



**CITY OF PANAMA CITY  
BEACH**

110 South Arnold Road  
Panama City Beach, FL 32413

COMMERCIAL/RESIDENTIAL STORMWATER MANAGEMENT/DRAINAGE INFORMATION

COMPLETENESS CHECK LIST

*Updated June 2012*

PROJECT: \_\_\_\_\_

PROJECT LOCATION OR ADDRESS: \_\_\_\_\_

**ONLY IF IN CITY LIMITS**

**Drainage Report To Include:**

YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name, address, and telephone number of the applicant.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and/or aerial photograph of the development site, which clearly outlines project boundaries.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Boundary and topographic survey, including the location of all easements, rights of way, and Coastal Setback Line or Coastal Construction Control Line.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Methodology and explanation of calculations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-Development Basin and Sub-basin Maps w/ stormwater runoff direction, volume, and flow rates at each point of discharge (Include any offsite drainage basins that discharge towards the site.)

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Post-Development Basin and Sub-basin Maps w/ stormwater runoff direction, volume, and flow rates at each point of discharge (Include any offsite drainage basins that discharge towards the site.)  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map & project boundary overlaid   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If Project has 50 lots or 5 acres, whichever is the lesser, and within FEMA Flood Zone A, Base Flood Elevations must be established with a hydrologic and hydraulic study by a FL Registered P.E.. A FEMA Conditional Letter of Map Revision or Amendment (CLOMR/CLOMA) is required prior to Engineering Approval and a FEMA LOMR/LOMA is required prior to City Acceptance of Project. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If Project is less than 50 lots or 5 acres, and within FEMA Flood Zone A, Base Flood Elevations must be established with a hydrologic and hydraulic study by a FL Registered P.E.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Elevations of any flood zone along the flood hazard boundaries shall be delineated on the drainage plans.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Nearby wetlands and other environmentally significant resources clearly labeled and required buffers shown.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A description of on-site vegetation and soils.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Information on Percolation Rate Used and Derivation. The standard factor of safety applied to percolation rates shall be 2 for DRI tests, 3 for other field testing, and 4 for percolation rates as contained in the Bay County Soil Survey. Maximum design percolation rate shall not exceed twenty-four (24) in/hr.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Groundwater Elev. at date of boring (Licensed FL Geotech. Firm)   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Existing and projected seasonal high groundwater levels beneath and proximate to the proposed stormwater treatment and attenuation system. The pond bottom for all dry ponds shall be a   |

minimum of two (2) feet above the seasonal high groundwater table.

          

Calculations for site Pre & Post C or CN. Coefficient of runoff used shall be as follows: Roofed and paved areas = 0.95. Bodies of water and retention and detention ponds = 1.0. Swale and recharge areas = 0.7. Gravel = 0.6. Compacted base material in vehicular areas = 0.75. All pre-development calculations shall be considered in site's natural state. Natural state meaning without any structure, concrete, asphalt, or other impervious surfaces.

          

Grading and drainage plan to include existing and proposed finished grade contours at one (1) foot elevation intervals.

          

Erosion and Sediment Control Plan

          

If discharging into public easement or right-of-way with capacity, attenuate 25 yr frequency, critical duration so post-development peak discharge rate shall NOT BE GREATER than pre-development rate.

          

If discharge is other than above, the storm event of critical duration shall attenuate a 100 yr frequency storm event. Consider the effects of tail water and seasonal high ground water elevation.

          

Location of Retention / Detention Structures. A minimum of six (6) inches or ten percent (10%) of the total volume shall be provided as freeboard, whichever is more restrictive.

          

Proposed stormwater management system features including the pre- and post-development locations and dimensions of inlets, wet and dry swales, wet and dry ponds, conveyance systems, easements, etc. including a grading and drainage plan showing the exact location and dimensions (top of bank, slope of bank and depth) of all ponds, swales, closed and open conveyances.

          

Description and Location of Receiving Drainage Structures

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plan and Profile of storm drainage pipes or channels   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All stormwater discharge facilities are to have sediment controls and skimming devices.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Offsite discharge flows shall be limited to non-erosion velocities.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Hydraulic Analysis of stormwater conveyance structures - provide Hydraulic Grade Line and Seasonal High Groundwater Elevation in profiles.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Wet Pond Design: Eliminate Short-Circuit of Pond by NOT Placing Overflow Weir in Line with the Inflow Pipe   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Wet Detention Ponds dedicated to the City must be enclosed with 4' high vinyl coat chain link fence and gate. Fence shall be set back a sufficient distance for maintenance vehicles to have access to all portions of the pond. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Any storm drain pipe within City R/W must be RCP   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A schedule for continual maintenance of the stormwater management system, erosion and sedimentation control.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Private stormwater management system will need to provide evidence of compliance with Section 26-22 "Minimum Dwellings Served" and Section 26-53 "Maintenance By An Acceptable Entity."  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Certification by Engineer of Record for construction Completion of Stormwater Management facilities.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Certification by Engineer of Record for NPDES Best Management Practices.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide copies of all required state and federal permits.  |