City of Magnolia, Texas
Ordinance 2009-148

AN ORDINANCE AMENDING ORDINANCE NUMBER 2007-106, OF THE CITY OF MAGNOLIA, TEXAS HERETOFORE INITIALLY PASSED AND APPROVED ON THE 20th DAY OF MARCH 2007, BY REPLACING CHAPTER NINE ENTITLED "STORM DRAINAGE STANDARDS" THAT IS CONTAINED IN THE APPENDIX "A" ATTACHED TO ORDINANCE 2007-106 WITH A NEW CHAPTER NINE.

WHEREAS, the City Council of the City of Magnolia has heretofore adopted an ordinance **PROVIDING RULES, REGULATIONS, AND REQUIREMENTS WHICH GOVERN THE PLATTING OR REPLATTING OF LAND INTO SUBDIVISIONS WITHIN THE CITY OF MAGNOLIA AND EXTENDING INTO THE CITY'S EXTRATERRITORIAL JURISDICTION; REQUIRING PLATS AND REPLATS TO CONFORM TO SUCH RULES AND REGULATIONS IN ORDER TO PROCURE THE APPROVAL OF THE CITY PLANNING COMMISSION AND THE CITY COUNCIL. ADOPTING SUBCHAPTER B, CHAPTER 212 OF THE TEXAS LOCAL GOVERNMENT CODE WHICH ALLOWS FOR THE REQUIREMENT OF DEVELOPMENT PLATS IN THE CITY AND WITHIN ITS EXTRATERRRITORIAL JURISDICTION; PROVIDING FOR GOVERNMENTAL IMMUNITY; PROVIDING SEVERABILITY; PROVIDING A PENALTY AND SAVINGS CLAUSE; REPEALING ORDINANCE #74 AND ORDINANCE #319; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES AND RESOLUTIONS OR PARTS OF RESOLUTIONS INCONSISTENT OR IN CONFLICT WITH THIS ORDINANCE; AND PROVIDING AN EFFECTIVE DATE.**
being Ordinance Number 2007-106 adopted on the 20th day of March, 2007, and

WHEREAS, Chapter 9 of Appendix "A" attached to said Ordinance Number 2007-106, provides for standards for drainage facilities to be constructed and maintained; and

WHEREAS, after study and review the City Council of the City of Magnolia has determined that said ordinance should be amended regarding storm drainage standards, and

WHEREAS, notice of the agenda for this meeting, was given in accordance with law by posting the same at the place reserved and designated for notices of public meetings and public activities and prior to the adoption of this ordinance; and

AND NOW THEREFORE, BE IT ADOPTED BY THE CITY COUNCIL OF THE CITY OF MAGNOLIA, TEXAS:

1. The City Council of the City of Magnolia having reviewed the findings of fact and conclusions as herein set out and adopts the same for inclusion in this ordinance if the same had been repeated verbatim herein.

2. Ordinance Number 2007-106 of the City of Magnolia, Texas is hereby amended by replacing by replacing Chapter Nine Entitled "Storm Drainage Standards", that is contained in the Appendix "A" attached to Ordinance 2007-106 with a new Chapter Nine which is attached hereto as exhibit 1.

3. The City Secretary is instructed to take out the previous Chapter Nine in the Appendix "A" of Ordinance Number 2007-106 and replace with the new Chapter Nine attached hereto as exhibit 1.

4. The City Secretary is instructed to publish this Ordinance in the Official Newspaper of the City of Magnolia in the manner provided and for the time required by Section 52.011(a) of the Local Government Code at which time this Ordinance takes effect.

PASSED AND ADOPTED by a vote of 4 "ayes" in favor and 0 "no's" against on this, the 10th day of March, 2009.

City of Magnolia, Texas

Jimmy W. Thornton, Jr.
Mayor

Attest:

LuAnn D. Drake
City Secretary

APPROVED AS TO FORM:

Leonard V. Schneider, City Attorney
City of Magnolia, Texas

Exhibit 1

CHAPTER 9 – STORM DRAINAGE STANDARDS

901. GENERAL PROVISIONS

Drainage facilities shall be designed and constructed in accordance with this chapter and the City's Standard Details and Standard Specifications. The following design criteria are the City's minimum methods and standards. Other hydrologic and hydraulic design methods may be used to satisfy drainage requirements with prior approval of the City.

901.1 Upstream Conditions

All drainage facilities shall be designed based on potential and fully developed upstream conditions. A minimum run-off coefficient of 0.75 shall be used for all undeveloped upstream property.

901.2 Downstream Conditions

Downstream water surface elevations shall be determined for a one hundred-year (100 yr.) design frequency storm in order to define the downstream flood hazards created by the proposed development.

901.3 Protection of Downstream Properties

Downstream drainage improvement or a retention system shall be designed and constructed to protect downstream properties from any increase in storm water run-off level.

901.4 Discharge Points

All drainage improvements shall be terminated at a discharge point approved by the City. Such discharge point, or outlet, shall be designed and constructed to prevent damage to or overflowing into adjacent property. The City may require creek improvement, channel lining, energy dissipaters or other improvements for such outlet to prevent erosion or increase the flow capacity.

901.5 Public Streets as Drainage Facilities

a. Maximum spread of water to be allowed in local streets at five-year design flow shall allow for one (1) clear lane of traffic [twelve feet (12') wide].

b. Maximum spread of water in collector streets at ten-year (10 yr.) design flow shall allow for one (1) clear lane of traffic each way [twelve feet (12') wide each].

c. Maximum spread of water in arterial streets at ten-year (10 yr.) design flow shall allow for two (2) clear lanes of traffic [twenty-four feet (24') wide].

901.6 Drainage Channels and Structures

a. An underground storm drain on curb and gutter streets shall be installed beginning at the point where the calculated storm water runoff is of such a quantity that it exceeds the height specified above (see also Table 9-2). The storm drain system from this point shall be constructed to an approved outlet.

b. For non-curb and gutter streets open channel (channel or ditch) methods may be used to dispose of storm water runoff of such a quantity that it exceeds the height specified above. Such channels may be in dedicated drainage easements outside the standard street right-of-way upon City approval of the location and alignment of such easements. Alternatively, the street right-of-way may be widened to accommodate an open channel of greater capacity than the standard street/ditch section (refer to Figures 7-2 to 8-6).

c. If the channel is located in a widened street right-of-way, the City shall approve the right-of-way width and channel configuration.

d. All channels shall be designed and constructed to terminate at an approved outlet.

901.7 Habitable Structures

Adequate means for storm water run-off in excess of the streets' "design storm" capacity [i.e., five, ten-year (5, 10 yr.) storm] shall be provided to flow around habitable structures.

a. If adjacent topography rises away from the street, a grading/drainage plan shall be provided which shows that all building sites can provide a finished floor elevation.

(1) at least one foot (1') above the top of the curb using the highest point along the portion of such curb fronting the building site, or

(2) at least one foot (1') above the top of ditch elevation, using the highest point along the portion of such ditch fronting the building site.

b. If adjacent topography falls away from the street, a grading/drainage plan shall be provided which shows that all building sites can provide a finished floor elevation at least one foot (1') above the ground elevation along all sides of the building site.

c. Provisions shall be made in the subdivision grading plan which will contain stormwater on each lot and discharge it to either the street or a drainageway at the rear of the lot. If necessary, drainage swales shall be constructed on the low side of each lot which will prevent stormwater migration to adjacent lots.

d. All streets shall be designed and constructed to minimize any fill required to bring building pads into compliance with this document.

e. Alternate methods of building protection of those above may be accepted by the City upon submittal of detailed, engineered plans.

901.8 Drainage System Criteria

If an underground drainage system is required, and a sixty-inch (60") or smaller pipe will handle the design flow, pipe shall be used. If a sixty-inch (60") pipe is not adequate, concrete pipe or natural and/or a lined open drainage channel may be utilized. If pipe is selected, the maximum allowable velocity shall be twelve (12) feet per second in the pipe. Lining materials, if used, shall be approved by the City.

901.9 Line of Flow

Water courses shall be allowed to follow their natural lines of flow; provided, however, that rechanneling or rerouting of water courses may be allowed where approved by the City and where the point at which the water course enters the lot and the point at which it leaves the lot are not changed.

901.10 Bridges and Box Culverts

Bridges or box culverts shall be designed and constructed at all street crossings over all drainage ways and flood ways in accordance with Table 9-2, Design Storm Frequency.

901.11 Valley Gutters

Concrete valley gutters shall be provided if the gutter flow must be carried across intersections of curbed streets.

901.12 Public Easements Required

All public drainage facilities shall be placed in public easements as described in Chapter 3, Public Easement Standards.

902. DESIGN CRITERIA

902.1 Basis for Discharge

Drainage improvements shall be designed for watersheds less than one thousand (1,000) acres based on flood discharges determined from the Rational Formula. The Rational Formula for calculating storm flows is shown in Figure 9-1.

Description of Water Course	Velocity of Run - Off in fps for Slope in %			
	0% to 3%	4% to 7%	8% to 11%	Over 12%
Overland Surface Drainage	5	10	15	18

Channels Determine V by Manning's Formula
Storm Sewers Determine V by Manning's Formula

For street or gutter flow, the velocity shall be based on the grade of the street. In the absence of detailed calculation by Manning's Formula for the specific street section, the average velocities shown in Table 9-1 may be used.

TABLE 9-1
AVERAGE VELOCITIES OF RUNOFF

% SLOPE OF GUTTER	ASSUMED VELOCITY (FT. / SEC.)
0.5%	1.5
1.0%	2.2
2.0%	3.1
3.0%	3.8
4.0%	4.3
5.0%	4.9
6.0%	5.3
8.0%	6.1
10.0%	6.9

FIGURE 9-1
THE RATIONAL FORMULA

$$Q = CIA$$

where:

Q = The maximum storm flow rate at a given point (in cubic feet per second).

C = A run-off coefficient which varies with the topography, land use and moisture content of the soil at the time. The run-off coefficient shall be based on the ultimate use of the land. The run-off coefficient can be selected from the major use classification shown below.

Shopping Centers	0.95
Business Areas	0.80
Industrial Areas	0.70
Residential Areas	
(1) less than 2 lots/acre	0.40
(2) greater than 2 lots/acre but less than 4 lots/acre	0.50
(3) greater than 4 lots/acre but less than 8 lots/acre	0.60
(4) greater than 8 lots/acre	0.75
Apartments	0.75
Park and Open Space	0.30

I = The average intensity of rainfall in inches per hour for a period equal to the time of concentration of flow from the farthest point of the drainage area to the point under consideration.

$$I = \frac{b}{(t + d)^e}$$

where

	5-Year	10-Year	25-Year	50-Year
e =	0.749	0.753	0.724	0.728
b =	70	81	81	91
d =	7.7	7.7	7.7	7.7

t = Time of concentration in minutes.

A = The drainage area, in acres, tributary to the point under design calculated from the drainage map of the area. This drainage map shall be submitted with any drainage map of the area. This drainage map shall be submitted with any drainage plans submitted for consideration by the City.

Using the average velocities in Table 9-1, the time of concentration shall be calculated by the formula shown in Figure 9-2 or by other recognized methods such as the Texas Department of Transportation formulas unless more data is shown on the plans for calculating time of concentration.

902.3 Storm Frequency

Design storm frequencies for storm drainage improvements are shown in Table 9-2.

TABLE 9-2
DESIGN STORM FREQUENCY

TYPE OF FACILITY	DESCRIPTION OF AREA TO BE DRAINED	MINIMUM DESIGN FREQUENCY (YEARS)
Streets and Storm Sewers or Side Ditches, Combined*	Residential, Commercial and Industrial	Local – 5 Collector – 10 Arterial – 10
Culverts, Bridges, Channels and Creeks	Any Type of Area Greater Than 1,000 Acres	25
Culverts, Bridges, Channels and Creeks	Any Type of Area Greater Than 1,000 Acres	100

* If in a storm drain, an inlet is located at a low point so that flow in excess of the storm drain capacity would be directed onto private property, and such overflow could cause damage or serious inconvenience in the opinion of the City, the design frequency shall be twenty-five (25) years.

902.4 Underground Drainage Facility Design

The underground drainage facility (storm drain) capacity shall be calculated by Manning's Formula as follows:

$$Q = \frac{1.486}{n} AR^{2/3} S^{1/2}, \text{ where:}$$

Q = The discharge in cubic feet per second
A = The cross-sectional area of flow in square feet
R = The hydraulic radius in feet equals area / wetted perimeter.
S = The slope of the hydraulic gradient in feet per foot.
n = The coefficient of roughness

The elevation of the hydraulic gradient of the storm sewer shall be a minimum of 1.0 feet below the elevation of the adjacent street gutter. Storm water pipe shall be sized so that the average velocity in the pipe will not exceed twelve (12) feet per second.

FIGURE 9-2
TIME OF CONCENTRATION

$$T = \frac{D}{V \times 60}$$

where:

T = Time of concentration in minutes for use in Figure 9-1

D = Distance in feet from point of concentration to the most hydraulically distant part of the drainage basing under construction.

V = Velocity in feet per second from Section 902.2 or velocity calculated by an engineer for streets and/or storm sewers.

902.5 Open Channel Design

Open channel facilities shall be designed and constructed based on frequencies shown in Table 9-2 and calculated by Manning's Formula with roughness coefficients and velocities as shown in Table 9-3. Side slopes of channels shall be no steeper than 3:1 in earth and 1:1 when lined with concrete

902.6 Culvert Design

Enclosed culverts shall be installed if a creek or ditch crosses proposed roadway improvements. The quantity of flow to be carried by the culvert shall be determined by the Rational Formula. The size of the culvert required shall be the larger size, checking both inlet and outlet flow control.

TABLE 9-3 COEFFICIENT OF ROUGHNESS		
OPEN CHANNELS	MAXIMUM PERMISSIBLE VELOCITY IN FEET / SECOND	COEFFICIENT* "n"
Paved		
Concrete	8	0.011 to 0.020
Asphalt	8	0.013 to 0.017
Rubble or Riprap	8	0.017 to 0.030
Earth		
Bare, Sandy Silt, Weathered	2.0	0.020
Silt Clay or Soft Shale	3.5	0.020
Clay	6.0	0.020
Soft Sandstone	8.0	0.020
Clean Gravelly Soil	6.0	0.030 to 0.150
Turf		
Shallow Flow	6.0	0.06 to 0.08
Depth of Flow Over 1 Foot	6.0	0.04 to 0.06
* Will vary with straightness of alignment, smoothness of bed and side slopes, and whether channel has light vegetation or is choked with weed and brush.		

903. MINIMUM DESIGN STANDARDS

The design requirements set forth in this chapter are minimum design standards. The City reserves the right to require additional precautions or treatments consistent with sound engineering practice to provide for condition not specifically covered in this chapter.

TABLE 9-4 CULVERT DISCHARGE – VELOCITY LIMITATIONS	
CULVERT DISCHARGING ON TO	MAXIMUM ALLOWABLE VELOCITY (fps)
Earth	6
Sod Earth	8
Paved or Riprap Apron	8
Shale	8
Rock	8

904. STORM WATER DETENTION

904.1 General

When physical, topographic, and economic conditions allow it, channel improvements downstream of the development shall be used to prevent increased flooding. When this is not feasible, runoff detention storage shall be used, wherein the storm volume is held back in the watershed and released at an acceptable rate. This section presents information on storage techniques, including guidance for the design of appropriate storm runoff storage facilities.

904.2 Storage Classification

Storage systems may be classified as either on-line or off-line facilities.

The purpose of detention storage is to hold runoff back but release it continuously at an acceptable rate through a flow-limiting outlet structure, thus controlling downstream peak flows.

904.3 On-Line Storage

An on-line storage facility is one in which the total storm runoff volume passes through the detention facility's outflow structure.

904.4 Off-Line Storage

An off-line storage design is one in which storm runoff does not begin to flow into the storage facility until the discharge in the channel reaches some critical value above which unacceptable downstream flooding will occur. An off-line facility serves to store only the runoff volume associated with the high flow rate portions of the flood event.

904.5 Design Procedures

The following design procedures are intended to insure that new development, with detention, will not cause any adverse impacts on existing flooding conditions downstream. The computer program PondPack, provided by Haestad Methods, shall be used to design and analyze proposed detention pond facilities including pond size and outfall orifice size. Submission of proposed detention pond plans shall include hard copies of the PondPack output data calculations along with a CD containing the computer input and output files for review by the Director of Public

Works or his designated representative. Alternate detention pond sizing programs may be used with prior approval of the Director of Public Works or his designated representative. (Note: the design engineer should contact the City of Magnolia for any specific requirements for the watershed in which the proposed facility is to be located).

904.6 Hydrology Methods

The method to be used for determining detention pond volume requirements is governed by the size of the total contributing drainage area. For contributing areas up to 10 acres, the Modified Rational Method may be used. For areas greater than 10 acres, the Soil Conservation Service hydrologic methods shall be used.

904.07 Design Tailwater Depth

In order to route the inflow hydrograph through the detention facility, a relationship must be established between the volume of storage in the pond and the corresponding amount of discharge through the outflow structure. In most cases, this relationship is directly dependent on the elevation of the tailwater at the outlet of the outflow structure.

For the purpose of establishing an outflow rating curve, the tailwater in the receiving channel shall be assumed to be at all times at the level of the same frequency storm being analyzed. In certain situations where this assumption may be shown not to be reasonable, an alternative tailwater condition can be presented for approval to the City of Magnolia Director of Public Works.

904.8 Final Sizing of Pond Storage and Outflow Structure

Detention facilities shall be sized such that at least one foot of freeboard shall be maintained during the 100-year storm event, as measured from the top of the detention or retention facility berm.

The minimum recommended outflow pipe for a detention facility is 12 inches. When further flow restriction is necessary, the restriction should be located at a separate manhole outside of the receiving channel.

904.9 Storm sewer Hydraulic Gradients

The hydraulic gradients in storm sewers shall be determined using procedures outlined in previous sections of these guidelines. The starting water surface elevation for these calculations shall be the 25-year maximum pond elevation.

904.10 Allowances for Extreme Storm Events

Design consideration must be given to storm events in excess of the 100-year flood. An emergency spillway, overflow structure, or swale must be provided as necessary to effectively handle the extreme storm event. In places where a dam has been utilized to provide detention directly in a channel, due consideration must be given the consequences of a failure, and if a significant hazard exists, the dam must be adequately designed to prevent such hazards.

In addition, detention facilities which measure greater than six feet in height are subject to Title 31 Texas Administrative Code (TAC) Chapter 299 (Sub chapters A through E), which went into effect May 13, 1986, and all subsequent changes. The height of a detention facility or dam is defined as the distance from the lowest point on the crest of the dam (or embankment), excluding spillways, to the lowest elevation on the centerline or downstream toe of the dam (or embankment) including the natural stream channel. Subchapters A through E of Chapter 299 classify dam sizes and hazard potential and specify required failure analyses and spillway design flood criteria.

904.11 Erosion Controls

The erosional tendencies associated with a detention pond are similar to those found in an open channel. For this reason the same types of erosion protection are necessary, including the use of backslope swales and drainage systems, proper revegetation, and pond surface lining where necessary. Proper protection must especially be provided at pipe outfalls into the facility, pond outlet structures and overflow spillways where excessive turbulence and velocities will cause erosion.

904.12 Multipurpose Land Use

The amount of land required for a stormwater detention facility is generally quite substantial. For this reason, it is logical that storage facilities could serve a secondary role as parks or recreational areas whenever possible. Such dual use areas will be allowed only after proper review of the design scenario and approval of the specific project by the City of Magnolia Director of Public Works.

When a dual use facility is proposed, a joint use agreement is required between the City of Magnolia and the entity sponsoring the secondary use. This agreement must specify the maintenance responsibilities of each party.

904.13 Approval of Private and Dual-Use Facilities

For privately maintained or dual use systems, each stormwater detention facility will be reviewed and approved only if:

1. The facility has been designed to meet or exceed the requirements contained within this document; and
2. Provisions are made for the facility to be adequately maintained.

904.14 Maintenance

In general, the City of Magnolia will only be responsible for maintenance of stormwater detention basins which serve public facilities such as dedicated public streets or parks and recreational areas. Responsibility for the maintenance of any portion of a facility not designed for flood control will not rest with the City, nor will the City be responsible for any damage which may occur resulting from flooding of the facility. ***The maintenance of new and existing storm water detention/retention basins shall be the responsibility of the owner. The owner of***

the basins/basins shall maintain them in such a manner as to provide a neat and aesthetically appealing area. Vegetation shall be controlled and mowed periodically. The City will inspect each pond annually and identify any deficiencies that exist in the pond maintenance. The owner will be notified of these deficiencies and required to make corrections. Corrections may include vegetation control, erosion repairs, silt removal, seeding of bare or disturbed areas and repairs to outfall structures, orifices and pumping units. Above ground pumps and piping shall be kept in a neat appearance with well maintained protective coatings. It is the intent of this ordinance to require that each detention pond be annually restored to its original design dimensions and function as a minimum.

A 30-foot wide access and maintenance easement shall be provided around the entire detention pond. This is in addition to the dedication required for the pond itself.

904.15 Pump Detention

Pumped detention systems will not be maintained by the City of Magnolia under any circumstances and will be approved for use only under the following conditions:

1. A gravity system is not feasible from an engineering and economic standpoint;
2. At least two pumps are provided, each of which is sized to pump the design flow rate; if a triplex system is used, any two of the three pumps must be capable of pumping the design flow rate;
3. The selected design outflow rate must not aggravate downstream flooding. (Example: A pump system designed to discharge at the existing 100-year flow rate each time the system comes on-line could aggravate flooding for more frequent storm events).
4. Fencing of the control panel is provided to prevent unauthorized operation and vandalism;
5. Adequate assurance is provided that the system will be operated and maintained on a continuous basis;
6. Emergency source of power is provided.

It is recommended that if a pump system is desired, review by the City of Magnolia Director of Public Works of the preliminary conceptual design be obtained before any detailed engineering is performed.

904.16 General Requirements For Detention Pond Construction

The City of Magnolia encourages the use of innovative and aesthetically appealing construction techniques for detention storage. Any detention storage that is not underground or in a parking lot shall be landscaped to ensure that the facility is an aesthetic asset to the City. An approved landscaping plan prepared by a registered landscape architect shall be required for all detention areas except those designed underground or in parking areas. The depth of water in parking areas shall not exceed 9 inches. For large regional detention ponds a landscaping plan may not be required if it will have a multipurpose land use as described in Section 904.12. Detention methods not specifically mentioned above shall be submitted for prior approval of the City of Magnolia Director of Public Works or his designee.

The structural design of detention facilities is very similar to the design of open channels. For this reason, all requirements pertaining to the design of lined or unlined channels shall also apply to lined or unlined detention facilities.

In addition, the following guidelines are applicable:

1. Pond Bottom Design – A pilot channel shall be provided in detention facilities to insure that proper and complete drainage of the storage facility will occur. Concrete pilot channels shall have a minimum depth of two inches and a minimum flowline slope of .0005 ft/ft. Unlined pilot channels shall have a minimum depth of two feet, a minimum flowline slope of .001 ft/ft, and maximum sideslopes of 3:1.

   The bottom slopes of the detention basin should be graded toward the pilot channel at a minimum slope of 0.005 ft/ft, and a recommended slope of 0.0075 ft/ft.

   Detention basins which make use of a channel section for detention storage may not be required to have a pilot channel, but should be built in accordance with the requirements for open channels.

2. Outlet Structure – The outlet structure for a detention pond is subject to higher than normal head water conditions and erosive velocities for prolonged periods of time. For this reason the erosion protective measures are very important.

   Reinforced concrete pipe used in the outlet structure should conform to ASTM C-76 Class III with compression type rubber gasket joints conforming to ASTM C-443. Pipes, culverts and conduits used in the outlet structures should be carefully constructed with sufficient compaction of the backfill material around the pipe structure. Generally, compaction density should be the same as the rest of the structure. The use of cement stabilized sand backfill around the outlet conduit should be considered where soil types or conditions may prevent satisfactory backfill compaction. Cement stabilized sand backfill should also be used where headwater depths could cause backfill to wash out around the pipe.

   Where possible, the location and orientation of the flow discharged from a detention pond shall duplicate the predevelopment conditions and minimize increased concentration of discharges.

904.17 Abandonment of Existing Facilities.

Abandonment of existing detention ponds may be approved by the City if development schemes in a particular area have changed such that they are no longer required or an acceptable alternative to the detention pond is utilized as provided by this chapter. Any abandonment will require that the current detention pond be completely filled with material approved by the City. Any alternatives to filling the detention pond must be approved by City of Magnolia Director of Public Works or his designee and City Council. Abandonment plans are subject to review and approval by the City of Magnolia Director of Public Works or his designee.

AFFIDAVIT OF PUBLICATION

BEFORE ME, the undersigned authority, on this day personally appeared, Tracy Herron who on her oath stated:

Received & Filed
in the Office of

MAR 20 2009

City Secretary
City of Magnolia, Texas

City of Magnolia, Texas
Ordinance 2009-148

AN ORDINANCE AMENDING ORDINANCE NUMBER 2007-106, OF THE CITY OF MAGNOLIA, TEXAS HERETOFORE INITIALLY PASSED AND APPROVED ON THE 20th DAY OF MARCH 2007, BY REPLACING CHAPTER NINE ENTITLED "STORM DRAINAGE STANDARDS" THAT IS CONTAINED IN THE APPENDIX "A" ATTACHED TO ORDINANCE 2007-106 WITH A NEW CHAPTER NINE.

I am the Account Manager of the TOMBALL MAGNOLIA TRIBUNE a newspaper published in Montgomery County, Texas and know the facts stated in this affidavit. The attached matter is a true and correct copy of the publication of the citation of which it purports to be a copy, as the same appeared in such newspaper in the respective issues of:

3/16, 2009

_____, 2009

Tracy Herron

Tracy Herron, Account Manager

Subscribed and sworn to this 18th day of March, 2009

NANCY M. NYQAARD
MY COMMISSION EXPIRES
December 10, 2009