

Meeting House Roof – A Continuing Saga

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August 2018

“Do not say there will be no more leaking from the roof over the Sanctuary, just say we believe there will be less leaking.” Member of the Building and Grounds Sub-Council.

When the Architect, Victor Lundy, designed our Meeting House, his highly symbolic design was based on careful study of our Unitarian faith, his design, unconventional at best, was selected over more traditional New England designs. In particular, it featured a central Sanctuary in the center of a more or less circular building with a roof suspended by bridge cables. Each of the soaring buttresses was of a different height symbolizing many paths to truth, a central belief of Unitarians. The large bays between the buttresses showed a strong connection of the faith to the external world always within view from all the peripheral rooms. The Sanctuary itself was placed in the center physically and spiritually, appropriate to Unitarianism. This thinking was further developed by extensive use of natural materials throughout. Concrete, cedar roofing, wood rays above the Sanctuary, and wood covering most internal surfaces.

The peripheral roof sections, each pie shaped, drained water away from the building. This left an issue of the appropriate covering for the central Sanctuary roof with its soaring inside ceiling, an architectural issue solved by making the circular roof center section set **down** in an inverted bowl shape with four separate drains. The entire structure again was supported by cables descending from the buttresses soaring above. One aspect of the cable supports was roof motion during windy weather causing movement and sounds more typical of a sailing ship.

As the building was approaching completion, and yes, the available funds were used up before it was finished, it became evident there would be a problem with that Sanctuary roof portion that was lower than the rest of the peripheral roof sections. Water could and did accumulated in the areas around the edge of the bowl, and, if the drains did not work, a pond ensued causing serious leaking into the Sanctuary. Further, there was no means of raising that portion of the roof and, as it turned out, when water flowed to the outer edges of the inverted bowl, it arrived at a point lower than the drains presumed to carry the water away. A pond resulted.

Historian Freeman Meyer noted in his book, Hartford Unitarianism 1844-1994, when Rev. Nathaniel Lauriat arrived (in 1964).. “There was much to do in “shaking down” the new meeting house - **fix the leaking roof (for the first of many times!)**” emphasis added

To address this leaking problem early on, our own Architect, the late Roy Cook, designed an additional roof erected over the first one incorporating sloping portions directing water to the four peripheral drains. This was helpful, but periodic leaking continued for many years. When some of us first joined the Building and Grounds Sub-Council in the 90s, we learned that

Roy never attended Sunday services if rain was predicted, yet he was very faithful to Unitarianism in every other respect!

When Stu Spence and David Newton began attending in the 90s, during rainy days water would be found dribbling down the buttress inside Servetus directly into an electrical outlet. The solution was to conduct the water onto a string leading to a plastic basket. Apparently, one winter, freezing cold water had entered the iron drain pipe deep in the buttress progressing from the roof through the

warmed buttress portion inside the building. Further along, the pipe emerging above the roof line into freezing cold weather froze the water in the pipe. As a result, the pipe was fractured deep inside the buttress creating the wall leak in Servetus.

The Servetus wall leak was subsequently addressed by placing a plastic pipe inside the fractured pipe, and, adding roof heating cables to the inside of the drains above the roof line to prevent similar damage. This fix actually worked! Few remaining members know the wet little secret about the Servetus wall. During this time B and G also learned cottonwood fluff would block the drains during May each year causing serious leaking as water ponded on the roof causing pressure. Ultimately the water found holes ending up in the Sanctuary.

At about that time, USH entered a period of enhanced roof maintenance as the aging EPDM roof covering would split from time to time creating new leaks. During this period Stu Spence, assisted by Janice and David Newton painted the roof with specialized paint for preservation purposes. Further, it was discovered the suspending cables themselves were conducting water down into the central support hub, whereupon it promptly leaked here and there into the Sanctuary. This was addressed by placing U shaped plastic pipes over the cables keeping water out while not allowing any water to puddle causing cable rust. These measures were so successful, for the first time, seat cushions were purchased for the pews to the immense happiness of many congregants.

The Meeting House, like the proverbial ant hill, could be maintained and improved.

However, as more years passed, it became yet more difficult to suppress new leaks in spite of the diligent efforts of Sextons John Bengtson and Kevin Girouard, who spent many a rainy and snowy day on roof repair duty. Consequently, following the requisite preliminary steps guided by our Architect Member, Hugh Schweitzer, a contractor was identified from the Eagle Rivet Roof Service Corporation, who would actually take on the roof repair job. And, to the joy of all participants in the bid solicitation and subsequent planning, there was a new methodology available for doing so. After extensive cleaning and repair of the roof structure and drains, a fluid roofing system was applied. It is termed the Polyurethane Elastomeric Fluid Applied System consisting of a first coat, Tremco AlphaGuard BIO Base coat, and the second coat, Tremco AlphaGuard B10 Top Coat. Together the two coats create a continuous tough membrane over the entire older roof EPDM.

No seams to split apart! The membrane manufacturer, Tremco, Inc., guarantees the resulting membrane for 20 years from the date of substantial completion, about now.

We have just finished this project supported by an Endowment expenditure of \$40,775. Final inspection has been completed, and substantial rains have occurred with no known leaking. Continuing maintenance of the new drain filters will be necessary and careful operation of the drain heaters during winter will be required.

And now, for an illustrated trip through the USH Sanctuary roof history....

(continued on next several pages)



Periodically we have had rain, inside, and have even developed a common accessible storage of buckets, tarps and associated equipment. Our carpet and pew cushions were selected for indoor-outdoor capacity to withstand water without damage



We discovered rain falling on the cables supporting the roof drained down into the support hub, and from there entered the Sanctuary, so we covered the cables in 2005, and that helped.



All help, divine or otherwise, was enlisted in the effort (2005)



Ponding on the roof continued to be a problem because the drains needed to be improved and debris removal, freezing within, and such matters needed to be prevented. Here Stu prepares to enter the lake and open one of four drains. This particular drain was relined with hose to prevent the leak inside Servetus (October, 2005).



In 2018 a new methodology was employed to repair, recover and improve the roof. Here the contractor is surrounded by buckets of fluids and equipment used to apply a new tough membrane covering the entire roof (May 2018).



And, now, with the shiny new coating in place, we look forward to an improved situation. It rained with some enthusiasm recently, and there were no leaks! (July 2018)



Final inspection: L-R, Art Dias (Eagle Rivet), Hugh Schweitzer (AIA, LEED AP Director, Architectural Planning and Design CHK Clohessy, Harris & Kaiser, LLC), Stu Spence and David Newton (B&G)

Many thanks to all, many unmentioned, who have contributed over the years to living successfully with our roof situation, and more recently Ministers, Board Members and Endowment Committee members who have enthusiastically supported B&G's effort to improve matters.

Remember, just say, **“We are confident there will be less leaking.”**