

DRAINAGE DESIGN CHECKLIST  
CITY OF CENTERTON, ARKANSAS  
REVISION NO. \_\_\_\_\_  
DATE: \_\_\_\_\_

- \_\_\_\_\_ 1. PROJECT TITLE AND DATE
- \_\_\_\_\_ 2. PROJECT LOCATION MAP
- \_\_\_\_\_ 3. PROJECT DESCRIPTION
- \_\_\_\_\_ 4. NAME OF OWNER AND ENGINEER – With addresses and telephone numbers.
- \_\_\_\_\_ 5. SITE AREA – With a 1 mile radius.
- \_\_\_\_\_ 6. UPSTREAM AND DOWNSTREAM DRAINAGE – The drainage study shall evaluate and properly account for all factors within a drainage basin that have a bearing on the detention pond design. Some drainage basins are difficult to analyze, especially where prior projects have resulted in other detention ponds being constructed. The drainage conveyances downstream of the site shall be evaluated for a distance of ½ mile to determine the cumulative effects of the various detention ponds, together with the effects of the proposed project, on the conveyances. The drainage report shall summarize the results of these analyses, and shall include backup data and calculations as appendixes. It is suggested that the designer use Centerton's topographic data for upstream and downstream analysis.
- \_\_\_\_\_ 7. AREA DRAINAGE PROBLEMS
- \_\_\_\_\_ 8. HYDROLOGIC COMPUTATIONS - Include complete runoff computations for the design frequency storm specified in the Manual for each specific type drainage system
- \_\_\_\_\_ 9. OPEN CHANNEL FLOW DESIGN - Include computations for normal depth and velocity (Use Figure 9.2 or equal)
- \_\_\_\_\_ 10. PAVEMENT DRAINAGE DESIGN - Include width of spread for design flow (Use Figure 7.12 or equal). Show flow in gutter for Q<sub>10</sub> and Q<sub>100</sub> in plan view.
- \_\_\_\_\_ 11. CULVERT DESIGN - Include all computations and check for inlet/outlet control (Use Table 4.3 or equal)
- \_\_\_\_\_ 12. STORM SEWER INLET DESIGN - Include all computations (Use Figure 7.12 or equal)
- \_\_\_\_\_ 13. STORM SEWER DESIGN - Include all computations (Use Figure 8.1 and/or 8.2 or equal)



\_\_\_\_\_ 14. STORMWATER DETENTION DESIGN - Include the following computations and backup/support data:

SUMMARY OF RUNOFF - A Table with minimum 2, 10, 25, 50, and 100 year storm flow comparisons for existing and proposed conditions and detention volumes required if applicable - Also describe method used for determining stormwater runoff flows.

RECOMMENDATIONS/SUMMARY - Description of any drainage improvements to be made to the site - Also, the following backup/support data:

- \_\_\_\_\_ a. Runoff coefficient/RCN computations (existing and proposed conditions)
- \_\_\_\_\_ b. Complete runoff computations for the 2, 10, 25, 50, and 100-year storms (existing and proposed conditions)
- \_\_\_\_\_ c. Detention basin size requirement computations (using an approved method)
- \_\_\_\_\_ d. Release structure design computations (include release rate computations for the 2, 10, 25, 50, and 100 year storms)
- \_\_\_\_\_ e. Stage-Storage and Stage-Discharge curves for the detention facility

\_\_\_\_\_ 15. DESIGN STORM DESIGNATED BY Q \_\_\_\_\_ = and design flow rate for each street crossing or drainage structure

\_\_\_\_\_ 16. Detail Plans and Specifications as required by the City of Centerton Drainage Manual, including Project Location (Street Address and Vicinity Map).

\_\_\_\_\_ 17. AS-BUILT DRAWINGS AND CERTIFICATION that drainage facility is constructed to the City of Centerton Standards and Ordinances and signed and sealed by an Arkansas registered engineer.

\_\_\_\_\_ 18. ADD THE FOLLOWING PARAGRAPH TO THE DRAINAGE LETTER:

Improvements as outlined in this report and depicted on the preliminary plat and design drawings shall not increase the risk of endangerment to life or have negative impacts on adjacent or downstream property or watersheds.

\_\_\_\_\_  
Signed and Sealed by Professional Engineer

\_\_\_\_\_ 19. OTHER

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