




DATE: December 12, 2017

TO: All Architects, Builders, Contractors, Developers, Engineers, Surveyors, and Property Owners

FROM: Greg Emanuel
Director, Department of Environmental Services (DES) 

SUBJECT: Simpler Stormwater Management Requirements with Reduced Plan Review Time and Compliance Cost for Certain Single-Family Home Projects

We are announcing a pilot project to simplify stormwater compliance, shorten review time, and reduce compliance costs with certain single family home projects in Arlington. Since the County Board adopted the Stormwater Management Ordinance in May 2014, we've learned through the experience of over 400 projects, we've heard a lot of feedback and a general desire to simplify the process and cost of stormwater compliance. This pilot project moves in that direction, while still remaining fully consistent with the spirit and intent of the ordinance.

EFFECTIVE DATE: January 1, 2018—for a one (1) year pilot period.

- Applicants with Land Disturbing Activity (LDA) Permit applications currently under review have the option to submit a plan revision (with no additional fees) after January 1, 2018, if the project meets the requirements set forth below.
- During the one (1) year pilot period, the County will collect feedback and evaluate whether the simplified stormwater management requirements are effective in meeting the multiple objectives of the Stormwater Management Ordinance, including protecting adjacent properties from stormwater runoff impacts.

BACKGROUND

When the County Board adopted the Stormwater Management Ordinance (Ordinance) in May 2014, the Board chose to continue to apply stormwater management requirements to single-family home projects—a regulatory option provided by the Virginia General Assembly and Department of Environmental Quality.

The Board made this decision for several important reasons, including:

- The significant cumulative stormwater impacts¹ of single-family home redevelopment. Since the Ordinance took effect in July 2014, more than 85% of the total impervious footprint increase from all development activity regulated under the Ordinance is from single-family home redevelopment.

¹ Including increased runoff to neighboring properties, storm drains, and streams as well as pollutants carried with that runoff.

- The regulatory consequences to the County from State and Federal water quality regulations if the pollution impacts are not addressed by each project.
- The extreme difficulty, cost, and equity issues associated with addressing these impacts on public lands instead of on the properties where they are created.
- Protecting adjacent properties from stormwater runoff impacts from new home projects.

These factors continue to remain strongly relevant.

PURPOSE

A simpler stormwater management approach is now available for relatively moderate scale and scope single-family home projects, more directly tied to stormwater impacts.

The eligibility criteria and simplified stormwater management requirements are intended to:

- **Reduce the time and cost associated with stormwater management compliance.**
- **Provide shorter plan review times.**
- **Facilitate existing home renovations and expansions.**
- **Clearly inform design and budget choices up front.**

Most new homes (and major home renovation/expansion projects of similar scale and scope) with significant site redevelopment, grading, and impervious cover changes will continue to be held to full stormwater management requirements.

ELIGIBILITY CRITERIA AND SIMPLIFIED STORMWATER MANAGEMENT REQUIREMENTS

Land disturbance will continue to be calculated with the standard buffers currently in effect, and land disturbance of 2,500 square feet or greater will continue to be the primary regulatory trigger.

Three threshold measures will be applied together to capture project scale and scope and impacts:

1. Net impervious area² increase <750 sf; and,
2. New and changed impervious area <2,000 sf; and,
3. Total impervious area <3,200 sf.

A more detailed description of these measures, with examples, is provided in Attachment 1.

² Note that impervious area is not the same measure as 'lot coverage.' Not all impervious surfaces are counted as lot coverage by the Zoning Ordinance.

For projects that fall below all three of these threshold measures, and do not require a Water Quality Impact Assessment (WQIA) under Chapter 61 (Chesapeake Bay Preservation Ordinance), the following simplifications of the Stormwater Pollution Prevention Plan (SWPPP) will be allowed:

- A simplified Stormwater Management Plan using a dry well design template can be submitted. No additional water quality or quantity computations or stormwater management facilities are required. An engineer's seal is not required. See Attachment 2 for more information about the dry well template.
- An 'Agreement-in-lieu of an Erosion and Sediment Control Plan' can be submitted, signed by the property owner.

All other requirements of the LDA permit continue to apply, including but not limited to a topographic survey and grading plan (sealed by a land surveyor), the Landscape Conservation Plan³, the Pollution Prevention Plan, and the Stormwater Facility Maintenance and Monitoring Agreement. See Attachment 3 for the Simplified LDA Permit Minimum Acceptance Criteria (MAC) Checklist.

RESOURCE PROTECTION AREA (RPA) REQUIREMENTS WHEN A WQIA IS REQUIRED

For projects that require a WQIA, the simplified Stormwater Management Plan applies ONLY if the project is considered 'allowable development'⁴ under Section 61-7 of the Chesapeake Bay Preservation Ordinance. In addition, the impacts of specific impervious surfaces on the RPA (e.g., driveway or rooftop runoff to a sloped area) will be evaluated as part of the WQIA review to determine if additional stormwater management measures other than dry wells must be installed.

Projects that require administrative or formal exceptions under Chapter 61 to increase impervious area and/or encroachment in the RPA must satisfy the full requirements of the LDA Permit and Stormwater Management Plan and are not eligible for the simplified stormwater requirements.

FLOODPLAIN REQUIREMENTS

Due to the complexity of the Floodplain Management Ordinance, for projects that contain floodplain on the property, the applicant must contact the plan reviewer to determine what is required.

For more information, please visit the Stormwater Management Ordinance website: <https://building.arlingtonva.us/stormwater-management-ordinance/>

³ A requirement of the Chesapeake Bay Preservation Ordinance (Chapter 61). Chapter 61 does not provide any administrative authority to change requirements for single-family home projects. For additional information, please refer to 'Resource Protection Area Requirements' section as well as: <https://building.arlingtonva.us/chesapeake-bay-preservation-ordinance/>

⁴ In particular, projects that increase impervious area and/or encroachment in the RPA are NOT considered 'allowable development.'

ATTACHMENT 1. Description of new criteria to determine if a project is eligible for the simplified SWPPP requirements, with examples.

1. Net impervious area increase: < 750 SF

- Represents new stormwater impacts created by a project.
- Intent to set a threshold for relatively moderate impact projects while capturing more significant increases and addressing cumulative impacts.

2. New and changed impervious area: < 2,000 SF

- A measure that separates more moderate scale and scope projects from more extensive ones, and also captures the degree of change on the property that affects runoff characteristics – such that the normal grading, engineering, and stormwater management plans are necessary.
 - New impervious area¹: Impervious area placed where it currently does not exist.
Example: Structure constructed over lawn area.
 - Changed impervious area: Impervious area placed in locations of existing impervious area.
Examples: Second story addition; structure built on existing patio; structure built on patio that is removed; driveway removed and replaced.

3. Total impervious area: < 3,200 SF

- Represents the overall stormwater impact of a property.
- 3,200 sf is the median impervious area value for single family homes in Arlington.

¹ Consistent with the Virginia Runoff Reduction Method (RRM), permeable paving surfaces are considered impervious land cover in this calculation. In the RRM, permeable paving surfaces provide partial credit to offset the impacts of the impervious land cover they represent. Use of permeable paving surfaces with the simplified Stormwater Management Plan can be proposed and will be reviewed on a case-by-case basis.

Examples where all three criteria apply:

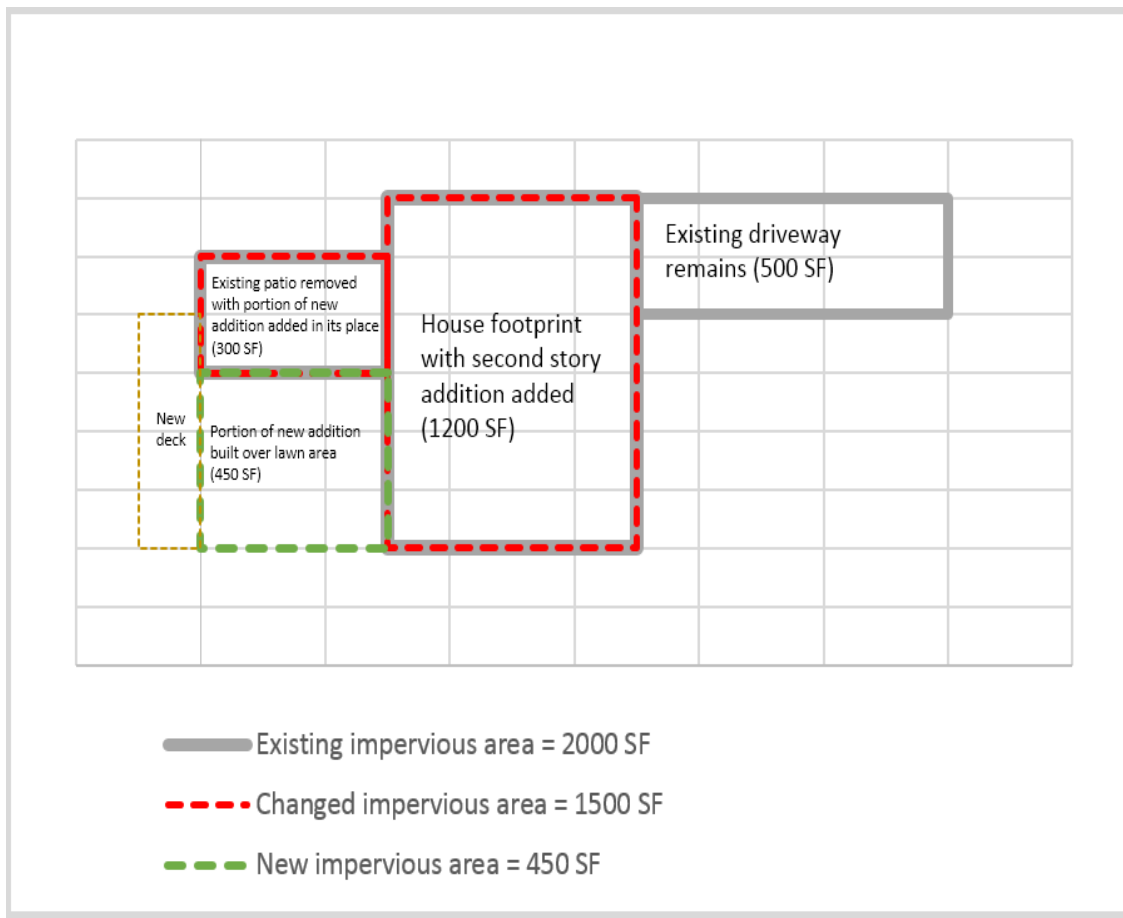
EXAMPLE 1: Major home addition/renovation project

Property with 2,000 SF of existing impervious area, with 1,200 SF house footprint, 300 SF patio footprint, 500 SF driveway footprint.

- Adds 750 SF rear addition
 - 450 SF is built on lawn area (**new impervious area**) → **<750 SF**
 - 300 SF is built on existing patio that is removed (**changed impervious area**)
- Adds new second story addition on 1,200 SF house footprint (**changed impervious area**)
- Adds 200 SF deck over lawn area (**remains pervious area**)
- 500 SF driveway remains unchanged
- New + changed impervious area:

$$\begin{array}{c} 450 \text{ SF} \\ \boxed{\text{New}} \end{array} + \begin{array}{c} (300 \text{ SF} + 1,200 \text{ SF}) \\ \boxed{\text{Changed}} \end{array} = 1,950 \text{ SF} \rightarrow \boxed{\text{<2000 SF}}$$

- Total impervious area = **2,450 SF** → **<3200 SF**



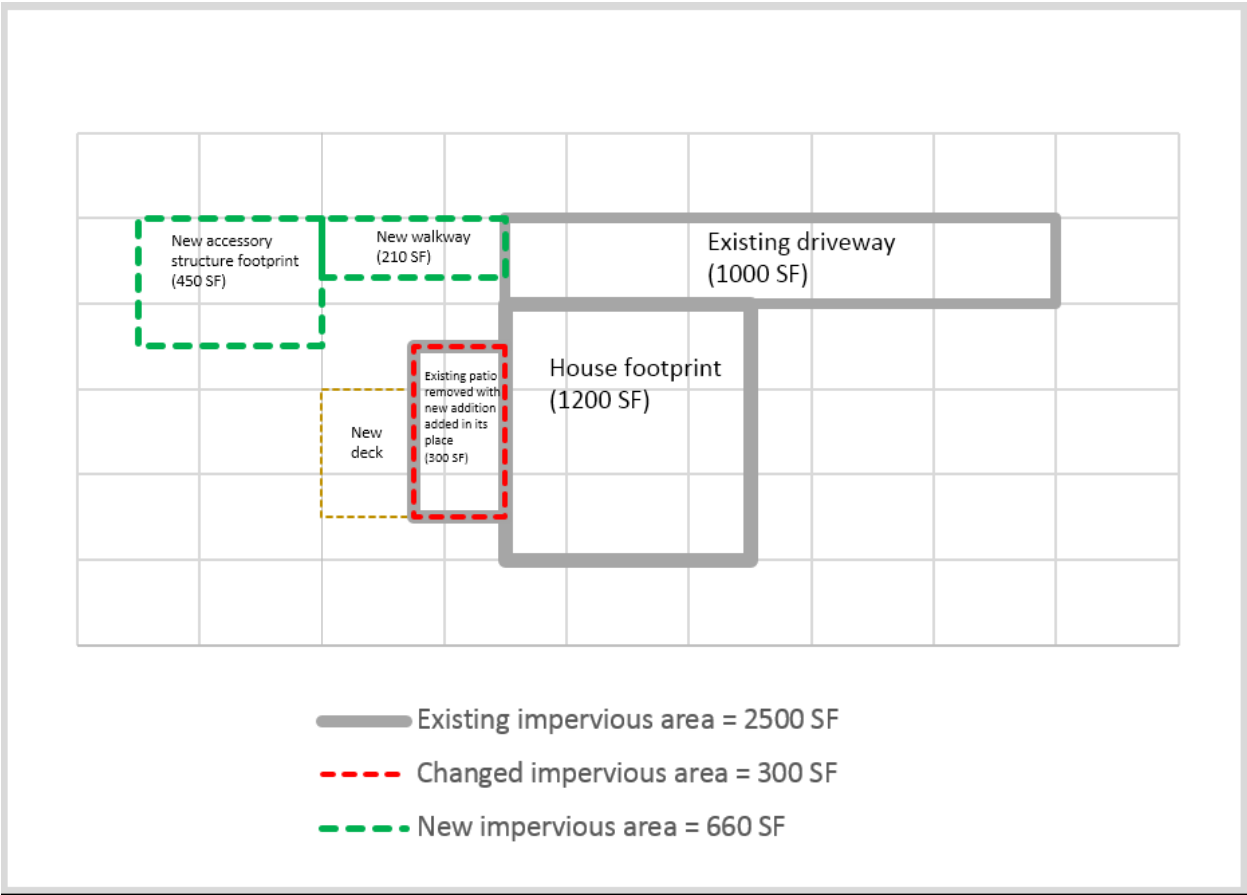
EXAMPLE 2: Detached accessory structure project with moderately-sized addition

Property with 2,500 SF of existing impervious area, with 1,200 SF house footprint, 300 SF patio footprint, 1000 SF driveway footprint.

- Adds 450 SF accessory structure and 210 SF walkway (**new impervious area**)
 - **660 SF** new impervious area → **<750 SF**
- Adds new 300 SF addition over existing patio area that is removed (**changed impervious area**)
- Adds 225 SF deck over lawn area (remains pervious area)
- 1000 SF driveway remains unchanged
- New + changed impervious area:

660 SF	+	300 SF	=	960 SF	→	<2000 SF
New	+	Changed				

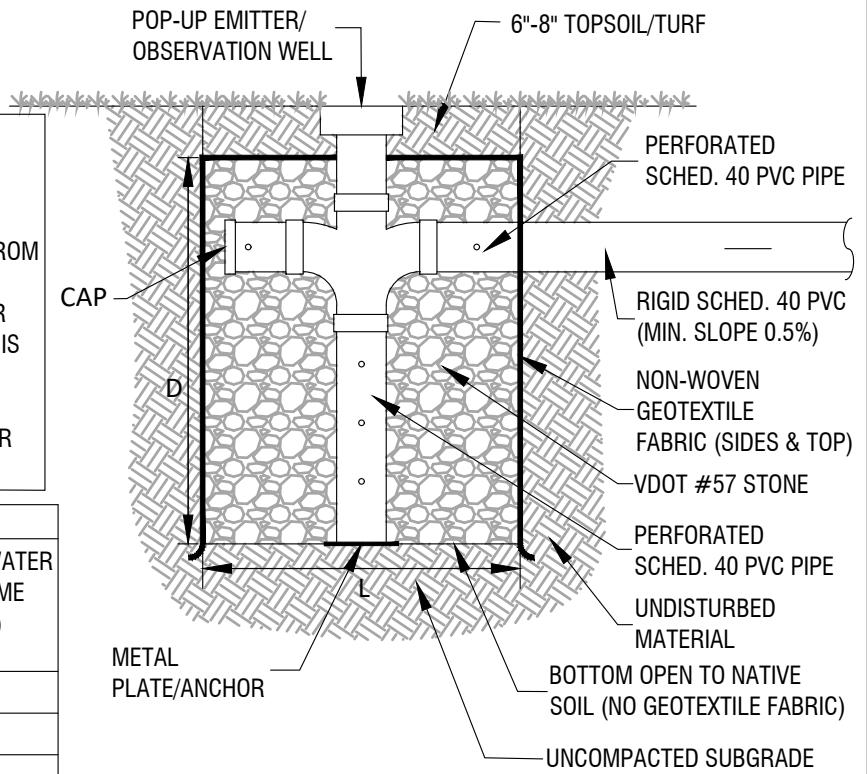
- Total impervious area = **3,160 SF** → **<3200 SF**



Attachment 2 - Dry Well Detail

NOTES:

1. GUTTER GUARDS ARE TO BE INSTALLED ON ALL GUTTERS DRAINING TO DRY WELL.
2. INSTALLED DIMENSIONS ARE BASED ON CHART BELOW.
3. FACILITIES SHALL BE SET BACK A MINIMUM OF 10 FEET FROM THE PROPERTY LINE FOR A DOWN-GRADIENT PROPERTY, AND A MINIMUM OF 5 FEET FROM THE PROPERTY LINE FOR AN UP-GRADIENT PROPERTY. SETBACK FROM A BUILDING IS 10 FEET.
4. ALL DOWNSPOUTS THAT DISCHARGE TO DOWNGRADIENT PROPERTIES MUST BE DIRECTED TO THE RIGHT OF WAY OR TIED INTO A DRY WELL.



TYPICAL DRY WELL
(NOT TO SCALE)

REQUIRED DRY WELL SIZE TABLE*

IMPERVIOUS AREA INCREASE (SF)	NUMBER OF DRY WELLS MINIMUM	SIZE OF EACH DRY WELL			TOTAL WATER VOLUME (CF)
		LENGTH (FT)	WIDTH (FT)	DEPTH (FT)	
0 - 99	2	3	2	2	10
100 - 199	3	3	3	2	22
200 - 299	4	3	3	2	29
300 - 499	4	4	4	2	51
500 - 750	4	4	4	3	77

*IF THE PROJECT CANNOT MEET THE MINIMUM REQUIREMENTS IN THE TABLE, DISCUSS OPTIONS WITH PLAN REVIEWER

MATERIAL SPECIFICATIONS FOR DRY WELLS

MATERIAL	SPECIFICATION
STONE	VDOT NO. 57
OBSERVATION WELL / OVERFLOW	INSTALL A VERTICAL 4 OR 6-INCH SCHEDULE 40 PVC PERFORATED PIPE, WITH A POP-UP EMITTER AND ANCHOR PLATE. PIPE PERFORATIONS ARE 3/8 INCHES AT 6 INCHES ON CENTER.
ANCHOR PLATE	INSTALL 6" SQUARE METAL PLATE FOR INSTALLATION WITH 4" PVC PIPE. INSTALL 8" SQUARE PLATE FOR INSTALLATIONS WITH 6" PVC PIPE.
SURFACE COVER	INSTALL 6 - 8" OF TOPSOIL AND TURF.
FILTER FABRIC	MUST BE INSTALLED ON THE DRY WELL SIDES. WHEN TURF IS USED AS A SURFACE COVER, FABRIC SHALL BE INSTALLED ALONG THE TOP BETWEEN THE STONE LAYER AND THE SURFACE COVER. USE NON-WOVEN POLYPROPYLENE GEOTEXTILE WITH A FLOW RATE OF > 110 GALLONS/MIN./SQ. FT. (E.G., GEOTEX 351 OR EQUIVALENT).
CLEANOUT	THREADED METAL ROD WITH PLATE AT THE END INSTALLED IN THE OBSERVATION WELL TO FACILITATE CLEANOUT.

DRY WELL MAINTENANCE SCHEDULE

MAINTENANCE ACTIVITIES	SCHEDULE
<ul style="list-style-type: none"> • REMOVE LEAVES AND DEBRIS IN GUTTER AT LEAF GUARD. • REMOVE LEAVES AND DEBRIS FROM OBSERVATION WELL / OVERFLOW. • INSPECT THE CONDITION OF THE OVERFLOW OR POP-UP EMITTER AND MAKE SURE IT IS STILL CAPPED AND FUNCTIONING 	ANNUALLY
<ul style="list-style-type: none"> • INSPECTED AND CERTIFIED BY A PROFESSIONAL LICENSED IN THE STATE OF VIRGINIA 	ONCE EVERY 5 YEARS

DRY WELL DETAIL

REVISION & DATE



ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
OFFICE OF SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT

DRAWING NO.
SWM # 7

ATTACHMENT 3. Modified SWPPP Minimum Acceptance Criteria checklist.



Department of Environmental Services
LDA Permit with Simplified SWPPP - Minimum Acceptance Criteria (MAC) Checklist
 OCT 2017

Instructions: Complete this required Front Counter Minimum Acceptance Criteria (MAC) Checklist to ensure the intake of your plan upon submission at 1st submission. If applicable, also complete all attached MAC Checklists for requirements pertaining to the individual review of plan elements.

Project Name:	
Address:	Date:

SWPPP Requirements	yes	n/a	no	sheet
1 Completion of this Front Counter MAC Checklist and all applicable Plan Review MAC Checklists.				
2 Submit with the LDA permit package for first submittal only.				
3 Including the following within the grading plan, prepared by a licensed Land Surveyor or Professional Engineer				
a Address and Real Property Identification Map Number, RPC Numbers				
b Graphic Scale and north arrow				
c Current Field Survey Topography				
d Existing and Proposed Easements				
e Clearly indicate the overall change and reconfiguration on the property, including: existing and proposed conditions; pre- and post-construction impervious area; impervious area change; and new, altered, or replaced impervious area. Include all supporting calculations.				
f Limit of disturbance and the total land disturbance area				
g Location of E&S control practices and construction entrance				
h Clearly indicate the existing and proposed downspouts and flow directions				
i Proposed grading, existing and proposed drainage divides				
j Location and size of the proposed dry wells				
k Sump pump discharge location				
4 Signed 'Agreement-in-lieu of Erosion and Sediment Control Plan' by the owner				
5 Standard E&S Control practices detail drawings				
6 Responsible Land Disturber letter				
7 Pre-storm checklist				
8 Standard dry well detail, sizing sheet, and construction inspection checklist				
9 Stormwater Facility Maintenance and Monitoring Agreement				
10 Pollution Prevention Plan (P2) Template of the Stormwater Manual				
11 Planning & Field Guide for Pollution Prevention (P2)				

Landscape Conservation Plan, prepared by certified arborist or landscape architect		yes	n/a	no	sheet
1	Determination of the critical root zone				
2	Tree protection fencing				
3	Signage				
4	Critical Root zone mitigation, such as root pruning, padding, or other root protection methods				
5	Note requiring county arborist inspection before any land disturbance activity				
6	Tree inventory of all trees larger than 3 inches DBH, either on site or with a critical root zone encroaching the limit of disturbance. This list will contain information on species, size, health, whether the tree is to be protected or not, and other issues, such as location in the RPA, disease concerns, or invasive species presence				
7	Tree canopy coverage calculation				
RPA Requirements		yes	n/a	no	sheet
IF EXCEPTION REQUEST IS REQUIRED, STOP. PROJECT IS NOT ELIGIBLE FOR SIMPLIFIED LDA PERMIT AND SWM PLAN.					
1	Indicate Resource Protection Area (RPA) boundary on plan OR include certified note on plan that no RPA is present. If RPA is present, include Completed Water Quality Impact Assessment (WQIA) form with the required elements. Note that additional stormwater management measures other than drywells may be required.				
Floodplain Requirements		yes	n/a	no	sheet
Due to the complexity of the Floodplain Management Ordinance, the applicant must contact the plan reviewer to determine what is required.					
Wet Utility Requirements		yes	n/a	no	sheet
1	For a new development with a new building or for additions that will upgrade to more than 3 toilets (WCs), the water meter and service line shall have as existing, or be upgraded to, a minimum ¾" and 1" diameter service line, respectively.				
2	The location of the existing and proposed meter/service shall clearly be shown on the plan to be within the utility strip (where applicable) or sidewalk but not on private property without the provision of an easement, nor in driveway/apron, nor within five (5) horizontal feet of any utility or apron.				
3	If the water service and meter are relocated from the existing meter location and the service line crosses other utilities (water, sewer, gas, underground dry utility) between the water main and meter, a depth profile shall be provided to clearly show the separation from these utilities with a minimum vertical separation of twelve (12) inches. The plan must be certified by a licensed professional.				
4	The location of the new meter shall be staked out by the developer/owner with information to be provided to the County meter installers.				

I certify that the above is true and accurate to the best of my knowledge.

Signature _____

Date _____