




Roof Issues

by Bob Zaikoski

Rummer rooflines are distinctive—certainly they are among the signature design elements of these dynamic mid-century homes. The flat and gently pitched roofs found on Rummers were common features in the modern design vernacular as developed by the architects from whom Rummer took his inspiration. In addition to the flat and low pitched roof, some of these houses feature a steeply gabled roof over the central portion of the house combined with a flat roof over the adjoining wings. This combination of flat and gabled roofs provides a dramatic roofline and exciting interior spaces and it would seem to owe much to the work of architect A Quincy Jones.

But as Rummer owners will testify, these distinctive rooflines come with their own set of maintenance issues. Flat roofs invite standing water which can, when the roof surface becomes degraded, eventually penetrate into the house and damage structural elements. Roofs pitched less than 3 in 12 that don't utilize proper materials will also be challenged by water intrusion, especially in the Willamette Valley with it's heavy rainfall and often driving winds.

Roofs, and it doesn't matter if you're talking Rummers or cape cods, don't always receive the maintenance attention they require. Maybe it's that out of sight out of mind thing. We just won't think about that system over our heads until forced to do so by the drip (or worse) produced by a leaking roof. That being said, roofs always need attention and scrutiny by homeowners. The shape and style of Rummer rooflines require a heightened awareness (and commitment to the correct system) on the part of the owners. Perhaps it can be considered as the price of admission to the enjoyment these houses can give.

A Case Study in Roof Problems

The Oak Hills double gable Rummer featured here provides a good illustration of roof issues that might be encountered. The owner actually had a new roof installed a few years earlier both on the gabled portion of the house and on the flat roof areas. The new roof seemed to solve the leak problems that had been occurring prior to its installation. However, it is suspected that a new leak resulted from improper chimney flashing when the gable portion of the roof was installed. Water entered high up on the gable where the chimney and roof meet and flowed down the gable under the roof shingles and collected where the gable and the flat roofs join. Eventually this resulted in dry rot in the 2X6 tongue and groove roof decking along the juncture of the gable and flat roof areas.

Because of the post and beam construction and the exposed roof decking, the rot damage to the decking became visible from the underside. It was especially noticeable on the exterior of the house under the broad eaves, but it was also developing in the interior. What made matters more interesting, rot was also developing in the cantilevered exterior portion of the 4"X12" structural beam that runs along and supports the roof system at the juncture of the gabled and flat roofs. The damage to the exposed exterior portion of the beam was severe, requiring replacement. Because the portion of the beam was cantilevered, the beam would need to be replaced back to at least twice the length of the cantilevered portion. As noted, damage in the roof decking was visible on the interior of the house in the living room. But the beam at this point was concealed behind the paneling of the wall separating the living


damage is visible along the beam

room and the master bedroom. This wall needed to be opened up, removing the paneling, to determine how far into the interior portion of the house the decking and beam damage extended.

A couple of other considerations added a bit more spice to the mix. A very large plate glass window fitted right up against the 4x beam that needed to be replaced. And because the work was being done in early spring in the Willamette Valley, the amount of time that the roof could be open to the weather needed to be as short as possible.

When the living room/ bedroom wall was opened up it seemed that about 15 of the 2x6 decking boards would need to be replaced on the gable portion of the roof over the living room and about the same number on the flat roof over the master bedroom. Damage to the beam extended about the same distance as the damage to the decking. This portion of the beam required replacement anyway to maintain the integrity of the cantilever.

The Plan

Now that the extent of the problem was determined the contractor could propose a game plan. The idea was to remove and replace the structural beam while the roof was still in place. This would reduce the time the roof would be open to the weather. A portion of the exterior wall where the beam passed through needed to opened so that the damaged portion of the beam could be removed and so that the new beam could be positioned in place. Luckily an in wall air conditioning unit was located perfectly and no further opening of the exterior walls was necessary after the removal of the air conditioning unit. The contractor decided to leave the large plate glass window that fit against the beam in place and keep fingers crossed. The living room/ bedroom wall was already opened, so the beam was now accessible.

Removing the Damaged Beam Portion


sectioning, prying out and removing the damaged beam

First step was to build temporary shoring to support the roof structure while the beam was removed. This was done for the gable portion in the living room and the flat roof over the master bedroom. With the roof temporarily supported, the portion of the beam to be replaced was cut into sections using a reciprocating saw.
These sections were removed using pry bars, sledges and elbow grease. Once the old beam sections were cleared the damage to the roof decking wasclearly visible as can be seen in the photos below.

beam removed

damaged roof decking

Beam Replacement

The new beam was cut to length. In the original construction the top of the beam had been notched to accept the decking coming down from the gable and the decking over the flat portion of the roof. The contractor reproduced this joint on the new beam using a circular saw. Getting the new beam into place was a bit of a challenge, but after a couple of attempts it slid into position. The new portion of the beam was tied into the portion still in place and secured to existing posts/supports.

nothching the beam

placing new beam

exterior view of new beam in place

Replacing Roof Decking

Phase two or the operations was to peel back the roof so that the damaged decking could be replaced. The roofing contractor first removed the composition shingles from the gable portion of the roof along with the original and extra insulation which had been added over the years. Then the membrane material over the flat deck was cut away, insulation removed and the decking exposed

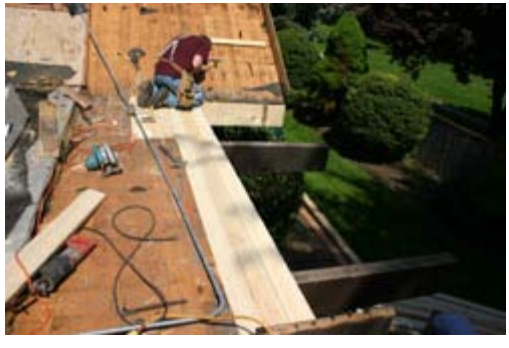
roof peeled back

Once the roof materials were removed the damage to the decking is clearly visible

damaged decking

some deck boards already replaced in this photo

The flat decking boards were removed and replaced first, and the gable portion followed. The contractor made sure that Hemlock was used in replacing the roof decking. "Most people look at the decking on these Rummer houses and think that it is Douglas Fir. That is not the case. If you want to match the original materials you'll almost always find that it was Hemlock."



The structural repairs were completed in about a day and a half of work time. Preparation for the beam removal required another half day. The roofing contractor had the roof buttoned back up the next day.

Best of all--the weather remained clear and dry for the days that the house was open to the elements.

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