

Review Number: 1 2 3 4 5	Site Address:
Permit Application Number:	
Date:	Reviewed By:

**DEPARTMENT OF WATERSHED MANAGEMENT
SITE DEVELOPMENT PLAN REVIEW**

**SUBMITTAL REQUIREMENTS AND REVIEW CHECKLIST #5
MULTI-FAMILY RESIDENTIAL, COMMERCIAL AND PRELIM-SUBDIVISIONS**

General

- 1. Applicant submitted an incomplete plan. Applicant must revise the plan set and provide the items listed in this checklist including a Hydrology Report. See the Stormwater Hydrology Report Section herein this checklist.
- 2. ALL plans shall be signed and sealed by a Georgia registered architect, Georgia registered landscape architect, Georgia registered engineer, or Georgia registered land surveyor. Plans with disturbed area greater than 1.0 acre shall be signed and sealed by a Georgia registered engineer.
- 3. Provide final recorded subdivision plat.
- 4. Provide all storm sewer, sanitary sewer and flood reference maps and/or other information relied upon.

Boundary and Topological Survey

- 5. Provide boundary and topological survey drawing showing existing conditions, sealed, signed and dated by Georgia registered land surveyor.

Grading Plan

- 6. Provide grading plan showing existing and proposed ground contours and elevations for cut and fill operations, and all pertinent information related to grading and infrastructure:
 - Label ALL structures as existing or proposed
 - Locations and top elevations of sanitary and storm sewers and structures
 - Top, bottom of footing, and ground elevations for retaining walls
 - Finished floor elevations for existing and proposed building structures
 - Driveways, sidewalks and other paved areas
 - Locations, dimensions and details of proposed storm water detention facilities.
- 7. Grading plan shall be signed and sealed by a Georgia registered professional (engineer, land surveyor, landscape architect, or architect). Plans with disturbed area greater than 1.0 acre shall be signed and sealed by a Georgia registered engineer.
- 8. Provide fully detailed design drawings for proposed retaining walls. If less than or equal to three (3) feet in height and non-structural, a typical detail may be used.

- **9. Dirt Statement – Identify the gross quantities for each of cut, fill, demolition debris, and haul volumes in cubic yards.**
- **10. A Haul Route Permit is required when more than 500 cubic yards of hauled volume to or from the site.**
- **11. No graded slope shall exceed 2h : 1v. Therefore, place the following note on grading plan – “No graded slope shall exceed 2h : 1v”.**
- **12. Construction over existing and proposed sewers is prohibited. Proposed structures shall be located completely outside all easement limits. For existing sewers deeper than 10 feet, the proposed construction plans shall identify that a minimum 1:1 slope is maintained from the bottom of the proposed structure’s footing to the bottom outside edge of existing sewer.**
- **13. Provide the applicable FEMA FIRM map number and date noting whether or not the site is within a FEMA flood hazard area.**
 - **Building construction within the 100-year flood hazard limit is not permitted.**
 - **Demonstrate that proposed construction is 2-feet higher than the nearest 100-year flood elevation and 15-feet from the nearest 100-year flood hazard contour.**
- **14. For properties with creeks or streams that are not identified within the FEMA flood maps, a flood study signed and sealed by a Georgia registered professional engineer is required that identifies the 100-year high water elevation(s) and contour location. Show on plans.**

Sanitary Sewer Construction (Incorporate into Grading Plan)

- **15. All sanitary sewers, manholes and structures shall conform to COA Standard Details, and such details shall be shown on plans.**
- **16. Show location, size, slope and direction of flow for existing and proposed sanitary sewers. The minimum easement required for proposed sanitary sewers is 20 feet. Deeper lines may require wider easements.**
- **17. Provide profile drawings for sanitary sewers 8-inches diameter and larger. Profile drawings shall include:**
 - **Top elevations for all manholes and invert elevation of sewers at manholes**
 - **Slopes for all sewers**
 - **Location of underground utilities or other features that may affect construction or maintenance**
 - **Manhole inverts shall be designed to provide fall across the manhole**
- **18. Utilize a numbering/lettering system to identify structures on the plan and profiles drawings.**
- **19. The minimum cover requirements for sanitary sewers are 3-feet of cover in non-vehicular traffic areas and 6-feet of cover in vehicular traffic areas.**
- **20. Inside drop manholes are permitted for drops up to maximum 2-feet. Outside drop manholes are required for drops greater than 2-feet.**

- **21. Manholes are required on all sanitary sewers 8-inch diameter and larger at the end of each sewer; at change in grade, pipe size and alignment; and at intersecting sewers.**
- **22. Ductile iron pipe (DIP) or vitrified clay pipe (VCP) are required pipe material for sewers proposed to be installed to the City of Atlanta.**
- **23. A manhole, located just inside the property line, is required for private sanitary sewers 8-inch diameter and larger.**
- **24. Proposed sanitary sewer connections:**
 - **Show location, size and slope of proposed sanitary sewer connections.**
 - **For sewers of less than 8-inch diameter, new connections to the public sewer shall be made with a wye fitting, and shall not exceed 15 degrees from perpendicular to sewer main (or main line).**
 - **For sewers of 8-inch diameter or greater, new connections to the public sewer shall be made at manhole.**
 - **Provide COA standard clean-out on existing or new sanitary sewer lateral, located just inside the property line, and show on plan.**
 - **Permit required for new sewer connections (see Permit section of checklist).**
- **25. Dumpsters must be on reinforced concrete pads, sloped to drain. A concrete apron is recommended in front of the dumpster. Dumpster pad drains must be connected to a sanitary sewer and be a minimum of 4-inches in diameter. For sites in Fulton County, Fulton County Health Department dumpster permit is required and the Fulton County Health Department construction details must be included in the site plan.**

Storm Sewer Construction

- **26. All storm sewers, manholes and structures shall conform to COA Standard Details, and such details shall be shown on plans.**
- **27. Show location, size, slope and direction of flow for existing and proposed storm sewers. The minimum easement required for proposed storm sewers is 20 feet. Deeper lines may require wider easements.**
- **28. Provide profile drawings for storm sewers 12-inch diameter and larger. Profile drawings shall include:**
 - **Top elevations for all manholes and structures, and invert elevation of sewers at manholes and structures.**
 - **Slopes for all sewers**
 - **Type of storm sewer structure proposed (manhole, catch basin, drop inlet, etc)**
 - **Location of any underground utilities or other features that may affect construction or future maintenance**
 - **Manhole and structure inverts shall be designed to provide fall across the manhole**
- **29. Utilize a numbering/lettering system to identify all structures on the plan and profiles drawings.**
- **30. Storm sewers shall be minimum 12-inch diameter. In general, storm sewers shall be sized to convey not less than a 25-year storm flow. Storm sewers that convey run-off to a storm water detention facility shall be sized to convey a 100-year storm flow.**

- 31. The minimum cover requirements for storm sewers are 2-feet of cover in non-vehicular traffic areas and 3-feet of cover in vehicular traffic areas.
- 32. Structures are required on all storm sewers 12-inch diameter and larger at the end of each sewer; at change in grade, pipe size, and alignment; and at intersecting sewers.
- 33. Reinforced concrete pipe (RCP) and Ductile iron pipe (DIP) are required pipe material for storm sewers proposed to be dedicated to the City of Atlanta. Truss-ribbed, smooth bore polyvinyl chloride pipe (PVC) may be used for private storm sewers and shall be limited to maximum pipe size of 18-inches. Corrugated metal pipe (CMP) may be used only as storm water detention facilities for storage purposes, **NOT FOR CONVEYANCE**.
- 34. Due to potential scouring effect, proposed drops within a storm water structure shall be limited to a maximum of 48-inches, measured invert to invert.
- 35. The maximum discharge velocity for storm sewer outlet pipes shall not exceed 10-ft per second based on Manning's Equation. The maximum slope on storm sewers is 15%.
- 36. Discharge points from the storm sewer system shall be located a minimum 10-ft from property lines and directed to an acceptable outlet point (e.g. creek, stream, river, swale or existing storm drainage system). Outlet points shall not cause ponding of water or increased erosion.
- 37. Demonstrate the flow patterns for all proposed drains (e.g. roof and yard drains).

Storm Water Hydrology Report and Details

- 38. Submit a storm water hydrology report, signed and sealed by a Georgia registered professional engineer.
- 39. As of July 18, 2005, the allowable outflow for new development or redevelopment construction shall be limited to seventy percent (70%) of the predevelopment peak outflow as follows:
 - For new development or redevelopment, the discharge rate limitation shall be applied to the area of site disturbance provided that the impacted area does not exceed 35% of the total parcel;
 - For new development or redevelopment in which the area of the site impacted by the work exceeds 35% of the total site area, the discharge rate limitation shall be applied to the total site area; or
 - For a subdivision of land, whether in an undeveloped or redeveloped condition, the discharge rate limitation shall be applied to the total site area.
 - Note the area of disturbance and site area in acres.
- 40. Calculations for all areas, flows, elevations and storage volumes shall utilize a minimum of 2 decimal places.
- 41. All data presented in the hydrology report shall match the information shown on the grading plan, profiles and details.
- 42. Include the "Professional Engineer's Statement Form" with the hydrology report after the cover page.

- **43. Provide pre-development and post-development drainage basin maps based on topography. Show the limits of areas, size in acres, and run-off coefficients for:**
 - On site areas of flow
 - Off site areas of flow
 - On site area “to pond”
 - Post-development areas bypassing detention
 - The pre-development and post-development acreage shall be identical.
- **44. Provide calculated flows for all required storm events (2, 10, 25, 50 and 100-yr) at pre-development and post-development conditions.**
 - Provide peak inflow hydrographs for all required storm events at pre-development and post-development conditions.
 - For peak inflow hydrographs, calculate the minimum time to peak inflow to pond based on 5xs the time of concentration selected for the routings in the hydrology report.
- **45. For sites 25 acres and smaller, the hydrology report shall reflect use of the Rational Method.**
- **46. Provide “weighted” C value calculations for all required storm events at pre-development and post-development conditions.**
- **47. Provide complete time of concentration calculations.**
- **48. Use City of Atlanta standard intensity factors and list the values used.**
- **49. Provide documentation for all areas of proposed bypass, including appropriate allowable outflow calculations.**
- **50. Storm Water Detention and Outlet Control Structure**
 - Detention, if required, shall be designed for the 2-year through the 100-year storm.
 - Identify the 100-year water surface elevation and the 100-year storage volume on the grading plan and in the hydrology report.
 - In combined sewer areas, the detention volume shall incorporate the sanitary flow from the proposed development.
 - Provide a detail of the outlet structure on the plans and in the hydrology report.
 - The outlet control structure shall be designed with manhole access for maintenance.
 - Control devices utilizing metal plates or inlet grates are not permitted.
 - Control weirs or orifices in curbs or walls alone are not permitted.
 - Overflows over curbs or walls are not permitted.
 - Provide documentation for the stage/storage/discharge (S/S/D) data used in the report. Shall include (at minimum) the size, configuration, and elevation of control orifices and weirs, the weir coefficient associated with the configuration of the proposed detention facility, and the elevations and storage volumes generated by the proposed detention facility.
 - The outlet control structure shall be designed to accept and convey the 25-year storm flow (routed or unrouted) as overflow above the 100-year storage elevation, based on the complete blockage or failure of the control orifice or weirs. Provide appropriate weir calculations.

- Calculation of storage volume shall not include the volume below the invert of the lowest control orifice or weir. Calculation of storage volume shall not include volume unavailable due to placement of the outlet control structure, interior structural elements, slope, etc.
 - Provide calculations to document the storage volumes available within the proposed detention facilities. Minimum data shall include:
 - For pipe storage – length, diameter and slope
 - For vault storage – interior dimensions and slope (require positive slope to drain)
 - Proposed storage is not permitted below the 100-year flood hazard elevation or the 100-year high water limits for streams not in a FEMA flood hazard area.
 - Provide routed outflow hydrographs, storage elevations and required storage volumes for all required storm events.
 - All inlets and pipes carrying the storm flows to detention shall be sized to intercept and convey the unrouted 100-year storm flow without surcharging or overflows. Provide pipe charts or other exhibits necessary to document the calculations.
 - For open detention ponds, show an access easement to and utility easement around the pond.
 - For open detention ponds 3 ft deep or more, show a fence with gate access around the pond.
- 51. Other:

Erosion and Sediment Control (E&SC) Plan

- 52. Show graphic scale and north arrow on all E&SC plan sheets.
- 53. Provide vicinity map showing site's relation to surrounding area, including designation of specific phase, if necessary. Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled
- 54. Show location of E&SC practices using uniform coding symbols from the Manual for Erosion and Sediment Control in Georgia, Chapter 6, with legend. Practices typically required for commercial construction include, but are not limited to:
 - Construction Exit
 - Sediment Barrier
 - Sediment Basin
 - Sediment Basin Baffling
 - Storm Drain Outlet Protection
 - Storm Drain Inlet Protection
 - Stone Check Dams
 - Detention Pond Retrofitting
 - Diversions
 - Down Drains

- **Matting and Blankets**
- **Disturbed Area Stabilization**
- **Other _____**

- **55. Delineate all Waters of the State located on or within 200 feet of the project site. All Waters of the State located on or within 200 feet of the project site must be delineated.**

- **56. Delineate the limits for the riparian stream buffers about Waters of the State as required by the State of Georgia and the City of Atlanta. The buffer limits shall be measured from the top of the water course bank and shall be shown as follows:**
 - **Perennial and intermittent streams shall show the State required 25 ft and the City of Atlanta 75 ft buffer limits.**
 - **Waters of the State other than the above-referenced streams shall show a 25 ft buffer (e.g. a swale that originates off-site and drains through a site).**
 - **If no Waters of the State are present within 200 ft of the project site, note on the E&SC plan: “No Waters of the State exist within 200 feet of the project site”.**

- **57. Include soil series and their delineation.**

- **58. Identify the project receiving waters and describe adjacent areas – neighboring areas such as streams, lakes, residential areas, etc., which might be affected. Identify, by name, any streams, rivers, lakes, etc. which the site drains to and describe any neighboring area which could be affected by the post-developed runoff from the site.**

- **59. Provide the following calculations on the E&SC plan:**
 - **Provide 67 cubic yards per acre of the entire drainage basin sediment storage. Sediment storage may be obtained through the use of excavated inlet protection, retrofitted detention ponds or temporary sediment basins. Sites with more than 10 total acres must have a retrofitted detention pond or temporary sediment basin. Include specific design information and calculations for structural measures on site.**
 - **Show storm drain pipe and weir velocities in a chart and provide appropriate outlet protection to accommodate discharges without erosion. Provide calculations, stone size and dimension, and any worksheets.**

- **60. For sites that are one (1) acre or larger, phase E&SC plans into an initial perimeter control E&SC plan, intermediate E&SC plan for grading and drainage, and a final phase E&SC plan.**
 - **Each phase of the E&SC plan should be shown on a separate page.**
 - **The initial phase should show all BMPs necessary to prevent sediment from leaving the project site during the beginning of the project and any tree-save fencing that may be required. These practices should include construction exits, Type C silt fence, etc. shown with the existing contours.**
 - **The intermediate phase should include all BMPs necessary to prevent sediment from leaving the site and the required 67 cubic yards per acre sediment storage. These should include temporary sediment basins, retrofitted detention ponds, check dams, temporary down drains, diversions, inlet protection, temporary grassing, etc.**

- The final phase plan should include such practices as outfall protection, revised inlet protection, permanent grassing, matting, etc.
- **61. Show limits of disturbance on E&SC plan. Limits of disturbance must be shown on plan for all phases including all disturbances on and off the site. Disturbances off site should include sanitary and/or drainage line easements, temporary access easements, etc.**
- **62. Plans with disturbed acreage of greater than 1 acre or within 200 ft of “Waters of the State” require a separate approval from the State of Georgia and Fulton County Soil and Erosion Commission at their scheduled meetings held the 3rd Tuesday of each month.**
- **63. Provide a vegetative plan, noting all temporary and permanent vegetative practices. Include the species, planting dates and seeding, fertilizer, lime and mulching rates. The vegetative plan shall be site specific for the appropriate time of year that seeding will take place. The vegetative plan must include two (2) cool and two (2) warm season grasses.**
- **64. Provide a detailed construction activity schedule that includes:**
 - Starting and completion dates
 - Initial erosion control BMPs installation
 - Intermediate erosion control BMPs
 - Final phase E&SC BMPs
 - Maintenance of E&SC practices
 - Demolition
 - Clearing and grubbing
 - Grading
 - Storm and sanitary sewer installation
 - Paving
 - Building Construction
 - Temporary grassing @ 14 day intervals
 - Permanent grassing @ 30 day intervals
 - Final Clean-Up
- **65. The following notes and narratives should be located on the E&SC plan:**
 - Provide description of existing land use at project site and description of proposed project. Include address, land lot, and district numbers for site location.
 - Describe critical areas and what extra measures will be utilized for these areas. Critical areas may include crossing Waters of the State, disturbance inside buffer if the work being done is exempt or a variance is obtained, wetlands, neighboring property to which the project site drains, etc.
 - Provide name, address and phone number of developer/owner.
 - Provide name, address and phone number of a 24-hour local E&SC contact.
 - Provide certification stating that the plan designer has visited the site prior to the design of the E&SC plans.
 - Note total and disturbed acreage.

- **Clearly note the following statements:**
 - **On the cover sheet, note “ Prior to land-disturbing activities, the Contractor shall schedule a pre-construction meeting with the area Erosion Control inspector. Call (404) 330-6990 to contact the inspector.**
 - **“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.”**
 - **“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.”**
 - **“Any disturbed area left idle for a period greater than 14 days shall be stabilized with temporary seeding; disturbed areas idle 30 days shall be stabilized with permanent vegetation.”**
 - **“Erosion and sediment control measures shall be inspected at least weekly, after each rain, and repaired as necessary.”**
 - **“Additional erosion and sediment control measures shall be installed if determined necessary by on-site inspection.”**
 - **“Silt fence shall meet the requirements of Section 171 – Type C temporary silt fence, of the Georgia Department of Transportation Standard Specifications, 1993 edition.”**
- **66. Provide detailed drawings and maintenance requirements for all structural practices. Construction specifications must, at a minimum, meet guidelines given in the Manual for Erosion and Sediment Control in Georgia.**
- **67. Provide documentation of payment of all ad valorem taxes due or owed on the project parcels.**

Work in the Public Right-of-Way

- **68. Installation of sidewalk along public right-of-way is required by City of Atlanta code (Section 138). Sidewalks, concrete curb and gutter and granite curb shall conform to the City of Atlanta Standard Details. Identify sidewalks, curb and standard details on the grading plans. The back of the sidewalk shall be located at the property line.**
- **69. Add the following note to the site plan: At all points along the public right of way where the existing curb height is less than 5 inches high, the existing curb shall be removed and replaced or reset to minimum City of Atlanta requirements and the sidewalk replaced. Add this note to the site plan.**
- **70. Concrete driveway aprons with flares are required by City of Atlanta code (Section 138), and shall conform to the City of Atlanta Standard Details. Identify concrete driveway aprons on the grading plans. The back of the driveway apron shall be located at the property line.**
- **71. Streets Proposed for Dedication to COA**
 - **All vertical curves shall be symmetrical**
 - **Maximum rate of change for vertical grade shall be 4ft per 100-ft for streets with R-O-W widths of at least 40-ft, and 6ft per 100-ft for streets with R-O-W widths of 32-ft.**
 - **Pavement section shall conform to the City of Atlanta Standard Details, and shall be shown on the plans.**

- **72. Add the following note to the site plan: “Prior to the dedication and acceptance of sanitary sewer, storm sewer or street infrastructure to the City of Atlanta, “as built” drawings and 3-year maintenance bonds are required. The street construction shall demonstrate adequate compaction with professional testing and reports prepared by a Georgia registered Professional Civil Engineer. The sanitary sewer installation shall include an internal television inspection, a successful mandrell pull and successful leak-down pressure test.”**

PERMITS, BONDS, AGREEMENTS AND FEES

Boilerplate agreements and forms are available from the Office of Site Development and Policy located in Suite 4400 City Hall (call 404-330-6249).

Permits

- **73. A Haul Route Permit is required from the Bureau of Traffic and Transportation (404-330-6501) when more than 500 cubic yards of material is hauled to or from the site.**
- **74. A Qualified Contractor Permit is required from the Site Development Section (404-330-6249) for construction of new sewer connection, sidewalks, driveway apron or other work in the public right-of-way. Requires proof of an in-force general liability insurance policy in the amount of \$3 million, and valid business license and payment of applicable fees. The City of Atlanta shall be shown as the certificate holder on the policy.**
- **75. A Georgia Department of Transportation (GDOT) Permit is required from GDOT for work in the public right of way on a State Route.**

Bonds

- **76. An Erosion Control Performance Bond is required in the amount of \$3,000 per disturbed acre for sites with disturbed acreage of greater than 1.0 acres or where the proposed cut and fill quantities exceed 500 cubic yards (\$3,000 minimum). Bond must be issued by a licensed surety with power of attorney in the State of Georgia. The bond ensures that disturbed areas can be stabilized in the event the owner or contractor cannot or will not stabilize the site. This Surety Bond must have a raised seal and bond number.**
- **77. An original copy of a 3-year Maintenance Bond is required for proposed sewer and streets that will be dedicated to the City of Atlanta. Bonds are to be provided after construction and acceptance of infrastructure to be dedicated.**

Agreements

- 78. An indemnity agreement, signed by the property owner, is required for storm water detention facilities. The total package includes:
 - The signed agreement
 - Written legal description of the property parcel
 - Photocopy of the storm water detention facility as shown on the grading plan
 - Photocopy of the outlet control structure detail from the plans or hydrology report
 - The entire package shall be on 8.5-inch by 11-inch sheets. The entire package shall be filed for recording in the Fulton County or DeKalb County clerk's office, as applicable. Submit the original recorded document to the Site Development Section.
 - Submit the indemnity agreement and photocopied attachments for recording after the site plan has been approved.

- 79. Show proposed easements on site plan. Any easement agreements required for off-site construction or for construction of public facilities not located in the public right-way shall be obtained by the property owner or developer and submitted to the Site Development Section. A copy is acceptable for private easement agreements. The original easement agreement as signed and recorded in the Fulton County or DeKalb County clerk's office, as applicable, is required for public facilities.

Site Development Fees

Note: Fees will be calculated by the plan reviewer after approval of the site plan

- 80. Multi-family Residential and Commercial Development Fees
 - Site plan review \$550 per site
 - Site inspection \$830 per site
 - Driveway and sidewalk inspections \$2.50 per LF
 - National Pollutant Discharge Elimination System (NPDES) \$40 per disturbed acre
 - Qualified contractor permit Fee varies

- 81. Pipe Inspection Fees – Multi-Family, Commercial and Subdivisions
 - Storm drains 12-inch diameter and larger \$0.25 per LF
 - Sanitary sewers 8-inch diameter and larger \$1.00 per LF
 - Inspection of new sewer connection \$40 each
 - Inspection of all other sewer structures \$5 each

- 82. Subdivision Development Fees
 - Subdivision plan review \$50.00 per lot
 - Curb and gutter installation \$0.50 per LF
 - Street Paving \$2 per SYD
 - Subdivision site inspection \$130 per lot
 - Subdivision plan review \$100 per lot

PLAN SUBMITTALS

- **83.** Refer to the red-lined plans enclosed with this checklist for additional site plan review comments. Resubmit the revised plans, the red-lined plans, and this checklist directly to the Site Development Section.
- **84.** Four (4) sets of plans and two (2) copies of the hydrology report in final form are required for Site Development approval. An additional set is required should the plans require separate approval from the State of Georgia and the Fulton County Soil and Erosion Commission (plans with disturbed acreage greater than 1.0 acres or within 200-ft of “Waters of the State”).

-
- **85. Other:**