A3 PASSAIC COUNTY LAND DEVELOPMENT REGULATIONS — SUMMARY OF RECOMMENDATIONS

Current Passaic County stormwater management requirements are focused on potential adverse impacts from land development on County drainage systems, which include curb and gutter systems, inlets, pipes, open channels, bridges, and culverts. Design requirements are intended to prevent flood-related damage from large storm events, i.e., 25- and 100-year storms. The County currently has no requirements for water quality, ground water recharge, or control of the smaller, more frequent storm events that cause localized nuisance flooding and stream channel degradation, and these issues would only be addressed for projects that meet the State's definition of major development, at which point the NJ Stormwater Rule requirements are triggered.

The table below provides a summary of recommended revisions to update the County's regulations and address shortcomings. With respect to regulatory requirements, two recommendations are most significant. First, water quality control requirements should be clearly specified, with a stated preference for the use of nonstructural LID and GSI structural practices. For the purposes of the resolution and associated technical guidance documents, GSI refers to distributed, smaller-scale BMPs that mimic a site's natural, predevelopment hydrology through infiltration, as well as evapotranspiration in vegetated systems. Second, water quality control requirements should be extended to sites that fall below the threshold for NJDEP requirements, which will enable the County to achieve water quality improvement benefits from more development sites.

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED ON NEXT PAGE)

TYPE OF REVISION	RECOMMENDED CHANGE	NOTES
Organization	I. Administration Section with subsections: • Authority • Purpose • Approving Agency • Power to Amend and Modify • Severability Revise existing Design Standards Section to clarify separate roadway and stormwater requirements. Add new section heading: VI. Multi-user Circulation and Roadway Design Standards. Incorporate Transportation Element requirements for Complete Streets by reference. Add new section heading: VII. Stormwater Management Design Standards (formerly Drainage). Add Purpose/County Goals to each section.	Combine the Site Plan and Subdivision Resolutions into a single Land Development Resolution. Currently, site plan and subdivision development requirements are covered by separate resolutions, although a single application form is used for both types of development. The two resolutions contain the same content for many sections, which can be addressed more economically and consistently in a single resolution.

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
Application Submission Procedures	A prospective applicant may request an informal meeting with Passaic County Planning Board staff prior to submitting a formal application and detailed plans. The purpose of the pre-application meeting is to • Review and discuss the general design of the project; • Advise the applicant of detailed analyses and information that may be necessary for formal review; • Discuss the substantive, administrative and procedural requirements of these Regulations; • Review and discuss applicable design standards and potential requirements pertaining to multi-user circulation and roadway design standards; • Review and discuss applicable design standards and potential requirements pertaining to stormwater management and impacts of the proposed development on county roads and drainage facilities; • Advise applicant of County concerns regarding development impacts on environmentally sensitive areas; • Expedite application processing and development plan review; • Coordinate requirements with local and state officials where applicable.	Add Pre-application meeting to Application Submission Procedures
	Documents submitted as part of a site plan or subdivision application shall be prepared in accordance with the following: • General Plan Sheet Requirements • Existing Conditions Plan Requirements • Conceptual Stormwater Management Plan Requirements • Erosion and Sediment Control Plan Requirements • Standard Erosion and Sediment Control Notes • Standard Sequence of Construction Notes • Post-Construction Stormwater Management Plan Report Requirements • As-Built Record Drawing Requirements	Improve document standards

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
Application Submission Procedures	Submit one (1) copy of the complete application and all supporting documents in Portable Document Format (.pdf) to the Planning Department on CD or DVD. An alternative media for the submission of this data may be requested by the applicant and agreed to by the Planning Board prior to approval or endorsement. Submit project plans in AutoCAD .dwg, .dxf, or other GIS-compatible file format, with georeferencing. The files must be identical to the relevant significant features and contain all factual information included on the printed plan. Upon project completion a digital submission of the As-Built Plan conforming to the above requirements is required for final release of the performance bond associated with any project. Document file organization, e.g., sheet naming and numbering, layer naming, shall follow National CAD Standards, current version.	Create digital submission standards
	Add requirement to provide Stormwater Management Plan and Report with application.	
New/Amended Definition	Best Management Practice (BMP) - A strategy or technique to prevent or mitigate the negative impacts of stormwater runoff. BMPs can be nonstructural or structural.	Add definitions, including, but not limited to, stormwater-related terms.
	Channel Protection – Management of peak rates from smaller storm events to protect the quality of stream channels and banks, fish habitat, and manmade infrastructure from the erosive forces and downstream sedimentation due to high stream velocities.	Consider adding definition and a specific requirement to protect stream channels from degradation, for example, retain or detain runoff from all DCIA within the limits of earth disturbance from a 1-year, 24-hour Natural Resources Conservation Service Type II storm such that runoff takes a minimum of 24 hours and a maximum of 72 hours to drain.
	Development – The division of a parcel of land into two or more parcels; the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any building or other structure, or of any mining excavation or landfill; and any use or change in the use of any building, or other structure, or land, or extension of use of land.	
	Directly Connected Impervious Area (DCIA) – an impervious surface that is directly connected to the drainage system either on the surface or subsurface.	
	Disconnected Impervious Area (DIA) – an impervious surface that directs stormwater runoff to a pervious surface or BMP.	
	Earth Disturbance – the addition of impervious surface (e.g., full-depth pavement); exposure or movement of soil or bedrock (e.g., grading, excavation, and full-depth pavement removal); or clearing, cutting, or removing vegetation. Mill and overlay of existing pavement that does not expose soil is not considered earth disturbance.	

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
New/Amended Definition	Extended Detention – Temporary storage of stormwater in a BMP designed to address both the runoff quality and quantity impacts of land development. Practices that provide extended detention store runoff from the Water Quality Design Storm and allow settling of pollutants while also reducing the peak rate or runoff from the small storms that cause localized flooding and damage to stream channels. Extended detention systems can also be designed to reduce the peak flow from larger storms.	
	Erosion – The detachment and movement of soil or rock fragments by water, wind, ice, and gravity.	
	Green Stormwater Infrastructure (GSI) – Engineered products, technologies, and structural, small-scale BMPs dispersed throughout a development site to store, infiltrate, evapotranspire, and/or recycle stormwater runoff close to its source. GSI practices mimic natural processes to enhance overall environmental quality and provide utility services. Plants and soil are key components in most GSI systems. When used as components of a stormwater management system, GSI practices such as green roofs, porous pavement, rain gardens, and vegetated swales can produce a variety of environmental benefits. In addition to effectively retaining and infiltrating rainfall, these technologies can simultaneously help filter air pollutants, reduce energy demands, mitigate urban heat island effects, and sequester carbon while also providing communities with aesthetic and natural resource benefits.	
	Green Street – a transportation corridor that incorporates LID and GSI elements and promotes nonmotorized vehicular forms of transporation.	
	Impervious Area or Cover – Any structure, surface, or improvement that reduces and/or prevents absorption of stormwater into land. Porous paving, paver blocks, gravel, crushed stone, crushed shell, elevated structures (including boardwalks), and other similar structures, surfaces, or improvements are considered impervious cover by NJDEP for the purposes of calculating stormwater runoff to be managed. Grass, lawns, or any other vegetation are not considered impervious cover.	
	Impervious Surface – A surface that has been compacted or covered with a layer of material so that it is highly or completely resistant to infiltration by water.	
	Infiltration – The process by which water from precipitation seeps into the soil.	

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
New/Amended Definition	Low Impact Development (LID) – Ecologically sensitive planning and design strategies and techniques that preserve and/or closely mimic natural or pre-development hydrologic processes. LID may include both nonstructural and structural stormwater BMPs, such as clustering uses to minimize the amount of impervious area and installing green roofs on buildings. LID usually operates at a scale larger than an individual BMP and may include an entire development site or even a watershed. At the watershed scale, LID can include protection and restoration of riparian corridors and floodplains. LID is a versatile approach that can be applied to new development, urban retrofits, and revitalization projects. This design approach incorporates strategic planning with micromanagement techniques to achieve environmental protection goals while still allowing for development or infrastructure rehabilitation to occur.	
	Major Development – Any development that will ultimately result in the disturbance of one or more acres of land, or increase impervious surfaces by one-quarter acre (or 10,890 square feet) or more, per N.J.A.C. 7:8. Disturbance for the purpose of these regulations is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation.	Consider redefining to • Reduce amount of earth disturbance that triggers requirements to 2,500 SF. • Reduce threshold for impervious surface to 2,500 SF. Consider adding Replaced Impervious Area – Existing impervious area that is removed full depth to existing soil and then replaced with new impervious surface. Mill and overlay of pavement or other repairs that leave the aggregate subbase in place and/or do not expose soil do not constitute replacement and are not counted toward determination of the regulatory threshold.
	Nonstructural BMP – A strategy or technique to prevent the creation of stormwater runoff through site planning and design. Examples of strategies include protecting natural resources, minimizing the amount of site disturbance during construction, reducing the amount of impervious area proposed, and clustering uses. Nonstructural BMPs typically apply to an entire site and are not fixed or specific to one location.	
	Retrofit – The modification of an existing development specifically to provide and/or improve stormwater management.	
	Stormwater Runoff – Water flow on the surface of the ground or in storm sewers, resulting from precipitation.	
	Water Quality Design Storm – In New Jersey, defined as 1.25 inches of rainfall falling uniformly in 2 hours.	

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
New/Amended Definition	Water Quality Requirement – required improvement of stormwater runoff quality through reduction in pollutant load concentrations, as well as by managing the quantity and timing of stormwater discharge. Pollution-reducing practices make use of physical, chemical, and biological processes to remove nutrients, metals, organics, and other contaminants from stormwater. Infiltration is a key pollution-reducing practice. Extended detention with slow release reduces peak flows in the combined sewer during wet weather events, thus reducing the frequency and magnitude of combined sewer system overflows.	
	Water Quality Volume – volume of runoff that must be managed to meet stormwater management requirements for the Water Quality Design Storm.	
Purpose	1. Reduce negative impacts from stormwater runoff to improve water quality. 2. Increase groundwater recharge. 3. Reduce flood-related damage and repetitive loss from flooding. 4. Enhance transportation safety and mobility. 5. Protect environmentally sensitive areas, including steep slopes, wetlands, floodplains, groundwater recharge areas, and wildlife habitat. 6. Provide quality-of-life/aesthetic improvements and social value to communities. 7. Reduce infrastructure maintenance and repair costs.	Add County purpose of regulations and goals for stormwater management outcomes.
Design Standards	To the County's requirements for the 25-year and 100-year storm, add requirements for stormwater quantity control for 2- and 10-year, events, in accordance with NJDEP standards, to all projects.	
	Add requirements for prioritized use of nonstructural LID and structural LID/GSI practices before use of other structural BMPs or before use of conventional gray stormwater controls for all development projects. Highest priority is accorded to vegetated and infiltrating systems, i.e., bioretention, green roofs, pervious paving, and subsurface infiltration.	

TABLE A3.1 SUMMARY OF RECOMMENDATIONS (CONTINUED)

TYPE OF REVISION	RECOMMENDED CHANGE	NOTES
Design Standards	A waiver from meeting the LID/GSI requirements in these Regulations may be issued by the County Engineer if the applicant demonstrates the impracticability of implementing these requirements. A waiver request must be submitted to the County Engineer for consideration. The waiver request must be signed and sealed by a professional engineer and shall include a technical explanation and supporting documentation for the waiver request. Recognized circumstances demonstrating potential impracticability include the following: • Insufficient land area for treatment • Steep slopes • Unsuitable soil conditions for infiltration • Existing soil contamination • Risk of groundwater contamination When infiltration is not an option for all or part of the water quality storm volume, the uninfiltrated volume must be managed by a detention-based system with a controlled release rate, or as directed by the County Engineer.	Add conditions for a waiver from use of LID/GSI to meet water quality control requirements through infiltration.
	Reduce the size of projects that trigger stormwater management requirements, specifically, projects that create 2,500 square feet or more of additional impervious area. All projects should meet water quality control requirements for TSS, nitrogen and phosphorus removal rates specified by NJDEP for major development using nonstructural LID and GSI practices.	Potential approaches to establishing a lower threshold include the following: • Redefining the major development category to reduce the size of projects that trigger stormwater management requirements under the NJ Stormwater Rule. The State allows this approach, but it may limit the County's flexibility for waivers or reduced standards (such as allowing for lower TSS performance.) • Reducing the size of projects that trigger stormwater management requirements without redefining the major development category or creating a new category. The County retains the flexibility to decide on a case-by-case basis whether to accept lower performance standards on projects that cannot achieve full compliance. • Establishing a regulatory category such as "minor development" for projects that do not meet the definition of major development. Consider reducing the threshold for earth disturbance to 2,500 SF as a trigger for requirements to manage impervious area. Including earth disturbance will enable the County to capture replaced IA on smaller projects that would otherwise not increase the total IA before and after development.
	Remove conflicts related to use of GSI in Circulation and Roadway standards.	Curb height requirements, type of pavement materials, and restrictions on landscaping in the right-of-way pose potential obstacles to GSI implementation.
	Require a mitigation fee for instances where a project cannot meet its stormwater management requirements.	

TABLE A3.1 SUMMARY OF RECOMMENDATIONS		
TYPE OF REVISION	**RECOMMENDED CHANGE**	**NOTES**
Maintenance Requirements	Add requirement to provide a Maintenance Plan for the stormwater BMPs incorporated into the design of the land development.	The Plan should include preventive and corrective maintenance.
	Add requirement to provide annual Inspection Reports to demonstrate compliance with Maintenance Plan requirements. County inspectors will periodically conduct random postconstruction assessments of projects.	