

**Storm Water Runoff Narrative**  
**Proposed Starbucks Restaurant, 1080 Forest Avenue, Portland, Maine**  
**May 2006**

This document has been prepared by St.Germain & Associates, Inc. for Stephen E. Mardigan to supplement a submission to the Site Plan Review Application for property located at 1080 Forest Avenue (site) in Portland, Maine.

**Existing Conditions**

The site is located at the intersection of Poland Street and Forest Avenue and is the current location of a commercial garage building with service bays. The majority of the site is paved and the existing impervious area ratio is 80%. The site is characterized by paved grades ranging from 3–5% that drain by sheet flow in an easterly direction towards Forest Avenue.

The Soil Survey of Cumberland County, Maine identifies the soil type at the site as Windsor loamy sand. Windsor soils are deep, excessively drained coarse textured soils commonly formed in glacial outwash deposits. Permeability is characterized as rapid or very rapid in these soils and available water capacity within the soils is low. Windsor soils are classified as Hydrologic Soil Group (HSG) A.

**Proposed Conditions**

The developer is proposing to demolish the existing garage and replace it with a new Starbucks coffee shop with associated access, parking, landscaping, and utilities infrastructure. These proposed improvements to the property will result in a reduction of the site impervious area ratio from 80% to 78%.

The proposed reduction in impervious area on the site will reduce the runoff curve number, and hence lead to a reduction in both peak runoff and the volume of runoff from the area under all rainfall conditions. Therefore, runoff calculations for peak runoff rates and runoff volume/detention storage should not be warranted for this development.

Existing stormwater runoff patterns will be preserved upon redevelopment, as proposed paved grades ranging from 2-5% will direct runoff to flow easterly towards Forest Avenue. Stormwater will be directed into two catch basin structures in the entrance and exit drives that will capture the runoff and prevent it from reaching Forest Avenue. The catch basins will be equipped with Casco Traps for filtering oils and floatables from the storm water prior to release into the existing piped storm water drainage system in Forest Avenue. This storm water management system will aim to provide effective capture and treatment of runoff from the new developed and re-developed areas of the site.

The preservation of existing site drainage patterns together with the reduction in impervious area will reduce runoff rates and volume during all storm events, and hence result in no detrimental impacts to the downstream receiving drainage system or abutting properties.