




MEMORANDUM

To: Department of Planning and Development Staff

From: Kathy S. Holland
Director 

Date: October 28, 2020

Re: Amendment to the Unified Development Ordinance - Effective October 6, 2020
UDO2020-00003 (Stormwater Management and Retaining Wall Design)

The Gwinnett County Board of Commissioners approved an amendment to the Unified Development Ordinance (UDO), Title 3: Development and Permitting related to stormwater management.

Summary of Key Changes

The amendment incorporates State of Georgia mandated regulatory changes in stormwater management and code changes associated with retaining wall design. The amendment generally includes the following:

- Significant changes to Chapter 800 to comply with the Metropolitan North Georgia Water Planning District- Post Construction Stormwater Management Model Ordinance and Gwinnett County MS4 Permit.
 - Runoff reduction must be evaluated for development practicability.
 - Pre-development flow rate may be calculated considering existing site conditions.
 - Channel protection may be waived under certain circumstances.
 - Landscape plan is required for vegetated stormwater BMP's.
 - Single Family residential lots are no longer exempt from water quality treatment if impervious surface exceeds 5,000 sq ft and/or land disturbance greater than 1 -acre.
 - Exemptions for ADA improvements and environmental projects by a governing agency.
- Minor change to comply with the State Soil Erosion, Sedimentation and Pollution Control Model Ordinance.
 - Trout stream protection is required for developments resulting in a temperature increase greater than 2°F and may be achieved by using appropriate stormwater BMP's outlined in the Gwinnett County Stormwater Management Manual.
- Changes to Section 810-30 to comply with the current International Building Code, American Concrete Institute Code, and National Concrete Masonry Association design standards.
 - Designated wall performance standards for specific construction type.
 - Walls as part of a stormwater management facility are limited to 50% maximum of the perimeter and may not be located closer than 1.5 times the wall height from any property line.

- Remove in Appendix Section 2.0 stormwater details shown on pages 2.1 through 2.11 which were relocated to the Gwinnett County Storm Sewer Pipe Standards.
- Clarification to requirements on final plats for directional flow arrows and minimum structure floor elevations.

GWINNETT COUNTY
BOARD OF COMMISSIONERS
LAWRENCEVILLE, GEORGIA

ORDINANCE ENTITLED: AMENDMENT TO CERTAIN PROVISIONS OF THE UNIFIED DEVELOPMENT ORDINANCE CONCERNING STORMWATER MANAGEMENT

ADOPTION DATE: OCTOBER 6, 2020

At the regular meeting of the Gwinnett County Board of Commissioners held in the Justice and Administration Center, Auditorium, 75 Langley Drive, Lawrenceville, Georgia.

	Present	Vote
Charlotte J. Nash, Chairman	Yes	Aye
Jace Brooks, District 1	Yes	Aye
Ben Ku, District 2	Yes	Aye
Tommy Hunter, District 3	Yes	Aye
Marlene Fosque, District 4	Yes	Aye

On motion of Commissioner Fosque, which carried 5-0 vote, the Unified Development Ordinance of Gwinnett County, Title 3, Development and Permitting is hereby amended.

A RESOLUTION TO AMEND THE UNIFIED DEVELOPMENT ORDINANCE

WHEREAS, pursuant to Article IX, Section II, Paragraphs I, III and IV of the Georgia Constitution, the County is authorized to enact laws and exercise powers to regulate zoning and development for the benefit of the citizens of unincorporated Gwinnett County; and

WHEREAS, the State of Georgia has issued to Gwinnett County, a Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System (NPDES) Permit (hereafter "the Permit") to operate its storm sewer system and the adoption of the Gwinnett County Stormwater Management Manual enabled the County to continue to comply with the Permit, and

WHEREAS, the Unified Development Ordinance sets forth the standards that govern development in the County, including standards governing stormwater management; and

WHEREAS, amendments to the Unified Development Ordinance are necessary to ensure that standards in the Gwinnett County Stormwater Management Manual are applied to all future development and redevelopment in the County; and

WHEREAS, the Board of Commissioners finds that it is in the best interest of Gwinnett County to adopt the recommended amendments to the Unified Development Ordinance;

NOW, THEREFORE, BE IT ORDAINED that the Unified Development Ordinance of Gwinnett County, is hereby amended as set forth in **Exhibit A**, attached hereto.

BE IT FURTHER RESOLVED that all regulations or parts of the same in conflict with this Resolution are hereby rescinded to the extent of said conflict.

GWINNETT COUNTY BOARD OF COMMISSIONERS

By: Charlotte J. Nash
Charlotte J. Nash, Chairman

Date Signed: 10/15/20

ATTEST:

By: Diane Kemp
Diane Kemp, County Clerk



APPROVED AS TO FORM:

By: Melanie F. Wilson
Melanie F. Wilson, Senior Assistant County Attorney

Exhibit A

Section 320-30.5J is deleted in its entirety and replaced with a new section to read as follows:

320-30.5J Directional flow arrows for street and lot drainage and minimum floor elevations for all structures.

Section 320-30.5S is deleted in its entirety and replaced with a new section to read as follows:

320-30.5S If buffers, other landscaping or screening treatments, or vegetation and landscaping stormwater BMP's are required, show the location, size, and type (natural or planted) on the plans conforming to the Tree Preservation/Replacement Plan or Buffer and Landscape Plan, as applicable.

Section 320-40.5J is deleted in its entirety and replaced with a new section to read as follows:

320-40.5J Directional flow arrows for street drainage and individual lot drainage as well as minimum floor elevations for each lot. Each lot to be labeled as slab, basement, or slab/basement.

Section 320-50.1C is deleted in its entirety and replaced with a new section to read as follows:

320-50.1C Stormwater drainage construction data prepared in accordance with the requirements of Chapter 800 of this UDO and the Gwinnett County Storm Sewer Pipe Standards.

1. Location and size of all proposed drainage improvements, and all proposed drainage easements to be located outside street right-of-way lines.
2. Profiles of all storm drainage pipes and slope of receiving channels. Hydraulic grade line is to be shown on all pipes (except roof drains) for the required design flow. On storm drainage profiles a pipe chart will be shown which will include pipe numbers, pipe size, pipe material, pipe slope, pipe length, contributing drainage area, design flow, design storm

frequency, runoff coefficient and velocity. On all pipes, the hydraulic grade line shall be shown. Profiles of all open channels and ditches including the design flow normal depth and velocity. On storm drainage profiles an open channel chart will be shown which will include open channel numbers, conveyance size, lining material, length, channel slope, contributing drainage area, design flow, design storm frequency, runoff coefficient and velocity for the required design flow.

3. Acreage of drainage areas and Hydrological study used in determining size of structures, including map of all contributing drainage basins and acreages.

Section 320-70.7 is deleted in its entirety and replaced with a new section to read as follows:

320-70.7 Grading plan for building pad locations for residential subdivisions.

- A. A grading plan showing building pad locations shall be submitted for residential subdivisions zoned for a lot size of less than 12,000 square feet or a density of 4 units per acre or more unless a modification application is approved.
- B. Lot must be graded to ensure adequate lot-to-lot drainage. Granting a modification will not nullify the intent of this UDO when the layout has a minimum lot area of 14,520 square feet and a minimum lot width of 90 feet. The grading plan may be used as a construction document prior to approval of the Final Plat or as a guidance document for individual lot grading after approval of the Final Plat.
- C. The grading plan must include the minimum floor elevations, drainage flow arrows and a designation of slab, basement or slab/basement for each lot.

Section 320-100.3H is deleted in its entirety and replaced with a new section to read as follows:

320-100.3H General location of all proposed trees, shrubs, vines, groundcovers, mulching and other features proposed within the buffer/landscape area. The layout of the vegetation and landscaping required for the proposed stormwater BMP as well as the plant names are to be shown.

Section 320-110.3 is deleted in its entirety and replaced with a new section to read as follows:

- 320-110.3 The Final Plat "for platting only" purposes shall contain the following information:
- A. Title or name of the Final Plat, subdivision name, unit number, land district, land lot number and parcel(s) of the parent tract(s) and the proposed tracts.
 - B. Name, address, and telephone number of owner of record, and the subdivider (if not the owner).
 - C. Name, address, and telephone number and registration number of the land surveyor and professional firm associated with the Final Plat.
 - D. Date of plat preparation and date of the field survey, graphic scale, north arrow; notation as to the reference of bearings to magnetic, true north or grid north, and indication whether bearings shown are calculated from angles turned.
 - E. Location sketch of tract showing major surrounding features.
 - F. Name of former subdivision, if any or all of the Final Plat has been previously recorded.
 - G. Case number and date of approval for any applicable rezoning, special use permit, variance, modification, or waiver affecting the property.
 - H. Location and dimension of any buffer, landscape strip, special setback, no-access easement, etc.
 - I. Boundary lines of the tract, to be indicated by a heavy line, giving distances to the nearest one-hundredth foot and bearings to the nearest second. Bearing and distance to designated tie point shall be shown. The Plat shall have a closure precision of 1 foot in no less than 10,000 feet.
 - J. Municipal or County jurisdictional lines approximately tied to the lines of the subdivision by distance and angles when such lines traverse or adjoin the subdivision; land lot lines traversing or adjoining the subdivision shall also be indicated.
 - K. Locations, widths, and names of all streets and alleys within and immediately adjoining the plat, the location and widths of all internal public crosswalks, and all other public rights-of-way.
 - L. Street center lines showing angles of deflection and standard curve data including radii, length of arcs and tangents between curves, point of curvature (PC) and point of tangency (PT).
 - M. Lot lines with dimensions to the nearest one-tenth of a foot and bearings to the nearest second, and radii of rounded corners, as necessary to delimit each lot.

- N. Building setback lines along streets with dimensions.
- O. When lots are located on a curve or when side lot lines are at angles other than 90 degrees, the lot width measured in accordance with the provisions of Title 2 of the UDO may be required to be shown, if deemed necessary by the Department for clarity.
- P. Lots numbered in numerical order and blocks lettered alphabetically.
- Q. Location and size of all drainage pipe, the location and size of all stormwater management facilities, and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- R. The location and size of all public sanitary sewer lines and manholes and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- S. The location and size of all public water lines and fire hydrants and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- T. Location of any areas to be reserved, donated, or dedicated to public use with notes stating their purpose and limitations. Location of any areas to be reserved by private deed covenant for common use of all property owners, or dedicated to a property owner's association.
- U. Accurate location, material, and description of monuments and markers (all monuments shall be in place prior to approval of the Final Plat).
- V. All information required under the Georgia Metropolitan River Protection Act for recording of plats, if applicable.
- W. Extent of the 100-year floodplain and a floodplain chart showing the area within and outside the floodplain for each lot containing any portion of the 100-year floodplain. Origin of the floodplain data shall be indicated.
- X. Street address numbers, lot or tract number designations, and parcel identification numbers of the proposed tracts.
- Y. All other notes or notations as may be required by the Department.
- Z. Certificates and statements specified in Section 320-110.6.

Section 320-120.4 is deleted in its entirety and replaced with a new section to read as follows:

320-120.4 The Final Plat shall contain the following information:

- A. Name of the subdivision, unit number, land district, and land lot

number.

- B. Name, address, and telephone number of owner of record, and the subdivider (if not the owner).
- C. Name, address, and telephone number of each professional firm associated with the portion of the subdivision within the Final Plat (engineer, surveyor, landscape architect, etc.).
- D. Date of plat drawing, graphic scale, north arrow; notation as to the reference of bearings to magnetic, true north or grid north, and indication whether bearings shown are calculated from angles turned.
- E. Location sketch of tract showing major surrounding features.
- F. Name of former subdivision, if any or all of the Final Plat has been previously recorded.
- G. Case number and date of approval for any applicable rezoning, special use permit, variance, modification, or waiver affecting the property.
- H. Location and dimension of any buffer, landscape strip, special setback, no-access easement, etc.
- I. Boundary lines of the tract, to be indicated by a heavy line, giving distances to the nearest one-hundredth foot and bearings to the nearest second. Bearing and distance to designated tie point shall be shown. The Plat shall have a closure precision of 1 foot in no less than 10,000 feet.
- J. Municipal or County jurisdictional lines approximately tied to the lines of the subdivision by distance and angles when such lines traverse or adjoin the subdivision; land lot lines traversing or adjoining the subdivision shall also be indicated.
- K. Locations, widths, and names of all streets and alleys within and immediately adjoining the plat, the location and widths of all internal public crosswalks, and all other public rights-of-way.
- L. Street center lines showing angles of deflection and standard curve data including radii, length of arcs and tangents between curves, point of curvature (PC) and point of tangency (PT).
- M. Lot lines with dimensions to the nearest one-tenth of a foot and bearings to the nearest second, and radii of rounded corners, as necessary to delimit each lot.
- N. Building setback lines along streets with dimensions.
- O. When lots are located on a curve or when side lot lines are at angles other than 90 degrees, the lot width measured in accordance with the

provisions of Title 2 of this UDO may be required to be shown, if deemed necessary by the Department for clarity.

- P. Lots numbered in numerical order and blocks lettered alphabetically.
- Q. Location and size of all drainage pipe, the location and size of all stormwater management facilities, and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- R. The location and size of all public sanitary sewer lines and manholes and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- S. The location and size of all public water lines and fire hydrants and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- T. Location of any areas to be reserved, donated, or dedicated to public use with notes stating their purpose and limitations. Location of any areas to be reserved by private deed covenant for common use of all property owners, or dedicated to a homeowner's association.
- U. A statement of private covenants if any shall be recorded on the plat; otherwise, if covenants are separately recorded provide a statement as follows:

This plat is subject to the covenants set forth in the separate document(s) attached hereto dated _____, which hereby become a part of this plat, and which were recorded and signed by the owner.

- V. Accurate location, material, and description of monuments and markers (all monuments shall be in place prior to approval of the Final Plat).
- W. Certificates and statements specified in Section 320-120.7.
- X. All information required under the Georgia Metropolitan River Protection Act for recording of plats, if applicable.
- Y. Extent of the 100-year floodplain and a floodplain chart showing the area within and outside the floodplain for each lot containing any portion of the 100-year floodplain. Origin of the floodplain data shall be indicated.
- Z. Street address numbers and block number designations for street names on abutting streets, where appropriate.
- AA. Individual lots shall be designated HLP (House Location Plan), RDP

(Residential Drainage Plan) and/or RDS (Residential Drainage Study) if such are required by the Department to be approved prior to issuance of a Building Permit.

- BB. All lots shall be labeled with minimum floor elevations, drainage flow arrows and designated as either a slab, basement, or slab/basement.
- CC. All other notes or notations as may be required by the Department.

Section 340-70 is deleted in its entirety and replaced with a new section to read as follows:

340-70 All constructed stormwater infrastructure improvements, including but not limited to new, replaced, or extended conveyance systems, shown on Final Plats shall be as-built and submitted prior to recording for review and approval by the Stormwater, Water and Sewer Plan Review Section of the Department. The design and construction of such system shall comply with the current policy and procedures of the Department and in accordance with the following documents as applicable: Gwinnett County Storm Sewer Pipe Standards and The Gwinnett County Standard Drawings.

Section 700-50.2B is deleted in its entirety and replaced with a new section to read as follows:

700-50.2B. Upon consideration of the factors listed in the Gwinnett County Storm Sewer Pipe Standards and the stated purposes of Chapter 700, such conditions to the granting of a variance as the Board of Construction Adjustments and Appeals deems necessary or appropriate, consistent with the purposes of this Sections may be attached to the variance.

Chapter 800 is deleted in its entirety and replaced with a new chapter to read as follows:

Chapter 800. Stormwater Management.

Section 800-10. Stormwater Management General.

800-10.1 Stormwater management is intended to lessen the impacts of urbanization on the natural hydrology of the site. The goal is to reduce the amount of stormwater runoff and pollutants that are released, provide for natural on-site control and treatment of runoff, and optimize the location of stormwater management facilities. These goals are met through runoff

reduction or water quality, channel protection, overbank flood protection and extreme flood protection.

- 800-10.2 Runoff reduction practices shall be sized and designed to retain the first 1-inch of rainfall on the site to the maximum extent practicable. Runoff reduction practices are stormwater best management practices, BMP's, used to disconnect impervious and disturbed previous surfaces from the stormwater drainage system to reduce the post-construction stormwater runoff rates, volumes and pollutant loads. Runoff Reduction shall be used where practical, prior to using water quality standards. If the Runoff Reduction requirements cannot be met in whole or part, then the water quality standards shall be used to treat the remainder.
- 800-10.3 Stormwater management systems shall be designed to detain or treat the runoff from 85% of the storms that occur in an average year and reduce the average annual post-development total suspended solids loadings by 80% in order to meet the water quality requirement. The water quality requirement can be waived if the entire 100% of runoff reduction is provided. Water quality and runoff reduction can also be provided in conjunction in order to meet the water quality requirements outlined in the Gwinnett County Stormwater Management Manual.
- 800-10.4 The increase in the frequency and duration of bankfull flow conditions in stream channels due to urban development is the primary cause of stream bank erosion and the widening and downcutting of stream channels. In order to reduce the effects from urban development within the stream channels, channel protection must be provided. Stream channel protection shall be provided using the following three approaches:
- A. 24-hour extended detention storage of the 1-year 24-hour return frequency storm event
 - B. Erosion prevention measures such as energy dissipation and velocity control
 - C. Preservation of the applicable stream buffer
- 800-10.5 Stormwater management facilities shall be designed so that their peak release rates, when combined with those of all bypass areas in the same basin, produce peak flow rates and flow velocities at the site's boundary line no greater than those which occurred at the same location for pre-developed conditions unless the project meets conditions specified in Sections 800-50.2 and 800-50.3.

- 800-10.6 The positive effects of stormwater management via on-site stormwater management facilities diminish rapidly as the distance downstream from the point of discharge increases, and the smaller the facility's contribution is, as a percentage of the total runoff contributing to downstream flow, the shorter the distance downstream that the benefits are realized. Because of these limitations, on-site stormwater treatment is effective at controlling flooding only when flow from the facility is a significant percentage of the total flow at the point of interest, and only if the point of interest is immediately downstream. The concepts of immediately downstream and significant percentage of total flow are inseparable. The portion of a receiving watercourse (one which receives and conveys runoff from a site) which lies downstream from the site to the point where the area of the site is 10 percent of the total drainage area, shall generally be considered to constitute that portion of the watercourse which is immediately downstream.
- 800-10.7 Peak flow rate control shall normally be provided only for the 2-year, 5-year, 10-year, and 25-year frequency storm events in order to meet the requirements of overbank flood protection. The 100-year event shall be provided when failure to do so would result in flooding of other habitable dwellings, property damage, or public access and/or utility interruption (extreme flood protection).
- 800-10.8 Trout stream protection, when required, can be achieved by using the appropriate stormwater BMP's outlined in the Gwinnett County Stormwater Management Manual. A temperature increase greater than 2°F is not allowed within a trout stream.

Section 800-20. Stormwater Management Documentation.

- 800-20.1 The purpose of Stormwater management documentation is to support the development of the project site using Best Management Practices (BMP's) and diligent engineering. The report must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual and is required for all developments. The report shall be certified by a qualified registered professional registered in the State of Georgia.
- 800-20.2 A stormwater management analysis shall identify the locations and quantities of stormwater runoff entering and exiting the site for both pre-

and post-developed conditions. Analysis of the off-site properties shall anticipate future development in addition to addressing existing conditions.

- 800-20.3 For the purposes of these regulations, the words “downstream” and “analysis” shall have the following meanings. The analysis of downstream conditions in the report shall address each and every point or area along the project site’s boundaries at which runoff will exit the property. The analysis shall focus on the portion of the drainage way “immediately” downstream from the project. This area shall extend downstream from the project to a point in the drainage basin where the project area is 10 percent of the total basin area. The analysis shall be in accordance with the Gwinnett County Stormwater Management Manual.
- 800-20.4 The following criteria shall be evaluated by the authorized registered professional preparing the Stormwater Management Report, and in determining whether stormwater treatment is required for any portion of any site:
- A. Existing land uses downstream.
 - B. Anticipated future land uses downstream.
 - C. Magnitude of increase in peak flows due to development.
 - D. Presence of existing drainage problems.
 - E. Capacity of existing and anticipated drainage systems.
 - F. Creation of concentrated flows where none had occurred previously.
 - G. Availability of feasible locations for stormwater management facilities.
 - H. Existing flows generated off-site which pass through the project site.
 - I. The nature of the receiving watercourse.
- 800-20.5 When a development uses an existing facility where the last approved certification and record drawing of the facility was over 18 months prior to the new development’s submittal, the authorized registered professional shall provide one of the following:
- A. A new survey, drawing and certification showing that the outlet structure is constructed as approved on the as-built plan and the flood storage and water quality volume of the facility is equal to or greater than the volume required when the facility was approved.
 - B. Construction plans and calculations showing that the outlet structure will function as designed and the flood storage and water quality

volume of the facility will be equal to or greater than the volume required when the facility was approved once proposed maintenance has been performed.

- C. A new record survey, drawing, study and certification showing that the facility meets the development requirements when the facility was approved.
- D. Current inspection of existing stormwater management structures with deficiencies noted
- E. BMP Landscaping Plans if required at time of BMP construction.

800-20.6 All design related to stormwater shall be in accordance with the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards.

800-20.7 A certified record survey of each facility shall be prepared by an authorized registered professional currently registered in the State of Georgia. A certified record drawing of the facility shall be prepared based upon this survey. The authorized registered professional shall certify that the facility functions hydraulically as designed. Documentation demonstrating the required testing outlined in the Gwinnett County Stormwater Management Manual for the proposed stormwater BMP shall also be provided. The record drawing shall be submitted to the Department at least one week prior to the issuance of a Certificate of Occupancy or Final Plat approval (as appropriate for the project). Record drawings of off-site facilities shall be recorded at least one week prior to the recording of the Final Plat.

800-20.8 The applicant shall certify and provide documentation that all other applicable environmental permits have been acquired for the site prior to approval of the stormwater management report.

Section 800-30. Stormwater Runoff Quality/Reduction.

800-30.1 Stormwater runoff quality/reduction can be provided through runoff reduction, water quality, or any combination of the two. Stormwater runoff reduction consideration is currently optional but effective December 10, 2020, the applicant shall provide runoff reduction in accordance with the requirements of the Gwinnett County Stormwater Management Manual. To the extent Runoff Reduction has been determined to be infeasible for all or a portion of the site using the Planning and Development Practicability Policy, then water quality shall apply for the remaining runoff

from a 1.2 inch rainfall event. The design professional shall schedule a meeting with Planning and Development when requesting removal or reduction of the runoff reduction requirement.

800-30.2 All projects, unless exempt pursuant to Section 800-90.1, that meet one or more of the following criteria, shall provide water quality treatment or runoff reduction as outlined in the Gwinnett County Stormwater Management Manual.

- A. New development that involves the creation or addition of 5,000 square feet or more of impervious cover.
- B. New development that involves land-disturbing activities of 1 acre or more.
- C. Redevelopment (excluding routine maintenance and exterior remodeling) that creates, add, or replaces 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre or more
- D. New and redevelopment if land development activities that are part of a subdivision or other common plan of development and the sum of all associated impervious surface area or land disturbing activities that are being developed as of such development meets or exceeds the thresholds in A and B above.
- E. Runoff from any new development or redevelopment, regardless of size, that is defined by the Director of Water Resources, or their designee, to be a hotspot land use or activity shall be adequately treated and addressed through the use of structural stormwater controls, nonstructural practices and pollution prevention practices.
- F. Linear transportation projects that exceed the threshold in (A) or (B) above.

800-30.3 Requirements for a certified record survey and applicable addendum as necessary to the Stormwater Management Report shall be the same for water quality facilities as for stormwater management facilities in Section 800-20.7.

800-30.4 Stormwater management facilities shall not be embedded within each other.

Section 800-40. Stream Channel Protection

800-40.1 Stream channel protection shall be provided by using all of the following three approaches:

- A. 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event. This standard is intended to reduce the frequency, magnitude and duration of post-development bankfull flow conditions. The volume to be detained is also known as the channel protection volume (CPv).
- B. Erosion prevention measures, such as energy dissipation and velocity control to prevent downstream erosion and stream bank damage.
- C. Preservation of the applicable stream buffer. Stream buffers not only provide channel protection but also water quality benefits and protection of streamside properties from flooding.

800-40.2 Channel protection volume is not required for post-development discharges less than 2.0 cfs at each individual discharge location for the 1-yr storm event.

800-40.3 The use of nonstructural site design practices and runoff reduction practices can reduce the channel protection volume by a proportional amount.

800-40.4 Channel protection criteria may be waived for sites that discharge into larger streams, rivers, wetlands, lakes, estuaries or tidal waters where the reduction in the smaller flows will not have a negative impact on the stream banks or channel integrity.

800-40.5 Stormwater management facilities shall not be embedded within each other.

Section 800-50. Stormwater Peak Flow Design Criteria.

800-50.1 Whenever a stormwater management report indicates that an adverse impact from stormwater runoff is expected to result from the development of a property, that project shall be provided with stormwater management facilities that provide storage (i.e. detention, extended detention, or retention) as discussed in the Gwinnett County Stormwater Management Manual. The meaning of "adverse impact" shall apply when pre-development flows did not cause difficulties and post-development flows

do. Difficulties shall include, but not be limited to, situations where 25-year velocities exceed the non-erosive velocity of the stream, habitable structures are shown to be subject to increased depth of flooding for any frequency up to and including the regulatory flood, and stormwater facilities that cannot carry the design storm in accordance with these regulations.

- 800-50.2 Stormwater management facilities required in Section 800-50.1 shall be provided, unless the authorized registered professional certifies and provides certified documentation supporting the conclusion to the Director that at least one of the following is true and correct as applicable.
- A. The non-detained, post-development runoff will leave the project site as sheet flow, and will not have an adverse impact upon downstream properties. The increase for a 25-year storm should not exceed 1 cfs over a length perpendicular to the flow of 100 feet.
 - B. The effect of stormwater treatment would be to concentrate flows where sheet flow had occurred under pre-developed- conditions, and any impact of increased sheet flows upon downstream properties would be less adverse than that which would result from the concentrated flows from a stormwater management facility even if energy dissipation devices were employed.
 - C. The undetained flow will pass through downstream properties, in drainage easements obtained by the developer, to an existing stormwater treatment facility, which has been designed to manage the upstream property's runoff, or to the point in the downstream analysis (see Section 800-20.3) which shows that stormwater treatment is not required.
 - D. Where the site runoff will flow directly into a stream or lake without crossing off-site properties:
 - 1. 24-hour detention of the one-year storm is not required per section 800-40.4. In this case, the post-development peak flows in the receiving channel may exceed pre-development flows by the smaller value of up to 0.1 percent of the pre-development flows or 3 cfs in the downstream analysis.
 - 2. Only peak detention for the two-year through the 25-year storm is not required if the downstream analysis using timing of the hydrographs shows no adverse impact from the exit of the site to the point immediately downstream from the project in the drainage basin where the project area is 10 percent of the total

drainage basin area.

800-50.3 Should the authorized registered professional conclude that overbank flood protection and extreme flood protection may not be necessary because of anticipate compliance with Section 800-50.2, rigid compliance with all of the following criteria is mandatory:

- A. A stormwater management report shall always be required whether stormwater detention is required.
- B. If the applicant proposes to show that, the stormwater treatment requirement may be eliminated for all or a portion of a project, then a pre-submittal conference with the Department staff is required prior to preparation and submittal of construction plans for the project.
- C. At the pre-submittal conference with the staff, the consultant shall be prepared to discuss the downstream analysis findings as follows:
 - 1. The affected stream must be analyzed downstream from the project to a point where the project area is 10 percent of the total drainage basin. The analysis must include all culverts, obstructions, existing and potential erosion problems, elevations of existing improvements, and any other existing modifications to natural conditions.
 - 2. If the existing downstream conditions are overburdened by the pre-developed flows in the stream, then stormwater treatment shall be required unless the developer elects to eliminate the downstream overburdened conditions at his or her expense when the development occurs.
- D. If there are any existing drainage complaints downstream, then stormwater treatment shall be required unless the developer elects to minimize the conditions causing the complaint at his or her expense when the development occurs.
- E. Even if the overbank flood protection and the extreme flood protection requirements are waived water quality and channel protection are still required as outlined in sections 800-30 and 800.40.

800-50.4 All stormwater management facility hydrologic and hydraulic analysis and design calculations shall be certified by the qualified registered professional. The design shall be in accordance with the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards.

- 800-50.5 All stormwater management facilities designed to treat peak flow, water quality or a combination of the two shall control the peak flow rates associated with storms having 2-year, 5-year, 10-year, and 25-year return frequencies so that flows from the developed site do not exceed those associated with pre-development conditions at the project boundary nor increase the peak flows downstream from the project to the point in the drainage basin where the project area is 10 percent of the total basin. Where adverse impacts, as defined in Section 800-50.1, occur during the 100-year storm, the 100-year storm shall also be regulated.
- 800-50.6 The hydrologic methodology used for any given project shall conform to the Gwinnett County Stormwater Management Manual.
- 800-50.7 Runoff coefficients and runoff curve numbers used for pre- and post-development conditions shall be consistent with those shown in the Gwinnett County Stormwater Management Manual.
- 800-50.8 The USGS Method shall be used to check the magnitude of peak flows.
- 800-50.9 Calculations shall be provided showing how all times of concentration or lag times were computed, both for pre- and post-developed conditions. Likewise, adequate support must be provided for all composite runoff coefficients or curve numbers used.

Section 800-60. Stormwater Management Facility Location and Easement Criteria.

- 800-60.1 For the purpose of this UDO, a stormwater management facility shall be deemed to consist of the total area of the approved stormwater BMPs outlined in the Gwinnett County Stormwater Management Manual. The stormwater BMPs outlined in the Gwinnett County Stormwater Management Manual are intended to be used in a series or as a standalone, where applicable, to meet the requirements outlined within the Gwinnett County Stormwater Management Manual and Chapter 800 of the UDO. If multiple BMPs are used to meet the stormwater requirements, then all BMP's will be marked a stormwater management facility.
- 800-60.2 Stormwater management facilities, to the greatest extent feasible, shall be located to minimize the amount of flow generated on the project that bypasses the facility.

- 800-60.3 No portion of any stormwater management facility shall disturb any required (as opposed to voluntary) buffer, landscape strip, or tree protection area, except that natural bottom stormwater management ponds and its appurtenant structures, which require no grading and removal of trees, may encroach into a required construction buffer.
- 800-60.4 No portion of a private stormwater management facility shall encroach upon a public right-of-way.
- 800-60.5 Stormwater management facilities may be located within utility easements or rights-of-way, or encroach upon utility easements or rights-of-way, upon receipt by the Department of written permission from both the property and utility owners.
- 800-60.6 Stormwater management facilities may be constructed within open space areas required under this UDO, if the following criteria are met:
- A. Ownership of the area will be held by a Qualified Property Owner's Association, Homeowners Association, or other private parties.
 - B. Permanent structures, such as buildings and swimming pools, will not be constructed within the boundaries of the stormwater management facility.
 - C. Stormwater management facilities within recreation areas will be approved only if the design of the area includes recreation amenities such as ball fields, tennis courts, grassed open areas or other similar improvements. The intent is to provide recreation facilities with stormwater treatment as a secondary feature.
 - D. Permanent stormwater treatment features shall not interfere with the intended use of the recreation amenity, (i.e., a ditch or large swale shall not traverse a ball field, an inlet structure shall not be in a tennis court, etc.).
- 800-60.7 If a residential subdivision is provided with an on-site stormwater management facility not located within an open space area as specified in Section 800-60.6 above, then a mandatory property owners' association shall be established for the ownership and maintenance of all stormwater BMP's within a residential subdivision. All stormwater BMP's which are placed on an individual private parcel or which crosses multiple private lots must be located within a private drainage easement, which will include access to the right-of-way, to be maintained by the HOA. If the project is

provided with an off-site stormwater treatment facility, a mandatory property owners' association shall be established for its maintenance. The association bylaws shall be recorded concurrently with the recording of a Final Subdivision Plat.

A. The following stormwater BMP's must be located on a separate lot, owned by the HOA, if not located on a recreation area lot as specified in Section 800-60.6:

1. Bio-retention Areas
2. Dry/Dry Extended Ponds
3. Stormwater Ponds
4. Stormwater Wetlands
5. Submerged Gravel Wetlands
6. Underground Detention
7. Multi-purpose Detention Areas

800-60.8 A non-residential subdivision is not required to locate an on-site stormwater management facility on a separate lot. The property owners served by a stormwater management facility that provides runoff reduction, water quality, channel protection, overbank flood protection, extreme flood protection or any combination for more than one property owner or is located off-site shall enter into a maintenance agreement acceptable to the County for the facility's maintenance. However, if desired by the developer, the facility may be located on a separate lot if it is owned and maintained by a mandatory property owners' association.

800-60.9 In a residential subdivision, a private drainage easement at least 20 feet in width in accordance with the UDO section 1000-10.3B shall be required to provide access to all linear stormwater BMPs from a public street. The private drainage easements are to be shown on the subdivision's recorded plat and clearly labeled as a private drainage easement to be maintained by the HOA.

800-60.10 Stormwater management facility access easement requirements for stormwater BMPs shall, at a minimum, meet the requirements outlined in the Gwinnett County Stormwater Management Manual.

800-60.11 Stormwater BMP's must be designed and installed as outlined in the Gwinnett County Stormwater Management Manual.

800-60.12 For every type of stormwater treatment facility, a planned safe flow path must be provided for conveyance of flows of water in excess of those for which the stormwater treatment facility was designed. In many instances, this function can be provided through installation of an emergency spillway. Emergency spillways are usually excavated open channels, either vegetated or paved with reinforced concrete.

800-60.13 Stormwater management facility maintenance requirements are as follows:

- A. The detention storage capacity or function of any stormwater management facility whether natural or man-made, shall not be removed or diminished without the express approval of the Department.
- B. In a residential subdivision, it shall be the responsibility of the Qualified Property Owner's Association, Homeowners Association, or other private parties to maintain the operational characteristics of any stormwater management facility constructed on their property for stormwater management pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt or debris.
- C. In a non-residential subdivision or project served by a stormwater management facility that provides stormwater management for more than one property or by an off-site facility, the property owners shall enter into a maintenance agreement with the County for maintenance of the operational characteristics of the facility pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt or debris.
- D. In a non-residential project with an on-site stormwater management facility which serves only that project, the property owner shall be responsible to maintain the operational characteristics of the facility pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt or debris as outlined in the Gwinnett County Stormwater Management Manual
- E. Where no maintenance agreement has been recorded, it shall be the responsibility of the property owner to maintain the operational characteristics of any facility constructed on their property for stormwater management pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free

of obstruction, silt or debris.

- F. Prior to the issuance of a Development Permit, the owner shall submit a detailed schedule of long-term maintenance and inspection activities. This schedule of activities shall be incorporated into a maintenance agreement to be entered into between the County and the owner. The schedule shall describe all maintenance and inspection activities and the parties responsible. The maintenance agreement shall be in a form acceptable to the County and shall be recorded in the deed records of the Clerk of Superior Court of Gwinnett County.

800-60.14 Stormwater management facilities shall be constructed in accordance with plans reviewed and approved by the Department, and shall be in place and inspected prior to the initiation of other improvements. If the stormwater management is planned to be handled by a lake a stormwater BMP which shall provide runoff reduction, or any other stormwater management system as determined by Planning and Development, a temporary stormwater management facility shall be provided and shall remain in place until such time as the stormwater management facility has become effective in providing stormwater management. The construction shall be in accordance with the Gwinnett County Stormwater Management Manual.

800-60.15 Upland Area Easements in non-residential subdivisions that are claimed as undisturbed upland areas for the site shall be recorded in an easement acceptable to the County. These areas shall be left in a natural, undisturbed condition except for walking trails.

800-60.16 Prior to or concurrent with the recording of a Final Plat for a subdivision, or issuance of a Certificate of Occupancy for a non-subdivision project, the developer, shall provide acceptable surety such as a bond or letter of credit, as determined by Planning & Development, providing for the stormwater management facility(ies) for a period of not less than 18 months. At the end of 18 months, the County may require the surety to be renewed due to anticipated improvements caused by such concerns as future construction activity within the project limits in the drainage basin. A renewed surety may be required up to a total maximum of 10 years. The surety for a facility shall be renewed during the ten-year period until:

- A. The surface water drainage area within the project has undergone

final stabilization and all planned site construction activity has been completed.

- B. All stormwater runoff in the surface water drainage area within the project is coming from undisturbed or stabilized areas.
- C. All stormwater facilities and infrastructure construction has been completed and permanent vegetation is established.
- D. If a temporary stormwater management facility is still in use at the end of the site construction, then the surety shall remain in place until the accumulation of acreage of undeveloped lots, lots with no completed permanent structure and no final stabilization, within the surface water drainage area within the project is less than 10 percent of the total area of the common development draining to the facility.
- E. Within two months of surety release, the permanent stormwater management facility shall be installed and cleaned out, as necessary. A new record survey, drawing and certification showing that the volume of the facility is equal to or greater than the volume shown in the record survey, drawing and certification when the facility was approved shall be submitted. Documentation demonstrating the required testing outlined in the Gwinnett County Stormwater Management Manual for the proposed stormwater BMP shall also be provided. As an alternative, a new record survey, drawing and certification showing that the facility complies with this UDO as specified in Section 800-20.7. shall be submitted. If deficiencies are found, the developer shall be required to update the stormwater BMP to comply with the approved development plans.

800-60.17 The methodology used for an underground or rooftop stormwater management facility design shall conform to the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards In the case of rooftop stormwater treatment, permissible structural loads and weatherproofing shall be governed by the Georgia State Building Code as may be amended by the County.

Section 800-70. Dams.

800-70.1 New Dams Subject to the Requirements of The Georgia Safe Dams Act and Rules for Dam Safety.

Dams proposed to be 25-feet or more in height and proposed to have a maximum storage volume of 100 acre-feet or more and are determined to be a Category I dam as defined by the Georgia Safe Dams Program shall

be subject to the requirements of the *Georgia Safe Dams Act*, the Rules for Dam Safety adopted by the Georgia Department of Natural Resources and the USDA Soil Conservation Service's Technical Release No. 60 "Earth Dam and Reservoirs". The developed shall obtain necessary approvals and permits from the Environmental Protection Division of the Georgia Department of Natural Resources for the project and the dam prior to securing a Development Permit from the Department.

800-70.2

New Dams Subject to Regulation by Gwinnett County.

Dams proposed to be nine feet or more in height, but less than 25 feet in height, in combination with an impounding capacity proposed to be 20 acre-feet or more at maximum water storage elevation, but less than 100 acre-feet, or dams determined Category II dams by the Georgia Safe Dams Program shall be subject to the following:

- A. If the developer elects not to construct the new dam to the design standards for new dams as contained in the Rules for Dam Safety, then a dam breach analysis for the dam shall be submitted with the construction plans for review and authorization prior to securing a Development Permit from the Department. The professional engineer shall use the computer model such as "DAMBRK" for the dam breach analysis.
- B. Should the new dam not meet the design standards for new dams as contained in the Rules for Dam Safety, then only the following uses and structures shall be permitted within the dam breach zone:
 1. Agriculture that requires no structures for human habitation within the dam breach zone including forestry, livestock raising, and agricultural and forestry access roads.
 2. Fences.
 3. Roads, driveways and parking areas.
 4. Utility poles, towers, pipelines, water treatment outfalls and facilities, or similar facilities and structures.
- C. If the developer elects to construct the new dam in accordance with the design standards for new dams as contained in the Rules for Dam Safety, then new development shall be permitted within the dam breach zone. However, the dam shall meet the design standards for new dams as contained in the Rules for Dam Safety if development currently exists or is proposed in the dam breach zone.
- D. Construction plans for new dams defined herein shall be submitted to Gwinnett County for review for the project and the dam prior to securing a Development Permit from the Department.
- E. For any dam that is proposed not to meet the design standards for

new dams as contained in the Rules for Dam Safety, the developer shall obtain a dam breach easement, recorded with the Clerk of Superior Court, from any offsite property owner where it is proposed for the dam breach zone to extend off the property where the dam is being constructed. The developer shall also cause a dam breach easement to be recorded upon the property being developed.

Prior to recording of a Final Plat or issuance of a Certificate of Occupancy, as appropriate, an as-built certification from a professional engineer shall be submitted to the Department. The certification shall state that the dam is constructed in accordance with the provisions of these regulations as well as the authorized construction plans. If the project is for the development of a subdivision, the developer shall also establish a legal entity, acceptable to Gwinnett County, such as a mandatory Property Owners Association, at time of recording of the Final Plat, responsible for the maintenance of the dam and its impoundment.

800-70.3 Existing Dams.

Existing dams that are located on a project site and will remain after construction is complete, shall comply with the provisions of this Chapter and all referenced chapters and sections as if they were new dams.

800-70.4 Existing Category II Dams.

When an existing Category II dam may be reclassified to a Category I dam because of a proposed development downstream of the dam, the following shall be provided by the developer for review by the Georgia Safe Dams Program. The following information shall be provided:

- A. Location of the Category II dam and the proposed development.
- B. A surveyed cross-section of the stream valley at the location of the proposed development including finished floor elevations.
- C. A dam breach analysis must establish the height of the floodwave in the downstream floodplain. A professional engineer shall complete the dam breach analysis in accordance with the Safe Dams Program Quality Assurance Program.

Section 800-80. Stormwater Management Practices for Redevelopment Projects.

800-80.1 Stormwater management for redevelopment projects must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual. For redevelopment, the pre-developed conditions may take into

account the existing conditions unless the existing development causes a negative impact on downstream property. The standards within this section apply to all redevelopment sites that meet the criteria in section 800-30.2.

- 800-80.2 The purpose of a stormwater management analysis is to support the redevelopment of the project site using Best Management Practices and diligent engineering. The report must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual and is required for all redevelopment projects. A qualified registered professional in the State of Georgia shall certify the analysis. The analysis shall be in accordance with the criteria specified in Section 800-20.
- 800-80.3 Water quality treatment of stormwater runoff for the purposes of water quality shall be in accordance with the criteria specified in the Gwinnett County Stormwater Management Manual under the following conditions:
- A. Water quality treatment must be met for the entire site when the disturbed area is more than 50 percent of the property.
 - B. Water quality treatment must be met for the improvements on the site only when the disturbed area is less than 50 percent of the property.
- 800-80.4 Channel protection and stormwater treatment for a redeveloped project site shall be provided in accordance with the criteria specified in the Gwinnett County Stormwater Management Manual under the following conditions:
- A. Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three approaches:
 - 1. Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer.
 - 2. Erosion prevention measures such as energy dissipation and velocity control.
 - 3. 24-hour extended detention storage of the one-year, 24-hour return frequency storm event (channel protection volume).
 - B. Downstream overbank flood and property protection shall be provided by controlling (attenuating) the post-development peak discharge rate to the forested condition rate for the 25-year, 24-hour return frequency storm event.
 - C. Extreme flood and public safety protection shall be provided by controlling and safely conveying the 100-year, 24-hour return frequency storm event such that flooding is not exacerbated.
 - D. For receiving water with trout stream designation, the stormwater management plan must address the protection of the trout waters.

- 800-80.5 Existing stormwater management facilities used for a redevelopment project must meet one of the following criteria:
- A. Where water quality treatment for a proposed redevelopment is to be provided in an existing detention facility, water quality treatment must be provided for the original project area. A modification to the 25-year detention requirement may be granted for retrofitting the stormwater management facility to meet current water quality regulations. Granting a modification will meet the intent and purpose of these regulations when:
 - 1. The detention requirements of the current regulations are provided in the facility for the 1-year, 2-year, 5-year and 10-year storm. For a retrofitted facility, the volume of the 1-year storm shall be based on the original project area being detained instead of the total area draining to the facility.
 - 2. The water quality requirements of the current regulations are provided for the original project area in the facility.
 - 3. The 25-year ponding limits create a hardship if no modification is granted.
 - 4. The outlet structure meets the requirements of the current regulations.
 - B. Where water quality is treated in a regional stormwater management facility approved between April 27, 1999, and January 1, 2001, all lots within the treated area shall either conform to the original permit requirements and water quality regulations at the time of approval or conform to the current water quality regulations. A volume verification confirming facility maintenance in accordance with the original design shall be certified by an authorized registered professional and submitted to the Department for review and approval.
 - C. Where stormwater detention is treated in a regional detention facility approved before April 27, 1999, all lots within the treated area shall conform to current water quality and channel protection regulations. A volume verification confirming facility maintenance in accordance with the original design shall be certified by an authorized registered professional and submitted to the Department for review and approval.

Section 800-90. Exemptions.

800-90.1 Exemptions from the Gwinnett County Stormwater Management Manual Standards are listed below:

- A. Land disturbing activity conducted by local, state, authority, or federal agencies, solely to respond to an emergency need to protect life, limb,

or property or conduct emergency repairs;

- B. Land disturbing activity that consists solely of cutting a trench for utility work and related pavement replacement;
- C. Land disturbing activity conducted by local, state, authority, or federal agencies, whose sole purpose is to implement stormwater management or environmental restoration
- D. Repairs to any stormwater management system deemed necessary by the Director;
- E. Agricultural practices as described O.C.G.A. 12-7-17(5) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in (A) or (B);
- F. Silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in (A) or (B);
- G. Installations or modifications to existing structures solely to implement Americans with Disabilities Act (ADA) requirements, including but not limited to elevator shafts, handicapped access ramps and parking, and enlarged entrances or exits.

800-90.2 Gwinnett County Department of Transportation should reference the Gwinnett County Stormwater Management Manual to determine stormwater management requirements for each project.

- A. If such requirements are ascertained to be infeasible to implement in certain site development or transportation projects due to one or more of the factors listed below, a Determination of Infeasibility Report shall be submitted to the Department of Planning and Development for review, along with the associated set of proposed plans. Factors affecting infeasibility include:
 - 1. Additional cost of 10 percent or greater of the total project costs, including right of way acquisition, construction, and utility relocation costs.
 - 2. Project delay of 180 days or greater due to implementation of post-construction controls.
 - 3. Loss of habitat for endangered or threatened species.
 - 4. Significant damage to a cultural resource, such as a historical site, archaeological site, or cemetery.
 - 5. Significant damage to a community resource, such as a park, wildlife refuge, trail, or school.

6. Implementation would result in the displacement of a residence or business.
 7. Implementation would result in the violation of a State or Federal law, regulation, or standard.
- B. The Determination of Infeasibility Report must be prepared by an authorized registered professional and include the following sections based on the applicable affecting factor(s):
1. Written narrative justifying limitations.
 2. Summary of proposed additional costs.
 3. Projected number of days for delays.
 4. Vicinity map showing site limitations.

Section 810-30 is deleted in its entirety and replaced with a new section to read as follows:

Section 810-30. Walls.

810-30.1 When permanent grades are proposed with a resulting slope steeper than one foot vertical for every three feet of horizontal, resulting wall height (measured from top of footing to top of wall) will exceed four feet, or surcharge loading will be applied to the back side of the wall, then an appropriate earth retaining structure shall be designed and permitted. The wall may be constructed of concrete, masonry, segmental block or wire basket units, or other appropriate structural materials. Walls that do not exceed six feet in height may also be constructed of timber. Retaining Wall design shall be in compliance with IBC 2018 with Georgia Amendments and ASCE/SEI 7-16. As applicable, wall design shall also comply with ACI 318-18 (Concrete Wall), TMS 402-16 (Masonry Wall), NCMA Design Manual for Segmental Walls (Modular Wall), and/or ANSI/AWC NDS-2018 (Wood Wall). Walls exceeding six feet in height shall be designed and drawings shall be prepared by a Georgia Registered Professional Engineer.

810-30.2 Walls and wall foundations or supports shall be located in such a fashion as to not encroach upon existing or proposed drainage easements, drainage courses, or floodplains. Grading on each side of the wall shall be designed so that the wall will not encumber the natural flow of stormwater surface runoff. Walls and wall supports shall be located at a distance from easements to allow for anticipated future maintenance of the easement while still maintaining the structural integrity of the wall.

- 810-30.3 Retaining/detention pond walls of any height that are proposed for the purpose of stormwater management must be designed by a Georgia Registered Professional Engineer and must be permitted. Walls shall be designed for hydrostatic loading under full pond conditions and retained backfill soil under dry pond conditions. The hydrological design must allow for a freeboard dimension and emergency overflow capacity that meets the requirements outlined in the Gwinnett County Stormwater Management Manual. The overflow device should be placed above the projected 100-year flood elevation within the detention area. Detention area and wall calculations are required submittals to Gwinnett County Planning and Development.
- 810-30.4 Retaining walls constructed in or adjacent to a residential subdivision shall comply with the following:
- A. For proposed developments with a residential component, no greater than 50% of a stormwater management facility perimeter may be walled without approval from the Director of Planning & Development.
 - B. Retaining Walls along the perimeter of a stormwater management facility where the top of wall elevation exceeds the surface elevation and which face a habitable structure and/or a public right-of-way, private access easement or other means of access, shall be screened. The screening shall include native vegetation supplemented as necessary via a preserved landscape strip at least 20-ft in width, a planted landscape strip at least 15-ft in width and the wall may be faced with brick or stone. The strip shall be located a minimum of 10-ft from the face of wall. Vegetation shall be maintained by the property owner on non-residential properties, or a qualified homeowner's association on residential properties or a property owner's association.
 - C. Retaining walls which face the property line of a residential property or properties shall be located a minimum of 1.5 times the height of the retaining wall from the property line or within the building setbacks of the property/lot. The wall setback area shall be landscaped with native vegetation to screen the wall from the adjacent property.
- 810-30.5 Any construction that may impact or be within the right-of-way of an existing or proposed water or sanitary sewer easement must be approved by the utility providing service.