

March 15, 2012

850 Forest Edge Drive, Vernon Hills, IL 60061  
TEL 847.478.9700 ■ FAX 847.478.9701

820 Lakeside Drive, Suite 5, Gurnee, IL 60031  
TEL 847.855.1100 ■ FAX 847.855.1115

[www.gha-engineers.com](http://www.gha-engineers.com)

Mr. Robert Abboud  
Village President  
Village of Barrington Hills  
112 Algonquin Road  
Barrington Hills, Illinois 60010

Re: 2012 Spring Road Closures  
Village of Barrington Hills

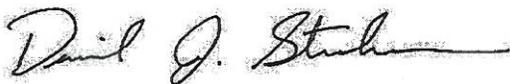
Dear Mr. Abboud:

As you know each spring our office monitors the pavement conditions on Village roadways as well as observed and forecast temperatures in anticipation of establishing a seasonal reduction in the weight limits on local roads. The purpose of the reduced load limit is to protect the roadways during the spring thaw, during which subsurface conditions result in a reduced capacity for the road base to support overweight loads. The restrictions are put in place pursuant to 625 ILCS 5/15-316, which allow local agencies to impose such a restriction when roads are likely to be seriously damaged or destroyed by overweight vehicles for reasons of "deterioration, rain, snow, or other climate conditions".

Due to the unusually mild winter, the area has experienced virtually no frost penetration. Quantitatively this statement can be confirmed by measurement of Cumulative Freezing Degree Days (CFDD), a statistical measure established by the Federal Highway Administration. A typical threshold for imposing a seasonal weight restriction due to frost is 400 CFDD; this past winter measurements taken at the weather station at the Village Hall indicate a maximum of 82 CFDD (for reference, this measure reached 842 during the winter of 2010-2011). Qualitatively the mild winter and lack of frost penetration has resulted in a substantial reduction in the amount of pothole patching required and drier than normal conditions in areas of seasonal ponding. No other climatic conditions have been observed that would warrant a Village-wide reduction in load limits.

Based on the unusual winter and the forecasts for continued warm weather, we would not recommend that the Village proceed with a seasonal reduction of the weight limit on local roadways this year.

Sincerely,  
Gewalt Hamilton Associates, Inc.



Daniel J. Strahan, P.E., CFM  
Assistant Village Engineer

cc: Robert Kosin, Village of Barrington Hills  
Patty Meroni, Roads & Bridges Chair



Clerk VBH &lt;clerk@barringtonhills-il.gov&gt;

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## 2012 Road Posting

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Dan Strahan &lt;dstrahan@gha-engineers.com&gt;

Thu, Mar 15, 2012 at 8:14 AM

To: "Robert G. Abboud" &lt;president@barringtonhills-il.gov&gt;

Cc: Robert Kosin &lt;rkosin@barringtonhills-il.gov&gt;, Patty Meroni &lt;pmeroni@barringtonhills-il.gov&gt;, Wendi Frisen &lt;wfrisen@barringtonhills-il.gov&gt;, Dolores Trandel &lt;clerk@barringtonhills-il.gov&gt;

Attached is our recommendation regarding foregoing the seasonal posting of roads.

Bob Kosin had requested some additional context for the use of 400 CFDD as a proposed quantitative threshold for the road posting; below are the previous three years, the CFDD based on "normal" winter averages, and a couple of outlier years. In each case the CFDD indicated is the maximum level reached during "meteorological winter" (Dec.-Feb.), and all values are based on readings at O'Hare since data from the Barrington Hills weather station is not available earlier than 2010-2011.

2007-2008- 634 CFDD  
2008-2009- 889 CFDD  
2009-2010- 616 CFDD  
2010-2011- 842 CFDD  
2011-2012- 82 CFDD

Approximate "Normal" (Based on monthly averages)- 508 CFDD

1997-1998- 95 CFDD (Last year with no posting)  
2001-2002- 182 CFDD

It is not suggested that this measure be the sole means of establishing the need for a seasonal posting, but rather as corroborative data when pavement conditions suggest that a posting may not be necessary.

Dan

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Dan Strahan, P.E., CFM  
Gewalt Hamilton Associates, Inc.  
820 Lakeside Drive, Unit 5  
Gurnee, IL 60031  
(847)-855-1100

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# Village of Barrington Hills

## Seasonal Roadway Weight Limit Posting History

