

December 15, 2014

Via Electronic Transmission

Village of Pelham Board of Trustees
c/o Robert A. Yamuder, Administrator
Village of Pelham
Pelham Village Hall
195 Sparks Avenue
Pelham, NY 10803

Subject: ExteNet application for a distributed antenna system

Dear Members of the Village Board:

Columbia Telecommunications Corporation (CTC) is providing technical support to the Village in reviewing ExteNet's application to install a distributed antenna system (DAS) on behalf of T-Mobile. On December 4th, CTC sent ExteNet a series of technical questions related to the application—specifically, about T-Mobile's antenna placement options and required signal service levels. I have reviewed the data ExteNet submitted in response to those questions; as you have requested, this letter reports my findings.

As background, CTC has provided professional engineering support to communities across the nation for more than two decades. Over that time, we have reviewed and made recommendations on several thousand antenna and tower applications on behalf of our city and county government clients; we have processed antenna applications filed by all major carriers.

In all of the applications we have examined, the communities have accepted radio frequency (RF) propagation studies based on computer modeling as documentation for evaluation of the effectiveness of the carrier's application. Only in a limited number of cases has an applicant submitted additional field-measured "drive data" to support coverage signal levels that fell below calculated values. We do not recall any of our municipal clients requiring an applicant's submission of measured data, either for vehicular service applications or for "in-building" coverage requirements.

The attached exhibit shows both measured and calculated data provided by ExteNet for in-vehicle (yellow) and in-building coverage (green) to be provided by the proposed DAS

Columbia Telecommunications Corporation

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deployment. As the exhibit illustrates, having the combination of Nodes 1, 2, and 3 active provides a significant improvement for in-building coverage in the Village over not having these nodes active. Further, even restricting the analysis to the "in-vehicle" measured data, there is significant enhancement in service in areas served by nodes 2 and 3.

In addition, as we noted in our previous letter, we find the system-level design of the proposed DAS facility to be in conformity with the physical infrastructure of DAS systems that we have reviewed for other communities.

Should you have any questions regarding our findings or desire any additional information or analysis, please contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Lee Afflerbach".

Lee Afflerbach, P.E.