Anne Arundel County Office of Planning and Zoning

Individual Single Family Dwelling (SFD) Engineering Review Checklist

Project Name - Number		Seal
Design Professional	Design Professional Certification (Seal, Signature, and expiration information)	

Instructions:

1. The checklist must be submitted with the first submittal.
2. Packages submitted without the completed checklist will not be reviewed and will be returned to the applicant.
3. Design Professional **(Des.)** should insert into each box either of the following:
   a. √ This item has been addressed.
   b. N This item does not apply to this project.
4. All boxes must be checked.
5. The review engineer **(Rev.)** will upon review of the plans verify by inserting either of the following:
   a. √ This item has been adequately addressed or agree that it does not apply.
   b. X This item has not been adequately addressed. (Use the remarks column to indicate via letter designation, which item needs to be addressed or if a more detailed response is required then indicate in the remarks column that the item is addressed in the comment letter).
6. **A copy of the checklist will be returned to the applicant with the comment letter.**
7. **The checklist must be returned with the second submittal utilizing the same check format indicated in item 3 above.**

►	This checklist is being provided as a general guide for identifying the minimum features that should be addressed prior to submitting the plans for engineering review**. It is to be used in conjunction with the Site Development Plan Checklist for Single Family Dwellings (SFD).**
►	The design consultant by assigning his/her seal and signature certifies that the plans were completed in accordance with all currently applicable design standards.
►	**Plans that are incomplete as per the checklist items will result in an incomplete review and will be returned to the consultant. The resubmittal will be considered a first submittal in the review process.**
►	The Stormwater Management Concept items will be reviewed with the first submittal. If based on the review, this office determines that SWM is being addressed using Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP), then the engineering review of the final details will be completed.
►	If this office determines that SWM is NOT being addressed using Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP), then the engineering review of the final details will NOT be completed. The applicant will then address the comments that are required to demonstrate that ESD to the MEP has been addressed prior to commencement of final plan review.

Anne Arundel County Office of Planning and Zoning

Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		**Engineering Review for Single Lot Grading Permit Plans** (Version 10-01-2024)	Remarks
	Des.	Rev.	Des.	Rev.		
	Stormwater Management Concept Review					
	Drainage Area Maps					
1					Provide the following drainage area maps: **A)** Entire drainage area to site and or affecting site **B)** On site drainage areas to SWM devices/practices	
2					**All Drainage Area Maps**: **A)** Contours numbered with legible lettering **B)** Contour lines extend at least 200' beyond drainage area boundaries **C)** Travel path for Tc shown with segments labeled (distance, slope and "n" factor) **D)** Hydrologic soil groups delineated and shaded **E)** Acreage shown for entire drainage area and each sub area used in computations for curve number or "C" factor **F)** North arrow shown **G)** Scale shown	
3					Soils: **A)** Labeled and shaded **based on Hydrologic Soil Group (A, B, C, D**). **B)** Indicate highly erodible soils by separate shading.	
4					If all of the required information required to be shown, such as soil and zoning etc. cannot be shown on the overall map then the information may be shown on a separate map. These maps must be shown at same scale as the overall map.	
5					Scale shall be 1" = 100' for sites with acreage $\leq$ 25 acres, or 1" = 200' for sites with acreage > 25 acres.	
	On Site Plans					
6					North arrow/NAD 83	
7					Benchmark- BM No., description and elevation. (Indicate vertical control used, NGVD 1929 or NAVD 1988)	
	Pre Development					
8					Site outline showing bearings and distances.	
9					**Resource Mapping:** Provide a composite map **which allows clear depiction of the existing site resources and conditions.**	
10					Site resources include but are not limited to: **A)** Mature trees **B)** Tidal and Non-Tidal Wetlands (based on report) **C)** Floodplains **D)** Streams labeled as (Perennial, Intermittent, etc.) **E)** Slopes greater than 25% (15% in Critical Areas) **F)** Buffers to streams and wetlands **G)** Historical and or archaeological resources	
11					**Highlight and shade the areas that should be protected from development:** This includes site resources listed above and sensitive features such as steep slopes, floodplains, etc.	

Anne Arundel County Office of Planning and Zoning

Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		Engineering Review for Single Lot Grading Permit Plans	Remarks
	Des.	Rev.	Des.	Rev.		
12					**Certification Note:** Provide a note certifying that the location of features shown on the **Resource Map** has been field verified. Note must be signed by design consultant.	
13					Pre and post development discharge points from the site shown and labeled.	
14					Indicate if site is within any Bog Drainage or impact areas.	
15					Provide a tabulation of sub drainage areas that provides a linkage with information used in computations. (i.e. any number used in curve number computations should be included in this table and clearly shown on the map.)	
16					**A)** Provide the names of public or private roads that abut or traverse the site **B)** Show right of way limits **C)** Indicate if road is on the scenic and historic road inventory	
17					Location of existing structures, septic areas, and water wells within 100 feet of site located on abutting and adjacent properties, as applicable; labeled "to remain", "to be removed", or "to be abandoned".	
18					Property ownership and info- including the tax # for abutting and adjacent properties.	
19					Limits of Critical Area designations- LDA, RCA, IDA.	
	Proposed Development Plan					
	Site layout meets the criteria listed below:					
20					Proposed imperviousness and disturbance is minimized to the maximum extent practicable	
21					Protects conservation areas, **and areas delineated in line 11 above,** to the maximum extent practicable	
22					SWM is addressed by utilizing non-structural practices, natural areas, landscape features, and micro-practices to manage runoff from impervious surfaces.	
23					Site graded so that runoff flows from impervious areas directly to pervious areas or natural conveyance systems.	
24					Natural flow paths between the site and upstream and downstream systems are maintained.	
25					Sheet flow and natural overland flow processes maintained wherever it is feasible.	
26					Stable conveyance of runoff provided to offsite areas.	
27					Structural BMPs are used only where absolutely necessary.	
28					Show and label proposed contour lines.	
29					Easements provided for any work proposed on private offsite properties.	
	End of Preliminary Plan Review					

Anne Arundel County Office of Planning and Zoning

Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		Engineering Review for Single Lot Grading Permit Plans	Remarks
	Des.	Rev.	Des.	Rev.		
	Final Plan Review					
	Reports, Computations, and Attachments					
30					All computations are provided in a booklet that is **A)** Bound **B)** All pages/sheets numbered **C)** Signed and sealed by a design professional **D)** Contains a table of contents.	
31					Provide a narrative that describes **A)** How natural features are protected and enhanced **B)** How natural flow patterns are maintained **C)** Measures taken to reduce impervious coverage	
32					Address how the 10% Critical Area pollutant reduction will be achieved, if required.	
33					**Study Points:** Provide pre and post development runoff for all study points.	
34					The same method of computation used when comparing runoff (i.e. if TR-55 used for post development runoff, it must be used for pre development as well).	
35					Compute rainfall amount treated in each facility and provide a table that shows the volume treated for each non-structural method, micro-practice, and structural device and includes a summary of the total volume required and provided.	
	Roads					
36					Road Plan Checklist included for any proposed road improvements.	
	Use this section of the checklist only for plans where road improvements are not required.					
37					If road(s) is not improved based on current classification and no improvements are proposed, then provide modification decision information on the plan.	
38					Bearing and distances shown on plan and plat.	
39					Right of way bearing and distances shown on ***both*** sides of each proposed or existing road that is part of contract shown in plan view; Limits defined via bearings and distance and or complete curve information; Show maximum and minimum widths if ROW is variable.	
40					Existing roads that abut or traverse the site (improved and unimproved) show: **A)** Road name and classification of road **B)** Ownership (SHA, County, Private) **C)** Surface type **D)** Show curb and gutter or edge of pavement **E)** Indicate if road is scenic and historic.	
41					ROW labeled **A)** As Temporary or Permanent **B)** Public or Private	
42					Proposed right of way widths shown, if applicable.	
43					Clear sight triangle at intersections	
44					Existing substandard roads: Based on road classification, either provide right-of-way dedication and or frontage road improvements (as applicable) or submit for a modification to current Article 17 Section 2-103.	

Anne Arundel County Office of Planning and Zoning

Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		Engineering Review for Single Lot Grading Permit Plans	Remarks
	Des.	Rev.	Des.	Rev.		
	Storm Drainage - Stormwater Management					
45					Storm Drain Checklist is required for any proposed public storm drainage improvements.	
46					**Right to Discharge (RTD):** Determine if any rights-to-discharge, on-site or off-site, are required.	
47					Provide all necessary computations and plans to show how SWM is addressed. If disconnections are used, show the flow path on a plan that includes labeled contours.	
48					Add and complete the Stormwater Management Data Form.	
49					All SWM treatments must be covered under a Private SWM Agreement to be executed with the grading permit.	
	Water and Sewer					
50					If public water and or sewer is being extended then supply the completed Water and Sewer Checklist with the necessary public plans.	
	This portion of the checklist is to be used only if water and or sewer system extensions are not proposed.					
51					Label all existing mains along the property frontage showing: **A)** Sizes and types **B)** As-built tracing numbers.	
52					Meters, cleanouts, etc. located outside of driveways.	
53					Easement provided where: **A)** Water meter **B)** Cleanout **C)** Fire hydrant **D)** Grinder pump, and or **E)** Mayo tank, is not located within public right-of-way	
54					Indicate current water and sewer service areas and category (Existing, Planned, Future, No Public Service, etc.).	
55					Mains extended to limits of property and through the property frontage, if lot is located within the Required Extension Distance (RED) as per the current Master Plan for Water Supply and Sewerage Systems.	
56					If site is within Existing or Planned Service Categories and utilities are not being extended, indicate the distance between the property line and the closest public utility.	
57					Show location of water and sewer connections to public utilities.	
	Floodplain					
58					**Floodplain: A**) Determine if floodplain exists on site **B)** If floodplain exists, use simplified method to determine water surface elevations onsite	
59					For previously platted floodplain: Floodplain limits shown, and floodplain source referenced.	
60					**For floodplains computed with this project: A)** Cross sections shown and labeled on the site development plan **B)** Q_{100}, Elevation and station shown for each cross section	
61					Floodplain drainage area information used in computations clearly depicted on drainage area maps.	
62					Runoff computations for floodplains based on ultimate development of the drainage area based on zoning. No reductions based on storage in ponds, other swm devices, oversized pipes, and undersized culverts.	
	Miscellaneous					
63					Provide any necessary plats for easements, dedication, etc.	