

5.2 Appendix B – Utilities Site Plan Checklist

The Applicant must submit a copy of this checklist, included with the County’s Site Plan Application, with a certification that the plans reflect all applicable items on the checklist. The Utilities checklist is not all-inclusive, merely representative of items that are routinely improperly submitted or otherwise selected by the Department of Utilities for your convenience. Use of the checklist does not relieve the Applicant from complete compliance with all of the standards and requirements shown in this Manual, whether or not reflected on the checklist.

DATE: _____

CHECKED BY: _____

PROJECT NAME: _____

PROJECT LOCATION: _____

PLANS PREPARED BY: _____

<u>Reference</u>	<u>Completed</u>	<u>Item</u>
1.3	_____	Site Plan complies with County Water/Sewer Master Plan
1.3	_____	Infrastructure Master Plan for development/subdivision
1.5	_____	Adjoining properties have access to utilities either by easement or by water/sewer main extension to the property line
2.1	_____	Water / sewer main size and material indicated on plan and profile
2.2.6.4	_____	Ensure restraints are shown on the profile view
2.2.7.7	_____	Check static pressure of nearest hydrant, state if PRVs will be required
2.2.7.3	_____	Calculate fire flow availability at site maintaining 20 PSI in zone or influence area
2.2.4.6	_____	No blow-off or air release valve if possible use fire hydrants
2.2.2	_____	Waterline depths of cover
2.3.2	_____	Sewer line depths and lateral depths versus pipe type
1.7	_____	Utility easement shall be “20' Public Utility Easements”
1.7	_____	All joint combined water and sewer easements shall be noted as “35’ Public Utility Easements”
	_____	“Public Utility Easements” are separate from other utilities.
	_____	No private force-mains shall be in public utility easements or State R.O.W.
2.1	_____	Existing line sizes and location shown
2.1	_____	Proper connections to existing utilities
Article II	_____	Sprinkled buildings have Dedicated Hydrant, FDC and PIV shown
2.1	_____	Water service location, size and material indicated
2.1	_____	Proposed meter(s) location and size indicated
4.3.12, 4.3.13	_____	Proposed meter barrel/vault size shown
2.2.4	_____	Correct barrel/vault detail provided

Article II		Fire hydrants (600' - 800' max spacing residential, see Article 2 for others).
Article II		Fire hydrants (300' – 500' max spacing commercial, see Article 2 for others).
Article II		Adequate access to hydrant for emergency apparatus - avoid location of fire hydrants along shoulders
2.2.7.4		Water mains shall be looped whenever feasible
2.2.7.4		Avoid dead end lines or place demand (meter) towards end of line
2.1		Services provided to all existing and proposed lots or parcels.
2.1		All valves, tees, bends, hydrants, etc. are labeled and stationed
2.2.4.3		Valves spaced less than 800' intervals
3.4.2.11		Valve boxes outside pavement shall have tops set to the finish grade with concrete collars
2.3.4		Cleanouts in paved areas need to be traffic rated
2.2.4.3		Tees must have at least 2 gate valves provided
2.2.4.3		Crosses must have at least 3 gate valves provided (Crosses Not Preferred)
3.4.2.14		Deflection of waterline does not exceed design radius
2.1		Bend dimensions are clearly shown (degree or inches) and restrained
2.2.7.6		3/4" minimum service line for single family ("K" Copper)
2.2.1		Water lateral and sewer lateral minimum 10' separation.
2.2.6.2.1		All water mains either 12 inches (12") and greater in diameter or under paved areas shall be constructed of Ductile Iron Pipe
4.3.1.1, 4.4.2.2		The minimum pressure class for C-900 PVC is DR14
2.2.4.6		Flushing hydrants provided at all low points
2.2.4.6		Air release hydrants provided at high points
2.1		Scale provided, plan and profile (horizontal/vertical)
2.3.1		Special protection for water mains located under sewer mains
2.2.6.3		Special protection for water mains near known corrosive soil areas
2.2.7		Hydraulic Report submitted and meets requirements
3.4.2.4, 4.3.7		Water meter services using a corporation stop or gate valve (No corporation stops over 1")
5.1		Meter sizing worksheets submitted, match construction drawings
2.1		Sewer services stationed and labeled
2.1		Existing sewer main shown and labeled
2.1		Existing sewer manhole connection indicated
2.1		Upstream manhole rim elevation needs to be lower than finish floor elevation
2.1		Manholes shown and properly numbered
2.3.3		Sewer line "Invert In" and "Invert Out" shall be at 90 degrees or greater
3.3.3.1		Sanitary manhole - stub provided for future extension (Including Easement)
2.2.6.4		Retrained waterline plug and valve provided for future extension (Including Easement)

2.3.3		Commercial properties under Sewage Use/Pretreatment Ordinances have a monitoring manhole or grease trap when needed
		Open drains shall not discharge into sanitary sewer (roof required for dumpster pads)
		Floor drains for automotive shops shall have oil/water separator and sand traps.
2.3.7		Pump station - requires specific approval. Considered complex
		No common force-mains allowed
2.1		Each parcel has separate water and sewer services
		Maximum separation between manholes, 400' if 15" or less, 600' if > 15"
2.3.3		Manholes in floodplains have watertight lids
2.3.3		Manholes over 16-ft in depth shall be 60-inch (60")
2.3.3		Sanitary house connection/lateral min. 4" with a clean out at property line
2.3.4		Cleanouts need to be provided at edge of easements and property lines
2.3.4, 3.3.3.3		Laterals between the main and our cleanout shall have a minimum slope of 2.08%
2.3.4		Minimum basement elevation shown
2.1		Sewer line size and material indicated, including percent slope.
2.1		No sewer line shall exceed 18% slope (Less than 11% desired)
2.3.1		PVC - minimum depth 48"
2.3.1, 2.3.2		DIP - required: low cover (2.3.2), boring (2.3.1), conflicts (2.3.1), and stream crossings (2.3.1).
2.3.1		Stream crossings are consistent with Standards Detail for Stream Crossings
2.3.6		Minimum slopes met (refer to specifications - 8" - 0.4%; 10" - 0.28%)
2.3.6		No sewer line shall be upsized to reduce slope requirements
2.3.3		Drop connections must be identified (Required for drops larger than 2-ft)
2.3.3		Two or more drop connections require a 60-inch manhole
2.1		Inverts given for all lines, stubs and manholes (minimum 0.1' and Rim elevation indicated)
2.3.1, 2.2.1		Stormwater pipe clearance, material, and separation
2.2.2, 2.3.1		Check cover on existing utilities
2.3.4		Laterals must be a minimum of SDR 26 or PVC Schedule 40
2.2.7.1		The average and maximum day usage (GPD) needs to be shown on the plans for each building.
2.2.7.1		The length of both water (each size) and sewer needs to be shown on the title page.
1.4		Note if CTC/CTO will be required
5.3		Updated water and sewer notes added to plan sheet

Certification:

Date: _____

Engineering Firm: _____

Engineer's Name: _____

(Printed)

(Signature)