**Hydrology Report Requirements**

Cover Page

A. Name of Project
B. Name of Engineering Company
C. Seal of Engineer
D. Date

The following must be included in Hydro-Study

A. Location Map
B. USGS Map
C. Compliance Statement: Design Professional has read the City of Valdosta Stormwater Regulations and this report reflects compliance with that regulation.
D. Chart showing 2, 5, 10, 25, 50, and 100 year storm event peak flows for pre and post development.
E. Description of Existing features
F. Description of Proposed features
G. Hydrologic Analysis
1. Explanation of method used to calculate runoff.
a. Modified rational method is ok to use for detention design if the drainage basin is less than 5 acres. However, the same method will be used throughout the report. If one sub basin is larger than 5 acres and SCS method is used, then the SCS method will be used for all basins even if one is under 5 acres.
2. Autocad drawing of Existing features.
3. Autocad drawing of Proposed features.
a. Show impervious and non-impervious areas.
b. Show all runoff coefficients for areas.
c. Drainage features with labels.
4. Show all calculations of runoff.
a. Predevelopment concentration time must be actual, but post-development may not be any less than 5 minutes. All calculations must be provided within the report.
b. Provide 10% downstream analysis Per the Land Development Regulations or else Post developed runoff conditions must be no greater than 85% of pre-developed runoff conditions.
5. Show all calculations of routing structure or structures.
6. Show all pond structure data.
7. Show pond max storage capacity.
8. Consideration for the effects of tail water must be provided as applicable.
9. Basin maps showing Tc path and calculations, runoff coefficients, and sub basins with study points. Also show basin (sub-basin) area in acres.
10. Identify pond max elevation and max outflow of pond.

H. Appendix
1. Give examples of calculations runoff.
2. Show 25year HGL calculations and give a chart showing actual HGL in the pipe / structure.
3. Outlet control detail.
a. If a permanent micropool is selected for water quality, then a properly sized gate must be included in outlet structure for maintenance purposes. Provide detail for gate.
b. If 24hr draw down is selected, provide a detail of the outlet structure including 24 hour orifice.
c. Water quality orifices- If the required orifice is smaller than 4”, an anti-clogging device must be used. The orifice will be sized to provide a 24 hour drawdown of the water quality volume.
4. Pond cross sections including water quality, channel protection elevation, 25 yr, and 100 yr storm event elevations. Also provide on plan.
5. Give a detailed explanation and example of how your Hydrological computer program shall be read.

Note: Submit all above items in one booklet format unless otherwise approved.
Engineering Department has the right to ask for more data as required.

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Patrick S. Collins, P.E., City Engineer