ENGINEERING PRELIMINARY PLAT CHECKLIST

Name of Project _____

Name of Developer _____

File Number _____

Date Submitted _____ Checked By _____

Type: R=Residential Only, C=Commercial Only, I=Industrial Only, C*Residential-Commercial			
TYPE	ITEM		NOTES
	Water (S. 708) · approximate location · pipe size · direction of slope · pressure and flow available at connecting point. 20 psi min. @ max demand · Easements shown (20' min.) · Water line should be shown on the road profile · Alternate means of water supply if connections to existing supply is not proposed. · Sufficient Cover · Existing fire hydrants · Wells, Well Radius		
	Sewer (S. 709) · approximate location · pipe size · direction of slope · invert elevation at connecting point · easements shown (20' min.) · profile/ sufficient cover /crossings · If not connecting to an existing system, a plan for a connection system, treatment and disposal		
	Access road or easement to sewer treatment, SWM		
	Existing topography · 2' or 5' contours · Contour lines shown 100' beyond boundary. Also 200' downstream channels Existing Features – rock outcrops, Util, sinkholes, tree lines, ponds, structures, soils information and delineation. Owners Certifications – SWM, Drainage, SWM, As-Builts Slopes > 15% - slopes analysis, % undisturbed		

	Streets and Roads (S.502, Appendix A) Verify that proposed streets are classified to accommodate future development (if there is to be future construction a temporary tee turn-around needs to be provided).		
	Proposed streets · location, width, names and classification, ADT · profile showing elevations (at beginning, end, intersections, points where there is a change in grade or direction · every 50' specify existing and proposed elevation · profile to show stations and elevation for PVC, PVI and PVT · profile scale should be 50' = 1 inch horizontal and 5' = 1 inch vertical · cross-section (scale of 10' or less = 1 inch), showing width, type of pavement, size and type of gutters, location and width of sidewalks, if required, and location and sizes of existing utility lines. · Geometric and pavement design shall be in accordance with Plates 1-12 and A. · Horizontal curvature at the centerline on road profiles · Horizontal stopping distances · Vertical curve AASHTO k-values · Temporary tee turn-around (Plate no. 12) · Long streets – extended cul-de-sac, access ways for long blocks · Multiple entrances required. · 100+ homes, townhouses (1500 ft) (S. 502) · Note stating the width of gravel shoulder for cul-de-sacs · Horizontal Alignment (Section 602, 5, B) · All lots are to have access from interior streets and not county road unless Highway entrance permit is obtained Guardrails/ Retaining Walls		
	Paths		
	Sidewalks (S.705) Handicap ramps Blocks – Monuments (S.503.1, S 702)		
	Parking (Appendix A)		

	Number, Size, Handicap (S. 801)		
	Curbs and Gutters (S.706) Location – detail BCED std.		
C	Landscaping plan and reserved buffer areas		
	Signs (S. 703) Location, height, size and design, check as to not obstruct view.		
	Grading and Drainage (S.506) · Note stating that lots are to be graded to secure proper drainage away from building or structures · No excavation shall be at a slope steeper than 3:1 (see Section 506.d for exceptions) · No fill shall be at a slope steeper than 1 ½:1 (see Section 506.e for exceptions) · top or bottom edge of slopes shall be minimum of 5' from property or right of way lines · On Lot Grading, FFE, GFE, BFE, Spots, Driveway slopes, existing and proposed contours. · Drainage Easements (20’ min) · Inlet details (MD or WV) · Gutter spread (2 yr) > 5ft and not in travel ways · Inlet capture (10yr) >85%, clogging=0.75 · Site must have an adequate outlet and downstream channel. Note: · Grading shall provide proper drainage and dispose of storm water without ponding. · Grading shall not be done in such a way to divert water onto property of another landowner. · Excavation or fill shall not endanger adjoining property. · Blocks and lots are to be graded to secure proper drainage way from building or structures.		

	Soil Erosion and Sediment Control (SESC) (Section 507, SWM & SEC Ordinance) · Sequence of construction (Including contact BCED, MISS Util, inspection, owners certification) · Stabilized construction entrance . Location (all entrances) . details (50' min length and 10' min width, 2-3" stone) · Design consistent with the '94 MD SESC standards · Sediment in runoff water shall be trapped until the disturbed area is stabilized (debris basins, sediment basins, silt traps, etc.) · Sediment Basin Design · Ditch Treatment · Total Disturbed area – cut/fill volume · Stockpile area(s) with SF · Rock outlet protection – rip rap apron sizing. · V25, Q25, Hgl at all outfalls · Inlet protection · Details (WV or MD) · Excavation and fills slopes shall endanger adjoining property. · Swales, perimeter dikes, slopes over 3:1 (embankments) stabilized within 7 days. Note: Fill shall be compacted to prevent erosion. All disturbed areas must be stabilized within 7 days of finished grade or site being idle. · Seeding notes		
	Culverts and Bridges (S.707) · When natural drainage channels intersect street, need culvert or bridge · Drainage ditch must have at least 0.40 of a foot grade per 100 feet · Roadway ditch exceeding 2% must use an approved type gutter · 12" minimum culvert pipe · 12" minimum driveway culvert- 20' long · Note that drive way culverts shall be laid so as to maintain the flow line of the ditch or gutter Note that min. cover over culverts is 1'		

	Culverts and Bridges (con't) · Design computations for roadside ditches, all culverts and driveway culverts (25 yr event) · Size and length · Type · Inverts · Design computations for outlet Protection and design details.		
	Easements (S. 505, 711.C) · Utility (DB and Page #) · SWM · Drainage		
	Stormwater Management (Section 711) · Narrative · Environmental characteristics of the affected areas (such as sink holes, etc. this can be shown on the plat) · Potential impacts of the proposed development on water resources (wells) · Effectiveness and acceptability of measures proposed for managing runoff(show differences between pre- and post- development) · Topographic information (note if in Karst terrain) · Describe any soils investigation (include borings and/or infiltration tests, if applicable) Computations · Hydrology · Hydraulic (25 yr HGL, Q25, V25 at outlets) · Stormwater management structures · Areas mapped in the local hazard zone need to maintain the 10-year 24-hour post peak discharge rate at a rate less than or equal to the 2-year 24-hour pre peak discharge rate and store the 10 yr event volume difference.		

	Stormwater Management (con't) · Areas not mapped in the local hazard zone need to maintain the 1 and 10-year 24-hour post peak discharge rates at a rate less than or equal to the 1 and 10-year 24-hour pre peak discharge rate. · WqV, CpV, ReV, Pretreatment computations shall be shown on drawings. · Pre-development peak discharge rate shall be computed assuming that all land uses in the site to be developed are in good hydrologic condition. Vicinity Map Drainage Area Map · Existing and proposed contours · Locations of buildings and other structures · Data for total site area, disturbed area, new impervious area, and total impervious area; · Table showing the unified sizing criteria volumes and release rates- WQv, CPv, 1-, 10-, and 25-year pond volumes. · Storm drainage facilities · Watershed boundaries (including extent of any offsite watersheds flowing thru the development) · Description of all water courses, impoundments, etc., on or adjacent to the site or into which storm water flows existing ponds, streams, etc.) · Stormwater flow paths broken into separate areas for type of flow (sheet, shallow concentrated, channel flow, etc.) · TR-55 pre and post or equivalent Stage-Storage-Discharge Routing Tr-20 or equiv. SWM Items shown on Plat Location of Bench Marks used for design and reference datum Structural details for all components of the proposed drainage system Dimensions of pond		

	Stormwater Management (con't) Top of berm and top of settled berm. 6' minimum width, 1' freeboard 100 yr event. Core trench, anti-seep collars, low flow orifice protection, emergency spillway · Construction Specification including access road or easement to SWM area · Show ditchline flows · Delineation of the 100 year flood plain Infiltration Systems Greater than 3' deep shall be at least 10' from basement wall To handle runoff from commercial or industrial impervious parking areas shall be 100' from well and shall have 5' of soil over any bedrock form the bottom elevation of the infiltration structure Retention and Detention Ponds . Velocity dissipation device shall be placed at the outfall of structure · Rip rap the length of any outfall channel to provide a non erosive velocity of flow. · Analysis of the impacts of stormwater flows downstream in the watershed (the design release rate of the structure shall be modified if any increase in flooding or stream channel erosion would result at the downstream point) · Hydraulic grade line (25 yr) · Easement from adjacent property owner · Groundwater Protection Permit (DEP-this is a state requirement) · Flotation analysis . NRCS 378 breach analysis and hazard classification		
	Townhomes (S.504) · Collector street – 20' front and 20' rear BRL · Local street – 10' front and 20' rear BRL · 10' side BRL for both collector and local streets · 18' min. lot width, min. 1800 sf lot size and max. 10 units per acre . 30% of units may be reduced to 16' min. lot width, min. 1600 sf lot size and max. 8 units per acre		

	Equal or >15 lots – traffic impact study is required for residential subdivision. Equal of >100 ADT – traffic impact study is required for commercial development Equal or >15 lots – hydrologic testing and reports are required for residential subdivisions not served by public water and public sewer.		
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