

Radio Technical Committee

DRAFT Meeting Notes for Feb 6, 2008 9am

Present: John LeGates and Paul Svetz

Also Present: Tim Higgins and Anita Scheipers

Not Present: John Caswell

Tim Higgins opened the meeting by introducing the committee members and support staff and then by stating that due to Chair John Caswell's absence he would facilitate this meeting.

He provided background information to the audience regarding the problems the public safety radio system was experiencing, the study completed by Langone & Associates identifying the three problem areas of hardware, copper line failure and radio signal distribution – with the hardware issues being resolved in Spring 2007 and the fiber issue being resolved with installation of new fiber. The remaining issue of determining the best options for improvements to the radio signal distribution is the now role of this committee.

John LeGates offered his comments to the issues as follows:

- Balance must be reached between maintaining effective public safety radio communications and the aesthetics of the system components for the public.
- Objection to the current configuration seems to be based on the aesthetics and on the process taken with the tower replacement.
- The tower seems to be working fine now at the new height but this needs to be confirmed for effectiveness when leaves are on the trees.
- Capacity of a radio signal can be improved with more power and/or with increased height.
- Alternatives to the tower aside, the best technical solution to the issue is a single tower as multi repeaters systems cause interference of signal, are costly to install and maintain and manage. Leased lines to alternate tower sites are costly and integrity of the line and service is outside the control of the Town.
- Aesthetics of current tower can be improved by painting the lower half of the tower brown or black, by sheathing the lower portion with painted wood, or by adding foliage screening.
- Aesthetics of the whip antennae may be improved through color change.
- A study of actual signal strength around town should be completed to augment the existing computer modeling.
- Mitigation measures should be accomplished quickly to reduce the negative visual impact being faced by abutters. It was agreed it was the role of the Selectmen to initiate such measures. One resident expressed concern that this step might cause some to feel that it is a final decision to leave the current tower as is.

Committee member Paul Svetz stated that future technology will likely provide us with much better alternatives to the tower to solve signal and aesthetic issues, but new technologies have not advanced enough yet to be relied upon, and should be evaluated in approx. 10 years.

Resident Fred Hopengarten offered the following comments:

- The antennae whips can be reduced in size to improve the visuals but may reduce the gain a bit. Should be modeled if the signal strength study shows we have a margin of gain loss to adjust.
- We can increase the power output but will not help with the issues of poor signal strength from the public safety staff trying to communicate back to the station.
- He produced aerial photos showing the vegetation around the site.
- Antennae are available that would likely meet our needs at a much smaller size to reduce visual impacts.

A resident asked if signal improvement had been evaluated after the steps of replacing the hardware and the fiber. Paul Svetz answered yes, but that only improving signal distribution can eliminate some of the dead zones found around town, and he made the analogy that radio signal effectiveness was similar to cell phone signal effectiveness. It was stated that cell phone signal is far less reliable than radio system signals.

Another resident asked if we had looked at putting repeaters in the public safety vehicles to improve signal back and forth in problem areas. He also stated the issues seem to be system issues and the committee should be looking at systems solutions rather than separate individual improvements to the components. Paul Svetz answered that we are already using repeaters in some of the vehicles but that expense, reliability and power comes are issue with that corrective measure. The committee agreed that the system wide solution approach was their intent, and pointed out that existing commercial cell towers have agreed to allow the town to locate repeaters on their towers if determined necessary.

A resident stated he was concerned that alternatives were being evaluated and dismissed as options due to high cost. He stated cost should be only one of the factors considered when evaluating the options. He also expressed concern that we not attempt to develop a system that unrealistically attempts to handle any and every potential upset. The committee assured him that cost alone would not prevent an idea from being considered, and the system improvements were intended to be realistic improvements.

It was asked if the tower could be replaced with another phone pole. Resident Fred Hopengarten explained pole towers are used but the height needed makes installation and maintenance very difficult. Cost is also a big factor as they typically must be shipped from the northwest at “oversized” load shipping rates.

One resident asked what the goal of the committee was. Did we intend to affect a certain % of improvement? What standard were we using to determine what options to

consider? It was agreed no formal goal had been set other than to improve the existing conditions of the system within the known boundaries the Town must follow. It was reiterated that the committee would be putting together the matrix to compare any and all options and submitting this to the Selectmen to assist them in making a decision about what action to take on the radio tower. The Selectmen would then file with the ZBA as necessary based on their decision.

It was asked if the Building Inspector had issued a permit for the tower or the small storage shed installed to replace the previous deteriorating shed. It was stated there was no permit needed for the small shed, but it was not known by the committee what process the building inspector had taken – if any.

One resident asked if any available data could be made readily available to the public to help them understand the issues as best they can. It was agreed that available reports or maps can be placed on the website or made available in hardcopy.

Anita Scheipers asked the committee if it was appropriate to forward the draft scope of work for the additional contours maps to the Medford based firm recommended by Fred Hopengarten. John LeGates stated he approved the scope. Paul Svetz stated he wished to review the document again and would advise Ms. Scheipers. It was agreed that as long as Paul Svetz also approved the scope, that Ms. Scheipers would send the spec to the firm for estimated costs and timeframe information.

It was agreed that Tim Higgins and Anita Scheipers would draft the following items for the committee review and approval:

- Draft goal(s) and committee charge
- Draft updated matrix of options and considerations
- Pull together and post available informational documents to the town webpage
- Draft aesthetic mitigation options for the Selectmen to consider
- Propose a meeting schedule and agenda (John Legates cautioned he would be unavailable to meet between March 10th through the 31st.)

Meeting was adjourned at 10:50am.