


**Stormwater Management Report**  
**For**  
**Hamilton Street Development, LLC**  
**Proposed 3-Story Apartment Building**

**587 Hamilton Street  
Block 204, Lots 18-22  
Franklin Township  
Somerset County, New Jersey**

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**October 30, 2020**



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The following stormwater management report is submitted for property located in Block 204, Lots 18-22, in the Township of Franklin, Somerset County. The property is located at the intersection of Hamilton Street (A.K.A. Somerset County Route 514) and Miller Avenue and has the address of 587 Hamilton Street.

### **Existing Conditions**

The existing property contains an area of 12,500 sq.ft. A 2-1/2 story framed single-family structure along with a detached wood-framed garage exists on the property with driveway accesses on both Hamilton Street and Miller Avenue.

Total impervious cover on the site is 6,250 sq.ft. or 50% of the property. The remaining surface of the property is grass in fair to poor condition.

The site gently slopes generally in the south to north direction from Hamilton Street onto adjacent Residential properties ultimately being collected in an existing stormwater system located at the intersection of Miller Avenue and Green Street, approximately 350 feet north of the subject property.

### **Proposed Conditions**

As part of the proposed development of the property, all existing structures on the site including pavement will be removed.

A new 3-story Apartment building with a footprint of 3,540 sq.ft. is proposed on the property with zero setback along Hamilton Street. A total of nine (9) Apartments are proposed within the building.

A paved parking lot for 17 vehicles is proposed in the rear portion of the site with curb and concrete sidewalk between the new building and parking lot. Access to the parking lot will be from Miller Avenue.

A dumpster enclosure is proposed to collect refuse from the Apartment building.

The property will be graded to significantly reduce runoff to the Residential property to the north. The proposed parking lot will be graded to drain directly to Miller Avenue. A retaining wall along the north and east property lines is proposed in order to accomplish the grading described.

The proposed development will increase the total impervious cover to 10,150 sq.ft. or 81.1% of the property. This translates into a net impervious increase of 3,900 sq.ft.



As a result of the increase in impervious cover, detention of the increase in runoff will be required.

Since the development will not disturb more than one acre of land and there is a net increase of impervious cover less than  $\frac{1}{4}$  acre (10,890 sq.ft.), the stormwater detention system does not meet the Township's Major Development criteria.

There are no existing stormwater facilities in the area. The closest stormwater inlet is located at the intersection of Miller Avenue and Green Street, roughly 350 feet from the northern property line of the site. Therefore, A combination of a drywell and porous pavement is proposed to detain the increase in runoff associated with the increase in impervious cover. The stored runoff will then discharge into existing soil below.

Soil tests were conducted on the site. The locations and results of the tests are contained on the Grading and Utility plan prepared for the project. Groundwater was determined to be at elevation 95.0. Therefore, the underground storage system will need to be designed at a minimum elevation of 97.0.

Roof leaders will control runoff from the building conveying runoff via an underground roof leader system to an underground drywell consisting of a series of StormTech SC-310 chambers within a stone envelope.

The drywell has been designed to contain three (3) inches of runoff for every one square foot of building area. The building footprint of 3,540 sq.ft. will require a storage volume of 885 cubic feet (cu.ft.).

The underground storage system will measure 32'x25' for an area of 800 sq.ft. The bottom of the storage system is set at elevation 97.0.

The system as designed has a storage capacity of 1.31 cu.ft. for every one square foot of area.

The capacity of the proposed storage system is 1,048 cu.ft. exceeding the required storage of 885 cu.ft.

The depth of the storage system is 24 inches. Results of the soil tests conducted on the property determined the percolation rate of 0.5 inches per hour. The underground storage system will therefore empty in 48 hours.

The building area of 3,540 sq.ft. is less than the 3,900 sq.ft. of net increase in impervious cover (360 sq.ft.), so additional measures are required to reduce impervious cover to that of existing conditions.

Porous asphalt pavement is proposed for three (3) parking spaces within the parking lot. The total area of the porous pavement is 486 sq.ft., exceeding the required area of 360 sq.ft.

## **Conclusion**

The proposed redevelopment of the subject property will increase impervious cover on-site by 3,900 sq.ft.

In an effort to restrict runoff from the site to existing levels, stormwater detention improvements are proposed.

The construction of the proposed underground storage system in combination with porous asphalt pavement will adequately control the increase in impervious cover so that runoff from the site is below that of existing conditions.

The underground system has been designed based on results of soil tests taken on the property.

The property will be graded to significantly reduce runoff to Residential properties to the north

No adverse drainage conditions to the surrounding properties will result from the proposed development.