

TOWN OF
MAGNOLIA SPRINGS

ORDINANCE NO. 2014-01

**AMENDMENT TO SECTIONS 1 AND 3 OF
ORDINANCE NO. 2008-13**

**AN ORDINANCE AMENDING ORDINANCE NO. 2008-13,
ADOPTED BY THE TOWN OF MAGNOLIA SPRINGS
ON THE 28th DAY OF OCTOBER, 2008.**

**BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF MAGNOLIA
SPRINGS, ALABAMA, AS FOLLOWS:**

WHEREAS, The Town Council adopted "STANDARD SPECIFICATIONS FOR SANITARY
SEWER INSTALLATION" Ordinance No. 2008-13 on October 8, 2008. (Exhibit "A").

WHEREAS, The Town Council desires to amend Section 1 of Ordinance No. 2008-13, titled,
"Sanitary Sewer Extensions," by adding Paragraph 1, Subparagraphs D and E.

WHEREAS, The Town Council desires to amend Section 3 of Ordinance No. 2008-13, titled
"General Specification for Sanitary Sewers," by striking out the following language in Paragraph
1, Subparagraph A: "No PVC pipe will be allowed for sewer mains whether gravity or force
main."

WHEREAS, The Town Council desires to amend Section 3 of Ordinance No. 2008-13 titled,
"General Specification for Sanitary Sewer," by adding a new Paragraph 2, Subparagraphs A
through C, and renumbering the existing Paragraphs from 2 through 20 to 3 through 21.

WHEREAS, The Town Council desires to amend Section 3 of Ordinance No. 2008-13 titled,
"General Specification for Sanitary Sewer," by adding Paragraph 3, Subparagraph C.

NOW, THEREFORE BE IT RESOLVED, by the Council of the Town of Magnolia Springs
as follows:

1. Section 1, Paragraph 1, Subparagraphs D and E of Ordinance No. 2008-13 shall read as
follows:

D. The materials outlined in this specification are subject to change as deemed necessary by the
Town. The Town will evaluate the use of alternate materials on a case by case basis governed by
the specific situation. The contractor has the ability to submit alternate materials under the
procedure below for approval by the Town. The information required for the Town to review and
deem any materials as an approved equal to the original specifications is as follows:

1. A copy of the contract specifications that name the materials, products and
manufacturers as specified.
2. The manufacturer's specifications for the materials, products and performance of the
proposed alternative.
3. Submittals concerning all proposed substitutions shall be submitted in writing to the
Town for review. All submittals shall be made in good faith and shall be certified as
verifiably equal or superior to the specified item.
4. All submittals shall include all data that would be present in construction drawings and
specifications, including complete names and descriptions, dimensions, performance
verification, and latest catalog numbers.

5. If a new material is proposed for substitution, data shall be provided on laboratory tests and standards that have been observed in the design of the product.

6. If a new fabricator is proposed, information concerning his capabilities and experience shall be included in the submittal.

7. The Town will review the "or equal" submittal package as quickly as possible and will issue a written opinion to the Contractor.

The Town is under no obligation to approve any alternate materials to those listed in these specifications. The Town has the right to request any additional information and/or require additional warranties, bonds, etc. prior to the approval of any alternate materials for use.

E. Nothing in the Standard Specifications for Sanitary Sewer Installation shall be construed to waive or in any way limit the Town's authority under Alabama law to consent or withhold consent to, or otherwise regulate or grant franchises for, the use of the rights of way, streets, avenues, alleys, or public places of the Town by any person, firm, association or corporation for the construction or operation of any public utility or private enterprise.

2. Section 3 of Ordinance No. 2008-13 shall read as follows:

**SECTION 3
GENERAL SPECIFICATION FOR SANITARY SEWERS**

1. SCOPE:

A. The purpose of this specification is to identify approved materials for the installation of sewer mains and related sewer appurtenances within the corporate limits of the Town of Magnolia Springs.

NOTE: All manufacturers of pipe have developed manuals which are specific as to recommendations for the laying and handling of their kind of pipe. The manufacturer furnishing the materials for sewer installation shall submit to the Town or Town's Representative the approval of such manuals prior to beginning of the sewer installation.

B. No materials shall be acceptable under this specification which have not been tested, inspected and labeled at the point of manufacture by a reputable testing laboratory acceptable to the Town or Town's Representative. Certificates of tests shall be furnished to Town or Town's Representative at the sewer provider's expense. Further inspections shall be made in the field by the Town or Town's Representative and rejected pipe or other material shall be removed from the project area. The intention is to secure and place only the best materials possible.

2. PVC SANITARY SEWER MAINS:

A. The pipe shall be designed in accordance with ASTM D 2241 for Polyvinyl Chloride (PVC) Plastic Pipe (SDR-PR and C.L.T). All pipe must meet requirements as set forth in Commercial Standard CS256-63 with Standard Dimension Ratio (SDR) as shown by PVC table. Provisions must be made for contraction and expansion at each joint with a rubber ring. Pipe and fittings must be assembled with a non-toxic lubricant.

B. Pipe shall be made from clean, virgin, NSF approved Type I grade 1 PVC conforming to ASTM resin specification D1784. All pipe used as force main and/or pressure sewers shall be green in color or shall have a green stripe. All physical and chemical tests shall be conducted at 73°F. After two hours immersion in a sealed container of anhydrous (99.5% pure) acetone a one-inch long sample ring shall show no visible spilling or cracking (swelling or softening is not a failure); said immersion test shall be in accordance with ASTM 2151. PVC pipe for force mains shall be SDR-21.

C. Location wire shall be laid directly over and at least 18 inches above all pipe of non-metallic materials (PVC) to facilitate locating force mains. Wire shall be fully insulated TW14 copper wire.

3. DUCTILE IRON PIPE FOR GRAVITY SEWERS AND FORCE MAINS:

A. Ductile Iron Pipe shall be used at all locations. Ductile Iron Pipe shall be centrifugally cast cement-mortar lined meeting AWWA C151 specifications. Certification by the manufacturer per section 51-4.2 of AWWA C151 shall be required. Minimum allowable wall thickness for ductile iron pipe shall be Pressure Class 250, Thickness Class 51.

B. Fittings shall be either cast iron or ductile iron materials and shall meet AWWA C110 or C153 Specifications. Locked mechanical joint retainer glands of adequate strength to prevent movement may be used on fittings for ductile iron pipe to supplement concrete backing. Locked mechanical joint retainer glands shall be ductile iron retainer glands equipped with either hardened cupped end set screws of a type which utilizes a multiple wedging action and twist-off nut to insure proper actuating of the restrained devices.

C. Ductile iron pipe shall be used in lieu of PVC pipe when:

1. The vertical clearance between the sewer line and drainage pipe is less than 2 feet. No extra payment will be made for the use of cast iron instead of PVC or for the coupling devices.

2. The sanitary sewer and water main cross at an angle other than 90° and with a vertical clearance less than 3 feet. No extra payment will be made for use of cast iron instead of PVC or for the coupling devices.

4. RESTRAINED JOINTS:

A. Restrained joint pipe and fittings will be required at all wet areas and creek crossings. Flexible push on restrained joint ductile iron pipe and fittings shall be used. All restrained joints shall be suitable for a 250 psig working pressure. Ductile iron locking segments, inserted through slots in the bell face, shall provide a positive axial lock between the bell interior and a retainer weldment on the spigot end of the pipe. Restrained joints shall be US TR-Flex, McWane Fastite, American Flex Ring, or other approved equal.

B. Mechanical joints with Megalug assemblies or a gasket system utilizing stainless steel locking segments molded into the gasket may also be used to achieve joint restraint.

5. TESTING:

A. After the mains and appurtenances have been installed, they shall be subjected to a test as directed by the Town or Town's Representative. A hydrostatic test will be required for force main installation and an air test will be required for gravity sewer installation. The Town reserves the right to participate in all such tests and shall be the judge of final acceptance of the work.

B. The Sewer provider or their representative shall be responsible for maintaining accurate records of each test. At a minimum, the date, time, length of line tested and a recording of test pressure shall be compiled in a neat and organized format and certified by the Town or Town's Representative. All testing must be witnessed by the Town or Town's Representative. The Town or Town's Representative will be provided with a letter of approval from a professional engineer, certifying the test.

C. All breaks, leaks or defects in the main and appurtenances and dripping valve glands shall be repaired, following which the test shall be again applied. The sewer provider or their representative shall make the preliminary test and repair all defects before requesting an inspection by the Town or Town's Representative.

D. In cases where the Sewer provider or their representative has elected to backfill the main prior to testing, it shall be his responsibility to fulfill the test requirements even if it becomes necessary to uncover any or all, of the pipe in order to find the cause of a leak or other defect.

E. A Post Video inspection will be required for all gravity sewer installations.

6. LAYING SEWER PIPE:

- A. The joints between the individual pipes shall in all cases be made watertight.
- B. Any debris or dirt which may find entrance into the pipe in making the joint shall be removed by a suitable scraper or other approved means.
- C. Whenever pipe laying is stopped for the night or for any other cause, the end of the pipe shall be securely closed with a stopper to prevent the entrance of water, mud, or other obstructing matter, and shall be secured in such manner as to prevent the end pipe from being dislodged by sliding or other movement of the backfilling.
- D. The sewer provider or their representative shall pump, bail, or otherwise remove any water which may be found or may accumulate in the trenches and shall perform all work necessary to keep them clear of water while the pipe laying is in progress.

7. ENCASEMENT PIPE:

- A. Encasement pipe shall conform to A.A.S.H.O. Standards and Alabama Highway Standards where placed under highways, roads and/or railroads. Unless otherwise approved by the Town or Town's representative, encasement pipe shall be installed by a dry boring method in which the casing pipe is placed simultaneously with the boring action. Welded Steel Encasement Pipe shall conform to A.S.T.M. Designation A-252, Grade 2. The pipe shall be epoxy coated.

8. COUPLING OF DISSIMILAR PIPES:

- A. Where a connection to an existing pipe is necessary, transitions from ductile iron pipe or cast iron pipe to other pipes shall be made using approved adapters specifically designed for this purpose. Joining of dissimilar pipes with concrete collars will not be permitted.

9. CONCRETE:

- A. Concrete shall be ALDOT Class A-2a. Field specimens and laboratory tests shall be made in accordance with the standards of the American Society of Testing Materials.

10. GRAVEL, SLAG OR CRUSHED STONE:

- A. Crushed stone shall be crushed limestone meeting requirements of ALDOT Section 825, Type A.

11. MORTAR FOR SEWER STRUCTURES:

- A. Mortar for masonry in sewer structures shall be a 1:3 Portland Cement Sand Mix, provided that hydrated lime of mortar mix may be substituted for, not to exceed ten percent (10%) by weight of the cement.

12. BRICK:

- A. Brick shall be hard burned common brick meeting A.S.T.M. Specifications Number C-32, Grade NA or concrete brick meeting A.S.T.M. Specification Number C-55, Grade A, Concrete Brick shall be nominal 2" X 4" X 8" size.

13. PRECAST CONCRETE MANHOLES:

- A. Precast concrete manholes shall conform to the requirements of A.S.T.M C-478. The top section of manholes 6 feet or more in depth shall be eccentric cone sections. The top section of manholes less than 6 feet in depth shall be flat concrete slabs. Manholes shall be neatly and accurately built, according to the plans, and specifications, of proper materials and in a workmanlike manner. CRYSTALLINE CONCRETE WATERPROOFING shall be used on all new sanitary manholes.
- B. Manhole Bottoms: Manhole bottoms shall be integral with the lower section of riser walls.

i. Bottoms shall be set on a prepared bed of not less than 2 inches of crushed stone. The bed shall be accurately shaped to fit the manhole bottom to assure uniform bearing over the entire manhole bottom. The invert of the manhole shall be built up with cement grout.

ii. Joints in riser and cone sections shall have rubber gaskets, RamNek or an approved equal.

iii. All manholes shall be provided with a flexible sleeve through which all pipe connections are made into the manhole. Each flexible sleeve shall consist of a high quality synthetic rubber terminating in a flange cast into the manhole walls or by a compression joint made in the manhole wall. The flexible sleeves shall protrude out from the manhole and shall be of adequate size to accommodate the sewer pipe.

iv. After installation of the pipe within the sleeve, a watertight joint shall be made by securing the sleeve over the pipe with a stainless steel strap, clamp, draw bolt, and nuts. A rich cement grout shall then be poured around the entire sleeve assembly to ensure a permanent joint. The flexible sleeves shall be as manufactured by the Interpace Corporation, Kornseal, or other approved equal.

v. Pipe cutouts and lift holes shall be sealed with non-shrink grout or an approved equal after pipe stub outs are in place.

vi. The invert and bottom curves of all manholes shall be neatly and accurately built and so formed as to facilitate the entrance and flow of sewage over them.

vii. Steps shall be placed in manholes and shall be spaced not more than 16 inches vertically and shall be so arranged that the lowest step shall not be more than two (2) feet above the bench. Manhole steps shall be steel rods encased in polypropylene plastic and shall be of the type as manufactured by M.A. Industries, Inc., or approved equal. Steps may be type PS-1 or PS-2, for pre-cast manholes. Steps shall conform to the requirements of A.S.T.M. C-478.

viii. The Sewer provider or their representative shall furnish and properly set in mortar to line and grade all cast iron covers and frames. Brick stacks not more than 12 inches in total height shall be used to adjust manhole covers and frames to the proper grade where tops of manholes are to be flush with ground or streets. Brick stacks will not be required where tops of manholes are to be above the ground surface.

ix. Cast iron frames and covers shall conform to all essentials of design. All castings shall be made of clean, even grain, tough gray cast iron. The quality of iron in the castings shall conform to the current A.S.T.M. Specification A-48 Class 30 Gray Iron Casting. The casting shall be smooth, true to pattern and free from projections, sand holes or defects. The portion of the frame and cover which forms the cover seat shall be machined so that no rocking of the cover is possible. The castings shall be coated with coal tar pitch varnish.

x. On paved streets, the frame and cover shall be set flush with and in the plane of the paved surface. In other locations, they shall be set to the grades determined in the field.

xi. When required, stub outs of required size shall be built into manholes to receive either present or future branch lines. Where it is not intended to construct the branch lines at once, the stub outs thus inserted must be securely closed in such a manner that future connections can be made without breaking the stub out.

xii. Where manholes intercept existing laterals connected to existing manholes, the Sewer provider or their representative shall keep the lateral service to the existing manhole intact until the next adjacent section of new sewer is completed and approved. The laterals shall then be broken and fed to the new sewer and the dead end of the laterals plugged at the manhole wall with an approved plug.

14. CRYSTALLINE CONCRETE WATERPROOFING FOR NEW MANHOLES:

A. This section covers the requirements for waterproofing of concrete structures for below grade walls and slabs, pre-cast sanitary sewer manholes, decks and water or chemical storage areas that require enhanced chemical resistance.

B. References:

1. American Society for Testing and Materials (ASTM)
2. Army Corp. of Engineers (CRD)
3. American Concrete Institute Reference 308

C. System Description: The concrete waterproofing admixture shall be of the cementitious crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete.

D. Manufacturers: Xypex Admix C-1000 R. Xypex Chemical Corporation, Richmond, B.C., Canada. Technical information may be obtained from the following: SteelCon Coating Systems, Inc., 2100 3rd Avenue South, Irondale, Alabama 35210, phone: 205-951-2086, Fax: 205-951-2089. Equivalent materials as approved by the Engineer 14 days prior to acceptance of bids.

E. Mixes: XYPEX ADMIX C-1000 R/dye shall be added to the concrete during batching operation to provide chemical resistance and waterproofing. The XYPEX ADMIX C-1000R shall be added at 3.5%, including dye, of the weight of Portland Cement. The amount of cement shall remain the same and not be reduced. The colorant shall be added at the XYPEX Manufacturing Plant.

F. Materials Preparation: Xypex Admix C-1000R must be added to the concrete at the time of batching. Consult Xypex Technical Services for specific recommendations. Blend total concrete mix using normal practices to ensure formation of homogeneous mixture. For precast concrete manufacturers this usually means adding the Xypex into their pan type mixers.

G. Application: Placement of concrete shall be in accordance with the Section 03300. Retardation of set may occur when using Xypex Admix C-1000R. The amount of retardation will depend upon the concrete mix design and the dosage rate of the admix. Consult with the manufacturer regarding proper dosage rate. Concrete that contains Xypex Admix C-1000R must be cured as per "Standard for Curing Concrete" (ACI 308).

15. FITTINGS:

A. Fittings for cast iron and ductile iron pipe shall be either cast iron or ductile iron materials and shall meet AWWA C110 or C153 Specifications. All fittings shall be 100% manufactured in the U.S.A. and shall be so marked according to AWWA C153, Sec. 53.10.

B. HDPE fittings shall be in accordance with ASTM D 3261 and shall be manufactured by injection molding, a combination of extrusion and machining, or fabrication from HDPE pipe conforming to this specification. The fittings shall be fully pressure rated and provide a working pressure equal to that of the pipe with an included 2:1 safety factor. The fittings shall be manufactured from the same resin type and cell classification as the pipe itself. The fittings shall be homogeneous throughout and free from cracks, holes, foreign inclusions, voids, or other injurious defects. All joints shall be butt fused in strict accordance with the manufacturer's recommendations.

16. LOCATION TAPE:

A. All pipe used as force main and/or gravity sewers shall also be accompanied with a green tape placed 18" above the pipe and shall have the lettering "Sanitary Sewer Pipe Below" or similar lettering.

17. FRICTION RESTRAINED FITTINGS:

A. The following type friction restrained fittings may be used in lieu of positive restraint:

1. Locked mechanical joint retainer glands of adequate strength to prevent movement may be used to supplement concrete backing. Locked mechanical joint retainer glands shall be ductile iron retainer glands equipped with either hardened cupped end set screws of a type which utilizes a multiple wedging action and twist-off nut to insure proper actuating of the restrained devices.

2. On ductile iron pipe friction mechanical joint restraint may be used in lieu of locked mechanical joint retainer glands. Mechanical joint restraint shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A536. Restraining devices shall be of ductile iron heat treated to a minimum hardness of 370 BHN. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA A21 and ANSI/AWWA C153/A21, latest revision. Twist-off nuts shall be used to insure proper actuating of restraining devices. The mechanical joint restraint device shall have working pressure of at least 250 psi with a minimum safety factor of 2:1.

18. VALVES:

A. The Sewer provider or their representative shall install main line gate valves a minimum of every 1000'. Additional valves may be required at the discretion of the Town or the Town's representative. All valves shall meet the following specifications.

1. Gate Valves:

a. All gate valves shall be resilient-seated gate valves and shall at minimum meet all applicable requirements of AWWA C509, latest edition. Valves shall be NRS right-hand closing (clockwise closing) equipped with a two-inch square AWWA operating nut. Valve shall be iron body with modified wedge disc operation and bronze stem nut shall be protected with "O" ring seals. All buried valves shall be mechanical joint ends. Resilient seat gate valves shall be Mueller A2370-20 or approved equal.

b. All valves shall be fitted with cast iron valve box with cover marked "sewer." The box shall be the bonnet type going from the valve up to ground level.

2. Tapping Valves and Sleeves:

a. Tapping valves shall be resilient-seated valves with full port opening through the main body meeting the requirements for gate valves as described hereinbefore. Valves shall be similar in all respects to Mueller A-2370-16.

b. Tapping sleeves shall fit the pipe and assure a perfect leak proof joint. Sleeves shall be fabricated from 304 stainless steel or CF8 cast stainless steel. Branch connection shall be flanged. The full circumferential gasket shall be molded of synthetic rubber. Sleeves shall be designed for maximum working pressure of 200 psi.

c. Prior to tapping the main the mounted sleeve and valve shall be tested with either a low pressure air test (40 psi) or a hydrostatic test (150 psi) to assure a leak proof connection.

d. Tapping valves and sleeves are to be used for making connections to existing mains. The Sewer provider or their representative shall coordinate with the Town or Town's representative prior to setting any sleeves.

3. Valve Stem Extensions:

a. All gate valves, on which the operating nut is greater than two (2) feet below the normal ground or street surface, shall be provided with extension stems to bring the operating nut to within two feet of the finished grade. The extension stem shall be provided with a 2 inch square operating nut on top and a coupling to connect the extension to the operating nut of the valve. A stem guide shall be provided to keep the valve stem extension concentric with the valve box. Extension stems shall be of the same diameter as the valve stem unless otherwise specified.

4. Valve Boxes:

- a. After the valve box has been set correctly, a square or round concrete collar shall be poured around the top of the valve box. The concrete shall be neatly formed to 18" square or diameter, poured 4" thick with the surface finished parallel to the surrounding ground surfaces. The concrete shall be Class C 2500 pound mix.

19. CLEAN-OUT ASSEMBLY:

- A. Mainline clean outs shall be placed a minimum of every 1000' along with the mainline gate valve.

20. FORCE MAIN SERVICE CONNECTIONS:

- A. Service connections shall include a service connection saddle at the main, the service pipe and an inline curb stop or valve (based on the size of the service pipe) with a check valve located inside a meter box.

- B. Service saddles shall be specifically designed for the pipe material used, and designed to prevent deformation of the pipe. The rubber or rubber-compound gasket shall be confined and provide full life seal against leakage.

- C. Service pipe shall be PVC SDR-21.

- D. Tracer wire shall be installed on all service pipe.

21. GRAVITY SEWER SERVICE CONNECTIONS:

- A. Service connections shall include a ductile iron branch tee at the main with the service pipe and a cleanout.

- B. Service pipe shall be PVC SDR-21. The size of the service pipe shall be 4" minimum.

- C. Cleanouts will be required on all service lines and shall be installed for each continuous run of 100 feet and at each change in horizontal or vertical direction. Cleanouts shall be plugged with approved stoppers in accordance with the local Plumbing Code. Stoppers shall be properly restrained.

4. Section 3, Paragraph 3, Subparagraph C of Ordinance No. 2008-13 shall read as follows:

- C. Ductile iron pipe shall be used in lieu of PVC pipe when:

1. The vertical clearance between the sewer line and drainage pipe is less than 2 feet. No extra payment will be made for the use of cast iron instead of PVC or for the coupling devices.

2. The sanitary sewer and water main cross at an angle other than 90° and with a vertical clearance less than 3 feet. No extra payment will be made for use of cast iron instead of PVC or for the coupling devices.

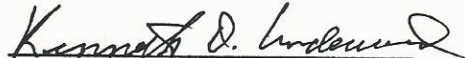
5. The Town Council hereby adopts these AMENDMENTS to Ordinance No. 2008-13.

6. The Town Clerk is directed to note that Ordinance No. 2008-13 has been amended by this Ordinance.


7. The STANDARD SPECIFICATIONS FOR SANITARY SEWER INSTALLATION, as amended by this Ordinance, is Ordinance No. 2014-01. (Exhibit "B")

8. This Ordinance shall become effective immediately upon its approval, adoption, and publication as required by law.

ADOPTED AND APPROVED this the 22nd day of July, 2014


Kenneth D. Underwood – Mayor

ATTEST:


Karen S. Biel, Town Clerk

I, Karen S. Biel, Clerk of the Town of Magnolia Springs, Alabama, hereby certify that no newspaper is published in the Town of Magnolia Springs and that the above-noted ordinance was published by posting copies thereof at the Mayor's Office in the Town Hall, Magnolia Springs Post Office and United Bank beginning July 23, 2014, and became in force and effect five (5) days thereafter.

Karen S. Biel
Town Clerk