

Lyme Energy Committee minutes for August 19, 2013

Present: Mark Bolinger, Gary Phetteplace, Sue Mackenzie, Matt Brown, Joanna Laro

Absent: Robin Taylor, Scott Nichols, Dan O'Hara

Mark Bolinger called the meeting to order at 7:30 PM.

The minutes of the July 15, 2013 meeting were approved as circulated.

The entire meeting thereafter focused on the town highway garage.

1) Regarding the heating system:

- **Slide Gate:** Sue shared that the installation of the slide gate for the pellet silo is now in Fred's hands. Fred will contact Mark Pelletier to see if the quote that Scott had received still stands, and if so, will authorize the work. This may have already happened.
- **Heat Exchanger:** The heat exchanger will not be replaced until the next time it requires service. Curtis Shepard just spent time and money cleaning it up, so might as well use it until it gums up again.
- **Circulator Pump:** Curtis Shepard looked into it, and it was decided that the pump will not be replaced at this time, since it is still working just fine.

2) Regarding the insulation issue:

Since the July 15 meeting, both Mark and Scott have had conversations with consultants or contractors regarding the insulation issue.

- **Henri Fennel:** Mark talked with Henri on August 12. Henri is a trained architect, and has been foaming buildings for 30+ years (Foam-Tech in North Thetford), but no longer does the work himself. Instead, he considers himself a "commissioning agent" or owner's representative. He helps clients develop a scope of work, helps with any design needed, writes up the bid spec, helps select the bids and product, oversees the work and handles the quality control -- from design to verification. He says most of his bids come in within 5% of one another -- in part because he has spec'd it so thoroughly. So if we were to want his assistance, we would need to bring him in BEFORE going out to bid. [As he put it, if we already know what we want to the point of being able to go out to bid with sufficient specificity, then we don't really need him.] His fees depend on scope, but for this job would likely be in the several thousand dollar range.

Henri advised that we need to decide whether we want to address just the insulation only, or whether we also want to address the corrosion issue at the same time, because that might affect the proposed solutions and order of operations (the scope). He conceded that we might not know the answer to this question until we rip out the existing insulation and see whether there is an extensive corrosion problem.

Henri said there are foam products that are not fire-retardant, but that can be painted in order to comply with fire code, and there are also more-expensive foam products that do not need to be painted in order to meet fire code. He said the no-paint option is usually cheaper than painting (all-in).

Henri didn't think there would be any structural issues from foaming the building, and assumed that a building built in this climate would be sized for full snow load. In fact, he thought there might even be less load after foaming, if better insulation avoids ice buildup.

- **Trumbull Nelson:** Scott met at the highway garage with a Trumbull Nelson representative and an insulation subcontractor on August 13. In addition to speaking generally about the building and the condensation problem, they did some fact gathering and discussed potential solutions.

They reconfirmed that there are two inches of fiberglass insulation in the walls. The roof is insulated with fiberglass of approximately 6" depth. The insulation was likely rolled in from above the white sheet material prior to roofing. The roof purlins are about 12" deep and the fiberglass seems only "casually" placed in the purlin bays.

They discussed insulation code, as the subcontractor was shocked that there was so little insulation.

They discussed options for insulation. The subcontractor was convinced that only spray foam will solve the problem. He will likely propose a 4" foam layer on the ceiling (all of the existing insulation will be removed from the roof). Around all of the steel framing members that are in contact with the cold roof surface, he was talking about a 1" foam layer for a thermal barrier. He was talking about a 3" spray right over the top of the existing insulation on the walls. Some cleaning and prep would be required for adequate adhesion, but he saw no reason to remove insulation in the walls. He spoke about a 1" dry spray for fireproofing over the top of the foam. Apparently, the fireproofing is very white so they spray it on all surfaces near the foam so that the surface color is coherent and professional looking.

They discussed how to handle the office area. It was the opinion of the contractors that based on the clearly visible stud pattern on the sheetrock, there is probably not very much insulation. However, they thought that it makes the most sense to work on the garage area first and only work on office area walls if problems there become evident.

The subcontractor thought that a foaming installation would take 7 days in total, during which no use of the building would be possible or even permitted due to off-gassing.

The subcontractor will come back one more time if necessary to perform more accurate measurements. Trumbull Nelson will provide a quote.

The committee members discussed what we've learned from these two conversations. Some skepticism was expressed regarding foaming directly over the existing insulation. Ultimately, we decided to proceed down the path on which we are headed – i.e., seeking proposals (and advice) from Trumbull Nelson, Estes and Gallup, and Bruss Construction – but to also approach Henri to see if he would be willing to walk through the building with us and provide advice for a much lower fee than he would charge if involved in the entire process. We would be under no obligation to hire him for additional services, but having an initial walk-through with him might help us to understand (A) whether the other proposals have merit and (B) whether we could benefit from bringing him on to manage the process.

We discussed how to pay for Henri's time, if he agrees to do this. Sue does not think there is sufficient budget in the highway department to pay for anything like this, so we decided to see whether our Energy Committee budget for the year (\$355) might be sufficient.

We also discussed whether we would want to look into corrosion protection or just foaming at this time. There was a general sentiment that corrosion may not be an issue yet (the rust-like patches on some of the beams are apparently mold rather than rust), and that foaming might alleviate the problem such that corrosion protection would not be needed.

We also discussed the potential humidity problem that might occur if the building is foamed. At present, the humidity travels to the walls (and ceiling), where it condenses and runs (or rains) down to the floor. With foam, the humidity will not condense on the walls or ceiling, potentially leading to very humid air. We discussed the need to upgrade or automate the ventilation system to bring in dryer air and remove humidity. Although a heat-exchange system would be ideal, it may be possible to work with the existing system. We agreed to consider this project as having two parts – upgrading the insulation, and upgrading the ventilation system – and to ask future contractors to provide input and proposals on both aspects.

Action items: Mark will contact Henri to see if the arrangement described above is feasible (for the limited amount of money we have to spend). Scott will follow up with Estes and Gallup and Bruss to see if they have interest in this project.

Other action items: Dan to follow up with Kevin Peterson regarding the emergency generator for the highway garage.

The meeting was adjourned at 8:30 PM.
Next meeting September 16, 2013 at Town Office Building.

Respectfully Submitted
Mark Bolinger (filling in for Dan O'Hara)