



Development Infrastructure City of Jacksonville Drainage Design Criteria

New Development – Identified Adverse Drainage Impacts Drainage Design Criteria



DRAINAGE DESIGN CRITERIA (Rational Method):

- Pre Vs Post:
 - Post-Development stormwater runoff can not exceed Pre-Development stormwater runoff
- Urban curb and gutter piped system:
 - 5-Year Storm Event (6.5" in 24 hrs)
- Rural road side ditch system:
 - 5-Yr Storm Event (6.5" in 24 hrs)
- Stormwater Facility
 - 25-Year Storm Event (8.5" in 24 hrs)
- Major Outfall Ditches and Roadway Pipe/Culvert Crossings:
 - 25-Year Storm Event (8.5" in 24 hrs)
- Privately Maintained Rear Lot Drainage By-Pass Systems:
 - 25-Yr Storm Event (8.5" in 24 hrs)

New Development – Identified Adverse Drainage Impacts Restricted Drainage Basin Criteria



Restricted Drainage Basin Criteria:

Certain drainage areas within Duval County were identified with structure flooding. For the most part, these basins were developed prior to formal stormwater regulations being implemented. Consequently, COJ requires more stringent stormwater management design criteria in those basins to assist with these challenges.

- 4 Basins “More Severe Basins”: Limit proposed new development stormwater facility discharge to $\frac{1}{2}$ cubic feet per second (not pre vs post). Generally stormwater ponds are 10%-20% larger.
- 4 Basins: Limit proposed new development stormwater facility discharge to a pre vs post volumetric outflow restriction between the hours of 10 & 17. Generally stormwater ponds are 5%-10% larger.

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FLOOD PLAIN DESIGN CRITERIA:

Any Development that proposes to fill 100-yr Flood Plain, must compensate for that fill.

- Provide “Cup for Cup” replacement of the filled area.
 - ❑ Within the same Drainage Basin of the new development and in close vicinity to the new development.
- Downstream Capacity Improvements to ensure that the Flood Profile Elevations remain the same or improve.

New Development – Identified Adverse Drainage Impacts Considerations



Design Criteria Improvement Considerations:

- Expanded property evaluation adjacent to New Development...require extended survey (contour information) to validate entire limits of contributing area.
- Require Drainage Engineers to develop and submit a Maintenance of Drainage Plan (MOD) with each 10-set Development Services submittal.
- Evaluate the Storm Event model data for potential adjustments.
- Adopt a Pre vs Post Volumetric criteria (between the hours of 10-17) stormwater facility design criteria.
 - This will require the site to not discharge more stormwater volume from the site between the hours of 10 and 17 than the site was discharging in the pre-development state



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“Questions”