



# Plan Submittal Application

Date: \_\_\_\_\_ Development Name: \_\_\_\_\_ Project Number: \_\_\_\_\_ (staff use)

Use: \_\_\_\_\_ Zoning: \_\_\_\_\_ Bldg SF/Units: \_\_\_\_\_ Site Location (street/cross street): \_\_\_\_\_

Acreage: \_\_\_\_\_ Disturbed Acreage: \_\_\_\_\_ District: \_\_\_\_\_ Section: \_\_\_\_\_ Land Lot: \_\_\_\_\_ Parcel ID Number(s): \_\_\_\_\_

## Please Specify Project Type:

- ☐ **Civil < 2 Acre Site (Land Disturbance Permit):** Plan Submittal Fee is \$750: 4 Full Size Sets Required for Review
- ☐ **Civil >= 2 Acre Site (Land Disturbance Permit):** Plan Submittal Fee is \$1,000: 4 Full Size Sets Required for Review

**LAND DISTURBANCE PERMITS MUST BE SUBMITTED USING EPLAN SOLUTIONS. HARDCOPY SUBMITTALS WILL NOT BE ACCEPTED**

The review process for civil plans will not be initiated without the following included in the plan set:

- ☐ Landscape Plan, Tree Survey and Survey Stamped by Surveyor
- ☐ Hydrology Study/Stormwater Management Report
- ☐ Application, annotated Checklists for Community Development, Arborist, Traffic Engineering, Civil Engineering & Fire Marshal
- ☐ **Residential Individual Lot Site Plan:** Please refer to Residential Individual Lot Site Plan Requirements, available on the "Resources" tab at: [http://www.alpharetta.ga.us/docs/default-source/planning-zoning/residential\\_individual\\_lot\\_site\\_plan\\_requirements.pdf?sfvrsn=4](http://www.alpharetta.ga.us/docs/default-source/planning-zoning/residential_individual_lot_site_plan_requirements.pdf?sfvrsn=4)
- ☐ **Permit Revision:** \$400: 4 Full Size Plan Sets Required for Review
- ☐ **Preliminary Plat:** \$750: 2 Full Size Plan Sets Required for Review
- ☐ The Preliminary Plat Checklist can be found on the "Resources" tab at: <http://www.alpharetta.ga.us/docs/default-source/planning-zoning/preliminary-plat-checklist.pdf?sfvrsn=2> and will need to be submitted with this Application.
- ☐ **Minor (or Combination) Plat:** \$400: 2 Full Size Plats Required for Review
- ☐ The Final Plat Checklist can be found on the "Resources" tab at: [http://www.alpharetta.ga.us/docs/default-source/planning-zoning/final\\_plat\\_checklist.pdf?sfvrsn=4](http://www.alpharetta.ga.us/docs/default-source/planning-zoning/final_plat_checklist.pdf?sfvrsn=4) and will need to be submitted with this Application.
- ☐ **Final Plat:** \$750: 2 Full Size Plats Required for Review
- ☐ The Final Plat Checklist can be found on the "Resources" tab at: [http://www.alpharetta.ga.us/docs/default-source/planning-zoning/final\\_plat\\_checklist.pdf?sfvrsn=4](http://www.alpharetta.ga.us/docs/default-source/planning-zoning/final_plat_checklist.pdf?sfvrsn=4) and will need to be submitted with this Application.

## Owner, Developer & Engineer Contact Information:

### Owner Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

☐ Check if Recipient of Comments

### Developer Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

☐ Check if Recipient of Comments

### Engineer Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

☐ Check if Recipient of Comments



## Summary of Land Disturbance Review Process

### Pre-Application Review Meeting “One-Stop Meeting”

Any person seeking development activity approval must schedule a One-Stop meeting with the Community Development Department Plan Review staff. The purpose of the meeting is to expedite applications, reduce application design and development costs, and is a requirement for stormwater and erosion control. One-Stop meetings are held each Wednesday between 9 AM and 12 PM. Please contact Brian Borden, Zoning Administrator, at (678) 297-6076 to schedule a meeting. Bring at least one (1) full size copy of the proposed plan to the meeting.



### Plan Submittal

All plan submittals are required to be submitted using ePlan Solutions. Please see preceding page for fee schedule and required submittal documents.



### Within Ten (10) Business Days Plan Reviewers will Provide Comments via ePlan Solutions.

See Open Files, Comments and Checklist tabs/links on the Eplan Solutions website for comments.



### Applicant Must Address All Comments and Submit New Plans Reflecting All Changes

Applicant may follow up with each reviewer regarding questions about City comments. Ten (10) working day review period upon re-submittal of revised plans.



### Sign-Off on Plans

Once all comments have been addressed, applicant must contact Brian Borden at (678) 297-6076 to schedule a One-Stop meeting to receive plan reviewers' sign-offs and to receive the Erosion Control Permit. **At least two (2) sets of plans\* and one (1) CD with CAD file(s), PDF files of LDP and hydrology must be provided for sign-off. Following issuance of Erosion Control Permit, the applicant must submit a PDF scan of the cover sheet to the Community Development Department.** The On-Site Superintendent must call the City's Community Department at (678) 297-6070 and sign up for the pre-construction class. This class is free and typically offered on the first Thursday of each month. No work is to commence on-site until the Superintendent has completed the class. A certification of class completion must be on-site at all times. **Please note that prior to Community Development's sign-off on the plans, the Development Fee, Erosion Control Bond, Tree Bond, Existing Roads Improvement Bond and Tree Recompense (if applicable) must be paid/posted.** These items are also included on the Community Development checklist.



### Tree Protection Fence Installed

Once the Tree Protection Fence has been installed, the applicant must contact City Arborist, David Shostak, at (678) 297-6070 to schedule an inspection.



### Land Disturbance Permit Issued

Once Erosion Control measures are in place, the applicant must contact the Community Development Department at (678) 297- 6070 to schedule an initial Erosion Control Inspection with the Land Disturbance Inspector. The LDP will be issued upon satisfactory inspection. **One (1) copy of the approved plan set must remain on site at all times.**

\* The City will keep 1 hard copies. Please bring as many additional as you will need.



(To Be Completed & Submitted along with Civil/LDP Application)

Contact _____	Phone _____	Email _____
1 <sup>st</sup> Review _____	2 <sup>nd</sup> Review _____	3 <sup>rd</sup> Review _____
Date Approved _____		
Project Name: _____		LDP # _____
Reviewer: <u>Brian Borden</u>	Phone: <u>(678) 297-6076</u>	Email: <u><a href="mailto:bborden@alpharetta.ga.us">bborden@alpharetta.ga.us</a></u>

**A complete, annotated checklist MUST be provided with plans prior to any review.**

**Annotation = Provide sheet number and/or note number reference next to each item below.**

- \_\_\_\_\_ 1. Provide name of project and LDP # in large letters on cover sheet and site plan.
- \_\_\_\_\_ 2. Provide inter-parcel access. Provide access agreements or reference DB/PG on plans.
- \_\_\_\_\_ 3. Provide location map, land lot, district/section, and tax parcel ID number.
- \_\_\_\_\_ 4. Provide name, address, phone, and contact person of developer, designer and 24-Hour Contact.
- \_\_\_\_\_ 5. Provide bearings and distances to the nearest existing street intersection, benchmark or other recognized permanent monument.
- \_\_\_\_\_ 6. State provider of all utilities and phone number.
- \_\_\_\_\_ 7. Provide boundary lines, showing bearings & distances.
- \_\_\_\_\_ 8. An approved combination plat may be required prior to the issuance of a CO.
- \_\_\_\_\_ 9. Provide source and date of boundary survey.
- \_\_\_\_\_ 10. Provide total acreage of site and disturbed area (on and offsite).
- \_\_\_\_\_ 11. Provide scale, north arrow, and signed professional seal.
- \_\_\_\_\_ 12. State zoning classification.
- \_\_\_\_\_ 13. State proposed use.
- \_\_\_\_\_ 14. Provide zoning, master plan, variance, and Design Review Board case numbers with dates and conditions of approval. Show compliance with conditions.
- \_\_\_\_\_ 15. Provide total number of units and density.
- \_\_\_\_\_ 16. Provide owner and zoning classification of adjacent properties.
- \_\_\_\_\_ 17. Provide building dimensions and square footage on site plan.
- \_\_\_\_\_ 18. Label all structures as existing or proposed.
- \_\_\_\_\_ 19. Provide building height.
- \_\_\_\_\_ 20. Show all building lines, buffers, and landscape strips.
- \_\_\_\_\_ 21. Provide all building setbacks.
- \_\_\_\_\_ 22. Show abutting streets. Label name, centerline distance, striping, and pavement width.
- \_\_\_\_\_ 23. Provide curb and gutter along adjacent streets.
- \_\_\_\_\_ 24. Provide sidewalk along public roads.
- \_\_\_\_\_ 25. Provide sidewalk connection to public right-of-way.
- \_\_\_\_\_ 26. Provide parking summary, including basis for required and proposed parking.
- \_\_\_\_\_ 27. Provide bicycle, electric charging and loading-unloading spaces.
- \_\_\_\_\_ 28. Label typical parking stall size (9'x 19' standard).
- \_\_\_\_\_ 29. Show dumpster location (minimum of 50' from right-of-way and 5' from property line).
- \_\_\_\_\_ 30. Provide masonry utility enclosure and opaque gate to match the building materials. Enclosure and gate shall be two feet (2') taller than utilities being screened.



- \_\_\_\_\_ 31. Show lighting, fire hydrants, transformers and other underground utilities on landscape plan. Demonstrate that they do not conflict with landscaping.
- \_\_\_\_\_ 32. Each parking lot shade tree island must be 200 square feet minimum soil area (label), which does not contain any utilities, transformers, etc.
- \_\_\_\_\_ 33. Provide detention pond screening. Trees are not allowed on the detention pond dam or within the access easement.
- \_\_\_\_\_ 34. Submit a water usage analysis and conservation plan. The water usage analysis and reduction plan shall be designed to establish a goal of not less than a ten percent (10%) reduction in the anticipated annual water usage by the project. See requirements at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) (commercial projects only).
- \_\_\_\_\_ 35. Provide wetlands status.
- \_\_\_\_\_ 36. Show limits of disturbance.
- \_\_\_\_\_ 37. Show all sanitary sewer easements on site, utility and landscape plans.
- \_\_\_\_\_ 38. Label all sanitary sewer lines as existing or proposed, and public or private.
- \_\_\_\_\_ 39. Show limits of disturbance for off-site sewer on all plans.
- \_\_\_\_\_ 40. Complete and return for approval the Development Fee and Bond Calculation Excel file. Please note: The development fee, erosion control bond, tree bond, existing roads improvement bond, and tree recompense (if applicable) must be paid/posted prior to LDP sign-off.
- \_\_\_\_\_ 41. Provide address request form to Nikisha Mistry (678-297-6077 or [nmistry@alpharetta.ga.us](mailto:nmistry@alpharetta.ga.us)) for all commercial projects without addressing.
- \_\_\_\_\_ 42. Provide waste generation calculations and notes as per below (for commercial projects only).

A. Calculate daily waste generation based on the following table:

Type of Development	Daily Generation Factor
Cafeteria	1 lb/meal served
Church	1 lb/100 sf
Grocery Store, not Inc. Food Service	100 lbs corrugated/\$1000 in sales + 65 lbs/\$1000 other waste
Hotel	3.2 lbs/room
Hospital	16 lbs/bed
Manufacturing, 1-400 Employees	3 lbs/employee
Manufacturing, 401-3000 Employees	7 lbs/employee
Office, No Food Service	1 lb/100 sf
Office with Vending Machine	1.5 lbs/100 sf
Office with Food Service	1 lb/100 sf + 1 lb/meal served
Recreation Use	0.5 lb/100 sf
Residential	5 lbs/person
Restaurant	1.5 lbs/meal served
Restaurant, Fast Food (Inc. Fast Food within Another Use)	200 lbs/\$1000 in sales
Retail, not including Food Service	2.5 lbs/100 sf OR
Retail, not including Food Service	75 lbs corrugated/\$1000 in sales + 15 lbs/\$1000 other waste
Retirement Home, No Food Service	5 lbs/person
Retirement Home with Food Service	5 lbs/person + 1 lb/meal served
School, Day Care	1 lb/person
Sports Arena	1 lb/spectator + 1 lb/employee
Warehouse	1 lb/100 sf



- B. Provide the frequency of pick-up service and calculate the storage volume required for your project. Provide a minimum of 25% storage for recyclables.
- C. Use the following to convert weight to area:
- 150-lbs/ cubic yard (cy) for office/ dry trash or recyclables
  - 40 lbs/ cy (loose) or 900 lbs/ bale for cardboard
  - 1 cy = 205 gallons
- D. Calculate the required recyclable container size based on the following:

Container	Volume (cy)	Capacity (Weight in lbs)	Dimensions (Width x Depth x Height)
Rolling Cart, 95 gallons	0.47	70	34" x 34" x 44"
Front Load, 2 cy	2.33	350	6 x 3 x 3.5
6 cy	6.11	915	6 x 5.5 x 5
8 cy	8	1,200	6 x 6 x 6
Compactor, 20 cy	20	3,000	8 x 20
30 cy	30	4,500	Height Varies
40 cy	40	6,000	

E. Label location, size, type and dimensions of the required recycling bin(s) on the site plan. The area required is determined by the waste generation analysis and must be accommodated within the dumpster enclosure. Sufficient area must also be provided to accommodate the Fulton County Health requirements, which must be included on the plans.

43. Provide the following under "COMMUNITY DEVELOPMENT NOTES":

1. An 18-month performance and maintenance bond will be required for all landscaping and irrigation.
2. Parking lot lights will be located outside of landscape islands. Site lighting must be approved by the zoning department prior to issuance of electrical permit.
3. The owner is responsible for annual reporting of the waste generation for this project on an ongoing basis. The waste generation analysis must demonstrate a 25% overall waste reduction due to recycling.
4. Off street parking shall be provided and maintained throughout construction.
5. All revisions to these plans must be submitted to the City of Alpharetta Community Development Department prior to continuing construction.
6. All rooftop appurtenances, satellite dishes and/ or other communication devices will be screened from all public rights-of-way.
7. All temporary and permanent signs to be permitted separately.
8. Contact the following departments for approval of the permanent Certificate of Occupancy: Community Development, Arborist, Traffic Engineering, and Fire Marshal. Allow a minimum of a 3-day notice for a site inspection appointment.
9. On-site burial is not allowed.
10. An engineer's certification will be required for all retaining walls prior to issuance of the certificate of occupancy. All retaining walls greater than 4-feet in height must obtain a building permit.
11. Irrigation notes:
  - a. Irrigation systems are not allowed within the public right-of-way. (Systems will be allowed inside medians if an indemnification letter is provided absolving the City of Alpharetta of any responsibility for damages.)
  - b. Irrigation spray onto public roadways is not allowed.
  - c. Irrigation systems must be shut off or operated manually during winter months to prevent unnecessary ice on roads.



**Prior to LDP Sign-off**

- \_\_\_\_\_ 44. Provide the City with 1 full Plan Set. Bring as many additional as you will need.
- \_\_\_\_\_ 45. Provide one hard copy of the hydrology report (to be returned to you).
- \_\_\_\_\_ 46. Provide one (1) copy of the covers of the hydrology report & the plan set (full-size).
- \_\_\_\_\_ 47. Provide 8.5" x 11" site plan.
- \_\_\_\_\_ 48. Provide copy of sewer permit (orange card).
- \_\_\_\_\_ 49. Provide proof of City of Alpharetta property tax payment.
- \_\_\_\_\_ 50. Provide one (1) CD with CAD and PDF files of the LDP and hydrology report at LDP sign-off.
- \_\_\_\_\_ 51. Provide a copy of the GA EPD Notice of Intent (NOI) submittal, if applicable.
- \_\_\_\_\_ 52. Provide the original copy of any required bond (Erosion Control, Tree and/or Existing Road).
- \_\_\_\_\_ 53. Provide payment for Tree Recompense, if applicable.
- \_\_\_\_\_ 54. Provide payment for the LDP Fee.

**After LDP Sign-off**

- \_\_\_\_\_ 55. Provide a scanned image of any redlined sheets.

**Contact Brian Borden at (678) 297-6076 or [bborden@alpharetta.ga.us](mailto:bborden@alpharetta.ga.us) with any questions about these comments or the review process.** Please note that prior to the issuance of a Building Permit, one (1) set of building elevations showing colors and materials for all four (4) sides must be submitted to Community Development for review, if the project is not subject to review by the Design Review Board.

Attention To/ Contact \_\_\_\_\_ Phone \_\_\_\_\_ Email \_\_\_\_\_

Project Name: \_\_\_\_\_ LDP # \_\_\_\_\_

**\*\*To be completed by applicant\*\***

1<sup>st</sup> Review \_\_\_\_\_ 2<sup>nd</sup> Review \_\_\_\_\_ 3<sup>rd</sup> Review \_\_\_\_\_ Date Approved \_\_\_\_\_

Reviewer: David Shostak

Phone: (678) 297-6229

Email: [dshostak@alpharetta.ga.us](mailto:dshostak@alpharetta.ga.us)

**\*\*To be completed by City Staff\*\***

Eligible for one-stop: 1: YES \_\_\_\_\_ NO \_\_\_\_\_ 2: YES \_\_\_\_\_ NO \_\_\_\_\_ 3: YES \_\_\_\_\_ NO \_\_\_\_\_

## STANDARD SUBMISSION REQUIREMENTS: TREE CONSERVATION, LANDSCAPE AND BUFFER REQUIREMENTS ORDINANCE (ARTICLE III SECTION 3.2)

**This completed and annotated checklist MUST be provided with plans prior to any review.**

### A. \_\_\_\_\_ Tree Survey

1. \_\_\_\_\_ Provide a tree survey including **ALL** specimen trees located on the property. All trees must be measured at Diameter at Breast Height (DBH: 4.5 feet above the ground line). Multi-stem trees must be measured at the most narrow point below the fork but at least 6" above the ground line. For multi-stem trees also include the individual stem measurements listed in parenthesis.
2. \_\_\_\_\_ Include **ALL** existing non-specimen "landscape trees" (including street trees, parking lot trees, etc.), trees that will count towards the existing density or other requirements, and trees along the LOD measured at DBH.
3. \_\_\_\_\_ Include trees of quality and tree groupings or groves of trees that warrant protection or preservation based upon size, condition, special interest, character, etc.
4. \_\_\_\_\_ Include all boundary trees and specimen trees (overstory and understory) within 30 feet of the property line or limits of disturbance even if on adjacent properties. (This is in no way an authorization to trespass.)
5. \_\_\_\_\_ Specimen trees, trees of quality, and tree groupings **MUST** be flagged and labeled with a numbered tag in order to be located out in the field (including those on adjacent properties if access is granted).
6. \_\_\_\_\_ The tree survey must be prepared by, dated, sealed and signed by a registered surveyor and included in all sets of plans and submittals and be labeled in the index on the cover sheet.
7. \_\_\_\_\_ The City Arborist **MUST** receive a tree assessment report prepared by a Qualified Professional, including all specimen trees, boundary trees, trees of quality, tree groupings, and landscape trees prior to **ANY** review.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 8.\_\_\_\_\_ Include photographs of all fair to poor condition trees showing any defects that may reduce the quality of a tree.
- 9.\_\_\_\_\_ The tree assessment report **MUST** address whether or not a tree is worth incorporating into the design based upon condition, form, structure, or location.
- 10.\_\_\_\_\_ This report must include reference numbers used on field tags. Numbers noted on survey, plans, trees, and arborist report **MUST ALL** match.
- 11.\_\_\_\_\_ The complete report and/or a summary table detailing the condition of the surveyed trees **MUST** be included in the plan set.
- 12.\_\_\_\_\_ If no trees exist on the site, provide note, "No existing trees on the site."

**B. \_\_\_\_\_ Specimen, Landscape, and Boundary Trees**

- 1.\_\_\_\_\_ An alternate design **MUST** be submitted that conserves and incorporates specimen trees, trees of quality, tree groupings, boundary trees, and landscape trees. Tree survey and Arborist assessment is NOT a recompense calculator.
- 2.\_\_\_\_\_ If a specimen tree, tree of quality, tree grouping, boundary tree, or landscape tree cannot be incorporated into the design a hardship justification **MUST** be provided on the plans.
- 3.\_\_\_\_\_ Show the Critical Root Zone (CRZ) of **ALL** existing Trees to be saved (1.3 feet X inches DBH = radius in feet) on the Tree Protection, Landscape, Erosion Control, Grading, and Demolition sheets.
- 4.\_\_\_\_\_ Label dimension of all CRZs on the Tree Protection sheets.
- 5.\_\_\_\_\_ If encroachment is allowed (no greater than 20%) within the CRZ of trees to be conserved provide the percent encroachment on the Tree Protection sheets.
- 6.\_\_\_\_\_ If removal or encroachment above 10% is proposed within the CRZ of a Boundary tree an agreement per section 3.2.6.2.b between the owners will be provided and included in the plan set.
- 7.\_\_\_\_\_ All specimen trees, trees of quality, tree groupings, boundary trees, and landscape trees to be removed **MUST** be marked with an "X" on the Tree Protection, Initial Erosion Control, and Demolition sheets.

**C. \_\_\_\_\_ Tree Care and Maintenance Plan (MUST be submitted by second submittal)**

- 1.\_\_\_\_\_ A Tree Care and Maintenance plan shall be developed specifically for every tree that warrants care due to the changes in site conditions. As well as basic tree care for the new trees.
- 2.\_\_\_\_\_ This plan shall be drafted by a Certified Professional and include tree protection and care prior to, during, and throughout construction and for 2 years after issuance of a certificate of occupancy (CO).
- 3.\_\_\_\_\_ The tree care plan **MUST** be pre-paid prior to the opening of the site. Provide City Arborist with proof of prepayment before scheduling the initial inspection.
- 4.\_\_\_\_\_ The plan shall be developed around the realistic timelines for implementation. Timeframes can be stated as "prior to construction", "within 2-weeks start of construction", or during a specific season or month during the year, etc.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section



- 5.\_\_\_\_\_ The current owner must provide for access to the trees throughout the duration of the tree care plan, including, if the property ends up under new ownership.
- 6.\_\_\_\_\_ The plan shall include, but not be limited to: canopy and root pruning, compaction reduction, root treatments, fertilization, fungicide/insecticide treatments, watering, and lightning protection. Please make sure to include the pruning of limbs and roots at the limits of disturbance or that overhang the site that may be ripped or torn during demolition and grading.
- 7.\_\_\_\_\_ The tree care plan shall include, as needed, demolition and construction oversight when work is required within the CRZ of trees.
- 8.\_\_\_\_\_ The watering schedule shall include supplemental watering for existing trees and a watering plan for new trees when they arrive on site until establishment. This can include hand watering, use of watering bags, irrigation timing, etc. Reference the location of the watering schedule on the landscape sheet.
- 9.\_\_\_\_\_ Every plan shall include a monitoring program where the Certified Professional will assess the tree(s) for evidence of wood boring and other insect infestations, diseases and pathogen infestations, mechanical damage, etc.
- 10.\_\_\_\_\_ Include a note on the Tree Care and Maintenance plan stating "In the event that there are any changes to the health and or condition of the tree(s) that warrant additional tree care a new plan will be provided to the City Arborist.
- 11.\_\_\_\_\_ Include a note on the Tree Care and Maintenance plan stating "The City Arborist must be notified within one week of completion of any tree care item as well as periodic updates. Proof of completion must be submitted to City Arborist in order for a CO to be issued."

**D. \_\_\_\_\_ Tree Protection and Limits of Disturbance Fencing**

- 1.\_\_\_\_\_ Clearly show all tree protection fence locations on the Tree Protection, Erosion Control, Grading, and Demolition plans.
- 2.\_\_\_\_\_ Provide tree save fence: Type "B" wire-backed with metal stakes and signage around CRZ of specimen trees and Type "C" orange mesh with metal stakes at all other locations. Type "A" orange mesh with wooden posts will have limited use. Chain link fence may be required for extra protection in some areas. See detail STD. L-6 for approved types of fencing.
- 3.\_\_\_\_\_ Provide Type "B" wire-back tree save fence and metal posts along all buffers.
- 4.\_\_\_\_\_ Tree protection fencing MUST protect the entire CRZ of specimen trees or to the greatest extent possible as approved by the City Arborist.
- 5.\_\_\_\_\_ Orange fencing or a type approved by the City is required to delineate the project LOD to keep pedestrians out of construction zones.
- 6.\_\_\_\_\_ Show the Structural Root Plate (SRP) of all "existing trees to be saved" along the limits of disturbance (.5 feet X inches DBH = Radius in feet) on the Tree Protection and Grading sheets. Tree protection fence must be shown at the edge of the SRP or beyond to receive density credits for these trees.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 7.\_\_\_\_\_ Use callouts or differing line types to denote tree save fence type and note stop and start locations. Tree fence should be labelled "A", "B", or "C" per detail STD. L-6 or labelled "Tree Save Fence", "Wire Back Tree Save Fence", etc.
  - 8.\_\_\_\_\_ Provide measurements from known points to the tree protection fencing on the Tree Protection and Initial Erosion Control sheets (these sheets must show existing conditions). Known points should manholes, property corners, utilities, structures, numbered trees with tags, etc., on the inside or outside of the LOD. These measurements will be used to verify the location of the tree save fence during the initial inspection. If these field measurements do not match the plans or trees are not tagged the tree fence will not be approved.
  - 9.\_\_\_\_\_ When the grading plan calls for filling along the LOD consider using a non-trenched in erosion control instead of silt fence in these areas.
  - 10.\_\_\_\_\_ Make sure the activity schedule shows ONLY the installation of tree save/LOD fencing as the first item to be completed prior to starting anything else.
- E. \_\_\_\_\_ **Tree Planting and Landscaping (Sections 3.2.7 and 3.2.8)**
- 1.\_\_\_\_\_ All landscape plans **MUST** be prepared by a licensed and registered Landscape Architect in the State of Georgia. Tree only plans may be prepared by a Qualified Professional.
  - 2.\_\_\_\_\_ Provide a complete landscape plan including all tree replacements, entrance landscaping, buffer plantings, required landscape strips, streetscapes, etc. This plan should include trees, shrubs, ground cover, mulch, seasonal color, hardscapes, etc. This shall be the plan that is expected to be planted.
  - 3.\_\_\_\_\_ Landscape plans **MUST** be coordinated with the surrounding properties to incorporate similar plant material and eliminate conflicts with existing plants and utilities.
  - 4.\_\_\_\_\_ Provide site density calculation of 130 inches per acre for all property types.
  - 5.\_\_\_\_\_ An alternate site density calculation may be provided for single family detached ('For-Sale' residential lots) calculated at a 30% canopy coverage per lot. Please see Arborist Guidance Document for explanation.
  - 6.\_\_\_\_\_ 100% of the tree density **MUST** be met on site with existing or new trees.
  - 7.\_\_\_\_\_ Provide specimen tree recompense summary. **Recompense is in addition to all other tree requirements.** Recompense plantings **MUST** be provided at 3 times the inches removed and should be native and of a similar species.
  - 8.\_\_\_\_\_ No more than 25% of the trees planted on any site shall be the same GENUS.
  - 9.\_\_\_\_\_ No less than 50% of the trees planted on any site shall be native.
  - 10.\_\_\_\_\_ No less than 40% of the trees planted on any site shall be overstory trees.
  - 11.\_\_\_\_\_ No less than 40% of all landscaping planted on any site shall be native unless approved by City Arborist.
  - 12.\_\_\_\_\_ Provide above percentages on landscape sheets. These numbers are based on the total number of plants.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 13.\_\_\_\_\_ Provide plant schedule: Include botanical and common name, cultivar, caliper, height, quantity, required percentages and totals for each genus and/or species (separate columns are required for density and recompense trees).
- 14.\_\_\_\_\_ Crape myrtles used for tree credit must be single stem standards listed as 9-10 foot tall minimum for 2-inch caliper credit. Cultivar must be indicated.
- 15.\_\_\_\_\_ Evergreen trees used for density credit must be shown as a minimum height of 9-10' for 2-2.5" caliper credit, 11-12' for 3" caliper credit, and so on.
- 16.\_\_\_\_\_ Provide required parking lot landscaping per section 3.2.8.C.
- 17.\_\_\_\_\_ Trees planted at the head of a parking space must be aligned with the striping.
- 18.\_\_\_\_\_ Provide required landscape strip and street-scape plantings per section 3.2.8.D. Designs shall not be monoculture's and exclusive of utilities and easements.
- 19.\_\_\_\_\_ Provide sight distance lines as required by Transportation Engineer on Landscape Plans to eliminate conflicts. Coordinate with design Engineer.
- 20.\_\_\_\_\_ Area and volume of the parking lot islands must be labelled on the site plan.
- 21.\_\_\_\_\_ Parking lots, detention ponds, dumpsters, utility and paved areas **MUST** be screened per section 3.2.8.E. Please list plant dimensions (height and spread) not container size for required shrubs on plant schedule.
- 22.\_\_\_\_\_ Pine trees or Leyland cypress are **NOT** allowed by the City Arborist for tree replacement credit or for evergreen screening requirements.
- 23.\_\_\_\_\_ Check with City Arborist for prohibited trees such as red maples or zelkova in parking lots, no ash trees, and limit the use of lacebark elms.
- 24.\_\_\_\_\_ Recompense to be provided on-site: Graphically highlight/shade symbols for specimen recompense trees on the plans. (**Recompense trees are in addition to required density and all other code requirements**).
- 25.\_\_\_\_\_ Trees planted for specimen recompense **MUST** be at least 4" caliper deciduous or 13-14' tall evergreen/conifers.
- 26.\_\_\_\_\_ Alternate methods of recompense **MUST** be approved by City Arborist (hardship only) prior to plan approval and sign off.

#### F. \_\_\_\_\_ Utilities

- 1.\_\_\_\_\_ Utilities are **NOT** allowed in required tree islands or planting areas. Locate all Light Fixtures, Water Lines, Fire Hydrants, etc. outside of these areas.
- 2.\_\_\_\_\_ Show all landscape, street, and parking lot lighting on landscape plans. Conflicts between trees and lights, current and future, shall be avoided. Light locations **MUST** match **ALL** plans submitted to the Building Department.
- 3.\_\_\_\_\_ All overhead and underground utility lines and easements (existing and proposed) must be shown on the Landscape plan. Species used under overhead lines must meet the Utility provider's specification and be approved by utility provider and City Arborist. It is preferable to relocated all utilities underground.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 4.\_\_\_\_\_ Label all drainage and sewer easements, including private easements on the Landscape plan. No trees shall be planted in easements, unless approved by the City Arborist and utility provider.
- 5.\_\_\_\_\_ Label all storm water management facilities including the 10' pond access easement on the Landscape plan. No trees shall be planted in easements.
- 6.\_\_\_\_\_ ALL utility locations MUST be coordinated with the landscaping. It is recommended to have the plans reviewed and approved by the utility providers during the plan review process. Provide City Arborist with proof of communication and/or approvals.

G. \_\_\_\_\_ **Details:**

- 1.\_\_\_\_\_ Provide city planting and anchoring details STD. L-1 to STD. L-4, and STD. L-7.
- 2.\_\_\_\_\_ Provide city tree planting in parking lot detail STD. L-5 and reference the location of this detail on the grading sheet.
- 3.\_\_\_\_\_ Provide city tree protection detail STD. L-6 and STD. L-9.
- 4.\_\_\_\_\_ Provide city detail STD. L-8 for root barrier and manufacturers detail(s) when existing trees or planted trees are within 10' of existing or proposed City owned and maintained hardscapes or when indicated by City Arborist. Note on the Landscape Sheet the length and locations of root barrier installation.
- 5.\_\_\_\_\_ Remove all references in non-city details and comments to installing wire tree guys, turnbuckles, etc. Use fabric ties as approved by Arborist.
- 6.\_\_\_\_\_ Provide Florida tree grading, pruning, and other cue cards as required.
- 7.\_\_\_\_\_ Provide other details or notes as requested by the City Arborist.

H. \_\_\_\_\_ **Provide the following notes on the Tree Protection, Grading, Erosion Control, and Demolition sheets in bold letters:**

- 1.\_\_\_\_\_ If there are inconsistencies between any items on these plans the more strict interpretation of those requirements shall be followed. Please contact the City Arborist for any interpretation.
- 2.\_\_\_\_\_ Prior to the tree save fence inspection provide the City Arborist with proof of pre-payment of the required tree care plan to a reputable tree care company.
- 3.\_\_\_\_\_ Tree save fence and signage for entire site must be installed, inspected and approved prior to installation of erosion control measures. No land disturbance or demolition is allowed before this inspection and approval has occurred.
- 4.\_\_\_\_\_ The CRZ of Specimen Trees plus all buffers shall be protected with wire-back tree save fencing with metal support posts or chain link and Tree Save signage.
- 5.\_\_\_\_\_ Installation of the tree save fence will involve no trenching.
- 6.\_\_\_\_\_ All existing trees identified for preservation or found within tree save areas must be fully protected during all phases of this project.
- 7.\_\_\_\_\_ Additional trees along the limits of disturbance with encroachment into the SRP and deemed structurally unsafe by the City Arborist or the Project Arborist may be required to be removed prior to CO.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 8.\_\_\_\_\_ All roots encountered 1/2" or greater during grading or excavating operations shall be clean cut under the direction of an ISA Certified Arborist.
  - 9.\_\_\_\_\_ Any limbs overhanging the LOD that may be ripped, torn, or damaged during construction SHALL be properly pruned under the direction of an ISA Certified Arborist.
  - 10.\_\_\_\_\_ It is the owner's responsibility to maintain the vegetation and remove trash and debris around the perimeter of the project, even if within the public ROW, in accordance with the City of Alpharetta Property Maintenance Codes.
  - 11.\_\_\_\_\_ All approved revisions to the location of the tree save fence need to be coordinated with the land disturbance inspector prior to relocation.
- I. \_\_\_\_\_ **Provide the following note on the Landscape plan and Utility plan:**
- 1.\_\_\_\_\_ **ALL TREES MUST BE PLANTED OUTSIDE OF ANY UTILITY EASEMENTS, UNLESS APPROVED BY THE CITY ARBORIST OR UTILITY PROVIDER.** Make sure this note is bold and in a prominent place near utilities. This pertains to **ALL** utilities (water, sewer, gas, fiber optic, electric, etc.).
- J. \_\_\_\_\_ **Provide the following notes on the Landscape Plan:**
- 1.\_\_\_\_\_ The City Arborist must inspect the site before installation of erosion control measures. Land disturbance without a site inspection and approval by the City Arborist will result in a "Stop-Work Order" and fines.
  - 2.\_\_\_\_\_ If tree survey inaccuracies are found on-site, a stop work order will be issued until revised plans are approved and processed based on accurate information.
  - 3.\_\_\_\_\_ Design Landscape Architect or Project Arborist will inspect, verify, and approve the landscape has been planted per the approved plans and city standards prior to contacting the City Arborist for a CO inspection.
  - 4.\_\_\_\_\_ Trees agreed upon to be saved are the responsibility of the owner.
  - 5.\_\_\_\_\_ A 4" layer of mulch is required for the CRZ of Specimen Trees, Trees of Quality, and Tree Groupings. Mulch must be applied prior to start of construction and shall not touch the trunks of the tree(s).
  - 6.\_\_\_\_\_ A minimum 2" layer of mulch is required for all existing, non-specimen, landscape trees, including street and parking lot trees. Mulch must be applied prior to start of construction and shall not touch the trunks of the tree(s).
  - 7.\_\_\_\_\_ All mulch must be organic mulch consisting of wood chips, shredded bark, pine needles, or similar. Synthetic mulch or rocks are not approved for use in the City of Alpharetta.
  - 8.\_\_\_\_\_ All newly planted trees shall have visible root flares at finished grade. No circling roots shall be allowed on planted trees. The upper two rings of the wire basket, all burlap, and strapping **MUST** be cut and removed prior to backfill.
  - 9.\_\_\_\_\_ Plant sizes (caliper and height) **MUST** match the sizes shown on the plans. Plants that do not meet these minimums will not be accepted. E.g. 3 inch caliper trees must be 3 inches or larger. Plant height measurement is taken at the top of the main body of the plant and not at the tip of the topmost growth.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section

- 10.\_\_\_\_\_ All newly planted trees shall be equivalent in quality to a Florida #1 grade or better. All trees of lesser quality shall be rejected by the City Arborist.
- 11.\_\_\_\_\_ Watering bags or a drip irrigation system **MUST** be provided for all trees immediately after planting and remain through establishment.
- 12.\_\_\_\_\_ When watering bags are used manufacturers recommendations **MUST** be followed for proper sizing and watering schedules. Bags will be filled weekly by owner and during droughts for a minimum of 18 months after installation.
- 13.\_\_\_\_\_ NO TRENCHING ALLOWED IN TREE SAVE AREAS- INCLUDING IRRIGATION.
- 14.\_\_\_\_\_ Tree pit drainage testing is required when trees are planted in parking lot islands, sidewalk tree pits, roadway medians, or similar locations. Please refer to City Details regarding planting pit or landscape island construction. Fill each pit with water. If percolation is less than 100% within a 12 hour period, use an auger to drill a 10" inch hole to a depth of four feet below the bottom of the pit. Fill hole with drainage gravel and cover with a soil separator. Retest pit. If drainage is still unsatisfactory, City Arborist and Project Arborist must be notified in writing of the locations with poor drainage to provide a solution before planting. Testing results must be provided to the City Arborist.
- 15.\_\_\_\_\_ All buffers shall be planted where sparse and code required screening shall be installed in order to create a year round opaque screen within 2 years of construction or as directed by the City of Alpharetta. During construction or at the time of CO the City may require additional plantings to meet these requirements above what is shown on the approved landscape plan.
- 16.\_\_\_\_\_ All tree anchoring devices shall be removed from tree after one complete growing season or one year after planting, whichever is greater.
- 17.\_\_\_\_\_ Property owner shall be responsible for the care and maintenance of the trees and landscaping that front their property within the ROW.
- 18.\_\_\_\_\_ Landscape contractors are required to attend the City of Alpharetta Pre-Construction class prior to beginning work on any project. Please call (678)297-6070 for information and to reserve a spot.
- 19.\_\_\_\_\_ **NO TREES SHALL BE PLANTED ON ANY AREA OF AN EARTHEN DAM OR EMBANKMENT.** Make sure this note is bold and located in a prominent place near the dam.

K. \_\_\_\_\_ **Additional Requirements**

- 1.\_\_\_\_\_ Provide Zoning Conditions on plans and provide site plans, including trees and landscaping plans to Arborist.
- 2.\_\_\_\_\_ Provide Design Review Board comments and requirements on plans and provide any site plans submitted to and approved by DRB to Arborist.

Notes, details and checklists may be found at [www.alpharetta.ga.us](http://www.alpharetta.ga.us) in the resources section



## Traffic Engineering Checklist

Contact _____	Phone _____	Email _____
1 <sup>st</sup> Review _____	2 <sup>nd</sup> Review _____	3 <sup>rd</sup> Review _____
Date Approved _____		
Project Name: _____		LDP # _____
Reviewer: <u>Eric Graves</u>	Phone: <u>(678) 297-6220</u>	Email: <a href="mailto:egraves@alpharetta.ga.us">egraves@alpharetta.ga.us</a>
Eligible for One-Stop:	YES _____	NO _____

### STANDARD SUBMISSION REQUIREMENTS

**A complete, annotated checklist MUST be provided with plans prior to any review.**

**Annotation = Provide sheet number and/or note number reference next to each item below.**

✓ Denotes action completed      X Denotes action required      N/A Denotes not applicable

Submission of this checklist does not relieve the applicant from his/her responsibility to comply with all applicable regulations, codes, standards, guidelines, ordinances, and policies. The Community Development Department reserves the right to revise this checklist periodically as the need arises.

### TRAFFIC ENGINEERING REQUIREMENTS

- A. \_\_\_\_\_ Contractor is to provide the City of Alpharetta Encroachment permit for all work within the City's ROW. Any traffic signal or utility relocations will be the responsibility of the owner/ developer.
- B. \_\_\_\_\_ All utility locates and relocations, and or damage will be the responsibility of the developer/contractor. Developer/Contractor must contact City of Alpharetta Locate Personnel directly for traffic signal utility locates. Phone (678) 297-6200.
- C. \_\_\_\_\_ All required traffic signage must meet MUTCD standards.
- D. \_\_\_\_\_ All required traffic striping must meet MUTCD and GDOT plan specifications and must be thermo-plastic.
- E. \_\_\_\_\_ Provide all required details on plans (H/C and Signage details). General note – All H/C ramp forms must be approved by City Land Disturbance inspector prior to concrete pour.
- F. \_\_\_\_\_ Provide a GDOT ROW permit for all state roadways prior to plan approval.
- G. \_\_\_\_\_ Provide location of all property lines with dimensions to the nearest one-tenth foot, bearings, and distances. Show existing curb cuts within 300 feet of the site frontage.
- H. \_\_\_\_\_ Provide the name(s) of all current adjacent property owners.
- I. \_\_\_\_\_ Proposed ROW lines with total acreage or square foot if additional ROW is to be conveyed to accommodate new roadway, intersection, and signal equipment or sidewalk development.
- J. \_\_\_\_\_ Check parking lot layout and entrance for unsafe vehicle maneuvers. (Minimize the occurrence of vehicle conflicts when possible. Use Auto Turn to demonstrate perceived difficult movements.)
- K. \_\_\_\_\_ Distance between curb cuts shall be 300 feet (City of Alpharetta Design Standards).





- L. \_\_\_\_\_ Show driveway width per City Standard 951.
- M. \_\_\_\_\_ Inter-parcel Access has been provided.
- N. \_\_\_\_\_ Minimum of 75 feet between roadway and first radius point in parking lot. This is to provide adequate vehicle stacking at intersection.
- O. \_\_\_\_\_ Curb cut location should line up with existing curb cuts across from site.
- P. \_\_\_\_\_ All transition tapers must meet MUTCD and AASHTO Standards.
- Q. \_\_\_\_\_ All roadway tangent and curve design must meet AASHTO Standards.
- R. \_\_\_\_\_ Sight distance should be established using AASHTO intersection and stopping sight distance standards. These calculations should be demonstrated on the landscape plan.
- S. \_\_\_\_\_ If signs, striping, and modifications to traffic control are required as a part of development, construction should be complete and approved by the City traffic engineer prior to issuance of Certificate of Occupancy.
- T. \_\_\_\_\_ Traffic impact and analysis along with Trip Generation. Studies will need to be submitted and approved by the City traffic engineer. These studies will assist in determining best location and type of intersection design, lane requirements and storage bay lengths. Curb cut location and requirements should be discussed with the City traffic engineer prior to site layout.
- U. \_\_\_\_\_ Sidewalks and islands must be designed to accept H/C ramps and landings that meet ADA requirements (Alpharetta Standard 902).
- V. \_\_\_\_\_ Roadway Pavement specification and curb and gutter detail must meet City of Alpharetta Standard 901.
- W. \_\_\_\_\_ Provide traffic signal utility in area on plans. (Pull boxes, set back loops, conduit, and fiber).
- X. \_\_\_\_\_ If signalization or signal modifications are required as a part of development, construction should be complete and approved by the City traffic engineer prior to issuance of Certificate of Occupancy
- Y. \_\_\_\_\_ Traffic signal plans will need to be approved and will become a part of regular plan sheets (not a separate plan sheet)
- Z. \_\_\_\_\_ Signalization of pedestrian push button locations must meet ADA requirements.
- AA. \_\_\_\_\_ Additional Comments:



## STORMWATER ENGINEERING DESIGN CHECKLIST

LDP # _____		
Project Name _____	Project Location _____	
Reviewer <u>Jill Bazinet 678-297-6203</u>	Designer _____	
Contact _____	Phone _____	Email _____
-----		
1 <sup>st</sup> Review _____	2 <sup>nd</sup> Review _____	Date Approved _____
<i>* Area above dotted line to be filled out by applicant.</i>		

Provide this completed checklist signed, dated, sealed and certified by a Georgia P.E.

✓ Denotes no action required

X Or underline denotes action required

N/A Denotes not applicable to this project

**SUBMITTAL MUST INCLUDE A CHECKLIST THAT HAS BEEN MARKED UP BY THE ENGINEER OF RECORD SHOWING HOW AND WHERE EACH ITEM LISTED IS ADDRESSED. (Fore example, notes should be labeled with plan sheet and note number, other items should be labeled with plan sheet number and location on the sheet, etc.). PLANS WILL NOT BE REVIEWED WITHOUT THIS STEP COMPLETED.**

I, the undersigned, hereby certify that I am a Professional Engineer in the State of Georgia and that each element of this checklist was considered and addressed in accordance with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

\_\_\_\_\_  
**Signature and Seal of Applicant**

Submission of this checklist does not relieve the applicant from his/her responsibility to comply with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

The Department of Engineering / Public Works reserves the right to revise this checklist periodically as the need arises.

## **STORMWATER AND DRAINAGE DESIGN REPORT CHECKLIST**

### **PROPERLY ANNOTATED CHECKLIST SUBMITTAL REQUIRED PRIOR TO REVIEW**

- A. \_\_\_\_\_ Ensure Stormwater Management Report/Hydrology Study bears signature and seal of professional engineer.
- B. \_\_\_\_\_ Narrative
  - 1. \_\_\_\_\_ Site location, acreage, and current and proposed land use.
  - 2. \_\_\_\_\_ Off-site area(s) (basis of delineation and incorporation in the site design).
  - 3. \_\_\_\_\_ Natural detention/retention features incorporated in the drainage calculations.
  - 4. \_\_\_\_\_ Compliance with the Quantity Control Criteria including summary table of pre- and post-development peak flows for all storm events.
  - 5. \_\_\_\_\_ Compliance with Runoff Reduction and/or Water Quality Criteria.
  - 6. \_\_\_\_\_ Inspection and maintenance guidelines for the SWM facility proposed. Specify whose responsibility it will be to inspect and perform required maintenance and or repairs of the stormwater management practices.
  - 7. \_\_\_\_\_ Evaluation of downstream impacts per the City of Alpharetta Stormwater Design Manual (latest edition).
- C. \_\_\_\_\_ Pre-Development Drainage Map (Maximum Scale 1"=100')
  - 1. \_\_\_\_\_ Points of analysis.
  - 2. \_\_\_\_\_ Delineation of drainage areas including off-site area(s).
  - 3. \_\_\_\_\_ Tc flow paths with data (flow type, length, slope, and 'n') specified.
  - 4. \_\_\_\_\_ Identification of, in accordance with acceptable computations, area(s) (acres), CN and Tc for all drainage areas.
  - 5. \_\_\_\_\_ Pre-development contours (at 1-foot intervals for ground slopes < 2% and 2-foot intervals for slopes ≥ 2%). Shall extend a minimum of 50' beyond the property line.
- D. \_\_\_\_\_ Post-Development Drainage Map (Maximum Scale 1"=100')
  - 1. \_\_\_\_\_ Points of analysis.
  - 2. \_\_\_\_\_ Delineation of drainage areas including off-site area(s).
  - 3. \_\_\_\_\_ Tc flow paths with data (flow type, length, slope, and 'n') specified.
  - 4. \_\_\_\_\_ Identification of, in accordance with acceptable computations, area(s) (acres), CN and Tc for all drainage areas.
  - 5. \_\_\_\_\_ Proposed development (include finish floor elevations for all buildings).
  - 6. \_\_\_\_\_ Post-Development Contours and spot elevations (1-foot intervals for ground slopes < 2% and 2-foot intervals for slopes ≥ 2%).
  - 7. \_\_\_\_\_ Show how off-site areas are collected and directed through/around the site.
  - 8. \_\_\_\_\_ Show how peripheral areas, not to be collected are drained.
  - 9. \_\_\_\_\_ Label cross sections used for analysis to define limits of flooding.
  - 10. \_\_\_\_\_ Show proposed storm sewer with all inlets, junction boxes, and outlets.
  - 11. \_\_\_\_\_ Show all stormwater management practices.

- 12.\_\_\_\_\_ Demonstrate that the 100 year storm event can be conveyed to the SWM facility or site without impacting structures and within all easements.
- E. \_\_\_\_\_ Calculations
- 1.\_\_\_\_\_ Estimations of CN for Pre- and Post- Development conditions
  - 2.\_\_\_\_\_ Tc Calculations for Pre- and Post- Development conditions
  - 3.\_\_\_\_\_ Peak discharge calculations for Pre- and Post- Development conditions for design storms (1, 2, 5, 10, 25, 50, and 100, yr storm frequencies). Include model diagram, input file and summary sheet for final results.
  - 4.\_\_\_\_\_ Compliance with the Runoff Reduction and/or Water Quality Criteria
    - a.\_\_\_\_\_ Provide copy/cd of TSS Stormwater Site Design Tool (Excel spreadsheet). Note that undisturbed areas and stream buffers cannot be considered Natural Conservation Areas unless it is a properly recorded conservation easement.
    - b.\_\_\_\_\_ Provide TSS Area Map including bypass area analysis.
    - c.\_\_\_\_\_ Runoff volume generated by the first 1.0" of rainfall shall be retained onsite through the use of green infrastructure practices.
    - d.\_\_\_\_\_ If Runoff Reduction Standard cannot be achieved, must demonstrate that one or more of the criteria listed in the Alpharetta SWMM have been met.
  - 5.\_\_\_\_\_ Location of soil borings and descriptive bore log.
  - 6.\_\_\_\_\_ Water surface profiles for establishing limits of flooding.
    - a.\_\_\_\_\_ Calculations for peak discharge (provide and justify all input data).
    - b.\_\_\_\_\_ Cross sectional data locations.
    - c.\_\_\_\_\_ Water surface elevations (by a method approved by the department).
- F. \_\_\_\_\_ Additional comments

## **STORMWATER AND DRAINAGE DESIGN ADDITIONAL STRUCTURAL CONTROLS CHECKLIST**

### **DESIGN REPORT REQUIREMENT**

#### **NARRATIVE**

- A. \_\_\_\_\_ Justification of use for the proposed structural control.
- B. \_\_\_\_\_ Description of all design features and how the structural control will function within the specific parameters
- C. \_\_\_\_\_ Runoff Reduction and/or Water quality Standards
- D. \_\_\_\_\_ Methods used to calculate design requirements.
- E. \_\_\_\_\_ Summary of Results.

#### **CALCULATIONS**

- A. \_\_\_\_\_ All calculations necessary to justify and meet all runoff reduction, water quality and/or quantity standards.
- B. \_\_\_\_\_ Show contributing drainages areas with all information as previously discussed in other sections.
- C. \_\_\_\_\_ Design calculations.
- D. \_\_\_\_\_ Final details

### **PLAN REQUIREMENTS**

- A. \_\_\_\_\_ Specify type of structural control, location, width, depth, size, and length
- B. \_\_\_\_\_ Details of all outlet structures with elevations and dimensions
- C. \_\_\_\_\_ Cross-sectional details
- D. \_\_\_\_\_ Verify the seasonal high ground water table (some structural controls require the presence or absence of groundwater)
- E. \_\_\_\_\_ Location of soil borings and descriptive bore log.
- F. \_\_\_\_\_ Infiltration test results.
- G. \_\_\_\_\_ Include slopes, vegetative lining, or plant materials necessary.
- H. \_\_\_\_\_ Inlet and outlet protection with details
- I. \_\_\_\_\_ Locations and details for underdrains, if applicable
- J. \_\_\_\_\_ All necessary details and applicable information to clearly demonstrate what is proposed and constructability.

SITE ENGINEERING DESIGN CHECKLIST  
(To Be Completed & Submitted along with Civil/LDP Application)

LDP # _____			
Review No.	1st _____	2nd _____	3rd _____
Project Name _____		Project Location _____	
Reviewer _____ Jill Bazinet		Email _____ <a href="mailto:jbazinet@alpharetta.ga.us">jbazinet@alpharetta.ga.us</a>	
Design Firm _____		Contact _____	
Phone _____		Email _____	
		Fax _____	

**STANDARD SUBMISSION REQUIREMENTS**

Provide this completed checklist signed, dated, sealed and certified by a Professional Engineer in the State of Georgia. Community Development will forward this checklist to the Community Development Department.

C	Denotes no action required
X	Or underline denotes action required
?	Unable to locate on plan. Clarify.
N/A	Denotes not applicable to this project

**SUBMITTAL MUST INCLUDE A CHECKLIST THAT HAS BEEN MARKED UP BY THE ENGINEER OF RECORD SHOWING HOW AND WHERE EACH ITEM LISTED IS ADDRESSED. (For example, notes should be labeled with plan sheet and note number, other items should be labeled with plan sheet number and location on the sheet, etc. Written comment responses that do require plan revisions are to be included hereon). PLANS WILL NOT BE REVIEWED WITHOUT THIS STEP COMPLETED.**

I, the undersigned, hereby certify that I am a Professional Engineer in the State of Georgia and that each element of this checklist was considered and addressed in accordance with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

\_\_\_\_\_  
Applicant Signature & Date

\_\_\_\_\_  
Applicant Seal

Submission of this checklist does not relieve the applicant from his/her responsibility to comply with all applicable regulations, codes, standards, guidelines, ordinances, and policies.

The Department of Community Development reserves the right to revise this checklist periodically as the need arises.

**PLAN REQUIREMENTS**

## Cover Sheet

- A. \_\_\_\_\_ Vicinity Map
- 1 \_\_\_\_\_ Legible scale
  - 2 \_\_\_\_\_ Site perimeter outlined and labeled. (hatching to distinguish site)
  - 3 \_\_\_\_\_ Street names
  - 4 \_\_\_\_\_ North Arrow
- B. \_\_\_\_\_ Title Block
- 1 \_\_\_\_\_ Name of project
  - 2 \_\_\_\_\_ Name, address, phone number of firm responsible for preparing the plan
  - 3 \_\_\_\_\_ Date original plan was prepared
  - 4 \_\_\_\_\_ Scale
  - 5 \_\_\_\_\_ Sheet number
  - 6 \_\_\_\_\_ Revision date
- C. \_\_\_\_\_ General Notes
- 1 \_\_\_\_\_ Narrative stating purpose of the plan.
  - 2 \_\_\_\_\_ Site acreage
  - 3 \_\_\_\_\_ Total disturbed acreage
  - 4 \_\_\_\_\_ Percent impervious for the site
  - 5 \_\_\_\_\_ Boundary Survey date and source
  - 6 \_\_\_\_\_ Topo benchmark location and elevation (Include Datum)
  - 7 \_\_\_\_\_ Name, address, phone number of owner of record
  - 8 \_\_\_\_\_ Flood hazard statement with most current (FEMA) FIRM panel number (9/18/13).
- D. \_\_\_\_\_ Index of Sheets
- E. \_\_\_\_\_ Call Before You Dig Logo and note (cover)
- F. \_\_\_\_\_ Ensure Maps, drawings, and supportive documentation bear signature and seal of professional engineer, site surveys bear signature and seal of licensed surveyor, and erosion control plans bear signature and seal of engineer, surveyor, architect, or landscape architect in the State of Georgia.  
[Will check at final sign off.](#)
- G. \_\_\_\_\_ Provide an encroachment agreement from adjacent properties for off-site work, ingress/egress site access agreement, approval from DOT for site entrance.
- H. \_\_\_\_\_ Provide/correct hydrologic analysis and design for 1, 2, 5, 10, 25, 50, and 100-year storm events on all detention facilities and design for runoff reduction and/or water quality control devices (See Stormwater Design Checklist.)

## All Plan Sheets

- A. \_\_\_\_\_ North Arrow (on all plans) Graphic Scale (max. 1"=100')
- B. \_\_\_\_\_ Graphic Scale (max. 1"=100')

## Site Plan / Existing Conditions Plan / Survey

- A. \_\_\_\_\_ Site boundary survey and topo.
- B. \_\_\_\_\_ Legend for all symbols used
- C. \_\_\_\_\_ Date and source of survey, topo benchmark reference, boundary legal description, adjacent property owners. Include lot lines with dimensions to the nearest one-tenth foot, bearings, and distances.
- D. \_\_\_\_\_ Include all streets with names, widths, and location of R.O.W.
- E. \_\_\_\_\_ Label all existing structures and their use.
- F. \_\_\_\_\_ Locate all utilities (must be on site plan unless argument made by applicant and accepted by city) and provide the names of the utility providers.
- G. \_\_\_\_\_ Label entrance dimensions and radii.
- H. \_\_\_\_\_ Street centerline stations, vertical & horizontal curve data
- I. \_\_\_\_\_ Provide pavement details/ specifications for all public roads, including acceleration/ deceleration lanes.
- J. \_\_\_\_\_ Callout entrance details 951, utility detail 400/401, curb & gutter detail 901, handicap ramp detail 902, street sign detail 900. GDOT A4 (detectable warnings) Provide details for each.
- K. \_\_\_\_\_ Locate all existing or proposed well or septic systems.
- L. \_\_\_\_\_ Delineate and label land to be reserved or dedicated for public use.

## Grading Plan / Stormwater Management Plan

- A. \_\_\_\_\_ Existing and proposed topography at 1-foot intervals for ground slopes < 2% and 2-foot intervals for slopes > 2%. Existing topo shall extend a minimum of 50' beyond the property line.
- B. \_\_\_\_\_ Existing and proposed spot elevations at all high and low points and elsewhere as necessary with associated flow arrows to illustrate drainage patterns.
- D. \_\_\_\_\_ Base of fill slopes steeper than 3:1 must terminate a safe distance from all property lines to allow for constructability and not to affect adjacent property owners.
- E. \_\_\_\_\_ Check that the limits of grading, retaining walls, and sediment control practices are constructible within the limits of disturbance and the designated resources to be protected.
- F. \_\_\_\_\_ Delineate FEMA and City Special Flood Hazard Area and floodway. (100-year floodplain)  
Provide LOMA and compensatory cut info as required for encroachment
- G. \_\_\_\_\_ Delineate future floodplain
- H. \_\_\_\_\_ Delineate wetlands  
Provide copy of all regulatory documentation permitting any proposed impacts
- I. \_\_\_\_\_ Delineate 50-foot undisturbed buffer along non-perennial streams measured horizontally from the wrested vegetation. Delineate 100-foot undisturbed buffer along perennial streams.

- J. \_\_\_\_\_ Delineate 75-foot impervious setback along non-perennial stream measured from the wooded vegetation. Delineate 150-foot impervious setback along perennial streams.
- K. \_\_\_\_\_ If stream buffer encroachment is proposed, provide necessary variance approval from City, State and Corps of Engineers as applicable.
- L. \_\_\_\_\_ Location and labeling of Specimen trees and critical root zones. Must be on grading plan.
- M. \_\_\_\_\_ Finished floor elevation of any structure shall be a minimum of three (3) feet above the 100-year flood elevation.
- N. \_\_\_\_\_ Volume of cuts and fills
- O. \_\_\_\_\_ Minimum grade of 1% in pervious areas and ½% in impervious areas
- P. \_\_\_\_\_ Provide all necessary details for retaining walls, conc. encasement, etc. If a retaining wall is proposed over 4'-0" in revealed height, include the structural design signed, dated, and sealed by a Georgia P.E.
- Q. \_\_\_\_\_ Provide elevations for top & bottom of all retaining walls.
- R. \_\_\_\_\_ Delineate and label all existing or proposed utility easements (sanitary sewer, public service utility rights-of-way, and off-site easements, landscape buffers)
- S. \_\_\_\_\_ Existing and proposed location of sanitary sewer pipes and structures with pertinent information (pipe sizes and material, structure tops and inverts). Must be on grading plan.
- T. \_\_\_\_\_ All pipe systems
1. \_\_\_\_\_ Complete layout with top and invert elevations labeled on all inlets and junction boxes. (specify type of inlet or junction box) Existing and proposed
  2. \_\_\_\_\_ Pipe profiles including pipe size, invert elevations, structure labels, structure elevations, pipe materials, slopes, 25 year HGL, crossing utilities and horizontal & vertical scale
  3. \_\_\_\_\_ Minimum ground cover 1 foot or ½ the pipe diameter
  4. \_\_\_\_\_ Pipe chart showing design for 25-year storm event on street structures, secondary collection systems and sizing of site pipes including drainage area, coefficient of runoff, intensity, flow, velocity, hydraulic grade, and capacity
  5. \_\_\_\_\_ Stormwater pipe minimum 18" diameter, continuous length less than 300 feet, slope greater than 1%.
  6. \_\_\_\_\_ Pipe materials: RCP within public R.O.W, outside of R.O.W. all metal pipes fully bituminous, asphalt or aluminum coated with paved inverts. For HDPE pipe, provide details and installation specifications.
  7. \_\_\_\_\_ Catch basins and drop inlets/ drains should be at lowest collection point for runoff; open drains shall be a minimum 40 feet from any building.
- U. \_\_\_\_\_ All open channel systems
1. \_\_\_\_\_ Cross-section detail consistent with grading plan
  2. \_\_\_\_\_ Sizing criteria; depth, bottom width, top width, length, flow capacity
  3. \_\_\_\_\_ Lining type and detail if applicable
  4. \_\_\_\_\_ Grading plan showing proposed contours and location of cross-section
- V. \_\_\_\_\_ Provide headwall, discharge outside building setback or minimum 30 feet from dwelling, discharge outside of fill slopes, discharge to natural drainage or other drainage system.



- W. \_\_\_\_\_ Eliminate proposed concentrated discharge from site where existing condition is sheet flow.
- Y. \_\_\_\_\_ Location of BMPs for runoff reduction, water quality control, detention.
- Z. \_\_\_\_\_ Delineate and label of all easements needed for inspection and maintenance of drainage system, stormwater management facilities, and BMP's.
1. \_\_\_\_\_ Minimum 20' wide emergency drainage easement shall be given on all drainage systems (open/closed), which lie outside the normal right-of-way.
2. \_\_\_\_\_ Minimum 10' access/maintenance easement around stormwater management facility.
- AA. \_\_\_\_\_ Storm drainage structures are not allowed within the radius of a curb.
- BB. \_\_\_\_\_ Detailed construction specifications/sequence specific to the BMP
- CC. \_\_\_\_\_ Provide off-site easements from adjacent property owners affected by off-site drainage from proposed development.
- DD. \_\_\_\_\_ Additional Comments:

## Erosion and Sediment Control Plan

- A. \_\_\_\_\_ If over 1 ac use the appropriate state NPDES construction checklist
- B. \_\_\_\_\_ If under 1 ac but within 200 feet of perennial stream complete \* items

### For projects under 1 acre and not within 200 feet of perennial stream:

- C. \_\_\_\_\_ Provide name and 24-hour telephone number of local contact responsible for the development's erosion and sediment control.
- D. \_\_\_\_\_ Delineate all State waters within 200 feet of site
- E. \_\_\_\_\_ Include construction schedule with timing of start/end dates for clearing/grading, construction activities, and erosion control maintenance.
- F. \_\_\_\_\_ Erosion and Sediment Control plans should be phased (minimum of 3 phases).
- G. \_\_\_\_\_ Limits of disturbance (on Erosion Control plans)
- H. \_\_\_\_\_ Delineate drainage basins on initial phase erosion control sheet and note acreage for each basin. Update basin acreage and delineation on intermediate and final phases as they are altered.
- I. \_\_\_\_\_ Provide 67 cubic yards per acre drained sediment storage for each stage of construction. Include specific design information and calculations for all structural measures on site, such as temporary sediment basins, retrofitted detention ponds, and excavated inlets.
- J. \_\_\_\_\_ When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface, such as skimmers, are not feasible, a written justification must be included on the plans.
- K. \_\_\_\_\_ Show 25-year storm water velocity at all headwalls and provide appropriate outlet protection to provide non-erosive conveyance (provide stone size, apron length, width, and depth for St). Aprons shall be constructed with no slope along its length (0.0% grade).
- L. \_\_\_\_\_ Include all applicable uniform structural coding symbols. Provide symbol legend.
- |    |    |     |    |       |     |     |    |    |
|----|----|-----|----|-------|-----|-----|----|----|
| Cd | Cr | Dn1 | Gr | Re    | Sd2 | Sd3 | Sk | Su |
| Ch | Dc | Dn2 | Lv | Rt    |     | Sd4 | Sr | Tp |
| Co | Di | Ga  | Rd | Sd1-S |     |     | St | Wt |

- M. \_\_\_\_\_ Include all applicable vegetative coding symbols:  
Bf Ds1 Ds2 Ds3 Ds4 Du Ss Fl-Co Tac Sb
- N. \_\_\_\_\_ Include all necessary details for erosion control practices that conform to or exceed standards in the Manual for Erosion and Sediment Control in Georgia (most current edition).
- O. \_\_\_\_\_ Include a vegetative plan for all temporary and permanent vegetative practices including species, planting dates, seeding, fertilizer, lime and mulching rates. Vegetative plan must show options for year-round seeding.

**For projects under 1 acre and not within 200 feet of perennial stream add notes:**

- P. \_\_\_\_\_ Sediment storage volume must be in place prior to and during all land disturbing activities until final stabilization of the site has been achieved.
- Q. \_\_\_\_\_ Professional Engineer has visited the proposed site. (Include P.E. seal and signature.)
- R. \_\_\_\_\_ Additional Comments:

## Notes

- A. \_\_\_\_\_ For sites with over 1 acre disturbed area, provide note: Two copies of the NPDES Notice of Intent must be provided to the Land Disturbance Inspector prior to initiating construction.
- B. \_\_\_\_\_ For sites requiring NPDES permit coverage, provide note: If Primary Permittee changes during the course of a project, the new Primary Permittee must submit copies of the new NOI to the City of Alpharetta Land Disturbance Inspector.
- C. \_\_\_\_\_ All areas to receive structural fill to be cleared, stripped and free of topsoil, roots, stumps, and all other deleterious material. Structural fill to be clean from organics and all other deleterious material. Fill to be placed in maximum 8" lifts and compacted to at least 95% standard proctor maximum density and to within 3%+ of the optimum moisture content, unless otherwise specified in the project geotechnical report or by the project geotechnical engineer. All fill soils to be placed under the observation of the project geotechnical engineer. Documentation of compaction testing shall be provided to Land Disturbance Activity Inspector for all roadway construction in right-of-way. (Including deceleration lane) Contact Land Disturbance Activity Inspector prior to construction for further testing requirements.
- D. \_\_\_\_\_ Failure of the contractor to perform the prescribed erosion control practices shall result in the immediate issuance of a stop-work order for the project site, pursuant to UDC 3.1.1.F.2.d.
- E. \_\_\_\_\_ Maintenance of all soil erosion and sedimentation control practices, whether temporary or permanent, shall be the responsibility of the owner.
- F. \_\_\_\_\_ All disturbed areas must be vegetated within 14 days of final grade.
- G. \_\_\_\_\_ All fill slopes shall have silt fence at the toe of the slope.
- H. \_\_\_\_\_ This site does not contain any state waters or wetlands. (if applicable)
- I. \_\_\_\_\_ The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land-disturbing activities.

- J. \_\_\_\_\_ Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.
- K. \_\_\_\_\_ The Contractor shall remove sediment once it has accumulated to one-half the original height of the silt fence used for erosion control.
- L. \_\_\_\_\_ Maximum cut or fill slopes are 2 horizontal: 1 vertical.
- M. \_\_\_\_\_ Any disturbed area left exposed for 14 days shall be stabilized with mulch or temporary seeding.
- N, \_\_\_\_\_ All silt fence shall be Type S.
- O. \_\_\_\_\_ The construction exit shall be maintained in a condition, which will prevent tracking or flow of mud onto public right-of-way. This may require periodic top dressing with stone, as conditions demand. (All materials spilled, dropped, washed, or tracked from vehicle or site onto roadway or into storm drain system must be removed immediately by sweeping.)
- P. \_\_\_\_\_ All storm drains and drop inlets will have 4" permanent pollution prevention markers installed prior to inspection. Markers are available at City of Alpharetta Community Development Department 678-297-6070.
- Q. \_\_\_\_\_ The owner will maintain storm water runoff controls at all times. Additional controls will be installed if determined necessary by City inspection.
- R. \_\_\_\_\_ Irrigation systems are not allowed within the public right-of-way.
- S. \_\_\_\_\_ At least one person on a project or site must have completed the Level 1A Erosion Education & Training Course and be certified by GSWCC.
- T. \_\_\_\_\_ Subcontractors must complete either Level 1A Erosion Education & Training Course or attend Subcontractor Awareness seminar.
- U. \_\_\_\_\_ Landscaping, fencing, or safety benches per Georgia Stormwater Management Manual required around stormwater management facilities.
- V. \_\_\_\_\_ The City will require a maintenance bond to remain in place on all public improvements (including but not limited to curb and gutter, sidewalk, pavement and base, pavement markings and street signs or signalization, the entire project storm system both inside and outside right-of-way, detention and water quality devices) for a minimum of one (1) year after final plat sign-off or until the final certificate of occupancy is issued, whichever is longer. This bond should be granted for one-year and renewed until the final certificate of occupancy is issued.
- W. \_\_\_\_\_ No wells or septic systems are proposed or exist on site. (if applicable)
- X. \_\_\_\_\_ A separate building permit will be required. All walls over 4'-0" require fencing or acceptable dense vegetation at the top per UDC Article IV 4.4.5J.
- Y. \_\_\_\_\_ All Metal pipes to be fully bituminous, asphalt or aluminum coated with paved inverts. All storm structures in right-of-way to have paved inverts.
- Z. \_\_\_\_\_ Contractor must attend City of Alpharetta Pre-Construction Class prior to site initiation.
- AA. \_\_\_\_\_ Erosion control matting shall be installed on all slopes 3:1 and steeper.
- BB. \_\_\_\_\_ Approved plans must be kept on site at all times.

## Details

- A. \_\_\_\_\_ Design details for detention outlet control. Delineate 100-year ponding limits of detention pond. Provide details for trash rack or anti-clogging devices. Openings on trash racks should be a maximum of 50% of the size of the smallest opening to be protected.
- B. \_\_\_\_\_ Provide all necessary City of Alpharetta stormwater details:  
200 201 202 203 204 205 210 211 212 213 220 221 230  
231 232 233 234 235
- C. \_\_\_\_\_ Provide all details necessary for construction of on-site storm structures.
- D. \_\_\_\_\_ Provide pollution prevention marker detail.
- E. \_\_\_\_\_ Include all necessary details for erosion control practices that conform to or exceed standards in the Manual for Erosion and Sediment Control in Georgia (most current edition).



## Fire Department Land Disturbance Permit Checklist

Instruction: A complete and annotated checklist (page numbers of each required item) **MUST** be provided with plan submittals. No review may be made prior to submitting this form. This list is not an all-inclusive list; all applicable codes as adopted codes must be met.

### Fire Access Plan

Self-Check	Page #
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- |       |       |  |
|-------|-------|--|
| _____ | _____ | 1. A Fire Access Plan (FAP) is provided. An FAP is a simple site plan identifying emergency access requirements and fire protection measures for site development. A Fire Access Plan shall be submitted with all Development Permit applications. |
| _____ | _____ | 2. Swept Path Analysis is on Fire Access Plan.   |
| _____ | _____ | 3. <b>Include</b> a code declaration with all applicable cited code called "FIRE MARSHAL'S OFFICE REQUIREMENTS" on the plans.  |

### Access & Roadways

Self-Check	Page #
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|-------|-------|--|
| _____ | _____ | 4. An address with an approved numerical and street name designation shall be provided. Provide designations for each building on the submitted plans. International Fire Code, Chapter 5, Section 505.1, 2018 Edition.  |
| _____ | _____ | 5. All fire access roads are compliant with the 2018 International Fire Code Chapter 5 and Appendix D, but at minimum, an unobstructed 20 ft. in width and 13 ft. 6 in. clear height, International Fire Code 503.2.1.   |
| _____ | _____ | 6. Approved Fire Apparatus Access Roads shall be provided for every facility, building, or portion of a building. The fire apparatus access road shall extend to within 150 feet of all portions of the facility or any portion of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. International Fire Code, Chapter 5, Section 503.1.1, 2018 Edition. |



## Access & Roadways (Cont.)

Self-Check    Page #

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|-------|-------|---|
| _____ | _____ | 7. Every Dead-End Access Road more than 150 feet in length shall be provided with an approved area for turning around fire apparatus. International Fire Code, Chapter 5, Section 503.2.5, 2018 Edition. Refer to table D103.4 for additional design requirements.  |
| _____ | _____ | 8. Roadways constructed of an all-weather surface capable of supporting 75,000 pounds gross weight shall be provided and noted on the plans. International Fire Code, Chapter 5, Section 503.2.3, 2018 Edition.   |
| _____ | _____ | 9. Aerial fire apparatus access roads are required for all structures over 30 feet in height measured from the lowest level of fire department access to the ceiling height of the highest occupied floor level and shall have a minimum unobstructed width of 26 ft., excluding shoulders, in the immediate vicinity of the building or portion thereof. |
| _____ | _____ | 10. Grades shall be no more than 10%. International Fire Code, 2018 Edition, Appendix D103.2. <b>Must be called out on Plans.</b>   |
| _____ | _____ | 11. Fire Lanes shall be installed in streets or roads adjacent to buildings, on at least one side which presents major point(s) of access into the building. International Fire Code, 2018 Edition Appendix D.  |
| _____ | _____ | 12. Fire Lane markings or signage shall be provided per the requirements of the International Fire Code, Chapter 5, Section 503.3, 2018 Edition.  |



## Hydrants

Self-Check	Page #
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|-------|-------|---|
| _____ | _____ | 13. Water Main location and sizes are to be shown on plan. International Fire Code 508.1.   |
| _____ | _____ | 14. Hydrant locations are to be shown on plans.   |
| _____ | _____ | 15. Placement of Fire Hydrants shall be a minimum of 3 ft. and a maximum of 15 ft. from the Back of the curb or road edge with the large fire department connection facing the nearest fire department access point and set a minimum of 18" and a maximum of 36" above finished grade to the center of the large fire department connection. |
| _____ | _____ | 16. Fire Hydrants in Single Family Residential shall be spaced no more than 600 ft. apart.  |
| _____ | _____ | 17. Fire Hydrants in Multi-Family residential subdivisions shall be located such that all portions of the building can be reached by fire hose lays not to exceed 400 ft.   |
| _____ | _____ | 18. Fire Hydrant Spacing in Industrial & Commercial developments, additional hydrants may be required to permit all portions, of all buildings, to be reached by hose lays not to exceed 400 ft. by road travel.  |
| _____ | _____ | 19. Fire Hydrants and Water Mains are to be installed, flushed and under pressure before any combustible construction is started. IFC 1412.1  |
| _____ | _____ | 20. A fire flow test and report is provided to verify that the fire flow requirement is available.  |
| _____ | _____ | 21. Fire flow information shall be provided by the owner or contractor [IFC 507.3]. Once the report is received, please image the fire flow report onto the plan set. A fire flow test is valid for 6 months from the test date.  |



## Fire Department Connections

Self-Check    Page #

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| _____ | _____ | 22. Fire Department Sprinkler Connection locations shall be shown on the site plan for all construction requiring a fire sprinkler system (per Life Safety Code & Alpharetta Ordinance #220).  |
| _____ | _____ | 23. Fire Department Sprinkler Connection is to be a maximum of 100 ft. from a fire hydrant unless otherwise approved by the Authority Having Jurisdiction. The connection shall be between 18 inches and 48 inches above ground level. NFPA 14 Chapter 6                                     |
| _____ | _____ | 24. Fire Department connections shall be on the street side of buildings and so located and arranged that hose lines can be readily and conveniently attached to the inlets without any interference. They shall also be free standing at approved location by the Fire Department. NFPA 24. |
| _____ | _____ | 25. Fire Department Connections installed underground shall have a listed check valve, an auto-drip valve, a sign on a plate or fitting reading, "Auto-Sprinkler or Auto Sprinkler/Standpipes", and hose connections shall have standard threads as specified in NFPA 1963.                  |
| _____ | _____ | 26. Fire Sprinkler Systems required for Multi-Family (Apartments, Townhomes & Condo's) shall comply with City of Alpharetta Sprinkler Ordinance #220. A minimum 2" water lines must be shown on plans.   |
| _____ | _____ | 27. (Installation or Repair) of Underground Fire Sprinkler water supplies shall be performed by a utility or fire sprinkler contractor or plumbing contractor licensed under 2010 Georgia Code Title 25, Chapter 11, Section 25-11-7.  |
| _____ | _____ | 28. Post Indicator Valves (PIV) in the underground piping shall be omitted unless specifically permitted by the Alpharetta Fire Marshal's Office.  |





## Georgia Accessibility Code/Miscellaneous

### Self-Check    Page #

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|-------|-------|--|
| _____ | _____ | 29. Emergency Responder Radio Coverage shall be compliant with 2018 International Fire Code Section 510 for all new buildings. All measured signal levels regardless of location must not be less than -95dbm<br><b>*See complete requirements and exceptions attached*</b>  |
| _____ | _____ | 30. Emergency Responder Radio Coverage IFC 510 Compliance Acknowledgement form shall be completed, and <b>a copy shall be provided on the plans for applicable projects.</b>   |
| _____ | _____ | 31. Show an accessible route from the site arrival point [120-3-20(A) - §206.2]  |
| _____ | _____ | 32. ADA Parking number and size must comply with Chapter 2 Section 208 of the 2010 American with Disabilities Act Standards.   |
| _____ | _____ | 33. Handicap ramp landings shall have level landings at the top and bottom of each ramp and each ramp run. They shall have the following features:<br><br>a) _____ The landing shall be at least as wide as the ramp run leading to it,<br><br>b) _____ The landing length shall be a minimum of 60 inches clear,<br><br>c) _____ If the ramp changes direction at landings, the minimum landing size shall be 60 inches by 60 inches. |
| _____ | _____ | 34. Transformer pad locations shall be a minimum of 10'-0" from any walkway, balcony, building overhang, canopies, exterior walls, and exterior stairs.  |
| _____ | _____ | 35. Transformer pad locations shall be no less than 3'-0" from any solid wall of non-combustible construction with no overhang. GA Safety Fire Commissioner, 120-3-3, NFPA 70  |



**DATE: June 1, 2017**

**TO: All Fire Marshal's Office Personnel and Contractors**

**FROM: Alpharetta Fire Marshal's Office**

**SUBJECT: International Fire Code (IFC) Section 510 Requirements for New Construction**

The Fire Marshal's Office (FMO) will not allow the issuance of temporary or permanent Certificates of Occupancy for any building permitted after June 1, 2017, due to the requirements of IFC 510, Emergency Responder Radio Coverage (ERRC), not being met. Any emergency responder radio coverage required by IFC 510 must be installed, tested, and operational prior to the issuance of a Fire Safety Codes release or Certificate of Occupancy. Building owners and designers must take the necessary steps for the testing, design, and installation of any required emergency responder radio system prior to the issuance of a temporary or permanent Certificate of Occupancy.

The City of Alpharetta participates in an area wide radio system. The North Fulton Regional Radio System Authority (NFRRSA) maintains and operates the system and will provide a local contact as needed.

**Application:** All new (proposed) construction and any substantial renovation(s) to existing buildings as defined in OCGA 25-2-14 (O) (d) approved after January 30, 2014. Existing buildings as required by IFC 1103.2 when ordered by the Fire Marshal. Wired systems as identified in IFC 510.1 exception 1 will not be accepted in lieu of an ERRC.

Exceptions: (As permitted by IFC 510.1 (2))

The following structures are not required to comply with the requirements of IFC Section 510.

1. Buildings with no more than two occupiable stories, no more than 12,000 total square feet, and no floors below grade.
2. Temporary buildings including tents when permitted by the fire marshal.

For additions to buildings, unless the exceptions above are met for the area of the addition, the entire building being expanded must meet IFC 510 requirements.

### **Testing—Needs Assessment**

- 1) Effective June 1, 2017, initial signal strength testing must be completed prior to the approval of site plans for new buildings and building additions.
- 2) Field testing for signal strength certification will not be conducted prior to the building envelope being complete and all doors, windows and exterior openings closed. In buildings with significant internal signal impairments like rack storage of metal parts, interior room enclosures that contain wire mesh security screens, or other interior or exterior features, etc.; all internal construction must be complete prior to final testing for signal strength.
- 3) Testing will be performed in accordance with IFC 510 using the 20 test cell (per floor) criteria for initial testing. For floors 32,000 sq. ft. or more, each floor of the building shall be divided into grids of approximately 40 ft. by 40 ft.
- 4) All critical areas as defined in NFPA 72 chapter 24.5.2.2.1 shall be tested individually and shall not be counted towards the 20 test cell count.
- 5) Testing results will be certificate by the testing contractor and forwarded to the FMO. A copy shall be left on site with the approved plans.

- 6) Authorization to operate on frequencies licensed to NFRRSA must be obtained from the Radio System Manager or local contact. NOTE: FCC Part 90.219 (b)(1)(i)—Non-licensees seeking to operate signal boosters must obtain the express consent of the licensee(s) of the frequencies for which the device or system is intended to amplify. The consent must be maintained in a recordable format that can be presented to an FCC representative or other relevant licensee investigating interference. Consent may be withdrawn by NFRRSA for any reason with notice to the property owner.

**\*See last page for a list of authorized contractors to perform the testing.**

**Design Considerations**—All proposed ERRC system shall be designed in accordance with IFC section 510, good engineering practices and applicable regulations of the Federal Communications Commission.

Plans must be reviewed and approved by the FMO prior to installation or modification of an ERRC system. Plans shall be electronically submitted for review through [www.eplansolution.com](http://www.eplansolution.com). After plan approval by the FMO, the appropriate permit will be issued by the FMO.

Permits will be issued based on a review of engineering plans. A design professional seal is not required.

Plans shall detail the following:

- 1) Site map showing location of target building and closest donor site antenna
- 2) Statement of work and scope of work describing the system design
- 3) Location(s) of all head end equipment and radio transmitters (BDA's)
- 4) Locations of all "critical areas" as defined in NFPA 72, 24.5.2.2.1 with anticipated signal levels (-95dBm required)
- 5) Single line schematic drawing of antenna lines and data lines
- 6) Type and location of NEMA 4 enclosures
- 7) Battery calculations to show 24 hours capacity at 100% transmit duty cycle
- 8) Floor plan showing distributed antenna system (DAS) antennas and the anticipated signal level in each test grid square, see number 4 above also
- 9) System component specification documents including coax cable(s) and data or fiber optic components, all transmitters shall be FCC Type Accepted, provide documentation
- 10) System monitoring shall include:
  - a. Monitoring equipment and identification of monitoring station
  - b. Malfunction of the BDA Loss of primary power or related electronic systems
  - c. Antennas and passive filters are exempt from monitoring
  - d. Fire alarm installing contractor if system is to be monitored by FACP
- 11) Detailed acceptance procedures including all provisions of IFC 510.5.3—talk in and talk out signal levels must be included for each zone and critical area.
- 12) Location of document box—shall be co-located with head end equipment
  - a. Documents to be included in the document box include;
    - i. System design diagrams
    - ii. Acceptance testing documents
    - iii. Identity of persons/company installing the system
    - iv. Identification of the system monitoring company with phone contact numbers
    - v. Test results for the preceding three years of annual test and inspection, refer to 510.6.1
    - vi. FCC 90.219—FCC Letter of consent from NFRRSA
- 13) Dual use antenna systems (Permitted on a case by case review basis)
  - a. Show the schematic layout of the head end equipment and the interconnect filtering that will prevent co-system interference.
  - b. Filters must be enclosed in a locked NEMA 4 cabinet
  - c. Cellular system components that cannot create interference with the public safety radio system do not need to be enclosed in NEMA rated cabinets.

**Technical Information**—All technical information for the NFRRSA Communications system is available on the FCC website and the attached document (pg.4). Additional technical information may be obtained by contacting the local NFRRSA contact at: Alpharetta Department of Public Safety, Technical Services, 678-297-6275

**Acceptance Testing and Commissioning**—Systems must be inspected by personnel from the FMO or approved third party inspection services. Acceptance criteria shall be specified in the plan submittal documents and shall clearly demonstrate the ability of the system to perform in the event of an emergency. The testing shall be conducted both on primary and secondary power sources. A certificate of commissioning shall be completed by an approved contractor and signed by the building owner's representative. An operations and maintenance manual shall be provided to the building owner as part of the commissioning. Refer to IFC 510.5.3 for additional details.

**Maintenance**—All system and components shall be tested annually in accordance with IFC 510.6. A system test and inspection report shall be maintained on site for inspection by the fire marshal's office. A tag shall be placed on the head end cabinet indicating the date of the last test and the results of the test. All test reports shall be submitted to the FMO in an expeditious manner. Any system that fails annual testing should be reported to the FMO within 48 hours of testing. Should a system fail to provide adequate signal, cause interference, or fail to perform as originally installed, the Fire Marshal is authorized to order the testing of the system and repair to original installation standards or the current adopted edition of the standard. The Fire Marshal is authorized to order that cellular signal boosting systems that interfere with the public safety radio system be tested or disconnected pending testing in order to eliminate interference.

*NOTE: Requirements listed above are not necessarily all inclusive, but are intended as a guide.*

**\*Authorized Contractors-** Due to security concerns within the NFRRSA Communication system, the following contractors are authorized to perform the testing.

Diversified Electronics Incorporated  
1290 Field Pkwy  
Marietta, Ga. 30066  
770-427-8181  
Glenn.Petersen@deirr.com

Bearcom  
1510 Huber Street  
Atlanta, Ga. 30318  
678-641-7450  
770-442-6600  
michael.farley@bearcom.com

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**Federal Communications Commission**  
**Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NORTH FULTON REGIONAL RADIO SYSTEM  
AUTHORITY

ATTN: ED SWEENEY  
NORTH FULTON REGIONAL RADIO SYSTEM AUTHORITY  
5840 ROSWELL ROAD, BUILDING 500  
SANDY SPRINGS, GA 30350

Call Sign	File Number
WOVD462	0007364934
<b>Radio Service</b> SY - Trunked Public Safety 700 MHz	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0023526452

Grant Date	Effective Date	Expiration Date	Print Date
01-08-2015	08-04-2016	01-08-2025	08-04-2016

**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loe. 1** Address: FIRE STATION 21  
City: ATLANTA County: FULTON State: GA  
Lat (NAD83): 33-50-33.4 N Long (NAD83): 084-22-41.7 W ASR No.: 1226222 Ground Elev: 300.8
- Loe. 2** Address: 450 Morgan Falls Rd  
City: Sandy Springs County: FULTON State: GA  
Lat (NAD83): 33-57-53.8 N Long (NAD83): 084-22-07.4 W ASR No.: 1249137 Ground Elev: 309.3
- Loe. 3** Address: 1810 HEMBREE ROAD  
City: ALPHARETTA County: FULTON State: GA  
Lat (NAD83): 34-03-46.3 N Long (NAD83): 084-18-17.0 W ASR No.: 1292664 Ground Elev: 328.3
- Loe. 4** Address: ALPHARETTA, GA  
City: ALPHARETTA County: FULTON State: GA  
Lat (NAD83): 34-02-29.0 N Long (NAD83): 084-13-36.5 W ASR No.: 1240775 Ground Elev: 348.0
- Loe. 5** Address: 3350 RIVERWOOD PARKWAY  
City: ATLANTA County: COBB State: GA  
Lat (NAD83): 33-52-42.3 N Long (NAD83): 084-27-29.7 W ASR No.: N/A Ground Elev: 301.8
- Loe. 6** Address: 920 LACKEY ROAD  
City: ROSWELL County: FULTON State: GA  
Lat (NAD83): 34-06-17.5 N Long (NAD83): 084-23-26.2 W ASR No.: 1292666 Ground Elev: 318.6
- Loe. 7** Area of operation  
Land Mobile Control Station meeting the 6.1 Meter Rule: FULTON county, GA

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



## IFC 510 Compliance Acknowledgment

Before a Fire Safety Codes Release (Certificate of Occupancy) is issued, compliance with International Fire Code Section 510 is required by means of an Emergency Responder Radio Coverage System (ERRCS) installed, tested, and accepted **OR** through field testing by a approved FCC licensed radio contractor to verify that an ERRCS is not required. A critical element to compliance with this standard is preliminary testing once the building is enclosed. Minimal signal strength is required to be compliant with the documentation provided above.

By signing below, I acknowledge that I have read the above statement on IFC 510:

Signature:
Print Name:
Association with Project:
Date:
Project Name:
Project Address: