Minutes of Public Safety Communications Committee meeting 07/15/2009

Present were John LeGates (acting chair), Paul Svetz, Arthur Cotoni (Fire Chief), and Fred Hopengarten from the public offering his expertise

This was a working meeting, addressing the question of antenna choice, mounting, and other related issues such as lightning protection and system grounding. The starting point was the bid submitted by David Capone of Capone Communications.

Several points were discussed:

- The committee confirmed that the total height of the highest point above the tower will be 72 inches, as specified in writing by the FAA and approved by the ZBA.

- We agreed that the antenna stack recommended by David Capone was not optimal and that there should be two larger multi-element antennas, each separately mounted on its own arm atop the tower with appropriate (in terms of wavelength) maximum separation.

- We noted that separate antennas would allow more effective models to be utilized and that each could be tuned to the specific frequency assigned to its particular public safety department. We felt that this would result in more effective and uniform radio coverage.

- We will pursue additional antenna possibilities. Paul will work with Fred Hopengarten, Curt Risley, and speak with outside resources in an attempt to identify antennas that may be a more optimal fit for our situation and limitations.

- We discussed the lightning rod, which would also require shortening to meet the FAA/ZBA height limitation. The electrical code does not require lightning rods per se, but does require that the entire tower itself be a grounded entity. It was noted that adding a rod may actually increase the probability of a lightning strike and may also compromise antenna performance. Fred Hopengarten will contact some outside sources and look further into the matter.

- The committee stressed that grounding of the antenna feed lines within the radio shack must be completed as part of the tower work in order to improve lightning protection, equipment safety, and radio reception.

- When calling firemen, we presently simulcast on both UHF and VHF channels. As a result of lowering the antennas, we may be required to depend on the VHF side of the simulcast for distant firefighters. If this turns out to be necessary, the committee agreed to support a funding request to town administration for additional Motorola VHF units.