

**CITY OF CONWAY**  
**SUMMARY OF STORM DRAINAGE DESIGN REQUIREMENTS**  
**FOR SITE DEVELOPMENTS**  
**AS REQUIRED BY ORDINANCE O-09-13**

Drainage plans for the proposed site development shall be submitted to the City Engineer for review and approval. The plans and supporting drainage design calculations shall include the following:

- 1) Watershed map showing contours and delineation of drainage basins that contribute to drainageways that enter or leave the project boundary. The area of each watershed shall be shown in acres. The storm drainage system located down stream from the project shall be shown on the plan along with the size and water carrying capacity of the existing downstream facilities.
- 2) The peak storm water runoff shall be computed using the Rational Method or other method approved by the City Engineer. The storm water runoff rate shall be based on a 10 year frequency rainfall event.
- 3) Runoff rates shall be based usual engineering values for runoff coefficients for the post development conditions and soil types. The coefficient shall be subject to approval of the City Engineer. In general, all cross site drainage shall be sized to accommodate runoff rates based on a runoff coefficient of not less than 0.60 for the contributing watershed.
- 4) Stormwater Detention will be required will be required for the following situations:
  - a) Downstream drainage improvements are not adequate to accommodate the estimated 10 year frequency storm water discharge from the site.
  - b) The site will be covered by more than 33% impervious surfaces (buildings, roof covered accessory buildings, paved parking or storage areas, paved drives, paved sidewalks or other impervious or low permeability surfaces). This provision allows the usual residential structure (less than 3,000 S.F. total surface coverage) and related facilities to be constructed on a usual size single family residential lot (8,000 square foot) without requiring storm water detention.
  - c) At locations where the downstream area has had a history of flooding problems (floodwaters rising to a level that building floors are flooded or major streets are made impassable) as determined by the City Engineer.
- 5) Storm Water Detention Design Requirements:
  - a) The minimum required volume of the storm water detention shall be based on the storage volume required to reduce the post construction site storm water runoff to a rate no greater than the storm water runoff from the predevelopment site.
  - b) The detention volume shall be based on a 25 year rainfall frequency.
  - c) The detention pond outlet facilities structure shall be designed to release a flow rate no greater than storm water runoff from the undeveloped site for a 10 year frequency rainfall event.
  - d) Detention area spillway and overflow facilities shall be designed to accommodate a 100 year rainfall event

without creating flooding conditions upstream of the pond or endangering the stability of the detention area embankment.

- 6) Stormwater Detention Facilities may not be required to be constructed and an in lieu of storm water detention fee paid to a fund to create regional detention facilities or regional storm water management improvements under following conditions:
  - a) The storm water discharge from the site is directly into a major storm water system in which the peak flow in the stream would be increased by the delayed release from stormwater detained on the site. The City Engineer shall review calculations prepared by the developer's engineer and make the determination that this situation exist.
  - b) Site area is limited and the storm detention would not result in a detectable reduction in downstream storm water surface elevations. This condition will be subject to the approval of the City Engineer based on his review of calculations prepared by the developer's engineer and make the determination that this situation exist.
  - c) A regional detention facility is planned or under construction in the watershed impacted by the development and the regional facility adequately addresses the increase in site runoff from the project area. The City Engineer will determine if an in lieu of fee is allowable under this exception.
  - d) The in lieu of detention fee for detention facilities shall be \$15,000 per acre foot of storm water detention volume required to comply with subsection 5 above.
  - e) At locations where engineering calculation demonstrates that the proposed development will not result in an increase in the peak runoff from the site.
- 7) Flood Damage Prevention Code. Where the project limits fall within the limits of the floodplain as shown on the City's FIRM panels, all permits and approvals required by Conway's Flood Damage Prevention Code shall be obtained prior to approval of the stormwater drainage plan.