



# LINCOLN PUBLIC SCHOOLS

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ADMINISTRATOR FOR BUSINESS AND FINANCE

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To: School Committee  
Mickey Brandmeyer  
From: Buckner Creel

Subject: Status of Roofs – Hanscom Middle School

**Background.** The Hanscom Middle School (HMS) is composed of clusters of classrooms built at varying times between 1958 and 1988. We believe that gray PVC roofing was installed over several of the roofs in the late 1970's, and we know that about half of the HMS roofs were replaced with black EPDM membrane in 2002. Those HMS roofs not replaced in 2002 have leaked. The 1970-vintage PVC continues to degrade and is now quite brittle; the leaks in the E Cluster and F Cluster roofs were so bad last year that DODEA provided money to cover a portion of each cluster with black EPDM membrane at a cost to them of \$85,000.

**Effects of recent snows.** The snowfalls of December and January deposited snow on the HMS roofs, and Odeh Structural Engineers observed up to 3.5 feet in some areas on February 4th. While the HMS configuration and orientation does not promote the same degree of drifting as they observed at several Lincoln campus locations, the Odeh engineers recommend the clearing of some of the HMS roofs, with particular attention to the clearing of drainage paths leading to internal roof drains. Snow shovelling operations began immediately, at the same time as the Lincoln roof shovelling but at a slower pace.

Beginning about February 15, warming temperatures thawed the remaining snow and ice water began to rain through the roofs in the B, E, and F clusters, the music and CASE classrooms, the IT head end room and the gymnasium. Inspections of the roofs revealed that the weight of the snow had compressed the old insulation, creating large tears in the brittle membrane. These tears were most pronounced along the edges, next to a small raised lip. The leaks forced the relocation of the B Cluster classes to other locations in the building, and closing of half of the gymnasium. In other locations, the leaks were contained in barrels. We decided to remove the rest of the snow off the affected roofs, in hopes of eliminating the water source; this had the effect of opening the tears in the brittle membrane even wider. The leaks worsened when temperatures rose beginning about February 21<sup>th</sup>.

**Emergency repairs.** We solicited quotes from three roofing firms to make emergency repairs. The most sensible (and cheapest) approach was submitted by Signature Roofing, who proposed \$34,000 to cover the edges with black EPDM membrane and perform patches on some of the roofs. At the same time, we solicited assistance from DODEA, who made \$55,000 originally designated for handicap bathrooms at Hanscom available for emergency roof work to be accomplished through government channels. I filed a request for an emergency waiver from the requirements of Massachusetts procurement laws with the state, who granted the waiver on February 23<sup>rd</sup>.

As the intensity of leaks increased in the gymnasium, we realized that the initial scope of the proposed repairs would not successfully solve the leaking for the next several years. We expanded the scope to provide for a covering of black EPDM membrane over all of the affected PVC roofs which had not been covered in last year's effort. The anticipated cost of the revised scope is \$137,850, and will affect over 26,000 square feet of roofs. That work began last week over the CASE and music classrooms, head end room, along the edge of the F cluster and over a portion of the B Cluster. The weekend rains of March 6-7 have proved the effectiveness of the repairs. The roofs where the new membrane was

installed don't leak. The gym, where no repairs have occurred, leaked like a sieve all night. The leaks have damaged about one quarter of the wooden gym floor.

**Next steps.** Discussion with the Town's insurance carrier, MIIA, resulted in a promise of insurance coverage for the emergency roof work, as well custodial overtime and other associated recovery costs. The total cost of this work may reach \$160,000. Our deductible is \$10,000, and we will ask MIIA to reimburse us for the balance. As a consequence, the \$55,000 offered by DODEA will be directed back towards the handicap bathroom project.

The remainder of the work will be finished over the next week and a half, weather permitting, and should restore the weather-tight integrity of the HMS buildings. The ceilings of the B Cluster will be repainted immediately after the roof is completely covered. Other areas may be spot-painted if necessary. Finally, we will have to assess the complete extent of damage to the wooden gym floor once it dries out, and come up with a plan to put it back into operation until the replacement project starts.

My thanks go to Michael Haines and the Hanscom custodians, who have worked tirelessly under adverse conditions to reduce the impact of the leaks on our education programs, and to Signature Roofing, Grey Paw Painting and others who responded quickly to our requests for emergency assistance.