

# Radio World®

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### DESIGNER INTERVIEW

# So You Want To Build A Tower Where?

## Fred Hopengarten Talks About Zoning Regulations and Broadcast Towers

By Steve Callahan

*The author is assistant chief engineer of WBUR Group in Boston.*

If you have an over-the-air broadcast station, chances are good that you have some connection to a tower, be it an ownership interest or as a tenant on a leased structure. An acceptable tower location is crucial for a successful station, but siting towers is not as easy as it once was. If you have to build a new tower site, or make major changes to an existing site, you'll run the gauntlet of local permitting authorities.

Fred Hopengarten is a telecommunications lawyer who specializes in land use for towers. A graduate of Boston College Law School, he is a member of the Bar in Maine and the District of Columbia. Attorney Hopengarten has been a tower owner and has advised in more than 100 tower cases. He is a frequent speaker on tower issues and has published articles on various aspects of tower zoning. In 2001, The American Radio Relay League published his book "Antenna Zoning." He received his first FCC license in 1956 and is extra class amateur K1VR.

### **Why do you specialize in tower siting issues in your law practice?**

That's easy. I became a shortwave listener at age eight, using a Hallicrafters S-38B to a random length wire about 60 feet long, and received my first ham radio license (WN1NJL, later K1VR) at age 10.

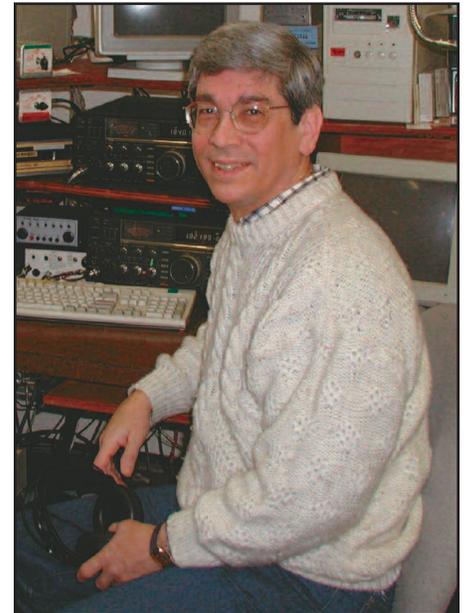
I've always loved radio and antennas. Yet I knew in high school that I wasn't smart enough to be an engineer, so I went to Boston College Law School and Harvard Business School. By doing well there in academics, I was hoping that I could hang around with engineers.

In 1978, at the urging of Fred Collins (W1FC) and Dana Atchley (W1CF), I started Channel One, the first satellite TV dealer in the United States. [Collins was chief scientist at Microwave Associates, now M/A-Com, a unit of Tyco Electronics; he subsequently left to be a founder of Radio Waves. Atchley was vice chairman at Microwave Associates.]

After a while, the company drifted into the cable TV industry when a condo association of over 2,000 homes in Connecticut asked us to establish a satellite master-antenna TV system. After 12 years, the company was sold to a substantial minority shareholder, Continental Cablevision, since consolidated into Comcast.

Along the way, though, I obtained permits for 15 headends—VHF/UHF antenna systems, plus satellite TV dishes. After a while, I had become experienced at preparing applications for planning and zoning boards.

The last time I looked, I think I had worked on over 250 tower applications in a



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whole lot of communities and states. I'm beginning to know what I'm doing.

### **Please briefly review the history of the legal regulation of tower siting.**

Now there's an assignment!

Let's begin with the first zoning regulations in New York City. The year was 1916, and they were created in response to the long shadows cast by the Equitable Building, which still stands at 120 Broadway. Through the 1920s, many states passed enabling acts to permit zoning regulation.

The power of a state, usually through a city or county, to enact a zoning regulation was challenged on constitutional grounds in the case of *Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365 (1926), which is usually the first case in law school land-use books. Thereafter, land-use regulations just kept multiplying. As a generalization, you'd be correct to say that it used to be easier to site towers in the past, even through the 1950s.

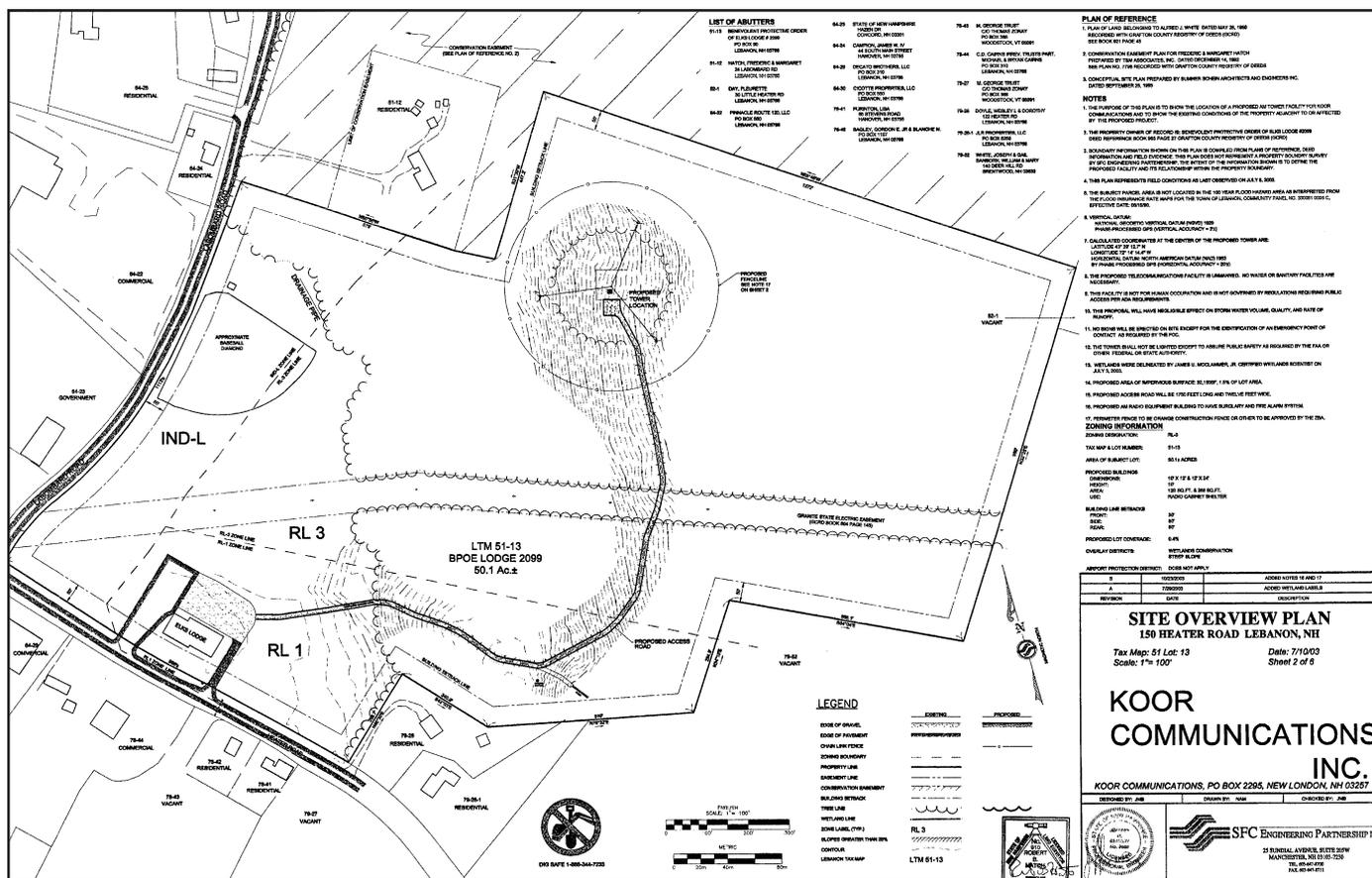


Fig. 2: Typical Detailed Plot Plan for Proposed Tower Site

Eventually though, local land-use restrictions began to prevent effective communications as contemplated by the Congress and the FCC, which led to a series of preemptions — a statement of federal law that overrules local law on the grounds that federal law is the supreme law of the land, unless forbidden by the 10th Amendment to the Constitution.

The usual technique for restricting construction of antenna systems was to restrict the height of structures, usually to three-story structures or 36 feet, unless otherwise permitted. After that, with bylaws that forbid the construction of anything that is not specifically enumerated as permitted, regulations kept getting tighter, culminating in the regulation of “viewsheds” — whatever they may be. Does anyone really know what a “viewshed” is?

The tide began to turn in 1985, with the FCC’s limited preemption of amateur radio antennas, based on solid work in advance by the ARRL [American Radio Relay League] and Sen. Barry Goldwater, an active ham (K7UGA) and previous Republican presidential candidate.

That test is whether or not the municipi-

ality applies the “minimum practicable regulation” to allow for “effective communications.” The FCC has declined to specify any minimum height below which the preemption applies, and each situation is extremely fact-specific, communications-specific and location-specific.

As attorney Barry Umansky wrote in Radio World in 2001, “Though petitioned to do so by the National Association of

The Association for Maximum Service Television (MSTV) also petitioned for preemption of siting regulations used to hold up the spread of HDTV, a huge issue for Lookout Mountain, Colo., but this preemption is not being pursued today.

Local regulation of broadcast emissions can be troublesome to broadcasters, as the Lookout Mountain case, still unresolved at this writing, has shown. For a look at the

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Broadcasters in 1986 and the former Electromagnetic Energy Association in 1994, the commission has declined to adopt a policy of federally preempting state and local broadcast siting regulations that impose duplicative, let alone more restrictive, RF radiation exposure standards.”

effort required for WZN(FM) in Burlington, Vt., to overcome a claim that RF emissions were “air pollution,” see [www.antennazoning.com/commercial/library.htm](http://www.antennazoning.com/commercial/library.htm).

The Communications Act of 1996 introduced an absolute preemption of local control over cellular telephone with respect to

RF emissions, and modest preemption of local zoning. The test is whether or not the zoning regulations create “significant gaps” in coverage by a carrier.

Less well known is the preemption introduced by §207 the 1996 Act for “Over-the-Air-Reception-Devices,” and implemented by 47 CFR §1.4000, better known as the OTARD Rule. It preempts “Common

former KROY(AM) 1240 kHz, now operating as Spanish-language KSQR in Sacramento, Calif. The 195-foot tower blew down in a storm in 2001 and the Planning Commission denied permission to rebuild on June 9, 2005.

I was never involved in that case, and I know only what the Sacramento Bee reported, but it sounds like a case where a valu-

In fact, that was exactly the case in *Koor v. Lebanon*, where Lebanon, N.H., tried to ban any broadcast tower taller than 42 feet. Fortunately, the Supreme Court of New Hampshire found that the FCC’s minimum-height regulations for an AM tower preempted the bylaw, and today you can find the new WUVR(AM) tower, 269 feet tall, visible to the east from U.S. 89.

In the case of AM broadcast stations, there are detailed regulations mandating minimum antenna heights [see, e.g., 47 C.F.R. §§ 73.189, 73.190 (2001)] at least in lieu of proof to the FCC that required minimum field strengths can be achieved by an antenna of less than the specified minimum height [see 47 C.F.R. §§ 73.186, 73.189 (2001)]. In *Koor v. Lebanon* [[www.courts.state.nh.us/supreme/opinions/2002/0212/koor152.htm](http://www.courts.state.nh.us/supreme/opinions/2002/0212/koor152.htm)], the New Hampshire Supreme Court declared that the FCC minimum height regulations preempt local zoning.

**Some recent zoning bylaws have been drafted with the specific goal of reducing the proliferation of towers. Can local zoning bylaws legally require co-location on an existing tower?**

Require? No. But town officials can make life very difficult for a new applicant who rejects the concept out of hand, and won’t explore it thoroughly, where the bylaw requires an attempt to co-locate, or perhaps proof of denial, on commercially reasonable terms.

This is exactly what the bylaw of Wolfeboro, N.H. requires, for example. On the other hand, for an AM broadcaster, especially one requiring a multiple tower array to satisfy requirements of non-interference, such bylaws are hardly relevant, as co-location on an existing tower is just not feasible. The TV or FM broadcaster faces a different problem, but the weight and windload of the antenna could play a critical role with respect to the question of co-location feasibility

**Who really controls a tower’s height, the FCC or local zoning?**

The best answer is going to sound lawyer-like: If the FCC preempts, the FCC controls the tower’s height to the extent of the preemption. If the FCC does not preempt, then it’s local zoning.

Determining whether preemption applies, and making it stick, is where the legal work comes in. In any event, many installations



Fig. 3: Fall Zone Sign as Required by Local Ordinance

Covenants and Restraints” or CC&Rs that would prevent the installation of small, one meter in diameter or less, satellite TV dishes or antennas for fixed wireless signals — think wireless Internet — in condos, and zoning that would prevent off-air TV reception satisfactory to the viewer. Since 1999, it has applied to a renter’s balcony or patio.

In 2002, the New Hampshire Supreme Court held that the FCC’s required minimum-height regulations for AM broadcast stations preempted local zoning. I know of no similar FM or TV ruling. There is work yet to be done.

**If I want to build a new tower in a community, what should I do first?**

Buy a complete, most-recent copy of the zoning bylaw. Nothing replaces reading the actual regulations.

Then talk to a local zoning lawyer, or an antenna lawyer who does these things nationwide. If you try to do it yourself, you could wind up like the poor owner of the

able company asset, the Tahoe Park tower, was lost. It is almost always possible, if the matter is handled well, to rebuild a prior existing use.

**Do all local governmental officials dislike new towers?**

As President Clinton would say, it depends on what you mean by the word “all.”

The professionals seem to want an orderly process, observance of the zoning ordinance and a showing of need. But some planners, planning board members and zoning board members, got into it because they want to control everything. They are not builders; they are controllers. They don’t much like development that they didn’t instigate. Those are the folks who tend to dislike towers the most.

**Can a community legally enact an outright ban against new towers?**

The question is pretty broad, but, speaking generally, no.

will require a Certificate of No Hazard from the FAA. And don't overlook the requirements of the National Environmental Policy Act (NEPA) of 1969. This is the wrong area for the novice lawyer or inexperienced engineer to start the learning process.

***Is restrictive tower zoning, such as being able to locate only on town-owned land, legal?***

A lot of restrictive zoning is legal. But the town must permit commercial antennas somewhere. I doubt an ordinance that allows locations only on town-owned land would survive a competent attack. That type

I just did some work on a digital TV antenna for a CBS affiliate. From my perspective, any time someone needs to put a new antenna in the sky it means new business!

***We've read reports that towers injure bird populations ... is that true?***

At the moment, the science does not support the proposition that towers are a significant source of bird kills. By contrast, feral cats are far more significant killers of birds.

But I would like tower owners to mount a camera and take a picture of the ground under the tower every morning, keeping the

where the Golf Club claimed that Fraasch — ham radio call sign KOSF — would ruin the habitat of Trumpeter Swans. The only problem was that the golf club could only produce testimony at trial that the bird had been seen twice in the past 15 years, and there was no known evidence of Trumpeter Swans nesting in the Goose Lake area. Costs and disbursements were awarded to the municipality, which had granted a building permit, and the radio ham, who had constructed a 130-foot tower.

***What other trends, such as consolidation of tower ownership, FCC auctions and increased land prices, are going to affect tower siting in the future?***

I'll take this as a standard question about the future. I see more cellular telephone and PCS installation on "hot towers," more collocation — good news for tower owners; more telephone industry consolidation — bad news for tower owners in areas of overlap; much more detailed application requirements at the municipal level to construct new towers, and more need to bring in a lawyer where once the on-site engineer did the zoning work in a more folksy manner.

The increased need for detailed applications will also require more work by civil engineering as well as surveying firms to provide detailed plans, contours and layouts. The time has already arrived where the cost of the steel is a minor part of the project. ■

**“I doubt an ordinance that allows locations only on town-owned land would survive a competent attack.”**

of restriction just doesn't meet the "rational governmental interest" test. This refers to the usual requirement that all land-use regulation must serve a rational governmental interest, and a mere desire to achieve rental income from a broadcaster is probably not good enough.

***How has digital conversion of AM, FM and TV affected the tower business?***

images on tape or DVD. Soon we could develop a significant number of observations, which, if it were 300 towers and daily recording for two years, would result in some serious observational data to replace the hype and speculation of anecdotal tales.

Some of the claims in this area can be pretty wild. See, for example, *Rush Creek Golf Club v. Corcoran, Minn.*, and *Fraasch (Hennepin County District Court, 1996)*,