BALDWIN COUNTY, ALABAMA
JUDGE ADRIAN T. JOHNS
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ORDINANCE NO. 1008-07

ADOPTING THE CITY OF FOLEY, ALABAMA
MANUAL FOR DESIGN AND CONSTRUCTION STANDARDS

WHEREAS, the City deems it necessary for design and construction requirements, guidelines, details and standards for the design, development and construction relating to residential, commercial or industrial development within its jurisdiction.

BE IT ORDAINED that the Foley City Council as follows:

Section 1. Adopts the City of Foley, Alabama Manual for Design and Construction Standards as submitted by the Planning Commission and is made a part of this ordinance upon its adoption.

Section 2. "The terms and provisions of this ordinance are severable. If any part or portion of this ordinance is declared invalid, void, or unconstitutional, that portion shall be deemed severed, and the remaining portions of the ordinance shall remain in full force and effect."

Section 3. All ordinances or parts of ordinances, in any manner conflicting herewith are hereby repealed.

Section 4. This ordinance shall become effective upon its publication as required by law.

ADOPTED AND APPROVED this 1st day of October 2007.

CITY OF FOLEY CORPORATE SEAL FOLEY, ALABAMA

John E. Koniar, Mayor

ATTEST:

A. Perry Wilbourne, CMC
City Clerk/Administrator

"I certify that the foregoing Ordinance was published in the Foley Onlooker, a newspaper of general circulation in the City of Foley, in its issue of **Saturday, October 6, 2007"**.

A. Perry Wilbourne, CMC
City Administrator/Clerk

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City of Foley, Alabama

Manual for Design and Construction Standards

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Article One – General Provisions

1.1 Title

This manual shall hereafter be known, cited, and referred to as the City of Foley, Alabama Manual for Design and Construction Standards.

1.2 Scope of Manual

This manual covers design and construction requirements, guidelines, details, and standards for the design, development, and construction relating to residential, commercial, or industrial development within the jurisdiction of this manual, including public or private subdivision of property.

1.3 Jurisdiction

On and after October 8, 2007, this manual for design and construction standards shall apply to the design and development of improvements located within the Corporate Limits of the City of Foley and within the Planning Jurisdiction, unless a separate or subsequent agreement between the City of Foley and the Baldwin County Commission states otherwise.

1.4 Applicable References

The following references should be considered as a minimum standards manual. Whenever the provisions of this manual impose more restrictive standards than are required in or under any other ordinance, regulation, or applicable construction manual, the provisions herein contained prevail. Whenever the provisions of any other ordinance, regulation, or applicable construction manual are more restrictive standards than are required herein, the requirements of such prevail.

1.5 City of Foley, Alabama Subdivision Regulations

The Subdivision Regulations shall be used to govern public and private developments, to include the application and approval procedure, the minimum construction standards, and the guarantee for completion and associated bonds. The Manual for Design and Construction Standards shall function in conjunction with the Subdivision Regulations, the Erosion and Sediment Control Ordinance, the Tree and Natural Feature Preservation and Restoration Ordinance, the Flood Damage Prevention Ordinance for Non Coastal Communities and the Land Disturbance Ordinance.

1.6 Compliance with Applicable Regulations

The owner/developer shall be solely responsible to ensure compliance with all Local, State, and Federal rules, requirements, regulations, and guidelines for all design and construction related to developments. The absence of a reference to any applicable regulations in this manual does not relieve the owner/developer of his responsibility to conform to all applicable rules and regulations related to the type of development intended.

Article Two – Definitions

For the purpose of these regulations, certain numbers, abbreviations, terms and words used herein shall be used, interpreted and defined as set forth in this section. Unless the context clearly indicates to the contrary, words used in the present tense include the future tens; words used in the plural number include the singular number; the word "herein" means "in these regulations"; the word "regulations" means this "City of Foley, Alabama Manual for Design and Construction Standards." The term "shall" is always mandatory.

1. Abutting Property: Any property that is immediately adjacent to, touching or separated from such a common border by a right-of-way, alley or easement. This does not include land touching corner to corner for purposes of statutory annexation.

2. ADEM: The Alabama Department of Environmental Management.

3. ALDOT: The Alabama Department of Transportation.

4. Alley: A public right-of-way primarily designed to serve as a secondary access to the side or rear of properties whose principal frontage is on another street.

5. Arterial Street: A street that collects and distributes traffic to and from collector streets, connecting areas which produce large numbers of trip generations. An arterial functions to move traffic and to provide access to land uses, particularly high trip generating commercial activities.

6. As-Built Engineering Plan: A post-construction record giving details of construction and locations of improvements and utilities as they were built or installed.

7. Baseflood: The flood having a one (1) percent chance of being equaled or exceeded in any given year.

8. BMP: Best Management Practice(s) are measures or practices used to reduce the amount of pollution entering surface waters, air, land or ground waters. BMPs may take the form of a process, activity or physical structure. There are two main types of BMPs for construction sites, those that prevent erosion and those that capture sediment.

9. BMP Plan: Best Management Practices Plan means any research, planning considerations, systems, procedures, processes, activities and practices implemented for the prevention and/or minimization of pollutants in stormwater to the maximum extent practicable, and collection, storage, treatment, handling, transport, distribution, land application or disposal of construction stormwater and onsite management of construction waste generated by the construction activity, an to comply with the requirements of the City of Foley. The BMP Plan shall be prepared and certified by a qualified credentialed professional as detailed in the Erosion and Sediment Control Ordinance, unless approved by the Community Development Department. It is also known as an Erosion and Sediment Control Plan.

10. Buffer: An area of land recorded as common area of the Final Plat dedicated as area of preservation. A buffer physically separates and protects one area from human

disturbance or encroachment. Soil shall not be disturbed however vegetation may be managed by mowing, planting and trimming trees.

11. City: The City of Foley, Alabama.

12. City Council: The Foley City Council.

13. City Engineer: The duly designated engineer of the City of Foley for technical assistance on construction and engineering matters and assistance in the enforcement and administration of these regulations.

14. Collector Street: A collector street has the primary function of collecting traffic from local streets and moving it to the arterial street system while also providing substantial service to the abutting land use.

15. Common Area: An area of development shared by all owners and managed by either the subdivider/developer or a home owner's association. This area includes recreation facilities, stormwater management area, buffers and other landscaped areas.

16. Community Development Department: The City of Foley Community Development Department

17. Conservation Green Space: An open area with trees, shrubs, grass and other vegetation within a development. Areas may include but are not limited to side, rear and front yards, common areas and landscaped islands. This does not include stormwater management facilities. This land shall be designated as being permanently undeveloped and used for recreation, conservation or preservation.

18. County: Baldwin County, Alabama

19. Cul-de-sac: A minor street with only one outlet and having an appropriate terminal for the safe and convenient reversal of traffic movement.

20. Detention Basin: An artificial flow control structure that is used to contain flood water for a limited period of time.

21. Developer: The owner or his designated representative of land proposed to be subdivided. Consent shall be required from the legal owner of the premises.

22. Development: Includes but is not limited to the design work of lot layout and the construction of infrastructure and structures. Developments include subdivisions, multi-family, commercial, and industrial facilities.

23. Drainage Common Area: A common area for the collection and transport of stormwater, runoff and surface waters within a development. The area is shared by all owners and managed by either the subdivider/developer or a home owner's association.

24. Easement: A grant by a property owner for the use of land for a specified purpose or purposes by the general public or a corporation, or person; or as created by operation of law. (No title to real property is conveyed.)

25. Erosion and Sediment Control Plan: Also known as a BMP Plan. It includes research, planning considerations, systems, procedures, processes, activities and practices implemented for the prevention and/or minimization of pollutants in stormwater to the maximum extent practicable, and collection, storage, treatment, handling, transport, distribution, land application or disposal of construction

stormwater and onsite management of construction waste generated by the construction activity, an to comply with the requirements of the City of Foley. The Erosion and Sediment Control Plan shall be prepared and certified by a qualified credentialed professional as detailed in the Erosion and Sediment Control Ordinance, unless approved by the Community Development Department.

26. Expressway or Freeway: A divided multilane street designed for a high volume of through traffic which limits ingress and egress to controlled intervals. A freeway involves complete control of access and lacks grade crossing while an expressway permits access at grade intersections at infrequent intervals.

27. Final Plat: A plat or a tract of land which meets the requirements of these regulations and is in proper form for recording in the Office of the Probate Judge of Baldwin County, Alabama.

28. Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:

    a. the overflow of inland or tidal waters;
    b. the unusual and rapid accumulation of runoff of surface waters from any source.

29. Floodplain: Those areas defined by the United States Geological Survey or the United States Army Corps of Engineers as subject to flooding once in 100 years, based on topography.

30. Floodway: The channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface more than one foot. For the purpose of these regulations, floodways shall be defined as follows:

    a. The floodways as identified or delineated in the Flood Insurance Study for Baldwin County, Alabama.
    b. Along small streams and watercourses, all lands lying within 25 feet of the top of the bank of the channel (measured horizontally), unless the developer demonstrates to the satisfaction of the Planning Commission that a lesser distance (but not less than 15 feet) is adequate based on the watershed characteristics and probable storm runoff for the base flood.

31. Grady Pond Wetland: An artificial pond created by excavating and/or diking dry land to collect and retain water and which are used presently or in the past exclusively for such purposes as stock watering, irrigation or settling basins. These areas are typically non jurisdictional wetlands but the soils have poor percolation rates.

32. Impervious Surfaces: Surfaces that prohibit the movement of water from the land surface into the underlying soils. Examples include buildings, asphalt and concrete.

33. Jurisdictional Wetland: A wetland area that meets the definitional requirements for wetlands to include the hydrology, hydric soil types and wetland vegetation as determined by the U. S. Army Corps of Engineers, 1987 Federal Wetland Delineation Manual.

34. Local Street: A local street is one whose primary function is to service abutting land use and to discourage through traffic. This includes cul-de-sacs, marginal access streets and residential access streets.

35. Lot: A tract, plot or portion of a subdivision intended as a unit for the purpose, whether immediate or future, of transfer of ownership, lease or rental, or for building development and has its principal frontage on a public street.

36. Maintenance Common Area: A common area for the access to stormwater management facilities and other common areas requiring maintenance within a development. The area is shared by all owners and managed by either the subdivider/developer or a home owner's association.

37. Marginal Access Street: A street that is parallel with and adjacent to an arterial street and which provides access to abutting properties.

38. Owner: Any person, group of persons, firm or firms, corporation or corporations or any other legal entity having legal title to or sufficient proprietary interest in the land sought to be subdivided under these regulations.

39. Pervious Surfaces: Surfaces that allow water to enter or percolate slowly into the earth.

40. Planning Commission: The City of Foley Planning Commission.

41. Preliminary Plat: A tentative plan of the complete proposed subdivision submitted to the City Planning Commission for its consideration.

42. Public Drainage System: Areas owned by the City of Foley, Baldwin County, or the State of Alabama which convey stormwater runoff into waterways. These areas include but are not limited to drainage ditches, channels and watercourses.

43. Retention Basin: Also known as a stormwater pond. An area used to contain stormwater and runoff from the drainage area.

44. Riparian Buffer Zone: An area of trees, usually accompanied by shrubs and other vegetation, along a stream, river or shoreline that is managed to maintain the integrity of the waterway, to reduce pollution and to provide food, habitat and thermal protection for fish and wildlife.

45. State: The state of Alabama.

46. Stormwater Facility Maintenance Agreement: A formal agreement between the Owner and the City that includes the owner's responsibilities concerning maintenance of the stormwater management facilities. The agreement is a covenant running with the land and is binding to the owner and any successors including homeowner's associations.

47. Stormwater Management: The process of ensuring that the magnitude and frequency of stormwater runoff do not increase the hazards associated with flooding and that water quality is not compromised by untreated stormwater flow.

48. Stormwater Ponds: Also known as a retention basin. An area used to contain stormwater and runoff from the drainage area.

49. Streets: The full right-of-way of a thoroughfare which affords the principal means of access to abutting property.

50. Subdivider: Any person who having an interest in land, cause it, directly or indirectly, to be divided into a subdivision or who directly or indirectly, sells, leases, or develops, or offers to sell, lease, or develop, or advertises for sale, lease,

or development, any interest in one or more lots, parcels, sites, units or plats in a subdivision.

51. Subdivision: The development and division of a lot, tract or parcel of land into two or more lots, plats, sites or otherwise for the purpose of establishing or creating a subdivision through the sale, lease or building development. Development includes, but is not limited to, the design work of lot layout, the construction of drainage structures, the construction of buildings or public use areas, the planning and construction of public streets and public roads, and the placement of public utilities. A subdivision does not include the construction or development of roads or buildings on private property to be used for agricultural purposes.

52. Temporary BMPs: Temporary best management practices are designed to remain effective for a relatively short duration of time, usually only until the construction site is complete and permanent BMPs have been established. Temporary BMPs are only effective if they are installed correctly and maintained. These include but are not limited to silt fences, hay bales and mulch.

53. Utility Easement: A grant by a property owner for the use of land for utilities installation and maintenance. The easement shall be recorded on the Final Plat. (No title to real property is conveyed.)

54. Watercourse: Any depression serving to give direction to a flow of water, having a bed and well-defined banks and which shall, upon the rule or order of the Planning Commission also include other generally or specifically designated areas where flooding may occur. The flow of water need not be on a continuous basis, but may be intermittent, resulting from the surface runoff of precipitation.

55. Watershed: The geographic area of land that drains water, sediment and dissolved materials to a shared destination.

56. Waterway: Any body of water over which boats may travel.

57. Wetland: Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions as delineated by the U.S. Army Corps of Engineers. Wetlands include swamps, marshes, bogs, grady ponds, and other similar areas.

Article Three – General Design Standards

3.1 Street Names

A street name shall be assigned to any street, whether public or private, which provides vehicular access to two or more parcels.

Street names shall be sufficiently different in sound and in spelling from other street names in the City. Street names shall be approved by Emergency 911 and the City of Foley. The letter approving the street names shall be submitted with the Preliminary Plat application for Planning Commission. Proposed streets in alignment with existing named streets shall bear the names of existing streets.

3.2 Land Disturbance and Buffers in Water Sensitive Areas

3.2.1 Wetlands

A parcel of land to be subdivided that contains delineated jurisdictional wetlands shall be subject to State and Federal regulations concerning fill material disposal into said wetlands. Lots shall only be platted where sufficient upland areas exist to provide a building site for the principal structure and necessary ancillary facilities. Lots that are 1 acre and less shall not be created that contain greater than 10% jurisdictional wetlands. Lots that are greater than 1 acre shall not be created that contain greater than 25% jurisdictional wetlands. Fill may be used only where necessary to provide access to lots where approval for such fill has been received from the Army Corps of Engineers and the Alabama Department of Environmental Management. All permits and certifications for wetland fill shall be submitted to the Community Development Department prior to initiation of the fill.

All jurisdictional wetlands as acknowledged by the Army Corps of Engineers shall remain in an undisturbed natural state and shall have a minimum buffer width of thirty (30) feet.

3.2.2 Floodplains and Floodways

Areas subject to periodic flooding caused by poor drainage facilities will not be accepted unless the developer/owner makes necessary provisions to eliminate such flooding in conformity with the National Flood Insurance Program. Construction within flood hazard areas shall refer to the Flood Damage Prevention Ordinance for Non Coastal Communities for specific details.

Land within a floodway shall not be platted for residential occupancy or building sites. Land within a floodplain may be platted for residential occupancy provided each lot contains a building site that may reasonably lend itself to construction of a minimum floor level of one foot above base flood elevation, or for such other uses which will not increase the danger to health, life, and property. Fill may not be used to raise land in the floodway. Fill may not be used to raise land in areas subject to flood and/or experience excessive erosion, unless the fill proposed does not restrict the natural flow of water, advance erosion, unduly increase flood heights or unnaturally redirect stormwater to adjacent properties.

3.2.3 Waterways and Watercourses

Any existing watercourses or waterways shall be maintained at all property boundaries. If land being subdivided contains a waterway, or portion thereof, the responsibility for safe maintenance of the waterway shall be such that it will not become a City responsibility.

No activity shall be permitted in close proximity to a natural watercourse or waterway unless a buffer zone is provided along the boundary to prevent construction activities from affecting the natural characteristics of the waterway or watercourse. All named waterways shall remain in an undisturbed natural state and shall have a minimum buffer width of fifty (50) feet from each bank.

Activity in connection with construction in, on, over, or under a natural watercourse or waterway shall be planned and conducted in such a manner as to minimize the extent and duration of disturbance of the watercourse or waterway.

The relocation of a waterway, where relocation is an essential part of the proposed activity, shall be planned and executed so as to minimize changes in the water flow characteristics, except when justification for significant alteration to flow characteristic is provided.

Relocation and/or activity within a waterway shall require submittal to the Community Development Department of appropriate permits as required by the Army Corps of Engineers, ADEM, Alabama Department of Conservation and Natural Resources and any other governmental agencies.

3.3 Sanitary Sewer Design Standards

The Riviera Utilities Design Standards, current edition, shall apply to all sanitary sewer design within the City of Foley Corporate Limits. Subdivisions within the Planning Jurisdiction of the City of Foley shall also comply with the Riviera Utilities Design Standards, current edition. A gravity fed sewer system shall be required unless a temporary grinder pump system is specifically approved by the City Engineer. Coordination with the utility shall be the responsibility of the Developer.

3.4 Conservation Green Space

Developments shall be designed acknowledging the existing natural conditions. Adverse environmental impacts shall be minimized in the design. All developments shall have a minimum of ten (10) percent landscaped areas and/or green space, exclusive of stormwater management areas and jurisdictional wetlands, upon completion.

Article Four – Stormwater Drainage Design and Construction Standards

4.1 – Erosion and Sediment Control

Developments shall adhere to the Erosion and Sediment Control Ordinance (Appendix 1) for the design of the Erosion and Sediment Control Plan and the implementation, maintenance and inspection of adequate, effective Best Management Practices for the control of erosion and sedimentation.

4.2 – Drainage and Grading Plan

A drainage and grading plan, prepared and certified by a Professional Engineer licensed in the State of Alabama, shall be submitted to the City of Foley prior to the issuance of a Land Disturbance Permit. The plan shall include the following information as a minimum:

- Map Information
  - Existing and proposed contours in 1 foot increments;
  - Locations of roads, parking areas and building footprints along with their proposed finished floor elevations;
  - Flood Zone Designation;
  - Elevation of the regulatory lowest floor level, including basement, of all proposed structures;
  - Elevation to which any non residential structures will be flood proofed;
  - Drainage basin boundaries, showing direction of flow and including total tributary drainage areas entering the improved area and taking into account any off site runoff being routed through or around the project in its undeveloped condition;
  - Size, location, slopes, inverts, types and general configuration of all primary drainage facilities required to route, collect, treat and dispose of stormwater runoff, generated by or passing through the development;
  - Location of on site water bodies and wetlands with details of size and vegetative cover to include normal water elevation, side slopes, and depths of water bodies and for wetlands, the general surface elevation and the wet season water elevation
- Narrative
  - Proposed project including its size, percent pervious versus impervious land usage, total wetlands within site boundaries, and a breakdown of wetland acreage preserved, by type, and acreage removed, by type

- ❑ All acres solely for water management purposes shall be noted and the legal method to ensure areas remain devoted
- ❑ Times of concentration, intensity, runoff coefficients used for determining runoff for all tributary areas and areas within the development at pre and post construction rates
- ❑ Discharge volume in cubic feet per second (cfs), discharge velocity, and any additional hydraulic data needed to establish that the drainage system will convey the flow to an adequate outlet
- ❑ Proposed start up and completion date for the project
- ❑ Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development, if applicable

❑ Supplemental Information

- ❑ Design storms used including depth, duration, and distribution
- ❑ Stage storage calculations for the project and stage discharge computations for the outfall structure(s)
- ❑ Runoff routing calculations showing discharges, elevations and volumes retained/detained during applicable storm events
- ❑ Draw down calculations for detention
- ❑ Base flood elevation data for all proposed developments greater than 50 lots or 5 acres, whichever is less; if not established refer to the Flood Damage Prevention Ordinance No. 643-00 Article 4, Section C for requirements
- ❑ Calculations required for determination of minimum building floor and road elevations
- ❑ Calculations for flood plain encroachment, if applicable
- ❑ Acreages in the following format:

	Existing (acres/%)	Proposed (acres/%)
Total Area	_____	_____
Impervious	_____	_____
Building	_____	_____
Pavement	_____	_____
Pervious	_____	_____
Wetlands	_____	_____

- ❑ Plans shall be signed and sealed by a professional engineer with a current license to practice in the State of Alabama

The Planning Commission may require additional engineering information as it deems necessary to make a decision on difficult drainage areas.

Stormwater drainage plans shall be designed prior to other utilities with sanitary sewer developed subsequently. Off site drainage easements or improvements may be required to handle run off from new developments into a natural drainage channel. Any off site drainage or utility requirements must be clearly shown on the plans submitted to the City of Foley. When a proposed new drainage system will divert water into an unnatural water system or on private land adjacent to the development, appropriate drainage rights shall be secured by the applicant/owner and indicated on the plat.

The Planning Commission may require enhancement of a drainage feature proportional to volume and velocity of discharge water if said discharge water will have an adverse impact on the drainage feature.

Upon development completion, As-Builts shall be submitted to the City of Foley from the Design Engineer of record certifying all drainage facilities have been installed in accordance with approved plans. A final inspection shall be scheduled and performed by the City Engineer prior to Final Plat or Certificate of Occupancy application.

4.3 – Design and Construction of Stormwater Management Areas

4.3.1 – General Design Criteria

The method of determining storm water runoff shall be based on an acceptable engineering practice and/or standard. Design of stormwater drainage facilities shall include calculation of a runoff coefficient by measuring the total area of each drainage basin and the areas of each land use which will occur in the basin after construction is complete. These areas shall include off site drainage onto the site as well as the development area. Grady pond wetlands shall not be designed as stormwater management facilities unless the existing and proposed runoff volume is accounted for in the storage calculations.

4.3.2 – Functional Design of Stormwater Drainage Systems

The drainage system shall at a minimum accommodate flows from at least a 25 year frequency design storm.

All roadway cross drain and side drain pipe shall be the equivalent of the minimum size of fifteen (15) inches in diameter. All piping shall be reinforced concrete, HDPE, or approved equal, provided that installation is in accordance with the manufacturer's recommendations. Only reinforced concrete shall be used in State or County rights-of-way. The minimum cover for drainage pipes under pavement shall be according to the pipe manufacturer specifications.

Roadway cross-drains for all local and collector streets shall be designed for a 25-year frequency storm, providing that the roadway is not overtopped by the 100-year frequency storm and that no structures are flooded by the 100-year frequency storm.

Roadway cross-drains for arterial streets or higher street classification shall be designed for a 50-year frequency storm, providing that the

roadway is not overtopped by the 100-year frequency storm and that no structures are flooded by the 100-year frequency storm.

All bridges, structures or embankments in floodways shall be designed to pass a 100-year frequency storm without raising the existing 100-year flood profile.

If the contributing drainage area is 200 acres and greater, the 100-year design storm shall also be computed and analyzed. The 100-year design storm must be contained within a drainage common area or public right-of-way for drainage areas at 200 acres or greater.

Minimum design velocities for storm drainage systems shall be at least 3 feet per second to ensure that the system has some capability for self-cleaning.

The minimum internal diameter of manholes or junction boxes shall be 48 inches.

4.3.3 – Design of Open Channels

Storm drain piping shall be used where practicable. Where storm drain piping is not feasible, open ditches or swales may be used as long as they are concrete paved or permanently vegetated based on site conditions.

A maximum of 3 to 1 side slopes and flat bottom ditch is required, unless the approval is received by the City Engineer for a variation. Calculations shall show the volume and velocity for each separate ditch section. Ditch lining shall be based on the ditch calculations. Where two open channels converge, some form of energy dissipater, such as riprap, shall be provided.

Where proposed lots gain access across an existing or a proposed ditch, calculations shall be submitted that shows the required size of future driveway culverts. These culvert sizes shall be shown on the Final Plat.

Headwalls and endwalls shall be installed on all street culverts with the use of flared headwalls or slope paved headwalls (4:1 slope or flatter) used within any public right-of-way.

The applicant/owner shall be required to carry away by pipe or open ditch any spring or surface water that may exist either previously to, or as a result of, the development. Such drainage facilities shall be located in the road right-of-way where feasible, or in common areas of appropriate width, 15 foot minimum.

4.3.4 – Design of Curb and Gutter and Inlets

For curb and gutter application on proposed roadways, inlets shall be spaced such that flow from a 25 year design storm does not result in ponding water covering more than ½ the width of the outermost traveling lane.

Curb inlets shall be designed so that surface water shall not be carried across any roadways nor for a distance of more than five hundred (500) feet in the gutter or valley. Inlets shall be placed located at uphill corners of each street intersection to prevent sheet flow of stormwater.

In addition, double-wing inlets shall be placed at all vertical sags in the roadway.

4.3.5 – Analysis of Downstream System

Stormwater discharges from a developed site must be routed to an existing natural or man made stormwater channel with adequate capacity. Calculations must be submitted that show the capacity of the receiving stormwater channel to handle the 2-year and 10-year design storms. The routing calculations must extend at least as far as the second downstream street crossing or to a named water body. Routing calculations must extend even further downstream, if the City Engineer has reasonable concern about the capacity of a downstream stormwater channel based on scientific or engineering evidence.

The first reasoning for analysis of the downstream system is to ensure known flooding problems are not exacerbated. The immediate downstream receiving channel, if it currently has adequate capacity, will continue to be adequate. However, if the stormwater detention basin causes a longer duration peak or near peak flows, then flooding could occur in locations where it did not occur before.

The second reasoning for analysis of the downstream system is to determine any backwater effects on the detention outlet structure and embankment. The design engineer typically assumes inlet control conditions for the detention basin control structure, which must be verified to ensure that the detention basin operates as designed.

Analysis of the downstream system will usually include flow capacity and velocity for existing and proposed flow conditions, using Manning's equation at a minimum.

4.3.6 – Detention Design and Construction

The purpose of detention structures is to slow or attenuate the peak flows downstream by controlling the release rate. The post development peak outflow rate is limited to the pre development peak outflow rate as the basis of detention design. However, the post development condition is likely to discharge at or near the peak outflow rate for a few hours. It should be noted that the conglomerate effect of dozens of detention basins in a watershed may or may not reduce peak flows at a downstream location.

All site development projects requiring a Land Disturbance Permit shall incorporate stormwater detention and first flush treatment as part of the design. Stormwater detention is not required in the following two situations:

- The project discharges stormwater runoff directly into a tidally influenced water body. This does not include discharges of stormwater runoff that flows through a public drainage system or across a downstream property boundary.
- Stormwater detention for a project site is either unwarranted or impractical. The design engineer shall submit complete hydrologic and hydraulic computations to support this conclusion. This conclusion must be

affirmed by the City Engineer. Typically this might occur in the very lowest downstream reaches of a major watershed, if it can be proved that undetained stormwater should be discharged quickly to avoid peak discharge timing for the entire watershed. The hydrologic analysis should include more than one representative downstream location for comparing hydrographs.

Even if stormwater detention is waived for the above two situations, the site development must still provide first flush treatment in order to protect water quality.

The detention basin shall detain the first 1 inch of runoff (Rational Method) from a storm event and release the subsequent runoff water at a predevelopment rate. There should also be adequate sizing of the detention basin to store an accumulation of ½" sediment during construction. The first flush volume for any stormwater detention structure must be contained and then slowly released over a minimum time period of 24 hours and maximum time period of 72 hours.

All stormwater detention structures must attenuate the post development peak flow rates from the 2 year, 5 year, 10 year, 25 year, 50 year and 100 year 24 hour design storms to release a graduated discharge at or below pre development peak flow rates.

Outfalls of detention areas shall be installed at least 25 feet from any property line to allow velocity dissipaters to be installed if necessary for the prevention of off site erosion. Exceptions may be approved by the Planning Commission for outfalls to approved drainage features such as an encased storm sewer system.

4.3.7 – Dry Detention Basins

Dry detention basins are surface facilities intended to provide for the temporary storage of stormwater runoff to reduce downstream water quantity impacts. These facilities temporarily detain stormwater runoff, releasing the flow over a period of time. They are designed to completely drain following a storm event and are normally dry between rain events.

Dry detention basins provide limited pollutant removal benefits and are not intended for water quality treatment. Detention-only facilities must be used in a treatment process with other structural controls that provide treatment of the stormwater.

The maximum contributing drainage area to be served by a single dry detention basin is 75 acres. Routing calculations must be used to demonstrate that the storage volume is adequate.

Vegetated embankments shall be less than 20 feet in height and shall have no side slopes steeper than 3:1. Riprap protected embankments shall be no steeper than 2:1. Geotechnical slope stability analysis is required for embankments greater than 10 feet in height. The maximum depth of the basin should not exceed 10 feet. The detention basin shall be setback such that the outward toe of the berm is a minimum of 25 feet from the property line.

Areas above the normal high water elevations of the detention facility should be sloped toward the basin to allow drainage and to prevent standing water. A low flow or pilot channel across the facility bottom from the inlet to the outlet is recommended to convey low flows and prevent standing water.

Inflow channels are to be stabilized with flared riprap aprons, or the equivalent. A sediment forebay sized to 0.1 inches per impervious acre of contributing drainage shall be provided for dry detention basins that are part of the treatment process.

The outlet structure shall be sized based on hydrologic routing calculations and can consist of a weir, orifice, outlet pipe, combination outlet, or other acceptable control structure that achieves the required graduated discharge.

Riprap, plunge pools or pads, or other energy dissipaters are to be placed at the end of the outlet to prevent scouring and erosion.

An emergency spillway is to be included in the stormwater pond design to safely pass the extreme flood flow. The spillway prevents pond water levels from overtopping the embankment and causing structural damage. A minimum of 1 foot of freeboard must be provided, measured from the top of the water surface elevation for the extreme flood, to the lowest point of the dam embankment not counting the emergency spillway.

4.3.8 – Stormwater Ponds

Stormwater ponds (also known as wet ponds and retention ponds) are constructed stormwater retention basins that have a permanent pool of water throughout the year. Runoff from each rain event is detained and treated in the pool through gravitational settling and biological uptake until it is displaced by runoff from the next storm. The permanent pool also serves to protect deposited sediments from resuspension. Above the permanent pool level, additional temporary storage is provided for runoff quantity control. The upper stages of a stormwater pond are designed to provide extended detention of the 1 year storm for downstream channel protection, as well as normal detention of larger storm events.

Stormwater ponds are among the most cost effective and widely used stormwater practices. A well designed and landscaped pond can be an aesthetic feature on a development site when planned and located properly.

Stormwater ponds treat incoming runoff by physical, biological, and chemical processes. The primary removal mechanism is gravitational settling of particulates, organic matter, metals, bacteria and organics. Another mechanism for pollutant removal is uptake (particularly nutrients) by algae and wetland plants in the permanent pool. Volatilization and chemical activity also work to break down and eliminate stormwater contaminants such as hydrocarbons.

Channel protection can be achieved by releasing the 1 year, 24 hour storm runoff volume over 24 hours. A stormwater pond shall also provide the required storage above the permanent pool and meet the specified graduated allowable release. In situations where it is required,

stormwater ponds shall also be used to provide detention to control the 100 year storm event. Where this is not required, the pond structure shall be designed to safely pass extreme storm flows.

On average pollutants can be reduced by stormwater ponds.

- Total Suspended Solids – 80%
- Total Phosphorus - 50%
- Total Nitrogen – 30%
- Fecal Coliform – 70% (if no resident waterfowl)
- Heavy Metals – 50%

Underlying soils of hydrologic group "C" or "D" should be adequate to maintain a permanent pool. Most group "A" soils and some group "B" soils will require a pond liner. Evaluation of soils should be based upon an actual subsurface analysis and permeability tests.

Minimum setback requirements for stormwater pond facilities:

- 10 feet from property line to outward toe of berm
- 100 feet from private wells
- 50 feet from a septic system tank/leach field

The well designed stormwater pond consists of a permanent pool of water, overlying zone in which runoff control volumes are stored, and a shallow littoral zone along the edge of the permanent pool that acts as a biological filter. All stormwater pond designs shall include a sediment forebay at the inflow to the basin to allow heavier sediments to drop out of suspension before the runoff enters the permanent pool. Additional pond design features include an emergency spillway, maintenance access, safety bench, pond buffer and appropriate native landscaping.

Proper geometric design is essential to prevent hydraulic short-circuiting which results in failure of the pond to achieve adequate levels of pollutant removal. The minimum length-to-width ratio for the permanent pool shape is 1.5:1, and should ideally be greater than 3:1 to avoid short-circuiting. In addition ponds should be wedge-shaped when possible so that flow enters the pond and gradually spreads out, improving the sedimentation process. Baffles, pond shaping or islands can be added within the permanent pool to increase the flow path.

Maximum depth of the permanent pool should generally not exceed 8 feet to avoid stratification and anoxic conditions. Minimum depth for the pond bottom should be 4 feet. Deeper depths near the outlet will yield cooler bottom water discharges that may mitigate downstream thermal effects.

Side slopes to the pond shall not exceed 3:1 without safety precautions or if mowing is anticipated and should terminate on a safety bench. The safety bench requirement may be waived if slopes are 4:1 or gentler.

The perimeter of all deep pool areas should be surrounded by two benches: safety and aquatic. For larger ponds, a safety bench extends approximately 15 feet outward from the normal water edge to the toe of the pond side slope. The maximum slope of the safety bench should be 6%. An aquatic bench extends inward from the normal pool edge (15 feet on average) and has a maximum depth of 18 inches below the normal pool water surface elevation.

The sediment forebay should consist of a separate cell, formed by an acceptable barrier. The forebay is sized to contain 0.1 inches per impervious acre of contributing drainage and should be 4 to 6 feet deep. A fixed vertical sediment depth marker shall be installed in the forebay to measure sediment deposition over time. The bottom of the forebay may be hardened to make sediment removal easier. Inflow channels are to be stabilized with flared riprap aprons, or the equivalent. Inlet pipes to the pond can be partially submerged. Exit velocities from the forebay must be non erosive.

Flow control from a stormwater pond is typically accomplished with the use of a concrete or corrugated metal riser and barrel. The riser is a vertical pipe or inlet structure that is attached to the base of the pond with a watertight connection. The outlet barrel is a horizontal pipe attached to the riser that conveys flow under the embankment. The riser should be located within the maintenance access, safety and aesthetics. Higher flows pass through openings or slots protected by trash racks further up on the riser. After entering the riser, flow is conveyed through the barrel and is discharged downstream. Anti-seep collars should be installed on the outlet barrel to reduce the potential for pipe failure.

Riprap, plunge pools or pads, or other energy dissipaters are to be placed at the outlet of the barrel to prevent scouring and erosion. If a pond daylights to a channel with dry weather flow, care should be taken to minimize tree clearing along the downstream channel, and to reestablish a forested riparian zone in the shortest possible distance.

An emergency spillway is to be included in the stormwater pond design to safely pass the extreme flood flow. The spillway prevents pond water levels from overtopping the embankment and causing structural damage. The emergency spillway must be located so that downstream structures will not be impacted by spillway discharges. A minimum of 1 foot of freeboard must be provided, measured from the top of the water surface elevation for the extreme flood to the lowest point of the dam embankment, not counting the emergency spillway.

A maintenance right-of-way must be provided to a pond from a public or private road. Maintenance access should be at least 15 feet wide, having a maximum slope of no more than 15% and be appropriately stabilized to withstand maintenance equipment and vehicles. The maintenance access must extend to the forebay, safety bench, riser, and outlet and, to the extent feasible, be designed to allow vehicles to turn around.

The principal spillway opening should not permit access by small children, and endwalls above pipe outfalls greater than 48 inches in diameter should be fenced to prevent access. Warning signs should be posted near the pond to prohibit swimming and fishing in the facility.

Fish such as Gambusia can be stocked in a stormwater pond to aid in mosquito prevention. A fountain or solar-powered aerator may be used for oxygenation of water in the permanent pool.

4.4 - Operation and Maintenance of Stormwater Facilities

Stormwater management areas will be accepted for maintenance by the City of Foley only if sufficient land is dedicated as a public recreation area with

adequate improved right-of-way, or if such area constitutes a necessary part of the City's drainage control system.

Any liability associated with the design, performance and operation of the facility remains with the owner and the owner's engineer.

Operation and maintenance of the detention facility is the responsibility of the property owner. The owner's engineer shall be responsible for instructing the owner in the proper operation and maintenance of the facility. Prior to Final Plat approval by the Planning Commission a completed Stormwater Facility Maintenance Agreement (Appendix 2) shall be submitted to the City for future maintenance responsibility.

Annual inspections shall be conducted by the City of stormwater management areas and outfalls within the City of Foley. These inspections shall note the condition of the detention/retention basin and outfall integrity, maintenance, erosion, or sedimentation. Entry to the stormwater facilities shall be granted by the owner, developer, or property owners association. Deficiencies of the stormwater facilities will be communicated to the owner, developer, or property owners association and those deficiencies shall be corrected within fourteen days or as practicable as conditions may allow.

4.5 – Drainage and Maintenance Common Areas

Drainage and maintenance common areas shall be recorded on the plats for all stormwater management facilities.

4.5.1 - Maintenance Common Areas

All stormwater management areas with the exception of parking lots shall be included as part of the common area of the development. The limits of the common area shall extend ten (10) feet beyond the maximum anticipated ponding area for a base flood event.

4.5.2 – Drainage Common Areas

Drainage common areas with a minimum width of fifteen (15) feet shall be provided within the stormwater management area connecting the tributary pipes and the discharge system along the most suitable routing for elimination of the stormwater. Also drainage common areas shall be required for areas traversed by an existing waterway and may be required for areas traversed by an existing watercourse. The drainage common area, if required by the City Engineer, shall be on both sides of the existing waterway or watercourse to a distance that is adequate to discharge flood waters without cumulatively increasing the water surface elevation of more than one foot.

Article Five – Road Design Standards

5.1 – General Requirements

The arrangement, character, extent, location and grade of all streets shall conform, when reasonable, to an acceptable plan and shall be integrated with all existing and planned streets. All lots must front on an improved public or private right-of-way. Developments shall propose streets that discourage through traffic. The number of streets converging upon any one point which would tend to promote congestion shall be held to a minimum.

If deemed appropriate by the Planning Commission, streets may be extended by dedication to the boundary of the adjoining property. A temporary turn around, as defined in design standards for street cul-de-sac, shall be provided.

The Planning Commission shall determine the classification of City streets.

5.2 – Minimum Design Requirements for Roadway Construction

All new roadways, public or private, shall be constructed by the subdivider/developer at his cost and centered on the centerline of a 60' wide right-of-way. It shall be the responsibility of the design or geotechnical engineer to certify that the road buildup accommodates the site specific conditions. All new public and private roadways shall be asphalt paved, at a minimum, to the guidelines of the City of Foley, Alabama, which include, but are not limited to, the following requirements:

a) Alabama Department of Transportation Standard Specifications for Highway Construction, current edition;
b) 1 ½ " minimum asphalt paving binder layer thickness combined with a 1" minimum wear overlay; Type 429-A asphalt as described in the 2006 Edition of the Alabama Department of Transportation Standard Specifications for Highway Construction;
c) 0.20 gallons per square yard prime coat;
d) 8" minimum sandy clay base thickness or 6" aggregate base;
e) 6" minimum compacted sub-grade (existing if suitable and imported if required);
f) removal and replacement of unsuitable sub-grade material;
g) 3" crowned centerline
h) 20' minimum asphalt paving width for local streets or 24' minimum asphalt paving width for collector and arterial streets;
i) 2 strips of solid sod surrounding paving with seed and mulch to the property line;
j) 1' clearance between the bottom of the base and the estimated seasonal high groundwater elevation as provided in a technical report, signed and sealed by a registered engineer;
k) Streets to be constructed within an area subject to flood shall be constructed at a minimum of 2 feet above base flood elevation. Fill may be used for streets. Drainage openings shall be so designed as not to restrict the flow of flood waters or increase flood heights.

5.3 - Curbs and Gutters

Curbs and/or gutters may be required by the City Engineer or Planning Commission. The purposes for requiring curbs and/or gutters are drainage control, and reduction of maintenance costs. The curbs and gutters shall be designed with a twenty-four (24")

inch curb and gutter or thirty (30") inch valley gutter. Minimum curb radius at all intersections shall be at least twenty-five (25) feet. Alternative engineered designs to curbs and/or gutters may be approved by the City Engineer subject to analysis of drainage control on the roadways. Vegetated swales shall require the plat to reflect driveway culvert installation at a minimum depth of 18 inches.

5.4 – Intersection, Tangents, and Horizontal Curves

Intersections shall be approximately at right angles, and shall not be less than 75° at any intersection. Intersections shall not include more than four (4) basic street legs or approaches which do not include merging lanes, deceleration lanes, "Y" intersections, and traffic circles.

Minimum radii of horizontal curves shall not be less than 400 feet on arterial streets, 200 feet on collector streets, and 100 feet on local streets. There shall be a tangent of 100 feet provided between all reverse curves on arterial and collector streets and shall be 50 feet on local streets. Alternative designs may be approved by the City Engineer.

Intersections shall be designed with a relatively flat grade wherever practical, but must always be designed to drain stormwater away from the driving surface to prevent ponding.

Deceleration and/or acceleration lanes shall be required where necessary to maintain a safe flow of traffic on existing or proposed streets. This requirement shall be determined by the City Engineer after a traffic study has been performed by the subdivider.

5.5 – Cul-de-Sac and Dead End Roadways

Permanent dead end roadways shall not exceed 500 feet in length without specific approval from the Planning Commission. All permanent dead end roadways shall be provided with a cul-de-sac having the following specifications:

(a) Type: Circular, Circular-Offset; Circular-All Paved or other turn around design approved by the City Engineer
(b) Radius: 47 feet Minimum
(c) Rights-of-Way: 50 feet Minimum

Temporary dead-end streets greater than 200 feet in length are required to have a temporary turnaround constructed of an all-weather surface at least 70 feet in diameter and have a right-of-way at least 100 feet in diameter. Said temporary turnaround shall be graded properly to drain, and be maintained by the developer until the roadway is continued. If adjacent property is not owned by the developer or no other preliminary plat is approved at the time of final inspections, a permanent cul-de-sac shall be required.

5.6 – Right-of-Way

Minimum widths of rights-of-way are as follows:

Street Classification	Minimum Right-of-Way Width
Alley	20 feet
Local	50 feet
Collector	60 feet
Arterial or Commercial/Industrial	80 feet
Designated Highways	100 feet
Cul-de-Sac	50 feet (Radius)

5.7 – Common Driveways

Maximum number of lots that may be served by a common driveway shall be 2. Maximum length of a common driveway shall be 330 feet. Common driveways shall be contained within a private ingress/egress easement labeled as such on the final plat. Said easement shall be a minimum width of 30 feet to contain the common driveway and provide adequate ingress/egress. All subdivisions using common driveways shall provide for a Homeowners Association to be responsible for the maintenance of the common driveway.

5.8 – Roadway Name and Signage

All new roadways shall have a name which is not used elsewhere within the City of Foley, nor which is so similar to another name already in use to cause confusion.

Roadway naming shall be consistent with the directional line of the streets as follows:

East-West----------Avenues
North-South----------Streets
Cul-de-Sac----------Lane
Circular Roads----------Circles
Northeast-Southwest or
Northwest-Southeast----------Drives

The cost to provide all traffic signs and/or signals is the responsibility of the subdivider/developer. All traffic signs and/or signals shall be in accordance with the most recent version of the Alabama Manual on Uniform Traffic Control Devices.

All intersections require roadway name signs in accordance with the City of Foley Public Works Department.

5.9 – Sidewalks

Sidewalks shall be included in all subdivisions. Sidewalks shall be constructed of concrete that has a minimum 28 day compressive strength of 3000 psi, and shall be at a minimum width of 4 feet. Sidewalks shall be located on one or both sides of the roadway within a five-foot wide pedestrian and utility easement immediately adjacent to both sides of the right-of-way.

5.10 – Minimum Lighting Requirements

The subdivider/developer shall install or have installed street lighting meeting the following minimum requirements. The cost of which shall be solely paid by the subdivider/developer.

a) 250 watt high pressure sodium bulbs;
b) Maximum 4' length extender arms;
c) Maximum 35' fixture installation height;
d) Lighting of all intersections;
e) Underground electrical utilities;
f) Maximum 200 feet pole spacing (staggered array).

The subdivider of property on an unlighted dedicated right-of-way (other than a State Highway) is required to light the rights-of-way as if included in the subdivision.

Article Six –Inspection and Testing Requirements

6.1 – General Inspection Requirements

6.1.1 – Pre-Construction Conference

It shall be the duty and responsibility of the developer and/or contractor to schedule and coordinate a Pre-Construction Conference with all involved parties, prior to the beginning of construction. Once this requirement has taken place and all other permits and requirements have been met, construction may begin.

6.1.2 – Notification of Work

The City Engineer or his/her designee shall be notified at each phase of subdivision development as specified below.

(a) It shall be the duty and responsibility of the developer and/or contractor to give written notice to the City Engineer or his /her designee, one working day prior to starting any phase of construction.
(b) The developer and/or contractor shall also notify the City Engineer and his/her designee in writing the day work is resumed after a delay of more than five working days.
(c) This includes all phases of construction; clearing, grading, drainage infrastructure, base, surfacing and any work that pertains to the street or road development.
(d) After all BMPs have been installed and/or constructed, but before any other construction takes place, the contractor shall notify the Environmental Section of the Community Development Department to inspect the BMPs as indicated on the Erosion and Sediment Control Plan.

Failure to provide proper notification as specified shall be grounds for non-acceptance of roadways by the City of Foley.

6.1.3 – Embankment Sections

Roadway fill or embankment of earth material shall be placed in uniform layers, full width, and not exceeding six inch thickness (loose measurement). Each layer shall be compacted so that a uniform specified density is obtained. Compaction tests shall be run at the frequency and location as directed by the City Engineer or his/her designee. Additional layers of fill shall not be added until directed by the City Engineer. For all density requirements refer to Section 210 and Section 306 of the "Alabama Department of Transportation Standard Specifications for Highway Construction."

6.1.4 – Subgrade

The subgrade shall be compacted and properly shaped prior to the placing of base materials. The top six (6) inches of the roadbed shall be modified, with the work being performed under Section 230 Roadbed Processing, of the "Alabama Department of Transportation Standard Specifications for Highway Construction". It shall be full width of regular section and extend eighteen (18) inches outside of curb sections or 30 inches from the edge of asphalt, whichever is greater. The embankment or subgrade shall be inspected by proof rolling, under the supervision of the City Engineer or his/her designee, with a fully loaded (minimum 20 CY) tandem axle dump truck to check for soft or yielding areas. Any unsuitable materials shall be removed and replaced with a suitable material compacted to a density as required.

6.1.5 – Base

Base course shall meet the requirements according to the "Alabama Department of Transportation Standard Specifications for Highway Construction." Base course shall have a minimum thickness as required by Section 4.2 of these regulations and shall extend eighteen (12) inches outside of curb sections or 24 inches from the edge of asphalt, whichever is greater. The density requirements for compaction shall be in accordance with Section 306 of the "Alabama Department of Transportation Standard Specifications for Highway Construction." Developer/Engineer may submit an alternate base design method for approval by the City Engineer. Design should be based on a proven and accepted engineering test or method for the site conditions that exist.

6.1.6 – Roadway Pavement

All roads and/or streets shall be paved and comply with the following:

(a) All roads shall be improved according to the standard outlined in Section 5.2 of these regulations.

(b) Prior to the placement of pavement, a bituminous treatment A (prime) shall be placed and inspected by the City Engineer or his/her designee, unless crushed aggregate base is used.

(c) The finished wearing surface shall be uniform and free of defects. The City Engineer or his/her designee may require additional density tests in areas that appear questionable.

6.1.7 – Final Inspection

It shall be the duty and responsibility of the developer and/or contractor to give written notice to the City Engineer or his /her designee, once the subdivision infrastructure is installed and areas have been stabilized for final acceptance. The inspection requires all infrastructures are complete and signs, lighting, and utility connections have been installed according to the approved Preliminary Plat. Furthermore all temporary BMPs such as silt fences shall be removed except those BMPs placed for lot development. The final inspection shall be requested a minimum of 15 days prior to deadline for the Planning Commission.

6.2 – Testing Requirements

All testing shall be conducted by an independent testing laboratory approved in writing by the City Engineer or his/her designee. The testing laboratory shall have the proper equipment and personnel necessary to perform the said testing of the required improvements and shall be certified by the Alabama Department of Transportation. Proof of certification must be submitted to the City Engineer or his/her designee, prior to said approval. The City Engineer shall determine which tests shall be scheduled and performed. A schedule of proposed testing must be submitted to the City Engineer or his/her designee for approval at the time of the Pre-Construction Conference. The tests normally consist of, but are not limited to:

1. Soil Gradation
2. Moisture Content
3. Soil Compaction
4. In-place asphalt density analysis of road building materials.

The developer shall notify the City Engineer, or his/her designee, twenty-four hours prior to any required tests. Copies of all test reports are to be provided to the City Engineer before additional construction occurs. In the event problems exist that require

remedial actions or design, the developer shall be required to submit appropriate engineering plans to the City Engineer before construction will be allowed to proceed.

Article Seven – Utilities Requirements and Easements

7.1 – Utilities

The developer shall secure and provide the Community Development Department with an acceptance or approval statement from each and every utility when design installation is satisfactory and complete. Final City acceptance will not be given until all statements are submitted.

The developer shall be responsible for coordinating with the sewer, water, power, phone, gas, and other utilities to provide service for the development, and shall pay any and all fees, service charges, or other costs levied by the utilities and associated with the installation of the same.

Power, phone, gas and other utilities providing service to commercial and industrial developments shall locate these services underground if viable or above ground at the discretion of the provider. Power, phone, gas and other utilities providing service within subdivisions of single family residences and developments of multi family dwelling units shall locate these services entirely underground; except existing or new power transmission circuits having a three-phase Voltage of twenty (20) kilovolts or more, and existing or new power distribution feeder circuits having an ampacity of more than five hundred (500) Amperes shall be excluded from these regulations. The installation shall be in accordance with the respective utilities specifications and procedures and shall meet all requirements of the building codes and development ordinances otherwise applicable within the City of Foley.

7.2 – Utility Easements

All utility easements shall be a minimum width of 15 feet. The utility easement shall contain all necessary utilities, to include sewer, water, gas, power, phone and cable.

The first 15 feet of a lot adjacent to each street shall be reserved for utility easement purposes where needed. The Owner shall dedicate any and all necessary easements for water and sanitary sewer lines which are installed on private property. Such easements shall be shown on the application for Certificate of Occupancy, shall be in the actual location of the installed line, and shall be dedicated for perpetual use by the installed utility company.

Appendices

Appendix 1

Erosion and Sediment Control

I. Title

This ordinance shall be known and called as the Erosion and Sediment Control Ordinance.

II. Jurisdiction

The provisions of this ordinance shall apply to all lands within the corporate limits of the City of Foley and subdivision developments within the Planning Jurisdiction of the City of Foley.

III. Purpose

During the construction process, soil is most vulnerable to erosion by wind and water. This eroded soil endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of watercourses. In addition, clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat, and to provide a healthy living environment for the citizens of Foley.

As a result, the purpose of this local regulation is to safeguard persons, protect property, prevent damage to the environment and promote the public welfare by guiding and regulating the design, construction, use, and maintenance of land disturbance in the city of Foley.

IV. Definitions

Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (Alabama Handbook) – Volume 1 and Volume 2 from the Alabama Soil and Water Conservation Committee provides guidance for the prevention or minimization of problems related to erosion, sedimentation and stormwater management on construction sites and eroding urban areas. It provides a basis for developing sound plans implementing appropriate measures (BMPs).

Best Management Practice (BMP) – Actions which landowners, developers, and/or contractors can take to reduce the impact of human activity on the natural environment. BMPs to control pollutant discharges from land disturbance can be divided into two main categories: erosion controls and sediment controls. Erosion and sediment controls can each be further described as permanent controls or temporary controls. BMPs shall meet or exceed recognized effective industry standards as outlined in the Alabama Handbook.

Clearing – Any activity that removes the vegetative surface cover.

Drainage Way – Any channel that conveys surface runoff throughout the site.

Erosion and Sediment Control Plan – Research, planning, processes, activities, and practices implemented for the prevention and/or minimization of pollutants in stormwater to the maximum extent practicable. This plan identifies site specific measures and sequencing to be used for the control of erosion and sediment on a development site before, during and after construction.

Erosion Control – Measures that prevent and/or minimize erosion (process by which the land surface is worn away).

Grading – Excavation or fill of material, including the resulting conditions thereof.

Perimeter Control – A barrier that prevents sediment from leaving a site either by filtering sediment-laden runoff, or diverting it to a sediment trap or basin.

Phasing – Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.

Qualified Credentialed Professional (QCP) – means a Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), registered landscape architect, registered land surveyor, Professional Geologist, registered forester, Registered Environmental Manager, or a Certified Professional Soil Scientist. The QCP shall be able to document requirements regarding proven training, relevant experience, and continuing education. The QCP shall be in good standing with the authority granting the registration or designation.

Sediment Control – Measures that prevent and/or minimize eroded sediments from leaving the site.

Land Disturbance Permit – A permit issued by the City of Foley for the construction or alteration of ground as required by Ordinance No. 371-86.

Stabilization – The use of practices that prevent exposed soils from eroding.

Start of Construction – The first land disturbing activity associated with a development, including land preparation such as clearing, excavation, grading, and filling.

Watercourse – Any body of water, including, but not limited to creeks, rivers, streams, and bays.

Waterway – A channel that directs surface runoff to a watercourse, or to the public storm drain.

V. BMP Permits

A. Best Management Practices Permits shall be required for land disturbing activities that uncover more than 500 square feet of ground except land disturbances as noted in Section V. B.

B. BMP Permits shall not be required for the following activities:
   1. Any emergency activity that is immediately necessary for the protection of life, property, or natural resources.
   2. Existing nursery, silviculture and agricultural operations conducted as a permitted main or accessory use.

VI. Erosion and Sediment Control Plan

A. Applicable for developments classified as multi family, subdivisions, commercial, and industrial construction.

B. Plan shall be designed by a qualified credential professional (QCP) such as a professional engineer.

C. Plan shall at a minimum include the following:

1. Map identifying topography, natural features such as watercourses, waterways, and wetlands, and proposed construction areas.
2. Sequence of construction of the development, such as clearing and grading, drainage installation, utility installation, infrastructure and building construction, and landscaping.
3. Erosion and sediment controls used throughout all phases of construction and details of permanent stabilization methods to be used at completion.
4. Provisions for maintenance of erosion and sediment controls and periodic inspections for effectiveness of controls.

D. Submittal, Review, and Approval Procedures:
1. Erosion and Sediment Control Plan shall be submitted in conjunction with the land disturbance permit.
2. Review of each Erosion and Sediment Control Plan shall be within thirty (30) days of submittal to determine the plan's conformance with these provisions. Failure of the City to act on original or revised Erosion and Sediment Control Plan within thirty (30) days of receipt shall authorize the ability to proceed in accordance with the plans submitted.
3. The City shall, in writing:
   a. Approve the plan as it meets and/or exceeds the Alabama Handbook.
   b. Approve the plan with reasonable, justifiable conditions to accomplish objectives of the provisions.
   c. Disapprove the plan, indicating deficiencies and procedure for submitting a revised plan.

E. Modifications to the Plan
1. Major amendments to the Erosion and Sediment Control Plan, such as the redesign of BMPs or removal of BMPs, shall be submitted to the City of Foley Community Development Department and shall be processed and approved, or disapproved, in the same manner as the original plan.
2. Minor modifications to the Erosion and Sediment Control Plan, such as the use of additional temporary BMPS, may be addressed on site as needed to ensure compliance with the provisions.

VII. Erosion and Sediment Control Contract

A. Applicable for single and double family residential construction.
B. In lieu of an approved erosion and sediment control plan prepared by a QCP, single and double family residential construction may complete an erosion and sediment control contract.
C. The contract shall include the BMPs to be used during the construction process and the final stabilization measures to be implemented.
D. The landowner and/or contractor shall comply with all design requirements as described within this ordinance.

VIII. Design Requirement

Erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas and shall be adequate to prevent transportation of sediment from the site to the satisfaction of the City of Foley.

A. Clearing and Grading
1. Clearing and grading of natural resources, such as wetlands, waterways, and watercourses, shall not be permitted, except when in compliance with all other chapters of this Code and as permitted by the United States Army

Corps of Engineers and the Alabama Department of Environmental Management, if applicable.

2. Clearing techniques that retain natural vegetation and natural drainage patterns are encouraged.
3. Phasing shall be required on all sites disturbing greater than fifty (50) acres, with the size of each phase to be established at plan review and as approved by the City of Foley. The Foley Planning Commission may allow exceptions on a case by case basis due to a justifiable discrepancy.
4. Clearing, except, as necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed.
5. Cut and fill slopes shall be no greater than 2:1, except as approved by the City of Foley to meet other community or environmental objectives.

B. Erosion Control
   1. Soils must be stabilized by temporary or permanent erosion control fourteen (14) days after clearing or inactivity in construction.
   2. If vegetative erosion control methods, such as seeding, have not become established within four (4) weeks, the City of Foley may require that the site be reseeded, or that a non-vegetative option be employed.
   3. On steep slopes or in drainage ways, special techniques that meet design criteria outlined in the Alabama Handbook shall be used to ensure stabilization.
   4. Soil stockpiles must be stabilized at the end of each work week or if significant rainfall is anticipated.
   5. Techniques shall be employed to prevent the blowing of dust or sediment from the site onto adjacent properties.
   6. Techniques shall be employed to divert upland runoff past disturbed slopes.

C. Sediment Controls
   1. Sediment controls shall be provided in the form of sediment basins or sediment traps and perimeter controls.
   2. Where possible, sediment basins shall be designed in a manner that allows adaptation to provide long term stormwater management.
   3. Adjacent properties shall be protected by the use of a vegetated buffer strip, in combination with perimeter controls.

D. Waterways and Watercourses
   1. When a watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from the United States Army Corps of Engineers.
   2. When in-channel work is conducted, the channel shall be stabilized after the work is completed.
   3. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in the Alabama Handbook.
   4. Outlets of all pipes and paved channels shall have adequate stabilization to prevent erosion. Riprap may be required for stabilization if vegetative measures prove to be ineffective at controlling erosion in waterways or watercourses.

E. Construction Site Access
   1. A stabilized construction access shall be required on all multi family, subdivision, commercial and industrial developments in order to ensure sediment is not tracked on to public streets from the construction site.
   2. If heavy sediment tracking occurs on public streets, it may be required to remove accumulated sediments from streets and ditches.

F. Completion of Construction Activities
   1. All open channels and ditches shall be permanently vegetated upon final inspection. Seed and mulch shall not be accepted. If sod is used on slopes, corners will need to be pinned per the Alabama Handbook.
   2. Common areas, such as detention basins shall be permanently stabilized upon final inspection. Seed and mulch shall not be accepted.
   3. All construction waste and debris, silt fences, hay bales, inlet protection, and other temporary BMPs shall be removed prior to final inspection except the temporary BMPs installed for the next phase of construction, such as home building.

IX. Inspections

A. The City of Foley shall conduct random and scheduled inspections of the construction activity and shall determine compliance or non-compliance with the provisions of this Ordinance. The following inspections shall be performed at a minimum on multi family, subdivision, commercial and industrial developments:
   1. Immediately after erosion and sediment controls are in place.
   2. After clearing and grading has been completed.
   3. After drainage has been installed.
   4. After streets and curb and gutter have been completed.
   5. Before construction completion.

B. The owner or contractor shall make regular inspections of all control measures throughout the construction process to ensure the overall effectiveness of the Erosion and Sediment Control Plan.

X. Enforcement

A. It shall be unlawful to violate any provision(s) of this Ordinance
B. The City of Foley may suspend or revoke the land disturbance permit for the following reasons:
   1. Violations of the terms of the permit or site development which may adversely affect the health, welfare, or safety of persons residing or working in the neighborhood.
   2. Site development that is detrimental to the public welfare or injurious to property or improvements in the neighborhood.

C. Whenever the City of Foley determines that significant sedimentation is occurring as a result of a land disturbing activity, despite application and maintenance of protective practices, the person conducting the land disturbing activity or the person responsible for maintenance will be required to take additional protective action. Furthermore, if it is to be determined that sedimentation has occurred off site onto right-of-way, instream, or into stormwater drainage systems, the sediments shall be removed if over six (6) inches in depth or stabilized if less than six (6) inches in depth.

D. Whenever the development is determined to be in noncompliance, the owner shall be notified of the violations and/or deficiencies. Upon notification, the owner shall have fourteen (14) days to bring the site into compliance. If the site fails to come into compliance, the owner may be found in violation of the Ordinance and may be guilty of a misdemeanor. Any person who violates this Ordinance shall, upon conviction thereof, be fined not less than $100 or more than $500, and in addition shall pay all costs and expenses involved in the case. Each day during which any violation of any of the provisions of this Ordinance

is committed, continued, or permitted shall constitute a separate offense. Nothing herein contained shall prevent the City of Foley from taking such other lawful actions as are necessary to prevent or remedy any violation.

XI. Abrogation and Greater Restrictions

This ordinance is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

XII. Interference

No person shall hinder, prevent, delay or interfere with the City while engaged in carrying out the execution or enforcement of this ordinance; provided, however, that nothing herein shall be construed as an attempt to prohibit the pursuit of any remedy, legal or equitable, in any court of competent jurisdiction for the protection of property rights by the owner of any property within the municipality.

XIII. Severability

If any provision of this ordinance is declared to be invalid, such declaration shall not affect, impair or invalidate the remaining provisions of this ordinance.

Appendix 2

City of Foley
Stormwater Facility Maintenance Agreement

THIS AGREEMENT, made and entered into this ___ day of _____, 20___, by and between (Insert Full Name of Owner)_____ hereinafter called the "Landowner", and the City of Foley, hereinafter called the "City". WITNESSETH, that
WHEREAS, the Landowner is the owner of certain real property described as (Tax Map/Parcel Identification Number) _____ as recorded by deed in the land records of Baldwin County, Alabama, Deed Book _____ Page _____, hereinafter called the "Property".
WHEREAS, the Landowner is proceeding to build on and develop the property; and WHEREAS, the Site Plan/Subdivision Plan known as _____, (Name of Plan/Development) hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the City, provides for detention of stormwater within the confines of the property; and
WHEREAS, the City and the Landowner, its successors and assigns, including any homeowners association, agree that the health, safety, and welfare of the residents of Foley, Alabama, require that on-site stormwater management facilities be constructed and maintained on the Property; and
WHEREAS, the City requires that on-site stormwater management facilities as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns, including any homeowners association.
NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:
1. The on-site stormwater management facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the Plan.
2. The Landowner, its successors and assigns, including any homeowners association, shall adequately maintain the stormwater management facilities. This includes all pipes, channels or other conveyances built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.
3. The Landowner, its successors and assigns, shall inspect the stormwater management facility and submit an inspection report annually. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.
4. The Landowner, its successors and assigns, hereby grant permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the stormwater management facilities whenever the City deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. The City shall provide the Landowner, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.
5. In the event the Landowner, its successors and assigns, fails to maintain the stormwater management facilities in good working condition acceptable to the City, the City may enter upon the Property and take whatever steps necessary to correct deficiencies identified in the inspection report and to charge the costs of such repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the City to erect any structure of permanent nature on the land of the Landowner outside of the easement for the stormwater management facilities. It is expressly understood and agreed that the City is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the City.
6. The Landowner, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. In the event a maintenance schedule for the stormwater management facilities (including sediment removal) is outlined on the approved plans, the schedule will be followed.
7. In the event the City pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, City attorney fees, costs and expenses of collection and the like, the Landowner, its successors and assigns, shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder.
8. This Agreement imposes no liability of any kind whatsoever on the City and the Landowner agrees to hold the City harmless from any liability in the event the stormwater management facilities fail to operate properly. The Landowner also agrees to indemnify the City for any alleged liability under this agreement or in regard to the facilities.
9. This Agreement shall be recorded among the land records of Baldwin County, Alabama, and shall constitute a covenant running with the land, and shall be binding on the Landowner, its administrators, executors, assigns, heirs and any other successors in interests, including any homeowners association.

WITNESS the following signatures and seals:

_____
Company/Corporation/Partnership Name (Seal)
By: _____

_____
(Type Name and Title)
The foregoing Agreement was acknowledged before me this ____ day of _____, 20___, by _____.

_____
NOTARY PUBLIC
My Commission Expires: _____
COUNTY OF _____, ALABAMA
By: _____
_____
(Type Name and Title)
The foregoing Agreement was acknowledged before me this ____ day of _____, 20___, by _____.

_____
NOTARY PUBLIC
My Commission Expires: _____
Approved as to Form:

_____ _____
City Attorney Date