

BRASELTON ROADS AND STORMWATER DEPARTMENT
CONSTRUCTION PLAN REVIEW CHECKLIST

November 2005

Project Name: _____

Phase: _____ Unit: _____ # Lots: _____

Development Type: _____
(Residential, commercial, industrial, etc.)

Braselton Project No. _____

NOTE: This checklist serves the designer and plan reviewer as a minimum guideline only, highlighting the Town of Braselton Code requirements for design of roads and stormwater systems. This document in no way represents all requirements of the Town of Braselton, Georgia Soil & Erosion Control requirements or sound design practices.

NOTE: It is the Owners/Developers responsibility to be in compliance with applicable National Pollution Discharge Elimination System (NPDES) Permit and Clean Water Act requirements, and State EPD requirements.

Stormwater Management Site Plan Preparation and Review

1. Applicant information

Name, legal address, and telephone number

2. Common address and legal description of site

Site address, and legal description of site

3. Vicinity map

Site address, and legal description of site

4. Signature and stamp of registered engineer/landscape architect and designer/owner certification

Signature, stamp and date

5. Existing and proposed mapping and plans (recommended scale of 1" = 50' or greater detail) which illustrate at a minimum:

Existing and proposed topography (minimum of 2-foot contours recommended)

Perennial and intermittent streams – call out on drawings

Buffers for Perennial and intermittent streams and rivers

Perennial - Within 7 miles of water supply intake: 100 ft each side and no impervious surface or septic tank 150 ft each side - Outside 7 miles 50 ft each side and no impervious surface or septic tank 75 ft each side

Intermittent – 25 ft each side

Mulberry River – 150 ft each side

Mapping of predominant soils from USDA soil surveys as well as the location of any site-specific borehole investigations that may have been performed

Boundaries of existing predominant vegetation and proposed limits of clearing and grading

Location and boundaries of natural feature protection and conservation areas such as wetlands, lakes, ponds, and other setbacks (e.g., stream buffers, drinking water well setbacks, septic setbacks, etc.)

Location of existing and proposed roads, buildings, parking lots and other impervious areas

Location of existing and proposed utilities (e.g., water, sewer, gas, electric) and easements

Estimates of unified stormwater sizing criteria requirements

- Identification and calculation of stormwater site design credits
- Selection and location of structural stormwater controls
- Location of existing and proposed conveyance systems such as storm drains, inlets, catch basins, channels, swales, and areas of overland flow
- Flow paths
- Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages
- Location and dimensions of proposed channel modifications, such as bridge or culvert crossings
- Existing 100 year flood plain

6. Hydrologic and hydraulic analysis including:

- Existing conditions hydrologic analysis for runoff rates, volumes, and velocities showing methodologies used and supporting calculations
- Proposed (post-development) conditions hydrologic analysis for runoff rates, volumes, and velocities showing the methodologies used and supporting calculations
- Hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms
- Final sizing calculations for structural stormwater controls including contributing drainage area, storage, and outlet configuration
- Analysis of potential downstream impact/effects of project, where necessary
- Stage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities
- Dam safety and breach analysis, where necessary

7. Representative cross-section and profile drawings and details of structural stormwater controls and conveyances which include:

- Existing and proposed structural elevations (e.g., invert of pipes, manholes, etc.)
- Design water surface elevations
- Structural details of structural control designs, outlet structures, embankments, spillways, grade control structures, conveyance channels, etc.
- Stormdrains not exceeding 500 ft in continuous length between inlet, manhole or junction box
- Outfall piping in residential subdivisions extending a min. from the street to 30 feet behind the front bldg. setback or the 100 yr. floodplain, whichever is less
- Curbs and gutters shown – curbs 6 inches high, gutter 2 ft face to back of curb
- Curb inlets not greater than 500 ft max
- Curb inlets sized to intersect 85% of stormwater
- The following notes included:
 Note: Grates with bars shall be perpendicular to road.
 Note: The throat of the curb inlets shall not exceed 8 inches.
- Reinforced concrete for stormwater structures under roadway
- Culverts carrying streams/ditch flow under a street shall be sized so headwater height does not exceed curb height during 100 yr. storm – show calculations
- Stormwater detention designed for 100 yr. event
- Calculations for stormwater detention provided for 2, 5, 10, 25, 50 & 100 yr. events
- Release rate: 2, 5, 10 – not greater than predeveloped rate
- Release rate: 25, 50 & 100 – not greater than 80% of predeveloped rate
- Stormwater Detention areas accessible for sediment removal
- Stormwater detention has emergency spillway
- Stormwater detention has fence with gate
- Buffers and setbacks for stormwater detention shown
- Easements a minimum of 20 ft.

8. Applicable construction specifications – make note referencing Georgia Stormwater Manual

9. Erosion and sediment control plan that at a minimum meets the requirements outlined in the Manual for Erosion and Sediment Control in Georgia – approval letter shall be submitted

10. Landscaping plans for structural stormwater controls and any site reforestation or revegetation and streambank restoration must be included.

- 11. Operations and maintenance plan that includes: (this can be completed near project end)**
 - Name, legal address and phone number of responsible parties for maintenance activities
 - Description and schedule of maintenance tasks
 - Description of applicable easements
 - Description of funding source
 - Access and safety issues
 - Procedures for testing and disposal of sediments, if required
- 12. Evidence of acquisition of all applicable local and non-local permits –permits submitted**
- 13. Waiver requests submitted**
- 14. Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts, etc.) – copies submitted**

Stormwater Management Report

- 1. Applicant information**
 - Name, legal address, and telephone number
- 2. Common address and legal description of site**
 - Site address, and legal description of site
- 3. Vicinity map**
 - Site address, and legal description of site
- 4. Signature and stamp of registered engineer/landscape architect and designer/owner certification**
 - Signature, stamp and date
- 5. Project Description**
 - Description of project (i.e., type of project, number of lots, amount of impervious surface, amount of greenspace, amount of pervious surface) with project summary
 - Location and quantities of stormwater entering and exiting the site for both pre and post developed conditions
 - Drainage area delineation maps with drainage divides and drainage structures and other pertinent features and site boundaries
 - Estimation of stormwater quality in TSS terms for pre and post developed conditions
 - Downstream conditions analysis using 2, 10, & 25 yr. design storm events with recommendation by engineer
 - Site plan shows all streams, lakes, wetlands and other bodies of water and 100 year flood plain
 - 100 year Base Flood Elevations (BFEs) for areas that are designated as Approx. Zone A on FEMA maps must be calculated using appropriate FEMA methodologies. Include calculations

Roads Site Plan Preparation and Review

1. Street Names:

- Street names shown
- Right of Ways shown

2. Street Design and Construction

- Right of Way – minimum 50 feet residential street, 60 ft cul-de-sac
- Road width – minimum 26 feet back of curb to back of curb residential
- Utility Detail included
- Street designations included (i.e. Arterial, collector, local)
- Street ownership designated – all permits submitted for streets not owned by Braselton
- Note: See Georgia Department of Transportation Standard Specifications for the Construction of Roads and Bridges for specifications of asphaltic concrete types.
- Note: Before asphalt pavement is placed a Bituminous Prime shall be applied to the base material in accordance with GA DOT specifications. Application rate shall be a minimum of 0.15 gallons per square yard.
- The following notes shall be included for residential road construction:
 - a. 1-1/2" asphaltic concrete Type F (top course)
2" Asphaltic concrete Type B (binder)
6" crusher run or graded aggregate base for main line pavement
10" crusher run or graded aggregate base for cul-de-sacs
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft

Or

 - b. 1-1/2" asphaltic concrete Type F (top course)
2" Asphaltic concrete Type B (binder)
6" soil cement base for main line pavement
10" soil cement base for cul-de-sacs
Soil cement shall be mixed in place – compacted to 98% max. dry density per standard proctor test ASTM D698
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft

Or

 - c. 7" Concrete pavement w/ compressive strength of 4,000 psi at 28 days
Concrete test cylinders taken from each batch poured for every 750 ft. Tested according to ASTM C51-69 and C59-72.
Concrete slump test (ASTM C145-74) not greater than 2-1/2"
Core samples shall be made at intervals of not less than 500 ft or greater than 1000 ft.
4" crusher run or graded aggregate base compacted to 98% max. dry density per standard proctor test ASTM D698
- The following notes shall be included for office, commercial and all collectors road construction:
 - a. 1-1/2" Asphaltic concrete Type F (top course)
2-1/2" Asphaltic concrete Type B (binder)
8" crusher run or graded aggregate base for main line pavement
10" crusher run or graded aggregate base for cul-de-sacs
Base shall be compacted to 98% max. dry density per standard proctor test ASTM D698
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft

Or

 - b. 1-1/2" asphaltic concrete Type F (top course)
2-1/2" Asphaltic concrete Type B (binder)
8" soil cement base for main line pavement
10" soil cement base for cul-de-sacs
Soil cement shall be mixed in place – compacted to 98% max. dry density per standard proctor test ASTM D698
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft

Or

 - c. 7" Concrete pavement w/ compressive strength of 4,000 psi at 28 days
Concrete test cylinders taken from each batch poured for every 750 ft.
Tested according to ASTM C51-69 and C59-72.

Concrete slump test (ASTM C145-74) not greater than 2-1/2"
Core samples shall be made at intervals of not less than 500 ft or greater than 1000 ft.
4" crusher run or graded aggregate base compacted to 98% max. dry density per standard proctor test ASTM D698

- The following notes shall be included for industrial and arterial road construction:
 - a. 1-1/2" Asphaltic concrete Type F (top course)
2" Asphaltic concrete Type B (binder)
5" Asphaltic base
8" crusher run or graded aggregate base course compacted to 98% max. dry density per standard proctor test ASTM D698
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft
 - Or
 - b. 1-1/2" Asphaltic concrete Type F (top course)
2" Asphaltic concrete Type B (binder)
5" Asphaltic base
8" soil cement stabilized base course mixed in place – compacted to 98% max. dry density per standard proctor test ASTM D698
Subgrade stabilized with stone, unless material in place weighs 95lbs/cu ft
 - Or
 - c. 8" Concrete pavement w/ compressive strength of 4,000 psi at 28 days
Concrete test cylinders taken from each batch poured for every 750 ft.
Tested according to ASTM C51-69 and C59-72.
Concrete slump test (ASTM C145-74) not greater than 2-1/2"
Core samples shall be made at intervals of not less than 500 ft or greater than 1000 ft.
4" crusher run or graded aggregate base compacted to 98% max. dry density per standard proctor test ASTM D698
- Cul-de-sacs: Residential and commercial– 60 ft right of way, 40 ft pavement radius
 - Cul-de-sacs: Industrial – 60 ft right of way, 40 ft pavement radius, no islands
 - Grade: Minimum grade 1%
 - Grade Maximum: Arterial –8%, Collector – 10%, Residential and Local 15%
 - No more than 5 residential lots per cul-de-sac
 - Distance from Intersections – minimum between nonresidential driveway & existing street or other nonresidential driveway:
 - Local Street – 100 feet
 - Collector Street – 200 feet
 - Arterial Street – 250 feet
 - Distance between nonresidential driveways – minimum between nonresidential driveway & other nonresidential driveway:
 - Local Street – 300 feet
 - Collector Street – 400 feet
 - Arterial Street – 500 feet
 - Acceleration and deceleration lanes – minimum lengths:
 - Collector – 120 ft long with 50 ft taper
 - Arterial – 200 ft long with 50 ft taper
 - Landscape islands / traffic dividers at entrance to residential subdivision
 - Right of way width plus width of landscape island/ traffic divider
 - Landscape island / traffic divider maximum width 16 ft, maximum length 100 ft, right-of-way length at landscape island/traffic divider is new width for a minimum of 150 feet