LEGATARCHITECTS

March 27, 2008

Dr. John Ahlemeyer
Gavin School District 37
25775 West Highway 134
Ingleside, IL 60041

Re: Gavin Central School
Truss Repair

Dear Dr. Ahlemeyer,

On Wednesday, March 26, 2007, I met with John Sufra of WJE, Ralph Schmidt of Schimdt Engineers and carpenters from Boller Construction to observe and perform the remaining truss corrective work at Gavin Central School. The work was performed on Truss 27A in module A. As stated in my letter dated January 20th, a series of seasoning checks were found on one member on truss 27A in Module A. A plate repair was recommended by WJE, but no work was performed at that time since Boller Construction personnel had prior commitments and had to leave. The plate repair was completed as recommended by WJE. The seasoning checks on truss 27A were not structural in nature. The attached pictures show the truss prior and after the repairs.

After the truss repair was completed, I reviewed with Ralph Schmidt the repairs previously completed on January 19th and visually inspected the bolted repair on truss 26 in module A. As I previously indicted, the truss 26 repair was the only structural truss repair. Jon Sufra, Ralph, and I then walked the building perimeter to visually inspect the roof areas from the building exterior and Jon and Ralph walked the roof areas. There were no structural concerns observed.

At your request, I reviewed a portion of the roof at the south side of the administration area which experienced leaks this winter. The area of concern was a roof valley (where two perpendicular sloped roof areas meet). Roof valleys and roof edges have a tendency to experience leakage during winters with heavy snow falls and cycles of very cold and warmer temperatures like the winter we just experienced. The leaks are created when a lower strata of snow melts and then refreezes. When it freezes, it pushes up under the shingles and leaks into the building. When this happens, it is called an ice dam. I also noticed at this location that a downspout from the higher roof drains into this roof valley, exacerbating the problem. (see attached photo) I suspect that a large amount of snow settled in the valley, creating an ice dam. When snow melt from the upper roof drained into the roof valley via the downspout, it was blocked by the ice and snow and was forced up under the shingles and into the building. In the design of the building, we provide a waterproof membrane under the shingles at the roof edges and the roof valleys to avoid this condition. During severe winters like the one we have just experienced, the snow and ice dams will extend beyond the edge of this membrane and leak into the building. To potentially avoid this situation, I would recommend moving the outflow of the upper roof downspout away from the roof valley. This condition is not a structural issue and is related to the weather conditions and the physical nature of shingle roofs.

I will be in contact with you around Thanksgiving of this year to schedule the roof inspection for early in the winter break.

Sincerely,

Ted Haug
TH:kf

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