

Licensed New York and New Jersey

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Lake Huntington Summer Community
Att'n: Ted Haber
PO Box 294
Lake Huntington NY 12752

August 1, 2007,

Dear Mr. Haber:

On July 30, 2007 an engineering evaluation was done on the roof structure and foundation of the casino building at the above community on Nelson Street in the Hamlet of Lake Huntington, Town of Cohecton, Sullivan Co., NY.

Foundation Support:

The existing foundation of this building consists of wood piers on concrete block footings placed on or near the ground surface without any visible protection from frost heave. The result is substantial displacement of both footings and piers. This condition could be expected to get progressively worse with each freeze/thaw frost cycle.

These will eventually topple and fail to support the structure above resulting in gross amounts of sag of the building.

Correction of this condition is difficult and would involve hand digging. Two methods should be considered.

1. Retain the service of a professional house mover and jack up the entire building to a height of about 4 feet so that workers can hand dig holes for Son-A-Tube piers. This would involve pumping fluid concrete to the piers under the central areas of the building. The small ground clearance further complicates this method since the steel "I" beam depth needed for jacking will be larger than ground clearance. Girders and joists should be inspected for rot degradation and rotted ones should be replaced with pressure treated ones. After curing of the concrete the building would be lowered to be supported by the new piers.
2. Instead of jacking, removing sections of the oak floor could be done to gain access for digging and placing new piers. The esthetic quality of the floor will be compromised using this method. Some local jacking should be done to correct sag. The two girders should be inspected for rot deterioration and rotted members should be replaced with pressure treated ones.

Son-A-tubes would then be placed and filled with concrete to replace the existing piers. This method would probably be several thousand dollars cheaper than method #1. However the jacking method would allow using one foot longer piers to permanently raise the building farther from the ground, reducing rot deterioration. It would also not require patching large sections of the flooring.

Roof Structure:

The roof structure consists of incorrectly designed field constructed wood trusses. These trusses do not tie the building together and have allowed the roof to spread. Remedial work in the form of steel rods and turnbuckles have been installed in insufficient quantity to properly restrain the roof from spreading resulting in wavy walls. This could be expected to progressively increase to the point of catastrophic failure. It is impossible to forecast how long this will take.

The best solution neglecting cost would be complete removal of the existing roof structure replacing it with prefabricated engineered trusses certified for the weight of the Sullivan County seasonal snow pack. These could be either standard roof trusses 4 ft on center or scissor trusses that would

offer a Cathedral ceiling. The roof surface could be either purlins and plywood with shingles or metal roofing directly attached to the purlins.

A couple of alternatives could be tried instead of total reconstruction.

1. The biggest weakness in the existing trusses is the bottom chords (ceiling joists). These should be replaced one at a time with double 2 x 8's tied with four ½ inch steel bolts to the rafters over the plates. The maximum available length of sawed lumber is 22 ft, so splicing would be necessary. The existing webbing lumber between the rafters and bottom chord is improperly done and new webbing should be installed using conventional Fink truss construction. Examples of this as well as the scissor truss construction are enclosed for reference only. (Not for Construction)
2. From a cost standpoint installing two more rods equally spaced between the existing rods would give enough lateral support to stabilize the roof for some time.

General and Miscellaneous:

The raised stage section complicates the top method of replacing piers through the floor and stage floor removal in some sections will be required.

The selection of methods for both the floor and the roof would need to be evaluated by your board of directors based on esthetic quality, longevity needed and cost.

Drainage:

The wet area on the uphill side has already been treated with some type of french drain according to you description. Trouble-shooting this from superficial observation is difficult, but it appears that the fault of the previous treatment is due to one or more of the following:

1. The sod over the stone may be rooted in clay that will not allow percolation of surface water to gravel below. If this is the case then the top would have to be stripped off and more gravel added so only a couple of inches of top soil and roots exist above the stone.

2. The drain may not cover enough area to properly allow the surface water to dissipate into the drainage.
3. The pipe that drains the gravel could be obstructed.

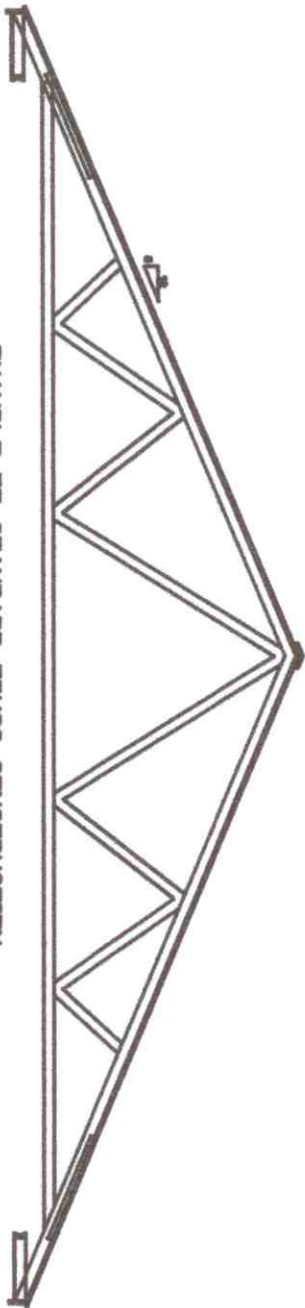
If you have questions please call me at 845-292-7797.

Sincerely,

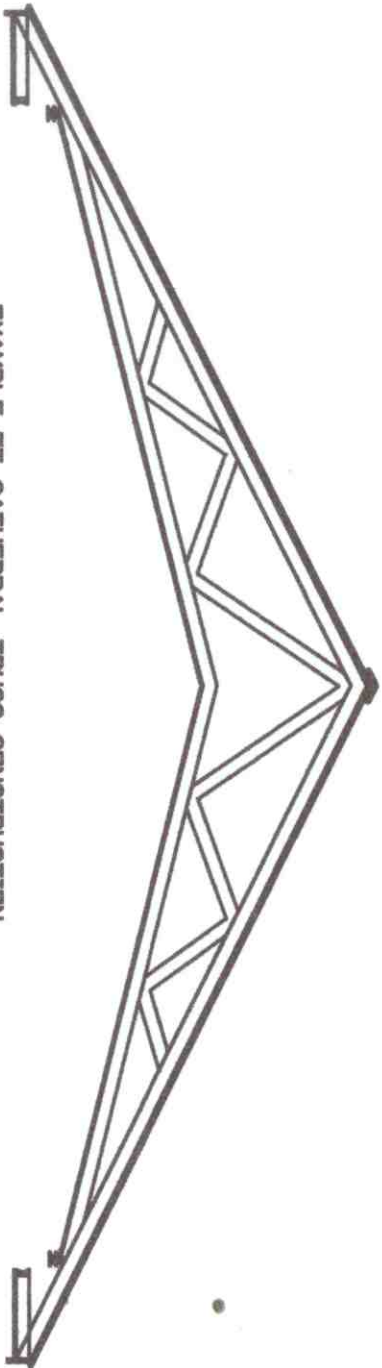
A handwritten signature in blue ink, appearing to read "Henry Illing", with a long horizontal flourish extending to the right.

Henry Illing

NYS PE 35830



EXAMPLE OF STANDARD TRUSS CONSTRUCTION



EXAMPLE OF CATHEDRAL TRUSS CONSTRUCTION

