



Development Certification Checklist

Date: _____ Property owner: _____

Certifying engineer: _____ Certifying surveyor (as-built): _____

Project name: _____

Address: _____

Proposed use of this property: _____

The Development Certification process is necessary in order for a construction bond or performance bond to be released, as described in the City of Knoxville Stormwater Ordinance (Chapter 22.5 of the City Code) in Section 22.5-28(e). Also see Section 13.5 of the Land Development Manual for a list of construction bond release requirements.

Certification Requirements:

	✓	Date
A. Submit as-built drawings which meet the minimum requirements of this checklist.		
B. Submit complete detention calculations (signed & stamped by professional engineer) showing that the as-built conditions meet the minimum design criteria in the City of Knoxville Stormwater and Street Ordinance. Include all inputs and methods.		
C. Submit roadway material inspection reports by a qualified geotechnical firm (if not inspected directly by Knoxville Engineering Department).		
D. Conduct the final site inspection using the Site Inspection Checklist in Appendix A.		
E. Ensure that all roadway, drainage, detention basin, and water quality structure easements are properly delineated on a recorded plat. Check to see if CPMSF (maintenance agreement) is recorded at Knox County Register of Deeds and also denoted on the recorded plat.		
F. Submit statement from a registered geotechnical engineer certifying that retaining walls, 4' or taller, that may potentially affect public right-of-way or safety of the general public, have been constructed in accordance with the approved design plan.		

As-Built Drawings – General Information:

1. Does title block have same project name, address, and contact persons as original plans?
2. Are seal and signature for the certifying Engineer & Surveyor shown on as-built drawings?
3. Does each as-built drawing contain survey benchmarks or other reference points?
4. Does each as-built drawing contain a north arrow, bar scale, and coordinates?
5. Does each as-built drawing contain the Engineer's & Surveyor's Certification Statements?

Yes	No	N/A

As-Built Drawings - Storm Drainage Structures:

1. Are all drainage pipes and structures located correctly on the drawings?
2. Is each drainage pipe labeled with slope, length, size or diameter, material, inverts?
3. Is each drainage structure labeled with top and invert elevations, size, material, detail #?
4. Is pump system data included? (location, pump make and model, capacity, switch design, inlet and discharge sizes, maximum & minimum water surface, and head-flow curves)

Yes	No	N/A



As-Built Drawings - Water Quality Structures:

1. Is the structure located correctly on plan view, with labeled facility & access easements?
2. Are the manufacturer's identification number, make, model, and size shown on plans?
3. Are specification sheets, operation instructions, and maintenance guidelines provided?

Yes	No	N/A

As-Built Drawings - Detention Basins:

1. Do all plan views correctly show detention basin at a readable scale, with 1-foot contours?
2. Are locations and invert elevations for all pipe/ditch outfalls into detention basin shown?
3. Are detention basin and access easements shown and labeled? Are all conflicts avoided?
4. Does the plan include accurate details of outlet structures, including all orifices and weirs, such as size, diameter, invert elevation, means of anchoring, underdrain systems, etc?
5. Does detention basin adequately attenuate the 1, 2, 5, 10 and 100-year storm events? Are the computations adequate to prove attenuation?
6. Has minimum freeboard of 1 foot been provided between 100-year storm and top of berm?

Yes	No	N/A

As-Built Drawings - Public Streets and Joint Permanent Easements:

1. Are street right-of-way, easement boundaries, and street centerlines shown and labeled?
2. Are all structures within the public right-of-way or public easement shown and labeled? (such as: pavement, curb, gutter, inlet, catch basin, manhole, pipe, streetlight, retaining wall, pole, sidewalk, large tree, utility structure, structural sign, or ornamental structure)
3. Is a street profile provided (to scale) with the as-built elevations at 50' increments, or as necessary, to ensure a smooth profile? Are street grades and K values provided?
4. Is the typical street cross-section shown with widths and all pavement depths?

Yes	No	N/A

Detention Routing Computation Inputs						
			Subarea #1		Subarea #2	
			Predeveloped	Postdeveloped	Predeveloped	Postdeveloped
Area	A	Acres				
Curve number	CN	-----				
Time of concentration	Tc	Min				

As-Built Detention Basin Routing Table					Top of berm elevation = _____
Rainfall Frequency	Predeveloped peak runoff	Postdeveloped peak runoff	Routed peak outflow	Maximum water surface elevation	Maximum storage volume
	(cfs)	(cfs)	(cfs)	-----	(cubic feet)
First Flush					
1-year					
2-year					
5-year					
10-year					
100-year					

Name of P.E. on calculations: _____ P.E. # _____ Expiration date: _____