DRAINAGE SUMMARY REPORT

For

“Husted Commons”

8 & 10 Husted Lane
New Canaan, Connecticut

Prepared For

Thomas Sanseverino

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1. Summary of Existing and Proposed Conditions

Thomas Sanseverino, owner of 8 & 10 Husted Lane in New Canaan, Connecticut, is proposing a residential development on the subject parcels. The subject parcels have a total area of approximately 23,940 square feet, located in the “B” Residence Zone. The subject parcels are located on the easterly side of Husted Lane, directly east of the intersection with Heritage Hill Road. Under existing conditions, the parcels contain two dwellings, two asphalt driveways, and various hardscapes.

This report will summarize the impacts of the proposed development on the surrounding watershed and downstream locations, and outline the proposed stormwater management plan designed to provide volume and runoff attenuation before discharging offsite.

The owner is proposing to construct an 11-unit residential building. Other improvements will include the construction of a bituminous concrete parking lot, access driveway, concrete sidewalks, a subsurface stormwater management facility with associated storm drainage piping and installation of various underground utilities with associated site grading, retaining walls and landscaping.

The proposed development will increase on-site impervious coverage by approximately 6,186 square feet and therefore increase the volume and peak rate of runoff generated during a storm event. In order to alleviate any potential impacts from the proposed development to downstream drainage facilities, two storm drainage conveyance systems were designed to collect site runoff and direct flows through a subsurface retention system prior to discharging flows downstream. Refer to Section 2.1 of this summary for an analysis of pollutant mitigation measures.

Due to a proposed direct piped connection to an existing 24-inch RCP drain line, an offsite watershed analysis was conducted to document known flooding concerns and potential impacts of the design on down gradient parcels to the south at the intersection of Forest Street and Locust Avenue. Refer to the HydroCAD Summary Table as well as Appendix “C” for information on the offsite watershed analysis.

For a depiction of existing conditions and the proposed development, refer to a plan set entitled “Husted Commons Location 8 & 10 Husted Lane New Canaan, Connecticut, Prepared for Thomas Sanseverino,” sheets 1 through 4 of 4, prepared by D’Andrea Surveying & Engineering, P.C.

The proposed development conforms with all applicable Town of New Canaan stormwater management standards to the maximum extent practical, including the Town of New Canaan Town Code Chapter 52 Stormwater Quality Management and Discharge Control (02/19/15), the Drainage Certification Policy of the Town of New Canaan (11/09/15) and the Connecticut Department of Energy & Environmental Protection’s (CT DEEP) 2004 Connecticut Stormwater Quality Manual.
2. Proposed Structural BMPs and Treatment Measures

2.1. Total Maximum Daily Load Action Plan

As the proposed project intends to create a direct piped connection to the Five Mile River, a Total Maximum Daily Load (TMDL) Action Plan has been prepared to address the pollutants of concern for the Five Mile River, and several stormwater management measures have been implemented to mitigate the pollutant loads.

The pollutants of concern for this project will include oil, gas, antifreeze, and other toxic waste from the proposed parking area, as well as total suspended solids from both the parking lot and roof areas.

Proposed mitigation measures will include a hydrodynamic separator (HDS) and two subsurface infiltration systems to separate floatables and sediment from the site runoff before flowing to the piped connection to the Five Mile River. Refer to Section 2.2 for Water Quality Volume, Water Quality Flow, and TSS Removal calculations.

During the construction phase of the project, treatment of storm water runoff will be provided by temporary sedimentation and other erosion control measures as outlined within the Site Plan Review Set. This includes the installation of silt fencing, an anti-tracking pad, and hay bales around catch basins. Periodic on-site inspections will be performed to ensure that these measures are maintained in effective working order. Once construction is complete and all disturbed areas are properly graded, seeded and stabilized, the proposed sedimentation and erosion control measures will be removed.

2.2. Water Quality Volume and TSS Removal

Refer to Appendix “D” for Water Quality Volume calculations. The proposed BMPs will provide adequate storage to retain and infiltrate the water quality volume of the contributing runoff from the proposed impervious improvements.

Retention of the Water Quality Volume from newly constructed impervious areas will provide the minimum 80% removal of total suspended solids (TSS), which exceeds Town standards. Refer to Appendix “D” for TSS removal calculations.

This volume will be retained and infiltrated by the proposed stormwater systems. Refer to Appendix “D” for 72-Hour Drawdown Calculations.

2.3. Runoff Reduction Volume

The proposed development will not result in an increase in runoff volume from the site up to the 100-year storm event towards all points of concern, as compared to existing conditions. Refer to Appendix “D” for Runoff Reduction Volume Calculations.
2.4. Peak Runoff Attenuation

The proposed development will decrease peak runoff flow rates to less than pre-construction conditions to all points of concern. Refer to Appendices “A” and “B”. The decrease in peak runoff flow rates meets the standard of reduction for all storms up to the 100-year storm.

3. Conclusion

The proposed improvements to the subject parcel will increase the impervious coverage on the site and thus increase the volume and peak rate of runoff generated during a storm event. However, with the use of the proposed BMPs and site grading there will be a reduction in stormwater runoff volume and flow rates, as well as a reduction of polluted stormwater runoff to all points of concern.

The proposed development will meet the water quality volume, TSS removal, and runoff reduction volume standards of the Town of New Canaan Drainage Certification Policy to the maximum extent practicable. The proposed development incorporates pre-treatment and attenuation of runoff to the maximum extent practicable. If the development is constructed as depicted on the proposed plans, there will be no adverse impacts to adjoining properties, the subject parcel, the town drainage system, or the Five Mile River due to the proposed improvements. Additionally based on the results of the conducted offsite watershed analysis, we have determined that there will be no adverse impacts or flooding concerns to the down gradient pipes or parcels to the south at the intersection of Forest Street and Locust Avenue.