

**STATE OF GEORGIA
COUNTY OF GORDON
CITY OF CALHOUN**

ORDINANCE NUMBER 887

AN AMENDMENT TO THE CODE OF ORDINANCES OF THE CITY OF CALHOUN, GEORGIA, SECTION 17, REGARDING THE CONSTRUCTION AND MAINTENANCE OF CITY OF CALHOUN STREETS AND SIDEWALKS; TO REPEAL CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO DESIGNATE AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

The Mayor and Council of the City of Calhoun, Georgia hereby ordain as follows:

SECTION ONE: Chapter 17 of the Code of Ordinances of the City of Calhoun shall be amended to read as follows:

Section 17-1-100 -- STREETS

There is hereby created the Department of Street Inspection. Said Department is to be managed by Street Department Inspector and administered by the office of Director of Public Works, which is hereby expressly created. The Director of Public Works shall be appointed by the Mayor and Council of the City of Calhoun, and shall be charged with the responsibility of construction and maintaining streets in the City of Calhoun, according to the guidelines and definitions as follows:

Section 17-1-101.01 -- General

The character, width, grade, and location of all public streets shall conform to the standards in these Regulations and shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets. Construction and material specifications for streets shall conform to Department of Transportation, State of Georgia, Standard Specifications Construction of Roads and Bridges, latest edition, except as may otherwise be stated herein. Specifications and design criteria stated herein are for planning purposes. Design exceptions will be considered on a case-by-case basis. It is the responsibility of the developer and his engineer to identify the exceptions in the concept and preliminary design stages. Exceptions will be subject to approval by the City of Calhoun Director of Public Works and Street Department Inspector.

Streets shall be planned in conformity with the Calhoun Comprehensive Plan and the City of Calhoun Transportation Plan.

No clearing or grubbing of streets or any type of construction shall begin prior to approval of the Preliminary Plat by the City of Calhoun Director of Public Works and City of Calhoun Building and Street Inspectors. Plans must be stamped and signed by the Director of Public Works, Street Department Inspector, and Building Inspector.

Section 17-1-101.02 -- Right-Of-Way

Minimum Right-of-Way Per Street Classification*

<u>Street Category</u>	<u>Minimum Right-of-Way</u>	<u>As Measured from Centerline</u>
Major Collector-Industrial	80'	40'
Minor Collector-Commercial	65'	32.5'
Local (Residential Subdivision)	55'	27.5'

* Additional street right-of-way width may be required to be dedicated at intersections or other locations fronting the property where turning lanes, storage lanes, medians, or realignments are required for traffic safety, and minimum right-of-way standards would be inadequate to accommodate the improvements. See Standard Details 401, 402 and 403.

Section 17-1-101.03 -- Street/Lane Widths

A minimum of ten (10) foot travel lanes are required on all streets. Street widths and lane assignments are based upon the functional classification of said street.

<u>Functional Classification</u>	<u>Width</u>	<u>Lane Assignments</u>
Local (Residential Subdivision)	20'	Varies
Minor Collector	24'	Varies
Major Collector	24' to 36'	Varies

Street width and design are variable based upon current and/or proposed operational characteristics of the roadway, and are subject to City of Calhoun review and approval. Major Collectors are streets that are subject to heavy pavement loadings (industrial drives, trucking areas, high impact commercial activities). See Standard Details 401, 402, and 403.

Section 17-1-101.035 – Underground Utility Locations

When utilities are within the proposed right-of-way a detailed drawing shall be provided to the Director of Public Works, Water and Sewer Engineering Department, and Electrical Department showing at scale the proposed design for water, sewer, electrical, gas, Bell South and CTV. This drawing must be stamped and signed by the appropriate party prior to issuance of any type of development permit from the City of Calhoun. See Standard Details 404, 405 and 406.

Section 17-1-101.04 -- Improvements Along State Highways

For any development, which abuts a state highway or other right-of-way controlled by the State of Georgia, improvements to the roadway and the location and design of any street or driveway providing access from the state highway shall comply with the standards and requirements of the Georgia Department of Transportation. A permit for the proposed access or improvements shall be required to have been approved by the Georgia D.O.T. and incorporated into the construction drawings for the project prior to issuance of any type of development permit by the City of Calhoun.

Section 17-1-101.05 -- Super Elevation And Run-Off

Widening sections along existing streets shall be designed reflecting existing curvature and super elevation, if any, unless the existing street has been included in a specific design by project engineers.

Roadway edge curves shall be provided for tangent (bringing edge from a normal crown to centerline elevation) and super elevation runoff (from the end of tangent to the point of design super elevation) in accordance with design standards by using AASHTO "A Policy on Geometric Design of Highways and Streets," latest edition.

Section 17-1-101.06 -- Unimproved Road

In the event that a subdivision and/or development has access to a SUBSTANDARD STREET (i.e. a dirt or gravel road), the following improvements shall be considered: If the abutting substandard street provides the primary means of access to the development and is dirt, gravel, or substandard paving, the street shall be upgraded to the classification of the roadway from the end of the improvements required to the nearest standard paved road along the route of primary access.

Section 17-1-101.07 -- Intersection Design

Section 17-1-101.07.01 -- Angle of Intersection

Intersections shall be at right angles and shall not be at an angle of less than seventy-five (75) degrees for safety, topography, interference with utilities, or separation from other driveways.

Section 17-1-101.07.02 -- Intersection Radius

Intersection radii for all streets shall be measured at the back of curb or edge of pavement if no curb exists. The minimum roadway radii for the intersection of residential subdivision streets is twenty-five (25) feet. Minor collector radii shall be fifty (50) feet. Major collector radii shall be seventy-five (75) feet. When a local or residential collector intersects a higher classification of roadway, the radii shall be a minimum of thirty (30) feet. Larger radii may be required for streets intersecting at angles less than ninety (90) degrees.

Section 17-1-101.07.03 -- Intersection/Corner Sight Distance

Intersections shall be designed with adequate corner sight distance for each street that approaches a street of higher street category. Where necessary, back slopes shall be flattened and horizontal or vertical curves lengthened.

The minimum corner sight distance requirement shall be calculated using AASHTO "A Policy on Geometric Design of Highways and Streets," latest edition, and as may be amended from time to time.

Section 17-1-101.07.04 -- Vertical Alignment/Intersection Approaches

For the intersections of local and residential collector streets, a leveling of the street at a grade not exceeding two (2) percent shall be provided for a minimum tangent length of twenty-five (25) feet. Exemptions are considered for topographic reasons as determined by the design professional and the Calhoun Street Inspector.

Tangent length is measured from edge of pavement of the intersecting street to the point of curvature in the approaching street. This grade for the landing may be 1%.

Section 17-1-101.07.05 -- Horizontal Alignment/Intersection Approaches

New local streets which approach an intersection with a street category higher than itself on a horizontal curve having a centerline radius less than two hundred forty (240) feet shall provide a tangent section of roadway at least thirty (30) feet long. The tangent length shall be measured along the centerline of the street, from the right-of-way line of the intersecting street, extended, to the point of tangency with the centerline of the curve section.

Section 17-1-101.07.06 -- Storm water Design for Intersections

Sheet or concentrated flows of water will not be permitted to run through intersections.

Section 17-1-101.08 -- NEW/PROPOSED STREETS

Section 17-1-101.08.01 -- General

All new proposed streets shall be designed and constructed to the standards contained in the Regulations, in accordance with the classification of said streets. The arrangement of local streets shall permit practical patterns, shapes, and sizes of development parcels. Streets, as a function of land use, must not unduly hinder the development of land. Distances between streets, angles of intersections, number of streets, and related elements all have a bearing on efficient lot layout of an area.

Section 17-1-101.08.02 -- Local Residential Streets

Local streets shall be laid out so that their use by “through” traffic will be discouraged.

Local residential streets shall be twenty (20) feet wide as measured from front of curb to front of curb. This provides for a ten (10) foot lane in each travel direction. See Standard Detail 401.

Section 17-1-101.08.04 -- Minor and Major Collector Streets

Collector streets shall be provided to channel through traffic movements within a development as part of, or in addition to, the current thoroughfare network. Actual classification of said roadway will be determined by the City of Calhoun Street Inspector after review of the functional and operational characteristics of the roadway and adequate Traffic Study, including but not limited to trip generation data, as provided by the developer. See Standard Details 402 and 403.

Section 17-1-101.08.05 -- Street Plan/Profile Sheets

- ◆ Plan and profile sheets shall be provided for all streets.
- ◆ All traffic control devices, signs, signals, and markings to be used shall conform to the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), Latest Edition. Plans must have detailed sheets showing type signs and placement of signs.
- ◆ Plans and profiles for proposed streets including intersections must be provided (scale to be 50' or 100' to one inch horizontal and 10' to one inch vertical.)
- ◆ They must show and state percent grade of streets and length of vertical curves.
- ◆ Minimum stopping sight distance requirements must be satisfied at all vertical curves.
- ◆ Proposed vertical curves must be adequate for grades shown.
- ◆ Street intersections shall be within +-2% of finished roadway grade elevation.
- ◆ Plans must show curve data necessary to reproduce street center line.
- ◆ Plans must show and state design speed.

- ◆ Plans and the final plat must show, in table format, the length of all proposed roads in linear feet.
- ◆ Plans must provide typical roadway cross-section and pavement specifications.
- ◆ Plans must provide typical cul-de-sac detail, which includes R/W and pavement radius.
- ◆ Plans must show and state all names of right-of-way (existing and proposed,) size from center line, and pavement widths of all roads which appear on plans.
- ◆ Plans must provide a right-of-way miter with ten (10) foot legs at all intersections within a subdivision. A twenty (20) foot miter is required at major street intersections.
- ◆ Plans must show dimension improvements (in feet) from street center line to back of curb.
- ◆ Plans must indicate tapers beyond projected property lines or end of accel/decels, as appropriate.
- ◆ Tapers are not to be curbed. (Transition curbing down unless tying to existing curb.)
- ◆ Plans must show all existing and proposed grades and slopes at maximum 2' contour intervals.
- ◆ Plans must provide appropriate spot elevations.
- ◆ The size, length, type, and location of all surface drainage pipe or structures shall be shown within this plan.

Section 17-1-101.09 -- Cul-De-Sacs

Dead end streets designed to have one end permanently closed shall provide a cul-de-sac turn around per standard detail. The traffic volume shall determine the length of the cul-de-sac street. Maximum vehicle trips per day, in a cul-de-sac development, shall be based on 300 trips using 8 trips per housing unit as an average. Spur streets off of the primary cul-de-sac street shall be considered part of the above vehicle trip calculation. No structure in a cul-de-sac designed development, or multiple cul-de-sac development, with no other ingress/egress points, shall be more than 1,500 feet from a primary ingress/egress for public safety reasons. Multiple ingress/egress to arterial streets are recommended for community connectivity and public safety access. Cul-de-sacs shall conform to layouts and dimension requirements. Detail 410

The length of a cul-de-sac street shall be measured from the center of the intersection with another street, whether a through street or another cul-de-sac or dead-end street.

Bubble cul-de-sacs (half cul-de-sacs) at “right angled” intersections, having an interior angle between eighty (80) degrees and one hundred (100) degrees, are for local residential streets only.

Section 17-1-101.10 -- Minimum Centerline Offsets And Intersection Separation

Streets shall either directly align or have offsets of a minimum of one hundred and twenty five (125) feet for intersecting streets on opposite sides of the through street, and a minimum of two hundred fifty (250) feet for streets on the same side of the through street, as measured between center lines of said streets.

Section 17-1-101.11 (Skipped Intentionally)

Section 17-1-101.12.01 -- Minimum Grades

The minimum grade for all streets shall be one and one half (1 ½%) percent.

Grades of less than one and one half percent may be approved by the City of Calhoun Street Inspector, based on adequate engineering designs, where at least one and one half percent cannot reasonably be achieved due to topographical limitations imposed by the land. In such cases, a record drawing and such computations as necessary shall be provided after construction to establish that the street will drain in accordance with these regulations. Street sections where unacceptable pooling, excessive spread at catch basins, or other hazardous conditions occur, shall be reconstructed or otherwise improved to eliminate such conditions.

Section 17-1-101.12.02 -- Maximum Grades

The maximum grade for all local and residential streets shall be fourteen (14%) percent.

<u>Street Category</u>	<u>Maximum Grade</u>
Major Collector	10%
Minor Collector	12%
Local Residential	14%

Maximum grade on any cul-de-sac turnaround shall be limited by drainage concerns. All banks should be graded to a 3:1 slope/2:1 may be approved by the Street Inspector where needed.

Maximum grade in excess of those listed above will be reviewed by the City of Calhoun Street Inspector based on a registered engineer’s recommendation.

Section 17-1-101.12 -- Alignments

Sight distance requirements at intersections shall be as follows. NOTE: Distances shall be measured from centerline of ingress/egress road extending to either side of abutting street along thoroughfare. Intersections within subdivisions shall be designed for a minimum sight distance of 200 feet.

<u>Speed Limit (MPH)</u>	<u>Sight Distance (Each Way)</u>
55	550'
45	400'
35	250'
25	200'

Vertical alignment must be designed in conjunction with the horizontal alignment. All changes in street profile grades having an algebraic difference greater than one (1%) shall be connected by a parabolic curve.

Minimum safe stopping distance is a direct function of the design speed, twenty-five (25) M.P.H. in residential areas, and thirty-five (35) M.P.H. in local, non-residential and commercial areas. A height of eye of three and one half (3.5) feet and height of object of one-half (0.5) foot is used to determine safe stopping sight distance.

The minimum length of vertical curve required for safe stopping sight distance shall be calculated using AASHTO “A Policy on Geometric Design of Highways and Streets,” latest edition.

Section 17-1-101.13 -- Horizontal Alignment

The sight distance for horizontal curves at subdivision entrances is determined by the line of sight available two (2) feet above the street surface. The sight distance is measured along the existing edge of pavement beginning at the centerline of the proposed entrance and ending where the line of sight intersects it. The line of sight is the projected line of visibility beginning at the entrance centerline and tangent to an obstruction two (2) feet above the street surface. Examples of obstructions are vegetation, ground cover, signs, utilities, existing topography, etc.

Section 17-1-101.14 -- Base And Pavement Specifications

Minimum Construction Standards* **Details 401, 402, and 403.**

Superpave Design

Street Category	Subgrade	Base	Binder	Topping
Local (Residential Subdivision)	Upper 12 inches of Subgrade compacted to at least 100% standard Proctor maximum dry density (AASHTO T-99)	6 inches Compacted Graded Aggregate Base (Group I Aggregate), 98% modified Proctor maximum dry density (AASHTO T-180)	2 inches Asphaltic concrete 19mm Superpave	2 inches Asphaltic concrete 9.5mm Superpave, or 12.5 mm Superpave
Minor Collector (Commercial)	Upper 12 inches of Subgrade compacted to At least 100% standard Proctor maximum dry Density (AASHTO T-99)	8 inches Compacted Graded Aggregate Base (Group I Aggregate), 98% modified Proctor maximum dry density (AASHTO T-180)	2.5 inches Asphaltic concrete 19 mm Superpave	2 inches Asphaltic concrete 12.5 mm Superpave
Major Collector (industrial)	Upper 12 inches of Subgrade compacted to at least 100% standard Proctor maximum dry Density (AASHTO T-99)	12 inches Compacted Graded Aggregate Base (Group I Aggregate), 98% modified Proctor maximum dry density (AASHTO T-180)	4 inches Asphaltic concrete 19 mm Superpave	2 inches Asphaltic concrete 12 mm Superpave

The structural number and allowable equivalent single axle load repetitions (ESALs) for the revised pavement sections are similar to those derived from the current standard sections. We believe that by limiting the thickness of graded aggregate base (GAB) to 8 inches for the Minor Collector and Residential standard sections, construction efficiency will increase and costs may decrease since the GAB could be installed in one layer instead of two, as would be required for any GAB layers thicker than 8 inches. Subgrade preparation requirements, GAB compaction requirements, and specified pavement types are in accordance with Georgia DOT standards.

In general, all pavement construction should be in accordance with Georgia DOT specifications. Proper subgrade compaction, adherence to Georgia DOT specifications, and compliance with project plans and specifications will be critical to the performance of the constructed pavement.

For major collectors, engineers can submit alternate pavement designs for City review and consideration.

Concrete Pavement Alternatives

The following are concrete pavement alternatives for Minor Collector roads and Major Collector roads:

Street Category	Subgrade	Base	Concrete
Minor Collector (Commercial)	Upper 12 inches of subgrade compacted to at least 100% standard Proctor maximum dry density (AASHTO T-99)	8 inches Compacted Graded Aggregate Base (Group I Aggregate), 98% modified Proctor maximum dry density (AASHTO T-180)	7 inches
Major Collector (Industrial)	Upper 12 inches of subgrade compacted to at least 100% standard Proctor maximum dry density (AASHTO T-99)	12 inches Compacted Graded Aggregate Base (Group I Aggregate), 98% modified Proctor maximum dry density (AASHTO T-180)	9 inches

The structural number and single axle load repetitions (ESALs) for the concrete pavement sections are similar to those derived from the current standards asphaltic concrete sections.

A 650-psi flexural strength concrete mix should be used. This corresponds to a compressive strength of approximately 4,500 psi. Portland cement concrete pavement should contain 4 to 6 percent entrained air, assuming the mix will contain ¾ to 1-inch nominal maximum size aggregate. Concrete slump should be no more than 4 inches.

Construction joints and other design details should be in accordance with guidelines provided by the Portland Cement Association and the American Concrete Institute. In general, all pavement construction should be in accordance with Georgia DOT specifications. Proper subgrade compaction, adherence to Georgia DOT specifications, and compliance with project plans and specifications will be critical to the performance of the constructed pavement.

Pavement Design Verification – For Example Only

The pavement design verification for the ½ mile access road is based on the following information and assumptions:

- Design life; Approximately 20 years
- Traffic: 600 vehicles per day (We assumed HS20 loaded tractor-trailers: 300 per lane)
- Initial Serviceability: 4.2 (AASHTO)
- Terminal Serviceability (R_i): 2.5 (GDOT Pavement Design Manual).
- Soil Resilient Modulus (M_R)5,800 (Assuming Properly Prepared Subgrade and a CBR of 5)
- Regional Factor: 2.0 (GDOT) Pavement Design Manual)
- Total Equivalent Single Axle Loads: 5,235,000 (Based on Estimated Traffic)

Section 17-1-101.14.01 – Development Testing and Inspection Requirements

Testing and inspection of site improvements shall be in accordance with Department of Transportation, State of Georgia, Standard Specifications Construction of Roads and Bridges, 1993 Edition, or subsequent revisions. An inspection fee of \$300.00 is required before construction begins.

The following sections of the Georgia DOT Standard Specifications are frequently referenced when working with Calhoun Street Development; Section 201 through Section 221 (Earthwork), Section 222 through Section 328 (Bases and Subbases), Section 400 through Section 461 (Pavements), Section 544 through Section 577 (Minor Drainage Structures), Section 800 through Section 934 (Materials).

The Calhoun Street Inspector shall be advised before each major improvement is undertaken. Clearing, Grubbing, Subgrade Preparation, Storm Drainage, Basing, Paving, Curb and Gutter are considered major improvements.

The Street Inspector shall cause to be made as many tests as necessary to determine that DOT Standard Specifications are being met throughout the development of streets. Any and all testing expenses shall be the responsibility of the developer. Proof Roll Tests are required with loaded tandem dump truck provided by the contractor for: Subgrade, Curb Base, and Final Base prior to Paving. Inspections shall be conducted for each phase of paving, curb/gutter, sidewalks, R/W grassing, signs, striping and street lights. Call Inspector 24 hours in advance for each inspection. Failure to call for inspections could result in compaction tests being required at developers' expense. Call 706-602-6027 to schedule inspections.

Section 17-1-101.15 -- Curb and Gutter

All new streets or street widening sections shall be provided with curb and gutter. All gutters shall drain positively, with no areas of ponding. Curb and Gutter shall set up with subgrade and base using the standard street setup specifications.

Residential Streets

Roll over curb, six (6) inches by twenty-four (24) inches by ten (10) inches can be installed per Street Inspector approval. See Standard Detail 414-RB Concrete shall be Class “A” (as defined by the Georgia D.O.T.) and have a minimum strength of three thousand (3,000) PSI at twenty-eight (28) days.

Commercial Streets

Minor and Major collector streets are required to use L-back curb six (6) inches by twenty-four (24) by twelve (12) inches. See Standard Detail 414. Concrete shall be Class “A” (as defined by

the Georgia D.O.T.) and have a minimum strength of four thousand (4,000) PSI at twenty-eight (28) days.

When the development ties into existing curbing, the curb and gutter shall match the existing width.

Section 17-1-101.15.010 –Side Walks

- ◆ Sidewalks shall be required in all residential developments and on the main connector road for commercial or industrial developments.
- ◆ Sidewalks shall be constructed to a minimum of five (5) feet wide and four (4) inches thick at 3,000 PSI at 28 days curing with an eighteen (18) inch grass strip between the curb and sidewalk, see Standard Detail 415. The sidewalk shall have stable subgrade with compacted base material prior to the concrete being applied. Minimum six (6) inches compacted graded aggregate required.
- ◆ Sidewalks shall be backfilled and landscaped.

Section 17-1-101.15.02 -- Minimum Grades

Curb and gutter shall be set true to the line and grade of the street, horizontally field staked, and finished to the section shown on the plans. Line and grade shall be set by developers' engineer or surveyor.

Section 17-1-101.15.03 -- Other requirements

Inferior workmanship or unprofessional construction methods resulting in unacceptable curb and gutter will be cause for rejection of the finished work. Disturbed areas along all curbing shall be back-filled, stabilized, and grassed. Cracked or broken curbs and sidewalks shall be replaced at the discretion of the Street Inspector.

Section 17-1-101.15.04 -- Street Cuts

All utility construction plans within the City right-of-way shall be reviewed and approved by the City of Calhoun Utilities and Street Inspector.

- ◆ All trenches shall be back-filled and compacted the same day the trench is opened.
- ◆ Trenches under the paving shall be returned to 95% compaction.
- ◆ The edges shall be sawed evenly and the paving cut shall be smooth.
- ◆ A final wearing surface of four (4) inches of Type "E" asphaltic concrete shall be poured and rolled, after the concrete is cured.
- ◆ See Standard Detail 416 for illustration.

Section 17-1-101.16 -- Sub-Grade Preparation

Sub-grade preparation shall be in accordance with Georgia D.O.T. specifications and these regulations. Sub-grade preparation shall also meet and pass proof roll testing.

If any section of the sub-grade is composed of topsoil, organic, or other unsuitable or unstable material, such material shall be removed and replaced with suitable material and then thoroughly compacted, as specified for fill, or stabilized with stone or a geo-textile or geo-grid. You must call for an inspection before backfilling any unstable sub-grade and state what type will be used.

Fill shall be placed in uniform, horizontal layers not more than eight (8) inches thick (loose measurement). Moisture content shall be adjusted as necessary to compact material to ninety-five (95%) percent of maximum dry density, except for the top twelve (12) inches, which shall be compacted to one hundred percent (100%) of maximum dry density.

After the earthwork has been completed, all storm drainage, water, and sanitary sewer utilities have been installed within the right-of-way as appropriate, and back-fill in all such ditches thoroughly compacted, the sub-grade shall be brought to the lines, grades, and typical roadway section shown on the plans. Backfilling on any street crossing must be filled with graded aggregate stone in six (6) inch layers and compacted to ninety-five (95%) percent. No dirt or other types of stone will be accepted.

Utility trenches cut in the sub-grade shall be back-filled, as specified herein. Compaction tests at the rate of one (1) per one hundred and fifty (150) feet of trench shall be provided to verify compaction. The sub-grade must pass roll testing, regardless of compaction test prior to placement of the base material. With the approval of the Street Inspector, a geo-textile or grid may be used to stabilize a sub-grade that does not pass proof rolling. Provisions shall be made to drain low points in the road construction when the final paving is delayed. A break in the berm section is required when the curbing has not been constructed.

Section 17-1-101.16.01 -- Temporary Gravel Entrance/Exit

When a street will be used for construction traffic before paving work is completed, a layer of #3 stone shall be laid as a traffic surface at the entrance of the subdivision, for a distance of fifty (50) feet. This material shall not be used as part of the base material. It may be worked into the sub-grade, or it shall be removed before the base course is set up for paving. An alternative method of protecting the base material and the existing street may be used, if approved by the City Street Inspector. See Standard Detail 400.

Section 17-1-101.16.02 -- Foreign Material On Streets

The developer, builders, and/or homeowners shall be responsible for keeping dirt, mud, building materials, concrete, etc., off of the pavement, curb, and right-of-way of existing City streets during all phases of development and construction of any project.

Before the Street(s) in question are accepted by the City of Calhoun, all litter and trash shall be removed from the dedicated rights-of-way and surrounding areas. All shoulders and easements shall be clear of limbs and debris, graded per plans, and established in grass before acceptance by the City.

Section 17-1-101.17 -- Signing And Striping

All traffic control devices shall adhere to the Manual of Uniform Traffic Control Devices. Master plans must include a detailed plan showing type and placement of all signs and striping.

Section 17-1-101.18 -- Street Lights

Street lights shall be provided by the developers of all new subdivisions or other developers utilizing roads, or any combination. The applicable power company will design a lighting layout and submit to the City of Calhoun Street and Electrical Inspectors for approval.

STREET LIGHTING

STANDARD INSTALLATIONS AND APPROVAL REQUIREMENTS

All residential, commercial, and industrial locations where streets or roads are to be deeded for acceptance by the City of Calhoun will require prior street lighting design approval. The type, size, and location of fixtures will meet the following basic design criteria to receive City of Calhoun Street Department approval.

RESIDENTIAL STREETS

1. 150' to 200' of spacing in subdivisions on property lines where possible.
2. Fixtures will be minimum 150 watt high pressure sodium or metal halide.
3. Any approved decorative fixture will be installed and furnished at developer's expense.
4. The minimum standard light fixture is to be a 150 watt "Cobra head" HPS type fixture installed on an existing or 30' minimum utility pole utilizing overhead service.
5. Intersections with main thorough fares will use 400 watt "Cobra head" fixtures minimum.
6. Lighting poles and decorative standards will be located 6' behind the curb maximum.
7. An additional maintenance charge may be required for underground installations or non-standard facilities where approved.

COMMERCIAL AND INDUSTRIAL STREETS/ROADS:

1. A maximum of 300' spacing will be allowed.
2. Fixtures will be minimum 400 watt HPS or Metal Halide for standard spaced lights mounted on a maximum 12' arm and having overhead service on existing or 30' minimum utility poles.
3. Any approved variations to the standard installation or decorative lighting will be installed and furnished at the developer's expense.

Section 17-1-101.19 -- Street Names and Addresses

Section 17-1-101.19.01 -- Street Names

No duplication of street names is allowed within the City of Calhoun. No proposed street name shall duplicate an existing street name within the City of Calhoun, regardless of the use of the suffix (ie. street, avenue, court, etc.,) unless the streets are contiguous within the same development.

Section 17-1-101.19.02 -- Street Addresses

Street addresses will be assigned by the City of Calhoun Building Inspection Department.

Section 17-1-102 -- ACCESS

Section 17-1-102.01 -- General

Driveways provide access to property and are a service to the traveling public. However, vehicles entering or leaving driveways may disrupt the flow of traffic on streets and cause

accidents, thereby infringing on the rights of the public to travel the roadway. All driveways should be restricted to locations where movements in and out can occur in a safe and orderly manner.

Because of their simple appearance, driveways often do not receive sufficient design consideration. At the least, driveways should always be designed to eliminate or minimize adjacent lane encroachment.

When property frontage is less than two hundred (200) feet, only one (1) driveway shall be considered for approval. All driveways are to be considered low volume intersections and to comply with minimum intersection and corner sight distance requirements of these regulations.

Section 17-1-102.02 -- Access From Thoroughfare Streets

In order to provide ease and convenience in ingress and egress to private property and the maximum safety with the least interference to the traffic flow on thoroughfares, there shall be the minimum number of access points to adequately serve the development. The number and location of driveways shall be regulated. To allow for proper corner clearance, the minimum tangent curb length between a driveway radius and an intersection shall be one hundred (100) feet. If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within two hundred and fifty (250) feet of an intersection with a collector road shall be limited to right hand turns only.

A maximum number of two hundred (200) residential dwelling units shall be allowed one street outlet on an existing public street. For non-residential developments, improvements to provide a separate left turn lane shall be considered on a case by case basis by the City of Calhoun Street Inspector.

Section 17-1-102.07 -- Residential Driveway Standards

Section 17-1-102.07.01 -- Residential Driveways

Residential driveways provide a primary means of access to single-family residential uses.

Width	Minimum 12' – Maximum 24' on right-of-way
Radii or Flare	Minimum 5'
Spacing from Street Intersection	Minimum 100'
Angle of Intersection	Approximate right angle (80 to 100 degrees)
Corner/Intersection Sight Distance	To comply with corner and intersection sight distance requirements of roadway intersected with the driveway, as per these regulations.
Landing Grade	Compatible with shoulder grade.
Length	A minimum of twenty-five feet or to the edge of the City Street, whichever is greater, shall be paved with a treated, hardened surface.

Section 17-1-102.07.02 -- Drainage Specifications

Sizing and location of all existing and proposed drainage structures shall be the responsibility of a registered Professional Engineer or a Landscape Architect and a Land Surveyor and are subject to the approval of the City of Calhoun Street Inspector.

A residential driveway constructed at a location has or should have a ditch or pipe along the roadside for the purpose of collecting, channeling and controlling storm water runoff. In addition to the design and construction requirements, residential driveways shall be constructed with culverts to conduct storm water underneath the driveway and shall be:

- ◆ Concrete, sixteen (16) gauge corrugated coated or aluminized metal pipe, or other type of culvert, which must be approved by the City of Calhoun Street Inspector;
- ◆ Sized to accommodate the twenty-five (25) year storm, at a minimum;
- ◆ Provided with flare end section at the inlet and outlet;
- ◆ Of sufficient length to accommodate a minimum of two (2) foot shoulder at each end of the driveway, with a maximum side slope of two-to-one to the bottom of the ditch line;
- ◆ Installed in a ditch a minimum of two (2) feet wide, flat bottomed with side sloped at a grade no greater than two-to-one, stabilized with acceptable vegetation.

The size, length, and location of all surface drainage pipe or structures shall be shown on the Preliminary Plat and shall be subject to the approval of the City of Calhoun Street Inspector. Storm drain pipes carrying storm water from the street or adjacent property between or through lots shall be extended at least fifty (50) feet behind the rear of the house or seventy-five (75) feet behind the building line, terminating with a head wall or rip-rap stone. In no case shall storm water be allowed to be discharged at a point where the water would cause damage to any existing or future structure.

All cross drain storm water pipe and storm water pipe under any section of roadway shall be concrete pipe. No metal or plastic pipe may be installed under the roadway. All cross drains must be GA DOT approved concrete pipe with flared end sections on the inlet and outlet side.

The design of drainage structures shall be based on recognized hydrological formulas and stated on the Preliminary Plat. The design drainage area and the twenty-five (25) year storm event flow shall be shown on the Preliminary Plat for each pipe or culvert opening. Cross drains laid in a natural drainage course shall have a head wall of approval design on both the inlet and outlet ends of the culvert pipe. These head walls may be constructed of concrete, brick, or rubble masonry. Street plans and profiles shall show type and dimension of proposed head walls, as well as provisions for prevention of erosion at the outlet end of the culvert.

Catch basins and drop inlets shall be designed by the developer's engineer or registered surveyor to Georgia DOT Standards and subject to final approval by the City of Calhoun Street Inspector. Catch basins shall be located outside of intersection radii unless unusual circumstances cause undue hardship, in which case the City of Calhoun Street Inspector may waive this requirement. No trough type flume drains are permitted unless approved by the Street Inspector. See standard detail 418A and 418B.

Street water shall be limited to a maximum distance as follows:

- 500' on grades up to 7%
- 400' on grades from 7% to 10%
- 250' on grades over 10% to 12%
- 150' on grades over 12%

Cul-de-sacs on downhill street grades shall require catch basin throat design and cul-de-sac grading detail. Provide riprap at all downstream discharge points of storm drains. The area of riprap required shall be six times the pipe diameter for the length and two times the diameter for the width. Exit velocities from storm drain pipe shall not exceed 10 FPS, with additional energy dissipaters (not including required riprap). Drainage easements shall be a minimum of twenty (20) feet wide when used as an open ditch. Piped storm drain shall have a permanent ten (10) foot wide easement. These easements must be shown on the engineers' plans.

Section 17-1-102.08 -- Non Residential Driveways

Driveways servicing developments shall provide uninterrupted ingress/egress to and from the site. The minimum distance required is measured from the street right-of-way line at the ingress or egress to the outer edge of any interior service drive or parking space, with direct access to such driveway as measured perpendicularly from the street. The length of the uninterrupted ingress/egress is determined by the maximum peak hour volume of the facility in which the driveway is provided and as shown in the table below. This information shall be provided by the developer.

<u>Maximum Peak Hour Volume</u>	<u>Uninterrupted Ingress/Egress</u>
Up to 50 Vehicles	25'
50 to 150 Vehicles	50'
150 to 500 Vehicles	100'
500 and Up	150'

Non Residential driveways shall not be designed or marked to allow more than one (1) lane of traffic to exit onto a street simultaneously, unless such driveway is channelized in accordance with traffic engineering design principles, as applicable when designing channelized street intersections. As may be requested, left turn driveway lanes shall be a minimum of twelve (12) feet wide and provide a minimum one hundred fifty (150) feet of storage with a one hundred (100) foot transition. Non Residential driveways are to be constructed to the following standards:

Width	Minimum twenty four (24') feet two (2) way access; Maximum thirty two (32') feet two (2) way access; Minimum fourteen (14') feet one (1) way access; Maximum eighteen (18') feet one (1) way access.
Radii	Minimum thirty (30') feet; Maximum fifty (50') feet.
Composition	Shall meet or exceed the same specification as the connecting public roadway.
Drainage	Consistent with existing drainage plan of the connecting public roadway, unless other improvements are required for safety, hydrological and environmental considerations.
Angle of Intersection with Street	Approximately right angled, eighty (80) to one hundred (100) degrees.
Corner / Intersection Sight Distance	To comply with corner/intersection sight distance requirements of street intersected with the driveway, as per these regulations.
Landing Grade	Plus or Minus two (+-2%) percent of intersecting street within right-of-way.

Section 17-1-102.09 -- Acceleration and Deceleration Lanes / Street Improvements Along Existing Streets

The City of Calhoun may require a deceleration and/or acceleration lane for all developments. Requirements for constructing the lane(s), that will be evaluated by the City of Calhoun Street Inspector include, but are not limited to sight distance, posted speed limits, classification of the existing street, volumes on the existing street, volumes to be generated by the development, vertical curvature, horizontal curvature, length of property street frontage, hydrological, and environmental concerns. See Standard Details 419, 420, and 421.

Section 17-1-102.10 -- Bond and Title

- a. No clearing or grubbing of streets, or any type of construction shall begin until the owner/developer files with the City of Calhoun Director of Public Works an acceptable performance bond in such an amount as the Director of Public Works shall estimate and determine to be necessary to complete all of the improvements required. Absent unusual circumstances or conditions, the amount of the performance bond shall be equal to then prevailing costs per linear foot of materials and construction.
- b. The performance bond required in this section may either be a cash bond, a bank letter of credit, or a performance bond executed by a company authorized to act as surety in the State of Georgia. The performance bond shall be payable to the City of Calhoun and be conditioned upon the faithful performance of any and all work required to be done. The performance bond shall be executed by the owner/developer of the land as principal and shall also be executed by a company authorized to act as surety under the laws of the State of Georgia.
- c. Whenever the owner/developer elects to deposit a cash bond, or letter of credit, the City is authorized, in the event of any default on the part of the owner/developer, to use any or all of the cash bond or letter of credit, to cause all of the required work to be done, and for all payment of all costs and expenses thereof. Any money remaining shall be refunded to the owner/developer.
- d. When a substantial portion of the street has been completed to the satisfaction of the Director of Public Works and the final completion of the street is delayed due to condition beyond the control of the owner/developer, the Director of Public Works may recommend to the Mayor and Council to accept the completed portion and consent to a proportionate reduction of the performance bond in an amount estimated and determined by the Director of Public Works to be adequate to ensure the completion of the street as planned.
- e. When a performance bond has been filed in compliance with this Ordinance, the City is authorized, in the event of any default on the part of the principal owner/developer, to enforce collection under such bond for any and all damages sustained by the City by reason of any failure on the part of the principal owner/developer to faithfully and properly do or complete the required improvements. In addition, the City may cause all of the required work to be done or completed and the surety on the performance bond shall be formally bound for the payment of all the necessary costs thereof. The bond shall be in

place for a period of one year after the acceptance of the street(s) by the Mayor and Council.

- f. The surety bond as required herein shall be in the following form or such form as approved by the City Attorney:

STATE OF GEORGIA
COUNTY OF GORDON

PERFORMANCE BOND

_____ as principal, and _____ as surety, are held and firmly bound unto the City of Calhoun, Georgia, a municipal corporation, in the penal sum of \$_____, lawful money of the United States, for which payment to be validly made, we bond ourselves, jointly and severally by this instrument.

The condition of the above obligation is that the principal has submitted to the City of Calhoun Director of Public Works and Building Inspector, plans and specifications for the construction and installation of a street or streets within the City of Calhoun to be known as _____ hereinafter referred to as the “street project,” to be completed on or before _____ in accordance with said submitted plans and specifications.

If the principal shall faithfully perform and fulfill all of the undertakings in accordance with the submitted plans and specifications of the street project and within the time specified and any extension thereof granted by the City of Calhoun, with or without notice to the surety; and if the principal shall repair and/or replace all defects due to faulty materials and work quality that appear within a period of one year from the date of acceptance of the street by the City of Calhoun, then this obligation shall be void; otherwise to remain in full force and effect.

Provided, further, that if any legal action be filed on this bond, venue shall lie in Gordon County, Georgia.

The surety for value received, agrees that no change, alteration or addition to the submitted plans and specifications of the street project shall in anyway affect its obligation as this bond, and it does waive notice of any such change, alteration or addition to the submitted plans and specifications of the street project.

WITNESS OUR HANDS AND SEALS this the ___ day of _____, _____.

PRINCIPAL:_____

SURETY: _____

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- g. Prior to the City's accepting title to and dedication of any newly constructed street, the owner/developer shall furnish to the City of Calhoun, at the owner/developer's expense, a general warranty deed to the land upon which the street and right of way are situated, duly and properly executed, together with a certificate from an attorney at law duly authorized to practice law in the State of Georgia, certifying that fee simple title is vested in the owner/developer and that the title is free and clear of all liens, encumbrances, restrictions or covenants.

Section 17-1-103 – Standard Details

Standard details 400 through 421 are as follows:

(See end of Ordinance for CAD drawings)

SECTION TWO: If any clause, sentence, paragraph, section, standard detail, or part of this ordinance shall be adjudged by the Court of competent jurisdiction to be invalid for any reason, such judgment shall not affect, impair, or invalidate the remainder.

SECTION THREE: All ordinances or part of ordinances in conflict herewith are hereby expressly repealed.

SECTION FOUR: The effective date of this ordinance shall be the date of passage and adoption by the Mayor and Council of the City of Calhoun.

The above ordinance is passed, adopted and approved at the regular meeting of the Mayor and Council of the City of Calhoun, Georgia, held on the 12th day of April, 2010.

City of Calhoun, Georgia

By: _____
James F. Palmer, Mayor

Attest:

Eddie Peterson, City Administrator
City of Calhoun, Georgia

Date of First Reading: March 8, 2010

Date of Second Reading: March 22, 2010

Date of Public Hearing: April 12, 2010

Date of Third Reading: April 12, 2010

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