



## DETENTION POND WALLS CONSTRUCTION CODE COMPLIANCE GUIDELINES

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Plan review and permitting requirements for detention pond walls.

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### Permitting Procedure

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- 1** A Building Permit (BLD) is required for any wall that is designed to retain water for any duration of time.

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  - 2** Submit two (2) complete sets of construction documents to Gwinnett County Building Plan Review to begin the review process. Design documents (drawings and calculations) shall be prepared by a Georgia Registered Professional Engineer.

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  - 3** Submit a site plan which locates the wall on the site, specifies top and bottom of wall elevations along the wall, and specifies the 100 year pond water elevation. Site plan shall be approved by the Gwinnett County Development Review and Storm Water Review sections.

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  - 4** Once the permit documents have been authorized by Building Plan Review, the contractor will turn in the documents stamped "County Copy" and the completed Permit Application form (available at the permits counter or on the county website) at the Building Permits Counter. The building permit fee, due at the time that the permit is pulled, is assessed at a rate of \$.006 multiplied by the value of construction cost. (The minimum permit fee is \$30). There is no fee for the required Certificate of Completion.
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### Drawing and Document Submittal Requirements

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- 5** In addition to the site plan per item 3 in this document, provide complete structural construction details, sealed and signed by the structural engineer-of-record, which specify the following information as applicable: required wall and footing materials, wall and footing dimensions, reinforcing (type, size, location within the member, and spacing), concrete design strength, drainage method for relief of hydrostatic pressure, type of backfill material, and slope of backfill finished grade. For modular walls, drawings shall also indicate the required types, spacing, and embedment length of all geogrid reinforcement. For concrete walls, drawings shall include minimum lap lengths for all reinforcement.
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- 6** Specify on structural drawings the applicable soil parameters utilized in the wall design. Applicable soil parameters shall include but not be limited to allowable soil bearing pressure, equivalent lateral fluid pressures (active and passive), surcharge loads, internal angle of friction, coefficient of friction, and soil density.
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- 7** Detention Pond Wall design shall be in compliance with IBC 2012 with Georgia Amendments and ASCE/SEI 7-10. As applicable, wall design shall also comply with ACI 318-11, TMS 402-11/ACI 530.1-11/ASCE 6-11, and/or NCMA Design Manual for Segmental Walls.
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- 8** Submit calculations, sealed and signed by the structural engineer-of-record, which demonstrate the structural adequacy of each proposed wall to resist the applicable design loads within the specified allowable soil bearing pressure and to maintain a minimum factor of safety of 1.5 against overturning and sliding. Calculations shall consider all applicable load conditions including but limited to full pond and dry pond conditions.
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State the following notes shall be stated, verbatim, on the drawings:

- 9** “Prior to construction, soil design parameters stated on the county-approved structural construction wall details including but not limited to allowable soil bearing pressure, equivalent lateral fluid pressure (active and passive), internal angle of friction, coefficient of friction, and soil density shall be field-verified by a Gwinnett County approved Third Party Geotechnical Testing Firm. A corresponding written report sealed and signed by a professional engineer registered in the state of Georgia and employed by the Third Party Geotechnical Testing Firm shall be submitted to Gwinnett County Chief Commercial Building Inspector prior to construction beyond footing installation. In the event of conflict between field-verified soil parameters and those stated on the county-approved details, construction shall not proceed until appropriate design modifications submitted by the wall design engineer-of-record have been reviewed and approved by Gwinnett County Building Plan Review.”

“Prior to issuance of a Certificate of Completion for each wall by Gwinnett County, written notification sealed and signed by the wall design engineer-of-record shall be submitted to the Gwinnett County Chief Commercial Building Inspector which acknowledges receipt of a soils investigation report by a Gwinnett County approved Third Party Geotechnical Testing Firm and which confirms that all soil parameters applicable to the design of the wall are consistent with those reported as field-verified.”

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- 10** Note directly on plans the name of the Gwinnett County approved Third Party Geotechnical Testing Firm responsible for performing the subsurface soils investigation and for verifying the soil design parameters specified on the structural construction details for each detention pond wall.

The list of Gwinnett County approved Third Party Geotechnical Testing Firms is available on the county website.

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### Helpful Information

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#### Current Construction Codes:

- The Gwinnett County Construction Code (2015 Version)
- International Building Code, 2012 Edition with 2014, 2015, 2017 & 2018 Georgia State Amendments
- International Mechanical Code, 2012 Edition with 2014 & 2015 Georgia State Amendments
- International Plumbing code, 2012 Edition with 2014 & 2015 Georgia State Amendments and IPC Appendix F
- International Fuel Gas Code, 2012 Edition with 2014 & 2015 Georgia State Amendments
- NFPA National Electrical Code, 2014 Edition
- International Energy Conservation Code, 2009 Edition with 2011, 2012 Georgia State Amendments
- International Existing Building Code, 2012 Edition with 2015 Georgia State Amendments
- International Residential Code for One & Two Family Dwellings, 2012 Edition with 2014 & 2015 Georgia State Amendments
- International Swimming Pool and Spa Code, 2012 Edition with 2014 Georgia State Amendments

#### Building Code Compliance Review Checklist:

For additional information, refer to the Building Code Compliance Checklist available at:  
[www.gwinnettcounty.com/portal/gwinnett/Departments/PlanningandDevelopment/  
PlanReviewSections/BuildingPlanReview](http://www.gwinnettcounty.com/portal/gwinnett/Departments/PlanningandDevelopment/PlanReviewSections/BuildingPlanReview)

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### Contact Information



Building Plan Review - Department of Planning and Development

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Gwinnett County Building Plan Review  
Department of Planning and Development  
One Justice Square  
446 West Crogan Street, Suite 150  
Lawrenceville, Georgia 30046

[www.gwinnettcounty.com](http://www.gwinnettcounty.com)

678-518-6000

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