

CITY OF PEARL DEVELOPMENT ORDINANCE



OFFICIAL DEVELOPMENT ORDINANCE
OF THE
CITY OF PEARL, MISSISSIPPI

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TABLE OF CONTENTS

ARTICLE 1 – GENERAL	6
SECTION 1 - TITLE	
SECTION 2 - AUTHORITY	
SECTION 3 - PURPOSE AND INTENT	
SECTION 4 - SCOPE	
SECTION 5 - JURISDICTION	
SECTION 6 - COMPLIANCE	
ARTICLE 2 - DEFINITIONS	8
SECTION 1 - DEFINITIONS	
ARTICLE 3 - PROCEDURES	12
SECTION 1 - GENERAL	
SECTION 2 - PRELIMINARY DEVELOPMENT CONFERENCE	
SECTION 3 - PRELIMINARY DEVELOPMENT LAYOUT	
SECTION 4 - PROCEDURE FOR SUBMISSION AND APPROVAL OF PRELIMINARY PLAT	
SECTION 5 - PROCEDURES FOR SUBMISSION AND APPROVAL OF CONSTRUCTION PLANS	
SECTION 6 - PROCEDURE FOR SUBMISSION AND APPROVAL OF FINAL PLAT	
SECTION 7 – REINSTATEMENT OF REQUIRED LETTERS OF CREDIT AND OTHER REQUIRED SECURITIES	
ARTICLE 4 - PRELIMINARY PLAT	18
SECTION 1 - PURPOSE	
SECTION 2 - COMPOSITION	
ARTICLE 5 - INFORMATION REQUIRED FOR CONSTRUCTION PLANS	20
SECTION 1 - GENERAL	
SECTION 2 - PLAN REQUIREMENTS	
SECTION 3 - FINAL CONSTRUCTION PLANS "AS-BUILTS"	

ARTICLE 6 - GEOMETRIC DESIGN STANDARDS FOR SUBDIVISION	23
SECTION 1 - STREETS	
SECTION 2 - LOTS	
SECTION 3 - BLOCKS	
SECTION 4 – PERMANENT EASEMENTS	
SECTION 5 – SUITABILITY OF THE LAND	
SECTION 8 - MONUMENTS	
SECTION 9 - OPTIONAL IMPROVMENTS.	
ARTICLE 7 – REQUIRED IMPROVEMENTS	27
SECTION 1 – GENERAL POLICY REQUIREMENTS	
SECTION 2 – GENERAL GRADING	
SECTION 3 – STREET DEVELOPMENT	
SECTION 4 – WATER SUPPLY SYSTEM	
SECTION 5 – SANITARY WASTEWATER COLLECTION SYSTEM	
SECTION 6 – STORM DRAINAGE SYSTEM	
SECTION 7 – OTHER UTILITY SERVICES	
SECTION 8 – MONUMENTS	
SECTION 9 – ADDITIONAL IMPROVEMENTS	
SECTION 10 – WARRANTY OF WORK	
ARTICLE 8 - FINAL PLAT, DATA AND CERTIFICATES	53
SECTION 1 - DATA FOR FINAL PLAT	
SECTION 2 - CERTIFICATES FOR FINAL PLAT	
ARTICLE 9 – MISCELLANEOUS	60
SECTION 1 - ADMINISTRATION	
SECTION 2 - VARIANCES	

SECTION 3 - FEES AND CHARGES

SECTION 4 - VIOLATIONS AND PENALTIES

SECTION 5 - VALIDITY

SECTION 6 - AMENDMENTS

SECTION 7 – APPEALS

SECTION 8 - OMISSION PROVISION

SECTION 9 - PROVISIONS SEPARABLE

SECTION 10 - CLARITY PROVISION

SECTION 11 - REPEAL OF CONFLICTING ORDINANCES

SECTION 12 - EFFECTIVE DATE

AN ORDINANCE ENACTED UNDER THE ENABLING LEGISLATION OF THE STATE OF MISSISSIPPI PROVIDING REGULATIONS GOVERNING DEVELOPMENT OF LAND WITHIN THE CORPORATE LIMITS OF THE CITY OF PEARL, MISSISSIPPI PROVIDING THE PROCEDURE FOR THE ADMINISTRATION THEREOF: ESTABLISHING PLAT REQUIREMENTS, REQUIRED IMPROVEMENTS, AND DESIGN STANDARDS: PROVIDING FOR VARIANCES: AND PRESCRIBING PENALTIES OFR THE VIOLATIONS OF ITS PROVISIONS.

WHEREAS, the Statutes of the State of Mississippi, Sections 17—1—3, 17—1—23, 17—1—25 and 21—19—63 of the Mississippi Code of 1972, as amended and recompiled, empower the City to enact subdivision regulations and provide for their administration, enforcement and amendment, and

WHEREAS, the Mayor and Board of Aldermen deem it necessary, for the purpose of promoting the health, safety, morals and general welfare of the City, to enact such an ordinance, and

WHEREAS, the Mayor and Board of Aldermen have prepared such regulations designed to set forth certain procedures and standards to be followed in the development or redevelopment of land subdivisions in the City of Pearl, Mississippi to assure that development of the City is orderly, healthful, efficient and economical, therefore

WHEREAS, the Mayor and Board of Aldermen have given due public notice of hearings relating to these subdivision regulations, and have held such public hearings in accordance with the requirements of Sections 17—1—15 of the Mississippi Code of 1972, annotated, as amended:

NOW THEREFORE, BE IT ORDAINED BY THE MAYOR AND BOARD OF ALDERMEN, FROM AND AFTER THE DATE OF ADOPTION OF THESE REGULATIONS, THAT THESE REGULATIONS SHALL GOVERN ALL DEVELOPMENT OF LAND WITHIN THE CORPORATE LIMITS OF THE CITY OF PEARL, MISSISSIPPI.

ARTICLE 1 - GENERAL

SECTION 1 - TITLE

This ordinance shall be known as the "Official Development Ordinance of the City of Pearl, Mississippi" and may be so cited.

SECTION 2 - AUTHORITY

The provisions of this "Official Development Ordinance of the City of Pearl, Mississippi" are adopted pursuant to the authority set forth in the Mississippi Code of 1972, annotated.

SECTION 3 - PURPOSE AND INTENT

These regulations have as their purpose and are designed to:

1. Establish procedures governing the filing and approval of land subdivision plats and data in the City of Pearl, Mississippi.
2. Establish minimum standards governing streets, utilities and other required improvements.
3. Establish minimum standards governing the preparation and filing for land subdivision plats and data to be submitted to the City for approval.
4. Ensure the proper coordination of future streets and their development with existing or planned streets.
5. Fix penalties for the violation of the provisions of these regulations.
6. Provide that the City may vary these regulations in certain cases or under certain conditions.

SECTION 4 - SCOPE

It shall be unlawful for any person or entity to lay out, subdivide, resubdivide, plat or replat any land into blocks, lots or streets within the City of Pearl, Mississippi or to sell subdivided land therein, which has not been subdivided, resubdivided, platted or replatted according to this Ordinance.

The City of Pearl shall withhold acceptance of improvements of any nature whatsoever, including the maintenance of streets and the furnishing of water or sewer facilities until a plat of the subdivision has been approved by the Mayor and Board of Aldermen and recorded in the office of the Chancery Clerk, Rankin County, Mississippi.

All land subdivision shall require a plat to be filed with and approved by the Mayor and Board of Aldermen.

The provisions of this ordinances apply to all developments and subdivisions as defined herein and also apply to all property located within the City even if property is excluded from the definition of a subdivision.

The provisions of this ordinance may be enforced by injunction from the Chancery Court of Rankin County, Mississippi.

SECTION 5 - JURISDICTION

From and after the date of adoption, these Subdivision Regulations shall govern all subdivisions of land located within the corporate limits of the City of Pearl, Mississippi as now or thereafter established.

SECTION 6 - COMPLIANCE

No land lying within the jurisdiction of this Subdivision Ordinance shall hereafter be divided or redivided, subdivided or resub— divided until a final plat of such subdivision has been duly approved by the Mayor and Board of Aldermen and recorded in the office of the Chancery Clerk, Rankin County, Mississippi.

No owner or agent of the owner of any lots located in a subdivision as defined by this Subdivision Ordinance shall transfer title to any such lots before a final plat of such subdivision has been duly approved and recorded in the Office of the Chancery Clerk of Rankin County, Mississippi and has conformed with the requirements of this Subdivision Ordinance.

No building permit shall be issued for the construction of any building or structure on any land under the jurisdiction of this Subdivision Ordinance before the final plat of such subdivision has been duly approved and recorded in the Office of the Chancery Clerk of Rankin County, Mississippi and has conformed with the requirements of this Subdivision Ordinance.

Upon special consideration by the Building Permit Department, a conditional building permit will be issued. Any conditional building permit will be on a case—by—case basis and will be only considered after permanent lot corners, as defined in Article 7, Section 8, have been established.

ARTICLE 2 - DEFINITIONS

SECTION 1 - DEFINITIONS

When not inconsistent with the context, words used in the present tense shall include the future tense; words used in the singular number shall include the plural number; and the word “shall” shall be interpreted as mandatory not merely directory.

For the purpose of this ordinance, the following words, terms, phrases and their derivations shall have the meaning given herein:

ALLEY: A minor right-of-way dedicated to public use which provides a secondary means of vehicular access to the back or side of properties otherwise abutting a street. This right-of-way may often be used for public utility purposes.

ARTERIAL HIGHWAY: A street designed to move large volumes of traffic to and from the major traffic generators within the city of which carries through traffic across town. Streets designated by the Mississippi Department of Transportation as federal aid primary or federal aid secondary roads or as a part of the state aid road system of Rankin County shall be considered as arterial highways.

BLOCK: A parcel of land intended to be used for urban purposes which is entirely surrounded by public streets, highways, railroad rights-of-way, public walks, parks or green strips, rural land or drainage channels or a combination thereof.

BOARD OF ALDERMEN (BOARD, GOVERNING BODY): The duly elected governing body of the City of Pearl, Mississippi.

BUILDING SETBACK LINE: A line delineating the minimum allowable distance between the property line or street right-of-way line and the front of a structure or the side/rear faces of a building and the adjoining property lines. (The building setback line is parallel to or concentric with the property line or street right-of-way line.)

CITY ENGINEER: A registered professional engineer employed by the mayor and board of aldermen either full-time, on retainer, or for particular services to assist in the enforcement of the development regulations enumerated herein.

COMMUNITY FACILITIES PLAN: The part of the Pearl Community Development Plan now or hereafter adopted which shows the location of existing and proposed schools, parks, recreational sites, fire and police stations, libraries, and other pertinent features.

COMPREHENSIVE PLAN (OR GENERAL PLAN): The community development plan for the City of Pearl which has been prepared to provide long-range development policies for the area subject to urbanization in Pearl, Mississippi.

CUL-DE-SAC (COURT OR DEAD-END STREET): A short street which has one end open to vehicular traffic and is permanently terminated by a vehicle turn-around.

DEAD-END STREET: Any street (other than a cul-de-sac) which has only one outlet.

Developer: Any person engaged in developing or improving any site, lot or group of lots or placing structures thereon for use of occupancy or making other improvements including grading, utilities, drainage or

paving. The primary person or entity responsible for entire subdivision from the beginning of development to the cities final acceptance of the subdivision/development.

DEVELOPMENT: The act of building structures or installing site improvements including clearing, grubbing, grading, earthwork, ditching, utilities, paving and other related activities.

DIRECTOR OF PUBLIC WORKS: Any person employed by the mayor and board of aldermen on a full-time basis to assist in administration of the public works department of the City of Pearl, Mississippi.

DIRECTOR OF PLANNING AND DEVELOPMENT: Any person employed by the mayor and board of aldermen on a full-time basis to assist in administration of the planning and development department of the City of Pearl, Mississippi.

DWELLING: Any building, or portion thereof, which is designed and used for residential purposes.

EASEMENT: A strip of land granted by the property owner to the public, a corporation or persons for a specific purpose, or otherwise acquired for such purpose.

FILL: The placing, storing or dumping of any material such as earth, clay, sand, concrete, rubble or waste of any kind upon the surface of the ground or the grading or regarding of the ground which results in increasing the natural surface elevation of a property or any portion thereof.

FRONTAGE: Property on one side of a street measured along the line of the street, or in the case of a corner lot, the property on each street measured along the lines of both streets.

GRADE, FINISHED: The completed surfaces of lawns, walks and roads as shown on construction plans.

LOT: A parcel of land of at least sufficient size to meet minimum zoning requirements for use, coverage, and area, and to provide such yards and open spaces as required herein. Such lot shall have frontage on or approved access to an improved public street and may consist of:

- (a) A single lot of record;
- (b) A parcel of land described by metes and bounds.

LOT AREA: The total area of a lot included within the front, side and rear lot lines.

LOT, CORNER A lot abutting upon two or more streets at their intersections.

LOT, DEPTH: The average horizontal distance between the front and rear lot line.

LOT, DOUBLE FRONTAGE: A lot, other than a corner lot, which runs through a block from street to street (i.e., has frontage on more than one street); double frontage lots are also called through lots.

LOT FRONTAGE: The front of a lot shall be construed to be that dimension of a lot abutting on a street or approved private drive. For the purpose of determining yard requirements on corner lots or double frontage lots, all sides of such lots abutting on public streets shall be considered lot frontage, and yards shall be provided as indicated in the zoning ordinance of the City of Pearl, Mississippi.

LOT, INTERIOR: A lot other than a corner lot.

LOT LINE: The lines bounding a lot as such parcel of land is defined herein.

LOT LINE, FRONT: In the case of an interior lot, the property boundary line separating said lot from the street. In the case of a corner lot or double frontage lot, the line separating said lot from the street on which the building will face, as determined from the application for a building permit.

LOT LINE, REAR: The lot boundary opposite and most distant from the front lot line. In the case of a pointed or irregular lot, it shall be an imaginary line parallel to and farthest from the front lot line.

LOT LINE, SIDE: The property boundary line between the front and rear lot lines.

LOT WIDTH: The distance from side of lot to side of lot measured at the front minimum building setback line. Buildable width shall be the width of lot to be built upon after the required yards are provided.

MARGINAL ACCESS STREET: A local street parallel with and adjacent to a major thoroughfare which provides access to abutting properties and protection from through traffic.

MAYOR: The duly elected official acting as chief executive of the City of Pearl, Mississippi.

100-YEAR FLOOD: The highest level of flooding that has an occurrence probability ratio at any given time of 100 to 1, aka 1% flood.

OWNER: Any person having sufficient proprietary interest in the land sought to be divided, subdivided, improved or developed.

PEDESTRIAN WAY: A right-of-way, however designated, either across or within a block, intended for use by pedestrian traffic.

PERSON: A corporation, firm, partnership, trust, association or any other legal entity as well as a natural person.

PLANNING COMMISSION: The duly appointed planning commission of the City of Pearl, Mississippi. In the absence of the City of Pearl appointing a planning commission, then the Community Development Director shall be the initial contact in the planning commissions place, and ultimately the Mayor and Board will make the final decision in place of the planning commission.

PLAT: A map, plan or layout indicating the location and boundaries of individual properties.

PLAT, FINAL: A map of land subdivision prepared by a registered land surveyor in suitable form for filing, including all necessary affidavits, dedications and acceptances; complete bearings and dimensions of all lines defining lots and blocks, streets and alleys, easements and public areas; and all other dimensions as may be appropriate.

PLAT, PRELIMINARY: A map of a proposed land development or subdivision showing the character and proposed layout of the tract in sufficient detail to indicate the suitability of the land proposed to be developed or subdivided.

PRIVATE DRIVE: A right-of-way which has the characteristics of a street as defined herein except that which has not been dedicated for public use. A driveway located on a lot which serves only that lot is not considered a private drive.

PROFESSIONAL ENGINEER: An engineer as registered by the State of Mississippi holding a current and valid license to practice engineering.

PUBLIC USES: Whenever used in this ordinance, public uses shall refer to public parks, schools, hospitals, administrative, cultural and service buildings.

PUBLIC UTILITY: Any person, firm, corporation, municipal department or board duly authorized under state or municipal regulations to furnish such public services as electricity, gas, water, sewer, telephone or other services to its subscribers or customers.

RECREATIONAL FACILITIES: Country clubs, riding stables, golf courses, swimming pools, playgrounds, recreation centers and other noncommercial recreation areas and facilities,

SANITARY SEWER: A public, private, quasi-public or community sewage disposal system within the City of Pearl of any type requiring approval by the Department of Environmental Quality, Office of Pollution Control and the City of Pearl

STREET: A right-of-way other than an alley dedicated or otherwise legally established for public use which usually affords the principle means of access to abutting property. A street may be designated as a highway, throughfare, parkway, boulevard, road, avenue, lane, drive or other appropriate name.

STREET, COLLECTOR: A street designed to facilitate the collection of traffic from local streets; to provide circulation within neighborhood areas; and to provide a convenient way for traffic to reach highways.

STREET, INTERSECTING: Any street which joins another street at an angle - whether or not it crosses the other.

STREET, MINOR OR LOCAL: A street designed primarily to provide access to abutting properties - usually residential. Some minor streets may be marginal access streets.

STREET RIGHT-OF-WAY LINE: The legal property boundary line delineating the street right-of-way and the abutting property.

STRUCTURE: Anything constructed or erected - the use of which requires permanent location on the ground or attachment to something having a permanent location on the ground.

SUBDIVIDER: Any person, firm, partnership, corporation or other entity acting as a unit and subdividing or proposing to subdivide land.

SUBDIVISION: Any division of any lot, tract or parcel of land into two (2) or more lots or sites for the immediate or future purpose of sale or building development. Also resubdivision or replatting of land, lots or tracts.

SURVEYOR: A land surveyor registered by the State of Mississippi holding a current and valid license to practice land surveying.

ARTICLE 3 – PROCEDURES

SECTION 1 – GENERAL

Any owner of land lying within the Pearl corporate limits who wishes to divide such land into two (2) or more lots, tracts, sites, parcels or divisions for the immediate or future purpose of sale or building development or who wishes to re-subdivide for this purpose, prior to the making of any street improvements or installation of utilities shall hold a Preliminary Development Conference with the Planning Commission, the Director of Community Development and the Director of Public Works/ City Engineer. A preliminary plat as set forth in Section 4 and a final plat as set forth in Section 6 shall be submitted to the Planning Commission, the Director of Community Development and the Director of Public Works/ City Engineer for approval prior to submittal to the Chancery Clerk of Rankin County, Mississippi for recording.

Subdivisions which do not involve the platting, construction and opening of new streets; improvements to existing streets; or the installation of water or sewerage facilities shall submit to the Planning Commission, the Director of Community Development and the Director of Public Works/City Engineer a final plat only. Developments which do not involve subdivision or resubdivision of a site shall fulfill the requirements of all portions of this appendix except the final plat procedure which is specifically excluded for same.

SECTION 2 - PRELIMINARY DEVELOPMENT CONFERENCE

Prior to the filing of an application for conditional approval of a preliminary plat, the subdivider or his designated agent shall submit a preliminary development layout to the Director of Community Development and the Director of Public Works/ City Engineer as specified in Section 3 .

The subdivider/developer shall submit the preliminary development layout to the Planning Commission at least seven (7) days prior to the next regular scheduled meeting of the Planning Commission.

The purpose of the preliminary development procedure is to afford the subdivider/developer an opportunity to avail himself of the advice and assistance of the review committee and to consult early and informally with said committee before the preparation of the preliminary plat and before formal application for its approval in order to save time and money and to make the most of his opportunities. The subdivider is also encouraged to consult with parties potentially interested in the development such as real estate, lending and mortgage insurance institutions, with a view to reaching at this initial stage firm conclusions regarding what part of the market demand should be served, the suitability of the location of the proposed subdivision/development, the most advantageous subdivision/development plan, the arrangement of streets, lots and other features of the proposed development.

SECTION 3 - PRELIMINARY DEVELOPMENT LAYOUT

The preliminary development layout shall include in simple form a sketch plan at a scale of approximately one inch equals one hundred feet (1" = 100') showing the proposed layout of streets, lots and other features in relation to existing conditions of the area to be subdivided. The layout should include sufficient data to permit a reasonable evaluation of the physical factors of the plan. A location map should accompany the preliminary layout to show the relationship of the proposed subdivision/development to existing community facilities which serve or influence it. Such factors as main traffic arteries, rail lines, shopping centers, schools, parks and playgrounds, types of land use adjacent to the site, scale, north arrow and date of map preparation are suggested.

While the supplementary information will vary because of physical characteristics of the site, type of land use proposed, etc., the general data supplied should include total number of lots proposed, available or proposed utilities, current or proposed zoning, etc. A very generalized narrative or tabular description of the

proposed subdivision will suffice for the initial review and additional information may be requested as may be determined in the informal conferences.

After discussion of the preliminary development layout with the applicant, the Director of Community Development and the Public Works Director/ City Engineer will advise the applicant within fifteen (15) days in writing of approval or disapproval of the preliminary development layout along with any changes that will be required as a prerequisite to the conditional approval of the preliminary plat to be submitted subsequently. This shall constitute conditional approval of the preliminary development layout.

SECTION 4 - PROCEDURE FOR SUBMISSION AND APPROVAL OF PRELIMINARY PLAT

Upon reaching conclusions as a result of the preliminary development review regarding his general program and objections, the subdivider shall submit to the City Planning Commission a total of four (4) copies of the preliminary plat along with a written request for review and approval of the preliminary plat. The preliminary plat shall be submitted at least seven (7) days prior to the Planning Commission meeting at which it is to be considered.

After receipt of the preliminary plat and other material submitted for conformity to these regulations, the Planning Commission shall forward the copies of the preliminary plat and supplementary material to the Director of Community Development and the Public Works Director/ City Engineer. Each department shall examine the preliminary plat and supplementary material to check if the said plat and materials meet the required specifications and construction standards. Each department will give special consideration and emphasis to the proposed plans regarding that department's area of expertise. The applicant requesting preliminary review may meet with the Director of Community Development and the Director of Public Works/City Engineer to answer any questions concerning the plat.

Within fifteen (15) days after the submission of the preliminary plat and other material submitted for conformity thereof to these regulations, the Director of Community Development and the Director of Public Works/City Engineer may recommend approval or disapproval of the application as submitted or, before approval, may request that the applicant modify, alter, adjust or otherwise amend the preliminary plat. Such conditions may be accepted and agreed to by the applicant at that time and without further hearing unless appealed. The Director of Community Development and the Director of Public Works/City Engineer shall then make a written decision of its findings and recommendations to the Mayor and Board of Aldermen.

Following the review of the preliminary plat and other materials, action by the Mayor and Board of Aldermen shall take place at its public meetings. The Director of Community Development shall notify the applicant requesting preliminary plat approval by registered or certified mail ("return receipt requested") of the time and place of said meeting. Notification shall be sent to said applicant not less than seven (7) days prior to the date of the meeting.

After receiving the recommendation of the Director of Community Development and the Director of Public Works/ City Engineer on the application for approval of the preliminary plat and on the date specified by the notification sent to the applicant, the Mayor and Board of Aldermen may approve or disapprove the preliminary plat or give conditional approval to the preliminary plat.

The action taken by the Mayor and Board of Aldermen shall be noted in writing and attached to four (4) copies of the preliminary plat. If conditional approval has been given, any modifications or conditions applying to such approval shall also be noted in writing and attached to the four (4) copies of the said plat. Two (2) copies shall be returned to the subdivider or his agent, one (1) copy shall be retained by the Director of Public Works/City Engineer and one (1) copy shall be retained by the Director of Community Development.

Approval of the preliminary plat shall lapse unless a final plat in substantial agreement with the preliminary plat is submitted within twelve (12) months from the date of preliminary plat approval or unless an extension of time is requested in writing by the subdividers and expressly granted by the Director of Community Development.

A reasonable extension of time will be granted, however, if substantial changes have occurred in the approved preliminary plat as determined by the Director of Community Development and/or the Public Works Director/City Engineer at the end of the twelve (12) month period then a resubmittal of the preliminary plat process will be required.

Approval of a preliminary plat shall not constitute approval of the final plat. It indicates only approval of the layout as a guide to the preparation of the final plat which will be submitted for approval by the Mayor and Board of Aldermen and for recording upon fulfillment of the requirements of the Development Ordinance and the conditions of the preliminary plat approval, if any. The subdivider may proceed with the construction of required improvements and staking of lots in preparation of the final plat after approval of the preliminary plat and the construction plans, subject to the issuance of all necessary and proper permits and subject to the inspection and approval of the improvements by the Director of Public Works/ City Engineer. However, if approval of the preliminary plat is given by the Director of Community Development and Director of Public Works/City Engineer, the subdivider shall be guaranteed that if the final plat submitted to the City Engineer conforms substantially to the approved preliminary plat, the said final plat shall be approved by the City Council. Where a substantial change is desired in an approved preliminary plat, such change may be proposed by the subdivider subject to approval of the Mayor and Board of Aldermen upon recommendation by the Director of Community Development and the Director of Public Works/City Engineer.

SECTION 5 - PROCEDURES FOR SUBMISSION AND APPROVAL OF CONSTRUCTION PLANS

The developer shall submit three (3) sets of complete construction plans and specifications for the entire development of the area given preliminary plat approval together with a complete and accurate contour map using mean sea level datum (United States Geological Survey) to the Director of Public Works/City Engineer for review and approval. Before final approval is granted the construction plans and specifications for the proposed water and sanitary wastewater system shall have written approval from the Mississippi State Board of Health (water) and the Mississippi Department of Environmental Quality (sanitary wastewater system).

Review of the construction plans and specifications shall be completed within twenty-one (21) days.

The construction plans shall include the complete design of the sanitary wastewater system, water distribution system, storm drainage system and street system for the entire area to be subdivided. It shall be recognized as a principle that the sanitary wastewater, water distribution and stormwater facilities cannot be properly designed on a piece—meal basis and that the entire area shall be studied and worked out as a unit giving due consideration to the problems which may be created by the subdivision/development or adjacent land especially as pertains to drainage.

The subdivider shall not perform any construction work until his completed construction plans have been approved by the Director of Public Works/City Engineer. After the construction plans have been approved and the plans filed with the Director of Public Works/City Engineer, the developer may proceed to construct the required improvements and proceed with the preparation of the final plat, after “notice to proceed” has been submitted to the director of planning and development with at least a minimum of seven days notice prior to construction. The subdivider shall not transfer title to any lots in the subdivision until the

final plat has been approved by the Mayor and Board of Aldermen and has been legally recorded in the land records of Rankin County.

Final approval of construction plans shall be valid for a period of twelve (12) months from the date of approval. The Director of Public Works/City Engineer shall have the authority to cancel and revoke approval or grant extensions in writing of all construction plans under which no work is commenced within the twelve (12) month period. New construction plans which conform to the regulations then in effect must be submitted and approved before construction of any improvements.

SECTION 6 - PROCEDURE FOR SUBMISSION AND APPROVAL OF FINAL PLAT

After the preliminary plat of the proposed land subdivision has been approved by the Mayor and Board of Aldermen, submission for approval of the final plat shall be as follows:

The original and four (4) copies of the final plat (double weight mural mounted on chartex) and other exhibits required for approval shall be prepared as specified in Article 8 and shall be submitted to the Director of Public Works/ City Engineer within one (1) year after conditional approval of the preliminary plat, unless a time extension is requested and granted by the Director of Public Works/City Engineer.

The final plat shall substantially conform to the preliminary plat as approved and, if desired by the subdivider, may constitute only that portion of the approved preliminary plat which he proposes to record and develop at the time provided, however, that such portion conforms to all requirements of this Development Ordinance.

Prior to consideration by the Mayor and Board of Aldermen, the Owner shall have prepared and submitted to the City Attorney for approval a "Certificate of Title" of the land embraced in the subdivision.

It shall be the duty of the Director of Public Works/City Engineer to examine the final plat to make certain that it conforms to existing streets and drainage systems and that all conditions set forth on the preliminary plat have been satisfied.

Should determination be made that the final plat does not conform to the approved preliminary plat, the subdivider shall be notified by the Director of Public Works/City Engineer by registered mail ("return receipt requested") or other means to assure receipt of such notification. The subdivider may agree to correct the deficiencies or make the changes indicated in the notification within a reasonable period of time before the recommendation of the Director of Public Works/City Engineer is forwarded to the Mayor and Board of Aldermen.

The final plat shall not be approved by the Mayor and Board of Aldermen until the subdivider has complied with one of the following alternatives:

1. The subdivider has completed construction of all improvements required by this Development Ordinance and any conditions attached to the approved preliminary plat.
2. The subdivider has posted with the City either a irrevocable letter of credit, a certified check or a Certificate of Deposit in an amount equal to **200** percent the total estimated cost of all required improvements remaining at the time of request to guarantee installation of all said improvements. The irrevocable letter of credit, certified check or Certificate of Deposit shall be subject to the condition that the improvements will be completed within three (3) years after approval of the final plat or at such time as structures have been completed on 85 percent of the lots in a subdivision. All improvements must be completed within a maximum of three years from the date of approval of the final plat, and in accordance with the ordinance of the City of Pearl. If three years after the approval of the final plat the City of Pearl elects not to call the irrevocable letter of credit

or to access funds placed on deposit either by certified check or certificate of deposit, the developer shall be required to renew the irrevocable letter of credit or to provide additional funds by certified check or to increase the certificate of deposit or provide an additional certificate of deposit as requested by the City of Pearl to reflect any estimated increase in the cost of completion of the required improvements, including sidewalks and the street surface course, and which shall include the cost to perform any repairs to the side walks and the base course of any streets, if such repairs are not performed by the subdivider as and when requested by the City of Pearl. The duties and obligations of the subdivider herein apply to and are binding upon the subdivider and its successors and/or assigns in all respects.

The power of approval of a final plat shall be exclusively reserved to the Mayor and Board of Aldermen. Such approval shall be required before the acceptance by the City of any lands, streets, utilities, easements or other property or rights proffered by the subdivider for public use and maintenance.

Approval of a final plat by the Mayor and Board of Aldermen shall be required before any plat shall be filed and recorded by the Office of the Chancery Clerk of Rankin County, Mississippi.

Upon approval of the final plat, the subdivider shall have the plat duly recorded in the Office of the Chancery Clerk of Rankin County, Mississippi as required by law. The subdivider shall be responsible for payment of all required recording fees.

Upon approval of a final plat by the Mayor and Board of Aldermen, the City may also accept any lands, streets, utilities, easements or other property or rights, or fees in lieu thereof proffered by the subdivider for public use and maintenance. Should any of the aforementioned be accepted, such acceptance shall also be indicated on the final plat as for the approval and endorsement.

Four copies of the final plat (duly approved and recorded as required by law) shall be distributed as follows:

1. One (1) copy shall be filed with the Director of Public Works.
2. One (1) copy shall be filed with the Director of Community Development.
3. One (1) copy shall be filed with the City Engineer.
4. One (1) copy shall be filed with the City Clerk.

The Book, Volume and Page Numbers where the plat is recorded shall be shown on said copies of the approved and recorded final plat.

SECTION 7 – REINSTATEMENT OF REQUIRED LETTERS OF CREDIT AND OTHER REQUIRED SECURITY

If for any reason any irrevocable letter-of-credit, a certified check or an certificate of deposit as required in [Section 6](#) above, is rescinded, canceled, revoked, terminated, expires, or is otherwise impaired or affected before the improvements for which the same was provided have been completed, inspected and approved by the City of Pearl, such that the City of Pearl is unable to obtain the proceeds represented thereby for the completion of the improvements so intended, the City of Pearl will not approve any permits or perform any inspections for any construction on any undeveloped lot located within an affected subdivision and no construction on any undeveloped lot within any affected subdivision shall be permitted in any respect whatsoever, unless and until such time as an approved irrevocable letter-of-credit, a certified check or an approved certificate of deposit in the appropriate amount is provided to the City of Pearl and contains such call or recovery terms acceptable to the City of Pearl. All irrevocable letters-of-credit and certificates of deposit tendered for the purposes referenced in [Section 7](#), herein, and anywhere else in the Code of

Ordinances of the City of Pearl, must contain language, terms and conditions approved by the City of Pearl and must be provided to the City of Pearl on forms approved by the City of Pearl.

Any construction and/or development activity, including the sale and/or transfer of any lots by the developer, its successors and assigns, within any affected subdivision, at any time that the developer, its successors and/or assigns, is not in full compliance with [Section 6](#), and/or acts in contravention with the prohibitions in this section, shall be punishable in accordance with the provisions of the Code of Ordinances of the City of Pearl.

ARTICLE 4 - PRELIMINARY PLAT

SECTION 1 - PURPOSE

The purpose of the preliminary plat is to graphically show all facts needed to enable the Planning Commission, the Director of Public Works/City Engineer and other City agencies to determine whether the proposed layout of the land in question is satisfactory from the standpoint of public interest and that it meets the requirements of these regulations. Changes may be necessary in the preliminary plat before it can be tentatively approved. Approval of a preliminary plat is a conditional approval only and does not constitute the approval of a final plat. A preliminary plat is required for any type of development (residential, commercial, industrial, etc.)

SECTION 2 - COMPOSITION

The preliminary plat shall be clearly and legibly drawn at a minimum scale of one inch equals one hundred feet (1" = 100'). If the subdivision contains more than one hundred sixty (160) acres, the preliminary plat may be drawn to a scale of one inch equals two hundred feet (1" = 200'). Sheet size shall be a 24" x 36").

Each preliminary plat shall contain the following information:

1. The title under which proposed development or subdivision is to be recorded ; the location of the property to be improved or subdivided; the names of the owner or owners and/or the developer/subdivider; and the name and registration number of the Professional Engineer or surveyor licensed to practice in the State of Mississippi.
2. Date of survey, location, north arrow, scale of plat in graphic form.
3. Exact boundary lines of the tract with bearings and distances along the boundary, total acreage and mathematical closure of the survey showing section and township lines.
4. Location of existing platted property lines, streets, railroad lines or easements, bridges, buildings, water courses, sanitary sewers, storm water culverts, drain pipes or other underground structures, water mains, all public utility easements or lines and fire hydrants, if any.
5. Present zoning classification (if any) of the land to be developed/subdivided; the zoning classification of all contiguous lands; and the names of adjoining property owners or subdividers.
6. Contour intervals to mean sea level datum, of not more than two feet (2') referenced to a United States Geological Survey bench mark or monument or to a bench mark approved by the Director of Public Works/ City Engineer.
7. The location of the proposed water distribution system, sanitary wastewater system and storm water system, and their relationship to existing or proposed utility systems.
8. The proposed location, names and width of streets; layout, number and approximate dimensions of lots if a subdivision; any other necessary description of lots, utility easements; location and dimensions of existing building, if any; and setback lines, access and drainage easements, common areas and other pertinent data. As it relates to street improvements, any modification, improvement or upgrading of existing streets resulting from the development shall be reflected in the preliminary plat.
9. Location and size of proposed parks, playgrounds, church or school sites or other special uses of land.
10. If any portion of the land being subdivided is below the elevation of the 100—year flood profile, the limits of such floods shall be shown on the preliminary plat, provided however, that no fill shall be made, or any subdivision/development constructed which will increase flood hazards to other lands, or in any manner impede or restrict the flow of water in a flood situation.

The 100—year flood elevation can be obtained from the U. S. Geological Survey, U. S. Corp of Engineers or the Department of Housing and Urban Development.

11. A key or vicinity map at two thousand foot (2,000') scale for subdivisions of more than twenty (20) lots, or a five hundred foot (500') scale for subdivisions or resubdivisions of less than twenty (20) lots showing existing streets, roads, drainage channels and buildings within at least one thousand feet (1, 000') from the boundaries of the property being subdivided.
12. The preliminary plat shall comply with current revisions of the Zoning Regulations, Stormwater Pollution Prevention Ordinance, the Flood Damage Prevention Ordinance, and any other applicable Ordinance.

ARTICLE 5 - INFORMATION REQUIRED FOR CONSTRUCTION PLANS

SECTION 1 – GENERAL

After receiving written notification of preliminary plat approval, the developer or his designated agent(s) shall submit three (3) copies of the construction plans of the proposed subdivision/development to the Director of Public Works/City Engineer. After approval of the construction plans, the subdivider may proceed with the construction of required improvements.

All improvements required in this Development Ordinance shall be designed by, certified by and constructed under the supervision of a qualified Professional Engineer registered in the State of Mississippi and employed by the subdivider/developer.

After construction plans have been approved by the Director of Public Works/City Engineer and the plans have been filed with the Director, the developer may construct the required improvements. The Director of Public Works/City Engineer shall be notified in advance of the date that such construction shall begin. Construction shall be performed under the supervision of the Director of Public Works/ City Engineer and at all times shall be subject to inspection by that department. However, in no way shall this relieve the developer and his engineer of close field supervision and final compliance with the approved plans and specifications. Any changes to the approved construction plans shall be approved in writing by the Director of Public Works/City Engineer prior to construction.

A field inspector acceptable to the Director of Public Works/City Engineer shall periodically inspect the work during all phases of the construction of sanitary wastewater mains, water distribution systems, underground storm water system and street pavements. The Director of Public Works/City Engineer may require that any inspector who appears incompetent or otherwise unsatisfactory shall be replaced by a satisfactory inspector. The Director of Public Works/City Engineer shall establish detailed regulations governing the inspections to be furnished by the developer or his engineer and may refuse to accept work which was done without proper inspection.

No construction work shall be undertaken prior to notifying the Director of Public Works/City Engineer in writing of the date on which the work will be commenced. The Director of Public Works/City Engineer shall not accept any construction work which is in such condition that it will require immediate and excessive maintenance by the City. It shall be the responsibility of the developer to ensure that installation of all public utilities including natural gas, telephone, power, water and sewer are installed strictly in accordance with the construction plans and specifications.

SECTION 2 - PLAN REQUIREMENTS

The basic requirements on construction plans for water, sanitary wastewater, street and drainage improvements shall be as follows:

1. Construction plans shall be prepared on standard twenty—four by thirty—six inch (24" x 36") reproducible layout and plan— profile sheets. The plan assembly shall generally consist of the following;
 - a. Front (Cover) Sheet: Vicinity map of the area comprising the subdivision; name of subdivision; city and county. Name of Professional Engineer and registration number. Name of developer.
 - b. Index To Drawings – May be on front sheet or other sheet within the first two pages of the plans

- c. **Typical Roadway Cross Section Sheet:** Sheet shall show the details and construction requirements of the typical roadway section for all proposed roadways associated with the project. This includes but is not limited to right of way width, width of roadway/travel lanes, materials proposed to be constructed as part of the roadway and any other items necessary to describe the typical roadway section.
- d. **Geometric Layout** : Minimum scale one inch equals one hundred feet (1" = 100'), north arrow, layout plan of the proposed streets and lots. Right-of-ways shall be labeled and street names shown, lot dimensions, lot numbers, lot areas in square feet if less than 1 acre, building setback lines, existing easements, proposed easements, acreage being developed, and adjacent property owners shall all be shown on layout plan.
- e. **Water and Sanitary Wastewater Layout Plan**: Minimum scale one inch equals one hundred feet (1" = 100'), north arrow, layout of water and sanitary wastewater system showing existing and proposed water main and services lines and sizes of such, sanitary wastewater mains and service lines and sizes of such, manholes, service lines, valves, fire hydrants and other appurtenances.
- f. **Drainage Layout Plan:** minimum scale one inch equals one hundred feet (1" = 100'), north arrow, contour map, minimum two foot (2') intervals of the area comprising the subdivision and sufficient additional area to include all water sheds which might be a factor in the design of the storm water drainage system. Layout plan of storm water system showing location and sizes of existing and proposed drainage structures.
- g. **Grading Plan**. Grading plan(s) for the phase of the development for which the construction plans pertain shall include existing and proposed contours to one foot intervals. Each proposed lot within the development shall include finished contours indicating the proposed drainage for that lot. Lots shall be graded to drain towards the street and away from other lots where feasible, and the use of swales and or storm drain systems along back lot lines shall be avoided.
- h. **Erosion Control Plan:** minimum scale one inch equals one hundred feet (1" = 100'), north arrow, contour map, minimum two foot (2') intervals of the area comprising the subdivision and sufficient additional area to include all water sheds which might be a factor in the design of the storm water drainage erosion control plan. Plan shall conform to the documents and Storm Water Pollution Prevention Plan submitted to MDEQ.
- i. **Standard Plan—Profile Sheets**: Scale one inch equals fifty feet (1" = 50') horizontal, one inch equals five feet (1" = 5') vertical. A profile along the centerline and each property line based on mean seal level datum (United States Geological Survey). Proposed sanitary wastewater mains and manholes, storm water pipes and inlet structures and ditch drainage system grades.
- j. **Standard Storm Water, Sanitary Wastewater Mains and Water Improvement Details**: City of Pearl's "Water Detail Standard Sheet; City of Pearl's "Sanitary and Storm Water Detail Standard Sheet.
- k. **Special Details**: Special design drainage structures, pump stations, etc. Design computations shall be submitted with construction plans if requested by the Director of Public Works/City Engineer.
- l. **Construction Specifications**. Construction specifications shall be submitted by developer and approved by the City.
- m. **Geotechnical Investigation**. A geotechnical investigation shall be performed and a report provided for all streets within the development. The investigation shall be conducted and sealed by a professional engineer (PE) registered in the State of Mississippi. At a minimum, the investigation should include soil borings along the centerline of the proposed streets at 250' intervals. Depth of borings shall be a minimum of five feet, or four feet below finished grade, whichever is greater.
- n. **Pavement Design**. Pavement design shall accompany the construction plans for any street improvements proposed. The pavement design shall be based on the pavement design procedure utilized by the Mississippi Department of Transportation based on the number

- of equivalent axle loadings and projected vehicular traffic expected to use the proposed street during a twenty (20) year period.
- o. Drainage Calculations. Drainage calculations used to determine the sizes of any proposed drainage improvements including detention/retention ponds shall accompany the Construction Plans.
 - p. Water System Analysis. A Water System Analysis for water system improvements shall accompany the construction plans.
 - q. Engineer's Certification. The plan, specs, hydraulic calculations, etc. shall be accompanied by a transmittal letter which contains the following statement:
 "I hereby state that the reports, calculations, and plans prepared for Name of Development were prepared under my direct supervision and the best of my knowledge believe they are in accordance with the provisions of the City of Pearl Ordinances."
 Registered Professional Engineer
 State of Mississippi
 Registration No.

SECTION 3 - FINAL CONSTRUCTION PLANS "AS-BUILTS"

When construction is complete, substantially in accordance with the approved plans and specifications and complies with the provisions of these regulations, one (1) set of reproducible tracings of completed final plans, dated, signed and certified by the Professional Engineer in charge shall be filed with the Director of Public Works/City Engineer accompanied by three sets of full-size plans, an AutoCAD2014 or compatible file and a pdf set of plans.

For a period of twelve (12) months after acceptance of the work by the Director of Public Works/City Engineer, the subdivider shall keep all filled trenches, pipes, manholes, structures, paved or unpaved surfaces, etc. which have been constructed by him in good condition making repairs to such defects in materials or workmanship which may develop or be discovered to the satisfaction of the City. If wastewater treatment plants and/or pumping stations are constructed, the subdivider shall guarantee materials and workmanship of these facilities for a period of twelve (12) months from the date of acceptance in accordance with standard warranty conditions of the equipment manufacturer.

The developer shall file with the Director of Public Works/ City Engineer a maintenance agreement which has been approved by the City Attorney, the Mayor and the Board of Aldermen warranty Ing the satisfactory performance of this work for a period of one (1) year from the date of such agreement.

The developer shall bear the responsibility of marking or causing to have marked on the ground the "As-Built" location of all water and sanitary sewer services to all individual lots. The location of each water and/or sanitary wastewater service main shall be clearly and accurately shown on the "As-built" Drawings. In subdivisions, the location of water and sewer service mains shall be scored in the face of the curb of street by use of the symbols "W" and "Y" respectively.

ARTICLE 6 - GEOMETRIC DESIGN STANDARDS FOR SUBDIVISIONS

SECTION 1 - STREETS

The design of streets shall conform to the minimum criteria set forth hereinbelow and shall be considered in its relation to existing and planned streets, topographic conditions, public convenience, public safety and appropriate relation to the proposed uses of the land to be served by such streets. The location and width of all streets shall substantially comply with the character and intent of the major thoroughfare plan of the City of Pearl.

The arrangement of streets in a subdivision shall either:

1. Provide for the continuation of existing streets in surrounding areas, or
2. Conform to a plan for area development adopted by the City Planning Board and approved by the Mayor and Board of Aldermen to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical.
- 3.

The street pattern shall provide ease of circulation within the subdivision as well as convenient access to adjoining streets, thoroughfares or unsubdivided land which may be required by the City Planning Board. Minor residential streets should be so planned to discourage their use by nonlocal traffic. Where a street will eventually be extended beyond the plat but is temporarily dead—ended, an interim turnaround approved by the Public Works Director/City Engineer will be required.

1. Right—of—Way: The minimum widths of road rights—of—way (measured from lot line to lot line) shall be as shown on the major thoroughfare plan or, if not shown on such plan, shall be not less than the following:

TYPE OF STREET	MINIMUM RIGHT-OF-WAY WIDTH IN FEET
Arterial Highway	100
Commercial and Industrial Center	80
Residential, Collector	60
Residential, Minor or Local	50
Alley, Commercial, Industrial	20
Crosswalkways	10

In cases where topography or other physical conditions make a street of the required minimum width impractical, the Director of Public Works/City Engineer may modify the above requirements. Through proposed neighborhood business areas, the street widths specified above shall be increased ten feet (10') on each side to facilitate the convenient movement of vehicles into and out of necessary off—street parking areas without causing any interference to the flow of traffic.

Subdivisions adjoining existing streets shall dedicate additional rights—of—way to meet the above minimum street width requirements. The entire right-of-way shall be provided where any part of the subdivision is located on both sides of the existing street. However, when the

subdivision is located on only one (1) side of the existing street, one-half (1/2) the required right-of-way (measured from the centerline of the existing roadway) shall be provided.

Residential streets in planned unit developments (if dedicated to the City) may have the street width and pavement width reduced based on submission of a design and with the approval of the Director of Community Development and the Director of Public Works/City Engineer.

All cul-de-sacs shall terminate in a circular area with a minimum right-of-way diameter of one hundred feet (100') with paving having a minimum forty and five tenths foot (40.5') radius to outside back of curb unless the Director of Community Development and the Director of Public Works/City Engineer approve a variation of turning facility

Cul-de-sacs shall not be longer than six hundred feet (600') unless necessitated by topography or other circumstances beyond the subdivider's control. All cul—de—sacs shall be approved by the Director of Community Development and the Director of Public Works/City Engineer.

2. Alignment — Minimum Standards: When there are changes in the horizontal and vertical alignment of streets the following shall apply:
 - a. Minimum radius of curvature permitted on a horizontal curve shall depend upon design speed and corresponding friction coefficients developed by the American Association of State Highway and Transportation Officials (AASHTO). Minimum horizontal centerline radius shall not be less than two hundred feet (200'), unless approved by the Director of Public Works/City Engineer, all streets shall have a minimum tangent of one-hundred feet (100') between reverse curves. Reverse curves shall be avoided when possible.
 - b. All changes in street grades shall be made with vertical curves and in accordance with formulas developed by AASHTO that provide minimum sight distance of not less than the following:

VERTICAL ALIGNMENT

TYPE OF STREET	<u>MINIMUM FEET</u>
Arterial Highway	500
Commercial, Industrial Collector	300
Residential, Collector	275
Residential, Minor or Local	200

- c. Every change in grade shall be connected by a vertical curve constructed to afford a minimum sight distance from an eyelevel height of three and seventy—five hundredths feet (3.75') to the height of object measured at five—tenths foot (0.5').
- d. The maximum street gradient shall not exceed eight percent (8%) except where steeper grades are mandatory due to unusual topographic conditions and approval is granted by the Director of Public Works/City Engineer. The minimum grade shall be such as to allow for adequate drainage without undue spread of storm water over the travel lane but shall be not less than four—tenths percent (0.4%).

3. Intersection Design: Streets shall be designed to intersect at approximately right angles. Skewed intersections shall be avoided. In no case shall the angle of intersection be less than seventy—five degrees (75%).

Street intersections and approaches shall be designed on as flat a grade as possible. Street gradients within one hundred feet (100') of intersections shall not exceed four percent (4%). Every reasonable effort shall be made to keep the gradient below two percent (2%).

The minimum curb radius permitted at intersections shall be as follows:

<u>TYPE OF STREET</u>	<u>MINIMUM CURB LINE</u>
Arterial Highway	40 Feet
Commercial, Industrial Collector	35 Feet
Residential, Collector	25 Feet
Residential, Minor or Local	20 Feet

4. Two (2) streets intersecting the same street(T intersection) shall be offset a minimum of one-hundred fifty feet (150') (centerline offset).
5. Turning lanes shall be provided at heavily travelled intersections as determined by the Director of Public Works/City Engineer.
6. When possible, intersections in sharp horizontal curves or near the vertex of crest vertical curves shall be avoided.

SECTION 2 - LOTS

The lot size, width, depth, shape and orientation and the minimum building setback lines shall be appropriate for the location of the subdivision and for the type of development and use contemplated as prescribed by the requirements of the Official Zoning Ordinance of the City of Pearl, Mississippi.

The subdividing of land shall be such as to provide (by means of a dedicated public street) each lot with satisfactory access to an existing dedicated public street.

Double frontage and reverse frontage lots should be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least ten feet (10') shall be provided along the line of lots abutting such a traffic artery or other disadvantageous use.

Side—lot lines shall be substantially at right angles or radial to street right—of—way lines. Each lot must front for the minimum distance required by the Official Zoning Ordinance of the City of Pearl, Mississippi on a public dedicated or approved parking lot.

No building shall be undertaken on lots platted in areas that are subject to flooding unless the floor elevation of such building is atleast eighteen inches (18") above the elevation of the 100-year flood level. Areas subject to inundation shall be clearly indicated on the preliminary plat and final plat.

SECTION 3 - BLOCKS

As usual practice, blocks should be no less than four hundred feet (400') nor more than one thousand six hundred (1,600') in length, except where it is necessary to secure an efficient use of land or desired features of the street pattern such as may apply to institutional, commercial or industrial areas; where exceptions or variances in the length, shape and width of blocks may be granted by the Director of Community Development and the Director of Public Works/City Engineer.

When a block exceeds six hundred feet (600') in length, the developer may be required to provide a pedestrian crosswalk not less than ten feet (10') wide to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.

Blocks shall be wide enough to allow two (2) rows of lots that are of the dimensions required by the Official Zoning Ordinance of the City of Pearl, Mississippi or where prevented by topographic conditions or physical conditions in which case the Director of Community Development Committee and the Director of Public Works/City Engineer may approve a single row of lots of adequate depth in keeping with the dimensional requirements of the zoning district wherein located.

SECTION 4 - PERMANENT EASEMENTS

Easements across lots or centered on rear or side—lot ties shall be provided for utilities where necessary and shall be at least fifteen feet (15') wide.

Where easements intersect or sharp changes in alignment are necessary, corners shall be sufficiently cutoff to permit equipment access subject to the approval of the Director of Public Works/City Engineer.

No buildings, fences or structures shall be permitted within easements unless specifically approved by the Director of Public Works/City Engineer.

Any overhanging limbs, shrubbery or other vegetation which form an obstruction may be moved from within the limits of a utility easement at the discretion of the maintenance personnel of the utilities installed or to be installed in or above the easements.

Every easement shall terminate at both ends upon a street, alley or another easement except where necessary dead—end easements will be permitted upon review by the Director of Public Works/City Engineer. The City and/or utility company shall be held harmless of any claims against them for replacement of obstructions removed during the course of maintenance or construction activities on such utility. The City of Pearl shall have the right to utilize any platted or dedicated easement for public use regardless of the designation of the easement.

SECTION 5 - SUITABILITY OF THE LAND

The subdivision of land affected by conditions undesirable to urban development shall not be approved until satisfactory evidence has been provided by a Registered Professional Engineer outlining the steps to be taken to overcome these conditions.

Land subject to flooding with a frequency of a 100—year flood shall not be subdivided unless precautionary measures are taken to eliminate or minimize flood hazards. All building slab grades shall be raised to an elevation equal to or above an elevation eighteen inches (18") above the maximum flood elevation of a 100—year flood calculated for the area in which the proposed development is situated. This is provided, however, that no fill shall be made, or any development constructed which will increase flood

hazards to other lands or in any manner impede or restrict the flow of water in a flood situation. All areas which will remain subject to flooding after the development is constructed shall be delineated on the preliminary and final plat.

All utilities and facilities, such as water, sewer, gas and electrical systems shall be located, elevated and constructed to eliminate or minimize flood damage. Adequate drainage shall be provided to reduce exposure to flood hazards.

ARTICLE 7 - REQUIRED IMPROVEMENTS

SECTION 1 - GENERAL POLICY REQUIREMENTS

In consideration of the acceptance by the City of Pearl and the assumption of the responsibility of maintaining the dedicated streets constructed therein, the owner or owners of the development shall cause to be designed and constructed (at no expense to the City of Pear) all improvements made within such development to the specifications set forth in this Ordinance and in accordance with any applicable standards, ordinances or drawings adopted by the City of Pearl, Mississippi.

These expenses shall include but not be limited to the following:

1. Cost of boundary survey, preliminary plat and final plat which have been prepared by a Professional Engineer or land surveyor who is registered in the State of Mississippi.
2. Cost of establishing grades prescribed by the City of Pearl for streets, alleys and sidewalks.
3. Cost for construction of sanitary wastewater facilities for the development, subdivision, office building, retail building , commercial development or addition.
4. Cost for construction of water facilities for the development, subdivision, office building, retail building, commercial development or addition.
5. Cost for construction of curb and gutter, storm drainage and street paving and/or retention/detention facility and calculations for the development, subdivision, office building, retail building, commercial development or addition.
6. Cost for preparation of all maps, plans and specifications for all above improvements. These maps, plans and specifications shall be prepared by a Professional Engineer who is registered in the State of Mississippi.

SECTION 2 - GENERAL GRADING

Grading and centerline gradients shall be in accordance with the construction plans and profiles approved by the Director of Public Works/City Engineer.

Areas to be graded by cutting or filling shall be rough graded to within two—tenths (0.2) of a foot of the accepted elevation after necessary allowance has been made for the thickness of topsoil, paved areas and other installations.

Final cross—sections and profiles of streets and other installations shall conform to grades approved by the Director of Public Works/City Engineer. Elevations shall be based on mean sea level (U.S. Geological Survey).

All timber, logs, trees, brush, vegetative matter and other rubbish shall be removed or otherwise disposed of in accordance with the rules and regulations of the Mississippi Department of Environmental Quality and applicable Clean Air Act rules and regulations to leave disturbed areas with a neat and finished appearance.

After grading has been completed and approved and before any base is applied, all underground work (water mains, gas mains, sewer mains, storm sewers, etc.) and all service connections shall be completely installed and approved throughout the length of the roads. Where utility mains are not located under the pavement, the developer may elect to omit the installation of service connections, provided that when these service connections are needed they are extended across the street without

breaking or weakening the existing pavement. In business sections where there are no grass plots, utility mains shall be installed under the sidewalks wherever possible.

SECTION 3 - STREET DEVELOPMENT

1. General

All streets shall be constructed with twenty—four inch (24”) wide curb and gutter, except for streets constructed in industrial areas, which may be constructed with 8’ minimum wide shoulders in lieu of curb and gutter. Streets designed without curb and gutter will not be allowed unless written approval has been granted by the Director of Public Works/City Engineer.

The typical cross—section for streets shall conform to minimum standards as follows:

<u>TYPE OF STREET</u>	<u>PAVEMENT WIDTH IN FEET (BACK OF CURB TO BACK OF CURB)</u>
Arterial Highway	Variable
Commercial, Industrial Collector	40
Residential, Collector	40
Residential, Minor or Local	27
Cul-de-sacs and Dead-End	27

*Not to exceed six hundred feet (600’) unless conditions warrant and approved by the Director of Public Works/City Engineer.

Street pavement designs shall be based on consideration of the anticipated traffic volumes by weight, the subgrade soil, surface drainage, ground water and climatic conditions. The pavement thickness shall be a function of the load supporting value of the subgrade soil beneath the pavement and of the load distribution characteristics of the proposed pavement structure. Set forth herein below are the minimum acceptable thicknesses for pavement structures:

Streets shall be designed with a 2% cross-slope.

All street improvements, base, subbase, curb and gutter and appurtenances shall be constructed in accordance with the "Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition .

The street surface course required pursuant to this section shall be placed no sooner than one year from the date of approval of the final plat, or until such time as structures have been completed on 85 percent of the lots in the subdivision. In no event shall the date of application of the street surface course be more than three years from the date of approval of the final plat. Prior to placement of surface course, Owner shall submit a request to the City for an inspection of the roadways to be paved. Owner shall be responsible to make repairs resulting from said inspection prior to placing final surface course.

2. Construction:

a. *Subgrade construction.*

Site preparation. As an initial step of site preparation, trees located within the pavement area shall be removed, including stumps and roots. Stripping shall be performed to a sufficient depth throughout the construction area to remove organic-laden surficial soils, vegetation, debris, brush and roots. Excavation shall be performed to remove weak soils. The lateral and vertical extent of excavation required to remove weak soils must be determined in the field during earthwork construction. Excavation to remove weak soils shall extend laterally not less than three feet beyond pavement edges or back of curb.

Bridging. Bridging over weak soils may be allowed. Excavation shall be performed to a sufficient depth to allow placement of an adequate bridging lift and not less than three feet of compacted select fill materials to directly underlie the pavement structure. Bridging materials shall consist of either clean sands (SP) or

slightly silty sands (SP-SM) with less than ten percent fines passing the No. 200 sieve. The bridging lift shall not be more than 18-inch thick. The bridging materials shall be spread and compacted by repeated passes of a dozer not larger than a D4. A geotextile shall be utilized beneath the bridging materials to initiate compaction with stability. The geotextile utilized for this purpose shall be Type V geotextile as specified in the Mississippi Standard Specifications for Road and Bridge Construction (1990 Edition).

Undercutting. Undercutting shall be performed to remove expansive clays (CH) as required to allow for the placement of compacted select low permeability soils to create a non-expansive soil buffer that shall extend not less than three feet below the subgrade level for pavements. Undercutting will be needed within areas where existing on-site silty clays (CL), silts (ML) and sandy clays (CL) by themselves or in combination with select fill do not provide the recommended buffer thickness. The lateral extent of undercutting required to remove expansive clays (CH) must be determined in the field during earthwork construction. Undercutting shall extend laterally not less than three feet beyond pavement edges or back of curb. Further undercut will be required in areas of storm drain pipe where the storm drain pipe is lower than the 3' of buffer as discussed above.

Scarification and compaction. The soils exposed after stripping, excavation and undercutting shall be scarified to a minimum depth of 12 inches and compacted to not less than 96 percent of standard Proctor maximum dry density (ASTM D 698) with stability present. The exposed soils shall be proof rolled to demonstrate stability. Stability is defined as the absence of significant pumping or yielding of soils during compaction or proof rolling. If stability is not evident in some areas, either additional excavation or treatment of the in situ soils with an admixture, or a combination of these approaches, will be required to achieve stable conditions. Scarification/compaction and/or proof-rolling of the in-situ soils is not required in areas where bridging is to be conducted.

Pumping soils. On-site natural silty clays (CL), clayey silts (ML) and silts (ML) exposed after stripping and excavation are susceptible to pumping under wet conditions. The construction techniques and types of equipment utilized and site drainage provided during construction will have a great effect on the performance of these soils throughout the project. The routing of heavy rubber-tired equipment shall be controlled to minimize, as much as possible, traffic over the site. All traffic shall be discouraged during periods of inclement weather. If pumping is initiated in subgrade soils (CL or ML), as a construction expedient the pumping can be counteracted by treating these materials with hydrated lime. It is estimated that about four to six percent hydrated lime by dry weight of soil will be required. The actual lime percentage needed to hydrate moisture and eliminate pumping shall be determined during construction by laboratory testing conducted on representative samples of the pumping soils. Lime treatment shall be performed in conformance with Section 307 of the Mississippi Standard Specifications for Road and Bridge Construction (2004 Edition). On-site natural soils treated with lime shall be compacted to not less than 96 percent of standard Proctor maximum dry density (ASTM D 698). Class C lime treatment which requires spreading the lime, mixing, compacting and finishing shall be used.

Fill placement. Fill materials shall be placed to achieve planned grades. Excavated onsite silty clays (CL) and sandy clays (CL) that are free of organic matter can be utilized as select fill. Imported fill soils shall consist of select, non-organic and debris-free silty clays (CL) or sandy clays (CL) having a plasticity index (PI) within the range of ten to 24 and a liquid limit less than 45, or clayey sands (SC) or silty sands (SM) with a plasticity index of four to 15 and a liquid limit less than 35. To be classified as silty clays (CL) or sandy clays (CL), the fill materials must have more than 50 percent fines passing the No. 200 sieve. Sands (SC or SM) shall not be used as backfill placed in undercut areas over expansive clays (CH). Select fill materials placed along the roadway shall be compacted from maximum nine-inch thick loose lifts to not less than 96 percent of standard Proctor maximum dry density (ASTM D 698) at moisture contents within three percentage points of optimum.

Proof-rolling. Stability must be evident during compaction of each lift before any subsequent lifts of fill material are added. Stability is defined as the absence of significant pumping or yielding of soils under compaction. In addition to density requirements the final layer of fill material (finished subgrade elevation) shall be proof-rolled in the presence of a city representative with a loaded dump truck to demonstrate stability after compaction requirements have been achieved. Finished site grades shall be sloped to provide for quick runoff of stormwaters.

Lime stabilization. All subgrade soils must be treated with six percent hydrated lime by dry weight of soil to a minimum depth of 12-inch lime treatment shall be performed in conformance with Section 307 of the Mississippi Standard Specifications for Road and Bridge Construction (2004 Edition). Class C lime treatment which requires mixing with a pulver mixer shall be used. The lime treated subgrade soils shall be compacted to not less than 96 percent of standard Proctor maximum dry density (ASTM D 698) at moisture contents within three percentage points of optimum moisture content.

3. *Hot mix asphalt specifications.* The hot mix asphalt (HMA) mixtures shall meet the following production requirements:

At least ten days prior to the start of work the contractor shall submit for approval by the city engineer a proposed job-mix formula (JMF) signed by a MDOT certified mixture design technician meeting the requirements listed as follows. The bituminous base course and asphalt surface course materials conforms with all applicable specifications for BB-1 and SC-1 presented in the Mississippi Standard Specifications for Road and Bridge Construction (1990 Edition) plus requirements listed in the following tables.

Hot Mix Asphalt Gradations Master Design Requirements

Sieve Size	Base Course	Surface Course
1½ inch	100	—
1 inch	83—100	—
½ inch	56—95	100
3/8 inch	—	87—100
No. 4	29—70	<u>54</u> —80
No. 8	19—54	32—63
No. 30	8—30	12—33
No. 50	4—20	6—20
No. 200	2—10	2—10

Hot Mix Asphalt Mixture Design Requirements Marshall Compaction - 75 blows (MT -35)

Mixture Requirements	Base Course		Wearing Course	
	BB-1A	BB-1B	SC-1A	SC-1B
Stability (lbs.)	1400	1400 (min)	1500	1500 (min)

Total air voids (%)	3.0—5.0	3.0—5.0	3.0—5.0	3.0—5.0
VMA (%)	12.0	12.0	15.0	15.0
Tensile strength ratio (%)	85	75	85	75
Hydrated lime (%)	1.0	0	1.0	0
Minimum asphalt content (%)	4.0	4.0	4.0	4.0
Crushed limestone content (%)	0	0	20—30	0
Fractured faces - + No. 4 sieve (%)	70	0	90	90
Natural sand content (%) max	20	20	20	20
RAP material (%) max	30	30	15	15

4. Testing requirements.

Subgrade. Testing requirements include, at a minimum, classification of subgrade soils, determination of Atterberg limits, percent passing No. 200 sieve, optimum moisture content, maximum dry density and in-place field moisture density. Soil classification tests and laboratory moisture-density relationship (Proctor) tests shall be conducted at the beginning of earthwork construction and for every 1,000 cubic yards placed. As a minimum, one moisture/density test shall be taken per lift for each 300 ft. of roadway or each 2,500 square feet of parking area. These quality control tests shall be run by a MDOT certified soil technician. Laboratory tests shall be conducted by a certified laboratory.

Asphalt. Testing requirements include, at a minimum, determination of HMA mixture gradation, total voids, VMA, asphalt content, maximum specific gravity of the HMA mixture, Marshall stability and roadway density tests. These test samples shall be randomly taken at the HMA production plant or at the placement site during production. These quality control tests shall be run by a MDOT certified asphalt technician 1. At least one quality control sample shall be obtained and tested for each 500 tons produced (minimum one per day) or at intervals determined by the City of Pearl. The contractor shall report all quality control tests to the city on a daily basis. While the contractor is responsible for production quality control of the HMA, the city may obtain and test HMA samples on a random basis during production.

A minimum of five roadway density tests shall be conducted for each day's production. For each day's production found not to meet the density requirement of 92.0 percent of maximum density may remain in place if approved by the city engineer. Any day's production or portion thereof with density of less than 90.0 percent maximum density shall be removed and replaced projects contracted by the city shall be reduced in payment as set forth in the following table:

Any day's production or portion thereof with density of less than 90.0 percent maximum density shall be removed and replaced at no additional cost to the City of Pearl.

Concrete. Testing requirements include, at a minimum, evaluating the quality of the concrete every 50 cubic yards or fraction there of concrete placed each day. The slump, air content and temperature of the concrete

mixture shall be evaluated. Compressive strength specimens shall be molded to determine seven and 28-day strengths. These quality control field tests shall be run by an ACI/MDOT certified field technician. Compressive strength tests shall be conducted by a certified laboratory. Concrete that does not meet the required 28-day compressive strength shall be removed and replaced at no cost to the City of Pearl.

Material Submittals and
Job Control Sampling and Testing

Layer	Tests	Frequency
Subgrade	Classification	1,000 C. Y.
	Proctor	1,000 C. Y.
	Density	300—500 ft. per layer
	Subgrade profile	200—500 ft. intervals
	Proof rolling	Final layer
	Material submittal	5 days prior to construction
Lime treated subgrade	Proctor	1,000 C. Y.
	Proof rolling	Final layer
	Density	300—500 ft. per layer
Granular base	Classification	1,000 C. Y.
	Proctor	1,000 C. Y.
	Proof rolling	Final layer
	Density	300—500 ft. per layer
	Material submittal	5 days prior to construction
Hot mix asphalt	Mix tests	1 per 500 tons
	Density	5 per day
	TSR	1 per 10 days of production

Layer	Tests	Frequency
	Mix design	10 days prior to construction
Concrete	Compressive strength	50 C. Y.
	Air content	50 C. Y.
	Slump	50 C. Y.
	Temperature	50 C. Y.
	Mix design	10 days prior to construction

5. *Minimum pavement thickness recommendations.* Currently the Standards of Design and Specifications for Subdivisions for the City of Pearl categorizes city streets according to the pavements intended purpose and expected traffic volume. The four classes of city streets, ranging from highest to lowest traffic volumes are arterial streets, collector streets, local streets, and cul-de-sacs. The primary difference in the traffic level categories is the anticipated level of heavy truck traffic and the total number of vehicles over the design life of the pavement. Cul-de-sac and local streets (light duty) are anticipated to carry a very limited amount of heavy truck traffic (i.e. moving van and garbage truck). Collector streets (medium duty) are designed to accommodate a minimal amount of daily heavy truck traffic. Arterial streets (heavy duty) are designated as principal traffic ways and are designed to accommodate moderate to heavy levels of daily heavy truck traffic.

Minimum pavement thicknesses are presented in the following tables for asphalt and concrete pavement sections for each of the city traffic level categories and commercial developments. The minimum pavement thicknesses are valid for typical soil conditions in the Pearl area (CBR=5 and K=150 pci). All pavement thicknesses shall be verified for actual expected traffic volumes and loadings using appropriate design parameters for subgrade soils and pavement structure materials. Pavement sections for heavy traffic streets shall be designed according to anticipated heavy truck volumes to insure adequate structural capacity.

Table 1. Minimum Requirements for Asphalt Pavements City Streets

Pavement Layer	Thickness (inches)					
	Arterial Street (Heavy Duty)		Collector Street (Medium Duty)		Local Street (Light Duty)	
	1	2	1	2	1	2
Asphalt surface	3	5	3	4	3	4
Bituminous base	6	—	4	—	3	—
Crushed limestone	—	10	—	8	—	6

Lime treated subgrade (1)	12	12	12	12	12	12
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[Note:] (1) Subgrade soil shall be treated with six percent hydrated lime by dry weight of soil. Lime treatment shall extend at least one foot beyond back of curb.

Table 2. Recommended Minimum Requirements for Asphalt Pavements Commercial Development

Pavement Layer	Thickness (In.)			
	Light Duty		Heavy Duty	
	1	2	1	2
Asphalt surface	3	4	3	5
Bituminous base	3	—	6	—
Crushed limestone	—	6	—	10
Lime treated subgrade (1)	12	12	12	12

Note: (1) Subgrade soil shall be treated with six percent hydrated lime by dry weight of soil. Lime treatment shall extend at least one foot beyond back of curb.

Table 3. Minimum Requirements for Concrete Pavements

Traffic Category	Thickness (In.)		
	Concrete	Crushed Stone (1)	Lime Treated Subgrade (2)
Arterial street	8.0	6.0	12.0
Collector street	6.0	6.0	12.0
Local street	5.0	—	12.0
Cul-de-sac	5.0	—	12.0
Light duty-commercial	5.0	—	12.0

Heavy duty-commercial	7.0	6.0	12.0
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Note:

- (1) Subbase material - No. 610 or % down limestone (MDOT Section 703.04).
- (2) Subgrade soil shall be treated with six percent hydrated lime by dry weight of soil. Lime treatment shall extend at least one foot beyond back of curb.

SECTION 4 - WATER SUPPLY SYSTEM

Water mains properly connected with the City of Pearl's water supply system shall be provided through a system of appropriate piping and valves and shall be designed and constructed in such a manner to adequately serve all lots shown on the subdivision plat for both domestic and fire protection purposes and will adhere to the minimum requirements set forth hereinbelow.

1. Water distribution systems shall be designed using the Hardy-Cross Analysis. The Hazen—Williams formula shall be used in computing head loss.
2. Water distribution systems shall be designed for the peak hour flow or the maximum day flow plus fire flow whichever is greater. Domestic flows shall be determined based on the “Water Facilities Planning Analysis for the City of Pearl, Mississippi”, April, 1976 and any future update thereto. Fire flows shall be determined from the “Guide for Determination of Required Fire Flow”, December, 1974, Insurance Services Office, 160 Water Street, New York, New York 10038.
3. The water distribution system shall be designed such that the following range of dynamic pressures are provided: fifty psi to eighty psi (50—80 psi) for average daily flows; twenty psi to forty psi (20-40 psi) for peak hour flows; twenty psi to thirty psi (20—30 psi) for maximum day flow plus fire flow. The minimum dynamic pressure at any point shall be twenty (20) psi.
4. The maximum design velocity in distribution mains shall not exceed five (5) fps.
5. Water distribution mains shall be laid out on a grid system with cross—connections at cross—streets. Dead—end pipes shall be avoided whenever possible.
6. Valves shall be installed at each intersection or change in pipe size and shall be placed such that no single case of pipe breakage shall require shutting off from service on artery, or more than five-hundred feet (500') of pipe in high value districts, more than eight-hundred feet (800') of pipe in any area, or more than twelve lots in a subdivision.
7. The distribution and spacing of hydrants shall be determined by the “Grading Schedule for Municipal Fire Protection”, 1973 by Insurance Service Office, 160 Water Street, New York, New York 10038 and any future updates thereto. In no case shall the maximum spacing exceed four-hundred feet (400'). All fire hydrants shall include a separate valve.
8. Main size shall be a minimum of eight inches and gridded or looped with more than one source of supply
9. All commercial service lines and residential sprinkler lines must be equipped with an appropriate backflow preventer as approved by the Mississippi State Department of Health.
10. A 12-gauge copper clad steel tracer wire shall be installed along all water mains and service lines. The tracer wire shall have HDPE insulation intended for direct bury, color coated per APWA standards for the water utility and have connectors rated for direct bury. All tracer wire shall be installed as a complete system, complete with connectors, magnesium anode ground rods, and terminal stations at each fire hydrant, water valve, and termination locations. All tracer wire installations shall undergo a location test by the city prior to acceptance. Any areas not able to be located using typical low frequency line tracing equipment shall be repaired. Tracer wire shall be equal to Copperhead 1230-HS or approved equal and all accessories shall be Copperhead Industries or approved equal.

The minimum requirements set forth apply to single family residential detached developments only and may be increased for higher density developments should conditions warrant.

The requirements for water distribution systems serving commercial and industrial developments shall be determined based on specific water requirements for the type of use intended but sized not less than ten inches (10”).

Any and all elements of any distribution system connected to the municipal water distribution system shall be installed in accordance with the recommendations of and approval of the Mississippi State Department of Health. The physical connection between the system installed by the subdivider and the municipal system shall not be made until the system being installed has been sterilized and a clearance report has been obtained from the Mississippi State Department of Health.

The Public Works Maintenance Superintendent shall be notified twenty—four (24) hours in advance prior to the connection of any water main to the City of Pearl's system. The City of Pearl shall make all physical connections and shall be reimbursed by the developer per the City of Pearl Fee Schedule.

Hydrostatic test(s) shall be performed on the new water system with a pressure of one-hundred fifty (150) psi for eight (8) hours unless a variance for unusual conditions is approved by the Director of Public Works/City Engineer. If, in the opinion of the Director of Public Works/City Engineer, additional testing is required, such additional testing shall be performed by the developer at his own expense. All water mains, hydrants, valves, service laterals and appurtenances shall be constructed in accordance with the approved construction plans and any standard drawings and specifications adopted by the City of Pearl, Mississippi.

SECTION 5 - SANITARY WASTEWATER COLLECTION SYSTEM

A means of collecting and transporting sanitary wastewater from each lot to a main in the interceptor wastewater system maintained by the City of Pearl shall be provided through a system of appropriate wastewater mains and appurtenances beginning at the nearest municipal main and terminating at the front lot (street) property line unless topography makes service at some other location on the lot necessary. Within developments other than subdivisions, the sanitary wastewater main shall terminate as determined by the director of planning and development. All service lines shall terminate above ground and marked with a metal T-post painted green.

All wastewater mains shall be connected into the City Of Pearl's wastewater collection and transport system in a manner to commensurate with future need and shall be designed to provide any additional capability necessary to serve other properties located upstream in the sanitary basin served by the wastewater main.

Any and all elements of any wastewater collection and transport system connected into the City of Pearl's wastewater system shall be installed in accordance with the recommendations of and approval of the Mississippi Department of Environmental Quality and the City of Pearl.

The minimum design standards of the sanitary wastewater collection system for each subdivision shall conform to the following:

1. Minimum pipe size — eight inches (8”).
2. Minimum pipe slope — four hundredths percent (0.400%) for eight inch (8”) pipe, (Manning Formula)
3. Minimum velocity — two feet (2’) per second.
4. Maximum velocity — nine feet (9’) per second.
5. Maximum depth of flow:
- 6.

COLLECTION	SUBINTERCEPTOR	INTERCEPTOR
8"	10",12",15"	18" UP
1/2 Full	3/4 Full	Full
7. Waste per load person — one hundred twenty (120) gallons per day including base infiltration.		
8. People per house — four (4)		
9. Peak Factor — three and five tenths (3.5) minimum.		
10. Maximum manhole separation — four hundred feet (400') with manholes required at each grade change and horizontal alignment change.		
10. Minimum cover – three feet (3')		
11. Top manhole elevation — ground elevation, minimum. In flood prone areas eighteen inches (18") above 100-year flood elevation. In non-developed areas, a minimum of twenty-four inches above natural ground elevation.		

The use of wastewater lift stations should be minimized. However, when lift or pump stations cannot be avoided, they should be designed for easy maintenance, maximum operating life and adequate pumping capacity. The design calculations must show flow rates and velocities for the lift or pump station and force main. Some requirements for lift or pump station include but are not limited to the following:

1. Minimum of two (2) pumps. Each pump to have capacity to handle the expected peak load.
2. Adequate controls with overload and lightning protection and alternators.
3. Adequate pump housing and heaters to prevent freezing.
4. Adequate capacity for not more than seventy-five percent (75%) duty cycle under peak flow conditions.
5. Necessary access roads and security chain link fencing with double gate.
6. Velocities in the force main shall be between 2.5 and 8 fps.
7. Adequate vented wet-well.
8. Valves on discharge lines located outside of wetwell.
9. Non-corrosive side rails with stainless steel lifting chains on submersible pumps.

All wastewater collection mains, laterals and appurtenances shall be constructed in accordance with the approved construction plans and any applicable ordinances, standard drawings and standard specifications adopted by the City of Pearl, Mississippi. All materials used in the construction of the sanitary sewer system shall conform to the following:

(a) The gravity sewer pipe shall be constructed of PVC (polyvinyl chloride) ASTM D-3034, SDR-26.

(b) Sanitary sewer manholes/wetwells shall be precast concrete with reinforced riser sections, and eccentric cone or flat slab top section and a base section. Riser section shall conform to the latest edition of ASTM Serial Designation C-4 78. The interior surfaces of all manholes/wetwells shall be coated with 24 mills coal tar epoxy in strict accordance with the coating manufacturers recommendations and precast with a crystalline waterproofing agent. Joints for precast manhole/wetwell sections shall be a combination of rubber gaskets, preformed bituminous joint compound, and a mastic joint material. Wetwell and a minimum of 1 manhole downstream of wetwell shall be coated with 100% solids epoxy coating.

(c) Frames and covers for manholes shall conform to ASTM Standard Specification A-48 for "Gray Iron Castings", "Class 25" Castings shall be manufactured to the sizes and shapes as illustrated on the Construction Drawings or as specified by the manufacture's model number. Frames shall be furnished with a 1" lip protruding into the reinforced concrete cone.

(d) Each wetwell and discharge piping valve pit shall have aluminum access hatches. The frame shall be encased in a concrete cover. Minimum hatch openings shall be 36" x 36" for wetwells and 30" x 30" for valve pits or larger as required for proper access to the equipment and potential removal of such. Hatches shall be equal to Haliday Series H except when subject to traffic, a H-20 loading design is required.

(e) Steps for manholes shall be the plastic coated corrosion resistant Perma Step PS-1-PF as manufactured by Utility Products, Incorporated of San Antonio, Texas, or Liver Tire and Rubber Company of Oakland, California, rubber encased "Surefoot" Manhole Step, or equal.

(f) The force main pipe shall be constructed of PVC pipe, pressure rated at 200 with a standard dimension ratio (SDR) of 25 for both barrel and joint dimensions. The joints shall be the factory installed heavy-duty type elastomeric gaskets in conformance with the requirements of ASTM F-477.

(g) Air release vacuum valves shall be installed at all high points on force mains. Valves shall be placed in a concrete pit as per City's Standard Details.

The sewer line shall be tested between manholes. The line shall be sealed at both ends. The seal at one end shall have an orifice through which to pass air into the pipe. An air supply shall be connected to the orifice at one end of the line. the air supply line will contain an on-off gas valve and a pressure gauge having a range of zero to 15 psi. The gauge shall have minimum divisions of .10 psi and shall have an accuracy of ± .04 psi. Pressuring equipment should include a regulator or relief valve to avoid over-pressuring and damaging an otherwise acceptable line.

The pipe line under test shall be pressurized to 4 PSIG for a period of no less than 5 minutes. If necessary, air should be added to the line to maintain the pressure above 3.5 PSIG. After stabilization period, the gas valve shall be closed. When the line pressure drops to 3.5 PSIG, commence timing with a stop watch. The stop watch should be allowed to run until such time as line pressure drops to 2.5 PSIG. Then the watch should be stopped and the time lapse compared with the allowable time lapse in Table I in this section and for pipe size and leakage allowance specified by the engineer. If the time lapse is greater than that specified, the section undergoing testing shall have passed, and the test may be discontinued at that time. If the time is less than that specified, the line has not passed the test and the contractor will be required to find the leak(s), repair them and retest until the section passes at his own expense.

Table I Line Pressure Air Test Using Low-Pressure Air
Specification Time Required for a 1.0 PSIG Pressure Drop for Size and
Length of Pipe Indicated

Pipe Diameter (in)	Minimum Time (min)	Length for Min. Time (ft)	Time for Longer Length (sec)	Specification Time for Length (L) Shown, Min.'s							
				100'	150'	200'	250'	300'	350'	400'	450'
4	3:46	597	.380L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04

18	17:00	133	7.692L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
24	22:40	99	13.674L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33

Deflection testing. 100% of the PVC gravity sewer shall be tested in the following method:

1. Use a "go, no go" mandrel which is sized to such dimensions that it will not "go" when encountering a deflection greater than 5%. The instructions for its use are as follows.
2. Test shall be conducted after final backfill has been placed at least 30 days.
3. No pipe shall exceed a deflection of five percent.
4. Mandrel shall have a diameter equal to 95% of the inside diameter of the pipe being tested.
5. Test shall be performed without mechanical pulling devices.
6. Completely flush the line making sure the pipe is clean of any mud and debris that would hinder the passage of the mandrel.
7. During the final flushing of the line, attach a floating block or ball to the end of the mandrel, pull rope and float the rope through the line. (A nylon ski rope is recommended.)
8. After the rope is threaded through the line, connect the pull rope to the mandrel and place the mandrel in the entrance of the pipe.
9. Connect a retrieval rope to the back of the mandrel to pull it back if necessary.
10. By hand, remove all the slack in the pull rope and place a tape marker on the top at the end of the pipe where the mandrel will exit, determining the location of the mandrel in the line.
11. By hand, draw mandrel through the sewer line. If any irregularities or obstructions are encountered in the line, they shall be corrected by the contractor.
12. If a section with excessive deflection is found, locate it; dig down and uncover the pipe; inspect the pipe; if any damage is found, replace it; if pipe is not damaged, replace the thoroughly tramp haunching and initial backfill; replace remainder of backfill.
13. Retest this section for deflection and air tightness.

Sanitary sewer lines under the groundwater table shall also be tested by the infiltration test. The testing shall be conducted by the CONTRACTOR in the presence of the City Engineer or City Public Works Director. The Engineer shall be given at least 24 hours notice before tests are to be conducted. The infiltration test shall be conducted between adjacent manholes. The outlet pipe on the downstream manhole shall be plugged and tested for water tightness to the satisfaction of the City Engineer or City Public Works Director. The accumulated depth of water in the downstream manhole shall be read at 12-hour intervals for two days and the infiltration rate calculated from the data obtained. Any section exceeding an infiltration rate of 200 gallons/day/inch/diameter/mile shall be re-laid. If the leakage in any reach exceeds the allowable maximum, the reach shall be re-tested after the leaks are repaired. This means that the Contractor shall locate and repair leaks as necessary to pass the infiltration test.

SECTION 6 - STORM DRAINAGE SYSTEM

The design of storm water drainage systems shall insure adequate control of storm water runoff through the use of properly sized and positioned drainage structures including but not limited to curb and gutter, curb and grate inlets, storm water sewer pipe, box culverts, intersectional drains, open ditches and bridges.

The design of all storm water drainage systems (main channels) shall be in accordance with the City of Pearl's master drainage plan for the basin in which the development is located and shall provide for potential effects of upstream and downstream developments in the basin. Drainage facilities shall be designed to prevent excessive runoff onto adjacent properties.

A before and after development stormwater runoff analysis shall be provided to the city engineer for evaluation as to the significance of offsite impact. The design criteria for comparison shall be the appropriate frequency event as established below. Storm water detention shall be provided on-site as required by the City of Pearl's Appendix D - Stormwater Prevention Pollution Ordinance.

Cross drains shall be provided to accommodate all-natural water flow and shall be of sufficient length to permit construction of a full width roadway including side slopes. Headwalls or flared end sections, aprons, channel bottom and slope protection shall be provided at the upstream and discharge end of the cross—drain as required by the Director of Public Works/City Engineer.

The following storm water design frequencies shall be used in computing design distribution:

100—Year: All major streams, channels, open ditches or drains within the corporate limits of Pearl.

50—Year: Minor streams, channels, open ditches or subdrains tributary to main streams.

25—Year: Side-drains and miscellaneous culverts where flooding would cause minor adverse effects.

No individual, partnership or corporation shall deepen, widen, fill, reroute or change the location of any existing ditch, stream or drainage canal without first submitting plans and obtaining written permission from the Director of Public Works/ City Engineer.

The Subdivider may be required to install drainage structures in excess of those required to adequately serve the Subdivision or property in the best interest of the City as a condition precedent to approval of the Subdivision or area to be served by any street and contiguous downstream areas.

The following design criteria shall apply to all storm drainage pipe and culverts:

1. Calculation of design flows

All pipes, side-drains and open ditches shall be designed using the applicable frequency curve. The minimum storm drainage pipe size shall be fifteen inches (15") and shall be obtained using the Rational Formula (below).

RATIONAL FORMULA: $q = CIA$ (cfs)

<u>SYMBOL</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
Q	cfs	Discharge Computed by Rational Method
c	*	Coefficient of Runoff
i	in/hr	Intensity of Rainfall
A	Acres	Area of Drainage Basin

*The value of "c" obtained from Table A (below)

TABLE A

	<i>HYDROLOGIC SOIL GROUP</i>			
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<i>RATIONAL COEFFICIENTS, C</i>				
CULTIVATED LAND:	0.49	0.67	0.81	0.88
PASTURE OR RANGE LAND:				
FAIR CONDITION (50% < GRASS COVER <75%)	0.38	0.63	0.78	0.84
GOOD CONDITION (GRASS COVER > 75%)	N/A	0.25	0.51	0.65
MEADOW: GOOD CONDITION	N/A	N/A	0.44	0.61
WOOD OR FOREST LAND:				
THIN STAND, POOR COVER, NO MULCH	N/A	N/A	0.59	0.79
GOOD COVER	N/A	N/A	0.45	0.59
OPEN SPACES, LAWNS, PARKS, GOLF COURSES, CEMETERIES, ETC.:				
FAIR CONDITION (50% < GRASS COVER <75%)	N/A	0.45	0.63	0.65
GOOD CONDITION (GRASS COVER > 75%)	N/A	0.25	0.51	0.74
COMMERCIAL AND BUSINESS AREAS (85% IMPERVIOUS)	0.84	0.9	0.93	0.96
INDUSTRIAL DISTRICTS (72% IMPERVIOUS)	0.67	0.81	0.88	0.92
RESIDENTIAL:				
1/8 ACRE OR LESS (TOWN HOUSES)	0.59	0.76	0.86	0.90
1/4 ACRE	0.25	0.55	0.70	0.80
1/3 ACRE	N/A	0.49	0.67	0.78
1/2 ACRE	N/A	0.45	0.65	0.76
1 ACRE	N/A	0.41	0.63	0.74
PAVED PARKING LOTS, ROOFS, DRIVEWAYS, ETC.:	0.99	0.99	0.99	0.99
STREETS AND ROADS:				

PAVED WITH CURB & STORM SEWER	0.99	0.99	0.99	0.99
GRAVEL	0.57	0.76	0.84	0.88
DIRT	0.49	0.69	0.80	0.84

The rainfall Intensity “i” in inches per hour shall be estimated using the following formula for particular design storm event:

$$\text{Rainfall Intensity (i)} = B / (T_c + D)^E \text{ in/hr}$$

- 1-Year Storm Event – B = 26.5204; D = 4.70, E = 0.6603
- 2-Year Storm Event – B = 30.5583; D = 4.90, E = 0.6619
- 5-Year Storm Event – B = 33.4660; D = 4.40, E = 0.6398
- 10-Year Storm Event – B = 34.6039; D = 3.80, E = 0.6165
- 25-Year Storm Event – B = 36.9640; D = 3.30, E = 0.5945
- 50-Year Storm Event – B = 37.9787; D = 2.80, E = 0.5752
- 100-Year Storm Event – B = 39.2528; D = 2.40, E = 0.5599

*For drainage basins that are larger than 100 acres, designer may use the SCS method to determine peak flow rates.

2. Street design in relation to storm system, curb and gutter design, inlet design

The following requirements shall apply to the construction of streets, curb and gutter and inlets:

1. The horizontal and vertical alignment of streets shall be compatible with the storm water runoff system and drainage design.
2. Street grades shall be coordinated with lot drainage as proposed in the grading plan. Street grades shall be above the 100—year frequency flood level.
3. The hydraulic capacity of the curb and gutter shall be determined by generally accepted engineering procedures taking into consideration roughness and street cross—slope.
4. The hydraulic capacity of curb inlets shall be determined by generally accepted engineering procedures taking into consideration inlet geometry and characteristics of the gutter flow. Curb inlets shall be spaced to limit the spread of water to not more than one quarter (1/4) of the street width during a design storm of five (5) year return period and fifteen (15) minute duration. Inlets shall also be placed at all low points in the gutter grade, at intersection where necessary to prevent gutter flow from crossing traffic lanes of an intersecting street or at points of special concern designated by the Director of Public Works/ City Engineer.
5. Finished grades of all buildings shall be a minimum of 18” above the 100—year flood elevation.

3. Storm Drain culverts

The structural design of all box culverts or bridges shall conform to the design standards of the Mississippi State Highway Department for a load capacity of twenty (20) tons minimum. Bridges shall be constructed of either reinforced concrete or structural steel with a reinforced concrete deck. No mud sills or timber grills will be permitted for bridge foundations. All bridges shall be provided with substantial guard rails and sidewalks.

All culverts, cross—drainage and storm sewers shall be constructed in accordance with any Standard Specifications and Standard Drawings adopted by the City of Pearl, Mississippi and the Mississippi Standard Specification for Road and Bridge Construction (Latest Editions).

All culverts, cross drain pipes, and storm drain pipes which are located underneath the roadway shall be reinforced concrete pipe (RCP). HP Storm Pipe (high-performance polypropylene pipe) may be used for storm drains located behind the curb and gutter and outside the roadway structure. Other materials may be approved by the City of Pearl Public Works Department for non-new construction sites. The minimum size for all storm drain pipe shall be 15 inches and all hydraulic calculations shall be approved by the city. All pipe shall be installed in accordance with the latest edition of the Standard Specifications for Road and Bridge Construction, latest edition, or per the manufacturer's recommendation, whichever is more stringent, and as directed by this section.

Filter fabric shall be laid around all RCP pipe joints and the joints located at all drainage structure/pipe connections.

Concrete pipe materials:

1. All concrete pipe shall conform to ASTM C-76 and be Class III minimum, standard strength, bell and spigot or tongue and groove.
2. All Portland cement shall conform to ASTM C150, Type 1.
3. All sand shall conform to ASTM C-33.
4. All mortar shall consist of one part cement, two parts sand, and 15 percent lime (weight of cement).
5. Rubber gaskets shall be used on all round concrete pipe and conform to the requirements of ASTM C-443.
6. Geotextile fabric shall be Type V as specified in the 2004 Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition.

Concrete pipe installation:

1. Any materials delivered to a job site defective, damaged, or not meeting code, shall be rejected by the city and shall not be used for construction, and shall be removed from the job site at once. If installed prior to detecting substandard material, it shall be removed, and approved material installed at the developer's expense.
2. All concrete pipe, catch basins, curb inlets and headwalls shall be installed in strict accordance with the manufacturer's recommendations and/or all applicable provisions of the Mississippi Standard Specifications for Road and Bridge Construction, Latest Edition.
3. All pipe shall be laid to alignment and grade with the use of a laser.
4. No more trench shall be opened than can effectively utilized in a day. Excavations to be left open during non-working hours shall be kept to a minimum. Such openings shall be adequately protected or marked to prevent injury.
5. All lifting holes shall be plugged with and approved manufactured lifting hold plug and covered with Type V Geotextile Fabric.
6. Rubber gaskets shall be used on all round concrete pipe joints and conform to the requirements of ASTM C-443. All joints are to be wrapped in a Type V Geotextile Fabric, 24-inch; minimum in width.
7. Mortar for connections to other drainage structures shall be composed of one part of volume of Portland Cement and two parts to mortar sand. Just enough clean, potable water will be added to

make the mix of such consistency that it can be easily handled and spread with a trowel. Any mortar that is not used within 45 minutes after water has been added will be wasted. Retempering of mortar will not be permitted.

8. Backfilling shall be as follows:
 - a. The contractor shall do such trench bracing, sheathing or shoring as necessary to perform and protect the excavation and shall remove such materials as backfill progresses. The backfill material shall be as approved by the engineer.
 - b. Great care shall be used to obtain thorough compaction under the haunches and along the sides and to the top of the pipe.
 - c. In areas under streets, walks, parking lots, or curbs, the backfill shall be placed in loose lifts, not exceeding eight inches in depth and compacted to 98 percent standard Proctor density by ASTM D-698 using mechanical devices designed for that purpose.
 - d. In all other areas the backfill may be placed in 12-inch; loose lifts compacted to 90 percent standard Proctor density by ASTM D-698.

HP pipe materials:

1. Twelve- through 30-inch (300 to 750 mm) pipe shall have a smooth interior and annular exterior corrugations and meet or exceed ASTM F2736 and AASHTO M330.
2. Thirty-six- through 60-inch (900 to 1,500 mm) pipe shall have a smooth interior and annular exterior corrugations and meet or exceed ASTM F2881 and AASHTO M330.
3. Pipe shall be joined with a gasketed integral bell & spigot joint meeting the requirements of ASTM F2736 or F2881, for the respective diameters.
4. Twelve- through 60-inch (300 to 1,500 mm) shall be watertight according to the requirements of ASTM D3212. Spigots shall have gaskets meeting the requirements of ASTM F477. Gasket shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.
5. Fittings shall conform to ASTM F2736, ASTM F2881 and AASHTO M330, for the respective diameters. Bell & spigot connections shall utilize a spun-on, welded or integral bell and spigot with gaskets meeting ASTM F477. Bell & spigot fittings joint shall meet the watertight joint performance requirements of ASTM D3212. Corrugated couplings shall be split collar, engaging at least two full corrugations.
6. Polypropylene compound for pipe and fitting production shall be impact modified copolymer meeting the material requirements of ASTM F2736, Section 4, ASTM F2881, Section 5 and AASHTO M330, Section 6.1, for the respective diameters.

HP pipe installation.

1. Any materials delivered to a job site defective, damaged, or not meeting code, shall be rejected by the city and shall not be used for construction, and shall be removed from the job site at once. If installed prior to detecting substandard material, it shall be removed, and approved material installed at the developer's expense.
2. All pipe shall be laid to alignment and grade with the use of a laser.
3. No more trench shall be opened than can effectively utilized in a day. Excavations to be left open during non-working hours shall be kept to a minimum. Such openings shall be adequately protected or marked to prevent injury.

4. Installation shall be in accordance with ASTM D2321 and manufacturer recommended installation guidelines, with the exception that minimum cover in all areas for 12- through 48-inch (300 to 1200 mm) diameters shall be one foot. (0.3 m) and for 60-inch (1500 mm) diameters, the minimum cover shall be two feet. (0.6 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum 90 percent SPD) or Class 3 (minimum 95 percent) material as defined in ASTM D2321.
5. Class IV material as defined by ASTM D2321 will not be allowed as bedding or initial backfill material.

HP STORM TRENCH INSTALLATION DETAIL

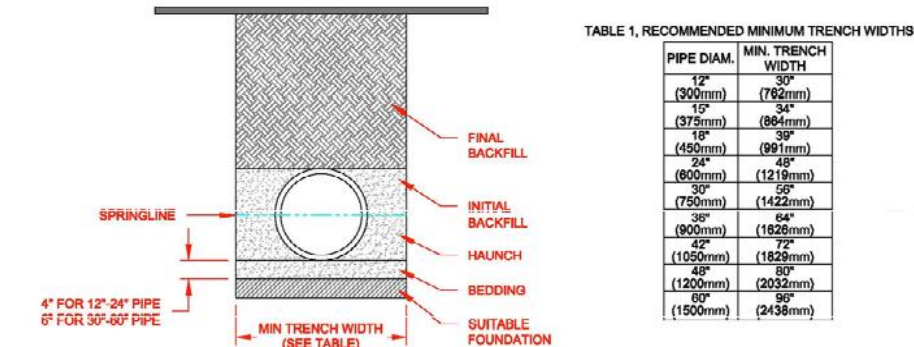


TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	38" (961mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. **FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. **BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II, OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE A MINIMUM OF 95%. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE, 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED.
5. **INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II, OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE A MINIMUM OF 95% TO THE SPRINGLINE OF THE PIPE AND 90% TO THE CROWN OF THE PIPE.
6. **FINAL BACKFILL:** MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS: CLASS I OR II MATERIAL COMPACTED TO 85% SPD AND CLASS III COMPACTED TO 90% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. MAXIMUM FILL HEIGHTS SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION.

Note: If any conflicts arise between these specifications and the manufacturer's recommendations or ASTM D2321, the more stringent requirements shall govern.

Inspection and acceptance: Prior to acceptance by the city and after all other underground utilities are installed, a CCTV video inspection shall be performed by an approved CCTV inspection company. Any construction debris found shall be removed, and any separated joints, misaligned pipe, or any other defects which may be found shall be corrected by the contractor prior to formal acceptance by the city. The inspection firm shall furnish the city with two full versions of a detailed report of the inspection. The reports shall include two printed and bound color copies of the report and two electronic copies in .pdf format as well. If any defects are found, a post correction inspection will be required as well. The report format and variance classifications shall follow NASSCO PACP standards.

The city shall also be contacted a minimum of 24 hours prior to the installation of any underground storm drainage pipe for inspection. The city shall inspect any storm drain pipe and the connection of any storm drain pipe to drainage structures prior to the commencement of backfill operations.

SECTION 7 - OTHER UTILITY SERVICES

All utilities, unless specifically authorized by the mayor and board of aldermen shall be installed underground and underground shall be placed in the utility strip between the back of curb and right-of-way line or at such other location required or specified in the franchise granted the company by agreements between the municipality and such companies, or by the public works director.

When placed in streets, all types of underground utilities shall be installed prior to construction of the base course of the street. If the base course is already in place, the utilities shall be placed in a private easement or between back of curb and right-of-way line if no conflict exists with water and sewer locations, Street crossings shall be installed by either a dry boring or an aqua-gel drilling mud process in a manner that does not damage the street or base course.

An accurate "as-built" map showing the exact location and approximate depth of all utilities by private utility companies shall be furnished to the City of Pearl.

No pole or support shall be erected at any location which will create a hazard to moving vehicular traffic.

SECTION 8 - MONUMENTS

All subdivision boundary corners and all changes in direction on the boundary of previously unsubdivided tracts shall be marked with permanent concrete monuments, Each monument shall consist of a minimum four inch (4") by four inch square or four inch (4") diameter concrete post a minimum of thirty inches (30") below the ground line and shall be reinforced with a single one-half inch (1/2") steel rod imbedded in the center flush with the top. Should conditions prohibit the placing of monuments on line, off-set marking will be permitted provided, however, exact off-set courses and distances are shown on the final subdivision plat.

Permanent steel markers shall be placed at all lot corners, single points, changes in lot boundary alignment and points of curve in street right-of-way lines. These markers shall consist of a solid one-half inch (1/2") steel stake a minimum of twenty-four inches (24") in length and shall be driven flush with the finished grade.

Monuments and steel markers shall not be placed until the major portion of the grading and utility installations have been completed.

Before acceptance of the final plat by the Mayor and Board of Aldermen, all permanent concrete monuments and steel markers shall be in place.

A permanent bench mark shall be accessibly placed and its elevation shall be based on mean sea level datum as determined by the U.S. Geological Survey, the U.S. Corps of Engineer or the Mississippi State Highway Department. Permanent bench marks shall meet at least third order accuracy and shall be accurately noted on the subdivision plat.

SECTION 9 - ADDITIONAL IMPROVEMENTS

A. SIDEWALKS

For the safety of pedestrians, the developer shall construct or require lot owner's to construct concrete sidewalks four inches (4") in thickness on one or both sides of the streets, as more specifically set forth below. The sidewalks shall be located either adjacent to the back of curb or 2' behind the back of curb. Sidewalks located in residential subdivisions shall be placed 2' behind the back of curb. Sidewalks shall be built according to the following dimensions:

1. Minor residential streets — four feet (4') wide.
2. Collector streets or neighborhood commercial streets — five feet (5') wide.
3. Other commercial streets — eight feet (8') wide.

To properly coordinate construction of all improvements on sites developed pursuant to the terms of this ordinance, the developer may post sufficient letter-of-credit, cash or other security in lieu of immediate construction of sidewalks to permit substantial completion of driveway curb cuts, and other related site improvements. The amount of such security shall be 150 percent of the estimated cost of the required sidewalk improvements incomplete at the time of final plat consideration. The letter-of-credit, certified check or certificate of deposit shall be subject to the condition that the outstanding sidewalk improvements shall be completed within three years after approval.

B. *Traffic signs, signals and striping.*

The developer and any other person or entity required to erect and/or erecting any traffic signs and/or signals within the city shall erect and place such traffic signs and/or signals as required by the city and in accordance with the MUTCD, latest edition. Stop signs and street name signs shall be placed on posts and frames designated by the city. Traffic signals shall be placed on single or double mast arms. Strain type installation is not permitted. All traffic signals shall be equipped with LED lens and an optical emergency vehicle priority control system. Said emergency vehicle priority control system shall be compatible with existing city emitters. Stop bars shall be required when deemed necessary by the city and any such striping shall comply with requirements of the MUTCD, latest edition.

C. *Street lights.*

A plan for street lighting shall be submitted by the developer to the city in advance of installation of same. The street light plan shall reflect recommendations of the appropriate utility company providing electrical power service to the development and shall be coordinated with other utilities in the development to ensure avoidance of conflicts. Street lights shall be erected no less than 300 feet apart, beginning at the entrance.

The foregoing requirements shall be completed prior to acceptance of the final plat by the mayor and board of aldermen as verified and recommended by the director of planning and development.

D. *Erosion control.* Erosion control means and methods meeting MDEQ requirements shall be required in all types of construction including residential construction. Methods of erosion control shall be as set forth in the Stormwater Pollution Prevention Ordinance and approved by the public works director or the director of planning and development prior to site preparation.

SECTION 10 – WARRANTY OF WORK

Prior to final acceptance by the City of Pearl of the dedicated utilities and streets, the owner/developer must provide a notarized warranty statement on forms furnished by the city for all work performed. The warranty defined herein will begin on the date the final surface course is accepted in writing by the director of planning and development. Prior to the end of the warranty period, an inspection will be performed by the owner, city and city engineer to identify any deficiencies requiring correction under the warranty. All deficiencies so identified must be corrected within 30 days of the initial inspection after which a follow-up inspection will be performed by the owner and director of planning and development. Failure by the owner to correct all noted deficiencies within 30 days of the initial inspection by the city will result in extension of the owner's warranty until such time as all deficiencies are corrected in a manner satisfactory to the city. The warranty period shall be for a period of 12 months.

At the end of the warranty period, the developer shall have his engineer survey and verify the capacity of the detention/retention pond and that it is in compliance with the design specifications. Any deficiencies shall be corrected prior to the release of the detention/retention pond to the HOA, and prior to the acceptance of the work and release of the warranty by the City of Pearl

ARTICLE 8 - FINAL PLAT, DATA AND CERTIFICATES

SECTION 1 - DATA FOR FINAL PLAT

The final plat shall substantially conform to the approved preliminary plat. If desired by the subdivider, the final plat may constitute only that portion of the approved preliminary plat which he proposes to record and develop at the time provided, however, that such portion conforms to all requirements of this Development Ordinance.

In every case, the final plat shall be drawn with black India ink on sheets of double weight mural mounted on chartex paper, eighteen inches by twenty—four inches (18" x 24") in size.

The final plat shall be clearly and legibly drawn at a minimum scale of one inch equals two hundred feet (1" = 200'). When more than one (1) sheet is required, an index sheet of the same size shall be filled as a key showing the entire subdivision.

The final plat shall be prepared to contain the following information as required by the Statutes of Mississippi relating to subdivision plats which include but are not limited to:

1. A full and detailed metes and bounds description of the land embraced in the map or plat, showing the township and range in which such land is situated, the sections and parts of sections platted and in the letters the fact that such land is a subdivision locate in the City of Pearl.
2. Title, correct graphic scale, cardinal points of the compass with true north shown.
3. The name(s) of the owner(s), the licensed engineer(s), the surveyor(s), or the person making the plat.
4. The signatures of the owner(s), licensed engineer(s) and surveyor(s) which shall be acknowledged as deeds are acknowledged.
5. The section and parts of sections platted designated lines drawn upon the final plat with appropriate letters and figures.
6. The point of beginning of the survey to which all dimensions, angles, bearings, and similar data on the plat shall be referred.
7. Monuments, tract boundary lines, names and width of each street or other right of way, easements and property lines of residential lots and other sites. Sufficient data, including accurate dimensions, bearings, deflection angles, and radii, arcs and central angle of all curves to determine readily and reproduce on the ground any line on the plat.
8. All the lots intended for sale may be numbered either by progressive numbers or, if in blocks, progressively numbered in each block and the blocks progressively numbered or lettered.
9. All adjacent streets and alleys and those parts of recorded subdivisions abutting them.

The following supplementary information shall be presented with the final plat:

The following supplementary information shall be presented with the final plat:

1. A statement that all required improvements have been completed; that the minimum standards approved by the Public Works Director/City Engineer have been complied with, freed and cleared of any encumbrance or lien.
2. A good quality reproducible of the "as—built" construction plans depicting the exact location of all required improvements as proposed on the approved construction plans.

„Such plans shall contain a certified statement by the Registered Professional Engineer employed by the subdivider attesting that a final field survey was conducted and that the "as—built" plans resulted from said survey and are true and correct to the best of the engineer's knowledge.

3. An agreement dedicating the required improvements to the City of Pearl, Mississippi.
4. Protective covenants for the subdivision in the form of recording, if any, for approval which must also be filed with the Chancery Clerk together with the final approved plat.
5. Street lighting plan including design, lumens, and locations to be provided from the City approved street lighting contractor. All street lighting provided in the development shall be the responsibility of the developer.
6. A transmittal letter by the developers Engineer stating that the “Name of Development” has been constructed to the City of Pearl Ordinances to the best of his knowledge.

SECTION 2 - CERTIFICATES FOR FINAL PLAT

The following Certificates shall appear on the final plat:

ENGINEER'S OR SURVEYOR'S CERTIFICATE

STATE OF MISSISSIPPI
COUNTY OF RANKIN

I, the undersigned engineer (or surveyor), do hereby certify that at the request of _____,
the owner, I have subdivided and platted the following described land being situated in Section_____,
Township_____, Range_____, City of Pearl, Rankin County, Mississippi, as follows, to wit:

(Insert herein legal description of subdivision boundary.)

Witness my signature on this the _____ day of 20_____

Engineer or Land Surveyor

Mississippi Registration Number

OWNER'S CERTIFICATE

STATE OF MISSISSIPPI
COUNTY OF RANKIN

I (We), the undersigned owner(s), do hereby certify that I (we) am/ are the owner(s) of the land described in the foregoing certificate of _____ engineer/ surveyor, and that I (we) have caused the same to be subdivided and platted as shown hereon, and have designated the same as (Name of subdivision), and in conjunction therewith hereby dedicate the roads, streets, rights-of-way, easements, sanitary sewer and water systems to the City of Pearl, Mississippi as shown hereon for public use forever.

Witness my (our) signature (s) on this the _____ day of _____

Owner (s)

CERTIFICATE OF ACKNOWLEDGMENT

STATE OF MISSISSIPPI
COUNTY OF RANKIN

Personally appeared before me, the undersigned officer in and for the jurisdiction aforesaid, the within named the owner(s), and engineer/ surveyor, each of whom _____ acknowledged to me that he _____ signed and delivered this plat and the certificate thereon as his own act and deed; on the day and year herein mentioned.

Given under my hand and official seal of office on this the _____ day of _____.

Notary Public

My Commission expires:

OF CITY'S APPROVAL_____

STATE OF MISSISSIPPI
COUNTY OF RANKIN
CITY OF PEARL

I hereby certify that this plat was approved and accepted by the Mayor and Board of Aldermen in session on this the _____ day of _____

Mayor

City Clerk

CERTIFICATE OF FILING AND RECORDATION

I, _____, Clerk of the Chancery Court in and for said County and State, do hereby certify that the duplicate plat of

(Name of subdivision) was filed for record in my office on this the _____ day of _____ and was duly recorded in Plat Book _____ at Page _____ of the records of maps and plats of land of Rankin County.

Given under my hand and official seal of office on this the ___ day of _____, 20___.

Chancery Clerk

CERTIFICATE OF
COMPARISON

STATE
COUNTY OF RANKIN

OF

MISSISSIPPI

We, _____, Chancery Clerk and _____, engineer/surveyor, do hereby certify that we have carefully compared this plat of (Name of Subdivision) , with the original thereof, as made by the said engineer/surveyor and find it to be a true and correct copy of said map or plat.

Given under my hand and seal of office on this the _____ day of _____ / _____ / _____, 20_____.

_____ Chancery Clerk	_____ Engineer/Surveyor
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ARTICLE 9 - MISCELLANEOUS

SECTION 1 - ADMINISTRATION

The Pearl Planning Commission is hereby authorized and directed to assist the Mayor and Board of Aldermen in the administration and coordination of these regulations. Final approval of plats and other data shall be the responsibility of the Mayor and Board of Aldermen as prescribed by law. The Director of Public Works/City Engineer is hereby authorized and directed to assist the Mayor and Board of Aldermen in the enforcement of all provisions of these regulations.

SECTION 2 - VARIANCES

Whenever the tract to be subdivided or developed is of such unusual size or shape or is surrounded by such development or unusual conditions that the strict application of the requirements contained in these regulations would result in real difficulties and substantial hardships or injustices, the Mayor and Board of Aldermen may vary or modify such requirements so that the subdivider is allowed to develop his property in a reasonable manner acceptable to the city and consistent with the character of the surrounding area. At the same time, the public welfare and interests of the City are protected, and the general intent and spirit of this Ordinance and the comprehensive plan of the community is preserved.

In granting variances and modifications, the Mayor and Board of Aldermen may require such conditions which, in their judgment, are necessary to substantially secure the objectives of the standards or requirements so varied or modified.

SECTION 3 - FEES AND CHARGES

Filing fee. At the time of filing an application for preliminary plat approval, the developer shall pay to the city clerk a filing fee as stated in the City of Pearl fee schedule. No action of the board shall be valid until the fee has been paid to and accepted by the city clerk. This fee shall be charged on all plats, regardless of whether the plat is approved or disapproved.

Inspection fee. When improvements are completed an inspection shall be requested by the developer and a fee shall be paid to the city clerk as per the City of Pearl fee schedule for each approval inspection request. If the work is not approved, each subsequent inspection will require payment of an additional fee. A 24-hour notice is required for the following inspections:

1. Water/sewer tie in inspection.
2. Storm Drain Inspection
3. Proof roll inspection.
4. Final plat inspection.
5. Warranty inspection.

SECTION 4 - VIOLATIONS AND PENALTIES

Violation of any provision or provisions of this Subdivision Ordinance by any subdivider shall constitute a misdemeanor. Upon conviction of such violation, there shall be imposed a fine not exceeding Five Hundred dollars (\$500.00). Each day that such violation continues shall be a separate offense. In case a corporation is the violator of any provision of this Ordinance, each officer, agent and/or employee in any way responsible for such violation thereof shall be individually and severally liable for the penalties herein prescribed.

SECTION 5 - VALIDITY

If, for any reason any section, paragraph, subdivision, clause, phrase or provision of this Ordinance shall be held invalid, the remaining provisions of this or any ordinance of the City to which these rules and regulations relate shall not be affected.

SECTION 6 - AMENDMENTS

The Mayor and Board of Aldermen from time to time may adopt amendments which will tend to increase the effectiveness of these Development Regulations. The Development Regulations may be revised or amended by the Mayor and Board of Aldermen after giving adequate public notice as required by law and by conducting a public hearing.

SECTION 7 - APPEALS

An appeal from any action, decision, ruling, judgment or order of the Mayor and Board of Aldermen may be taken by any person or persons, jointly or severally, or any taxpayer, or any officer, department or board to the Circuit Court of Rankin County.

SECTION 8 - OMISSION PROVISION

The omission of any specific use, dimension, work, phrase or other provision from this Subdivision Ordinance shall not be interpreted as permitting any variation from the general meaning and intent of this Development Ordinance as commonly inferred or interpreted. Should occasion arise as to such intent or meaning, the interpretation of the Mayor and Board of Aldermen shall hold.

SECTION 9 - PROVISIONS SEPARABLE

Should any section or provision of this Development Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of this Subdivision Ordinance as a whole, or any part thereof, other than the part so held to be unconstitutional or invalid.

SECTION 10 - CLARITY PROVISION


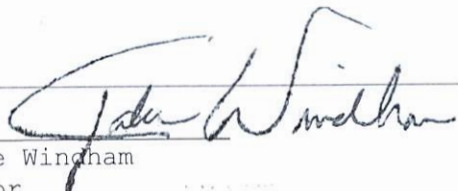
Before entering this Development Ordinance into the Minutes, the City Clerk is authorized to make any correction therein regarding spelling, punctuation and grammar in order to more clearly state the purpose thereof.

SECTION 11 - REPEAL OF CONFLICTING ORDINANCES

All ordinances or parts of ordinances of the City of Pearl, Mississippi in conflict herewith or inconsistent with the provisions of this Subdivision Ordinance are hereby repealed; provided however, that such repeal shall not affect or prevent the prosecution of any person for any act done or committed in violation of any such ordinances and parts thereof hereby repealed prior to the effective date of this Subdivision Ordinance.

SECTION 12 - EFFECTIVE DATE

This Subdivision Ordinance shall take effect and be in force thirty (30) calendar days from and after its adoption this 2nd day of July, 2025.

ATTEST:	
	
Kelly Scouten City Clerk	Jake Winham Mayor

