

In response to questions from the Finance Committee, particularly with regard to timing of this request for the BOS to schedule a Special Town Meeting this fall, the working group advising the Town Administrator on the execution of the contracts for the Public Communications System, is providing this summary timeline of the project since the initial funding for the study that led to the ATM 2017 appropriation of \$2,961,100 and authorization to build new towers on 4 specific sites with co-locations on other existing towers, nor specified in the motion to the current time. (Yellow highlights are related to efforts to coordinate co-location with SBA Communications, the central issue to the current request.)

ATM 2016

Repurposing of previous appropriation for a Public Safety tower at the school for a consultant to design a comprehensive public safety system

June 2016

Town engaged Langone & Associates to design the system: a robust public safety communications system, to provide the best possible support to the first responders, while protecting the scenic, historic, natural, and man-made resources of the Town, to minimize the impact on the character of the community.

July 2016-January 2017

The consultants were asked to consider existing infrastructure (including towers within and outside the town borders), but were not directed to just tell us where to put towers. They were asked to consider pole-mounted hardware along the public right-of-way, vehicle repeaters and commercial cellular and connectivity options including landlines, fiber or microwave.

Months of work assessing the current pieced together inadequate “system” and terrain maps of the town that show why our first responders are faced with dead spots at various locations in town and in neighboring communities through mutual aid situations and en route to local hospitals. Reviewed lists of Town-owned parcels, parcels in the right of way, existing towers in all surrounding communities for possible co-location opportunities, and coverage plots using various combinations of possible sites. First outreach to SBA Communications re: co-location. Looked at possible technologies other than towers. Also began research into available frequencies and issues with T-band (used extensively by Carlisle and other FDs) slated for decommissioning by the FCC for Public Safety use.

Based on unique terrain issues and the fact that radio waves used for public communication require line of sight from tower to receiver and back, settled on a proposed tower-based system with towers on high points in Carlisle’s hilly terrain as most efficient way to get coverage in the “shadows” of the hills or “dead zones.”

February 14, 2017 - BOS Mtg

First public presentation of the proposal, by Chiefs Fisher and Flannery: Presentation to BOS of proposed system. First noting that our first responders are at risk with the current band-aid “system.” Proposed budget (\$2.5 - \$3.3 million) for comprehensive system, including 6 new towers (one a replacement of existing police tower) plus two co-locations on 2 existing towers (private commercial cellular at Bedford Road and Concord-owned tower at Annursnac Hill). New towers included a 190’ tower at the DPW site off Elizabeth Ridge, an 80’ tower on Proctor Rd, a 120’ tower on traffic island at the intersection of Heald and Judy Farme Roads and an 80’ tower in the traffic island on Autumn Lane.

BOS scheduled a follow-up discussion at their next meeting but authorized the working group to proceed on developing a bid package. Working group announced a public info session for 3/22.

February 28, 2017 - BOS Mtg

Chief Fisher presented more details on the system presented 2 weeks earlier including coverage maps showing the existing coverage issues and how the proposed system would address them.

A large number of abutters, primarily to the Heald and Judy Farme sites, spoke in opposition to the proposal; some had submitted letters to the BOS. They requested documentation for the proposal and were informed that there was no written report to distribute and that the committee would take their input into consideration.

March 13, 2017

Email to SBA Communications (Florida-based owns and operates thousands of towers throughout the western hemisphere), owner of 871 Bedford Road tower and Tower leaseholder at 1022 Westford Street re: Town's intention to locate new fire and police radio equipment at both sites. No response for months.

March 22, 2017 - Public Info Session

First presentation of revised proposal. Reiterated that current "system" is obsolete, difficult to repair and poses a threat to public safety (first responders and citizens). Proposal for 4 new towers in town (1 a replacement of existing Police tower), 190' at Banta-Davis and 110' at Proctor Road (both shown with photo-simulations) and 4 co-locations, one on a new private tower at the Middlesex School and one on a 10' extension of the 80' tower at 1022 Westford St. Presented coverage maps for the new proposal. Budget (\$2.45-3.08 million; does not include maintenance). Combination of microwaves and fiber to link the towers. Central tower at Banta-Davis instead of DPW so fewer homes in vicinity.

ATM 2017 – Warrant Article passes

Essentially the system presented at March info session. Budget estimate of \$2.4 to 2.96 million. Appropriation for \$2,961,100. Warrant article specified the locations of the Town-owned sites where towers could be built to assure voters that once the funds were allocated, if issues arose, new towers couldn't be put built elsewhere in town (or back in the traffic islands at Heald Road and Autumn Lane), without Town Meeting approval.

June –August 2017

Develop RFPs for new towers and radio and antenna and support equipment. Included detailed specification for coverage standards system must meet, locations and specifications for proposed towers, detailed lists of types of radio equipment needed, responsibilities of approved tower vendor with regard to expected permitting process.

Ongoing monitoring of Middlesex School tower application and re-application process.

Discussions with public officials regarding FirstNet national public safety system and possible impacts on Carlisle's proposed system. Concluded that they were separate, not redundant and FirstNet was likely to take considerably more time (years) than press releases suggested (imminent).

October 2017

Review of bids, follow-up questions and decisions re: recommendations to BOS. Negotiate contracts with selected vendors.

Ongoing monitoring of Middlesex School tower application and re-application process.

Decision to eliminate Police Station antenna and increase height of tower at Fire Station accordingly.

November 2017 – Contracts awarded to Green Mountain for towers and Motorola for equipment, including a new console and radios and a commitment that the system would meet an acceptable standard (not as good as the original Heald/Autumn Lane system, but acceptable)

Contacts with Town of Concord and Concord Fire Department re: planned upgrading of co-located antennas on Annursnac Hill tower.

October 2017

Review of bids, follow-up questions and decisions re: recommendations to BOS. Negotiate contracts with selected vendors.

December 2017

Outreach to SBA Communications to follow up on our request to use the two sites they control.

January 2018

Detailed contract Design Review of entire team with Motorola and CyberCom, a subsidiary/subcontractor of Motorola, including review of specifications for all antenna equipment, racks and cabinets, staging and coverage maps, and project timeline.

November 2017 – May 2018

Research into possibly available frequencies for operation of various Public Safety entities (Fire, Police, School bus, school emergency, DPW). Site license applications filed with FCC.

Ongoing monitoring of Middlesex School tower appeals process.

Preliminary discussions with AT&T site lease team regarding First Net and possible collocation of First Net antennas (external) and AT&T commercial cellular on Banta-Davis tower. Concluded that AT&T was too far away from a decision to hold up Town's tower design and construction while they sorted out their needs, whether they would finance a tower that allowed for internal commercial antennas as required by the commercial wireless bylaw, etc.

Detailed review and refinement of all equipment needed including \$300K+ for radios, pagers, etc., \$300K+ for communications console and support equipment at Police Station and \$600K+ for antennas and support equipment.

Ongoing contacts with Town of Concord and Concord Fire Department re: planned upgrading of co-located antennas on Annursnac Hill tower.

Detailed engineering of sites and towers and development of site plans for Site Plan Review on three new towers (B-D, Proctor, Fire Station). Process included consultation with Building Commissioner, review with Town Counsel of zoning issues, and coordination with Conservation Commission and Planning Board in developing SPR applications.

Motorola analysis of microwave connectivity vis a vis intervening tree height, microwaves determined not to be feasible.. Decision to change from system connectivity via combined microwave and fiber to all fiber connectivity. Included extensive researching into alternate suppliers for fiber including leasing from Comcast; settled on direct commission of Town-owned fiber and months of communication and negotiation extending into September 2019) with Concord Municipal Power & Light and the Town of Concord (during transition to new Town Manager), decisions about types of fiber and number of strands, all relative to anticipating future needs and budget considerations. Change orders in Motorola contract.

Repeated attempts to get response from SBA Communications, Tower owner at 1022 Westford St (where proposed 10 foot extension was to go). Several changes in SBA contact people after preliminary contacts had been made with representatives who left SBA. Eventually received response that AT&T had a lease agreement for a potential cellular facility on the possible 10' extension. Contacts with AT&T indicated they had no plans to build the facility, but they were paying monthly for the lease rights. Despite repeated

outreach by Town Administrator and Langone, no clear answer from AT&T or SBA as to whether AT&T would give up their rights before the expiration of their contract or if failing that, Town would have to pay AT&T for their cost for the duration of their lease rights. Given the inability to get a clear answer, conclusion was to wait until the lease right expiration (February 2019) and then to negotiate with SBA.

While waiting for AT&T lease to end, we initiated the design process with SBA from March-June 2018, paying their fees for their structural analysis and other costs related to the extension. Chappell Engineering (subcontractor to Green Mountain) prepared photo-simulations for 1022 extension.

Initiated discussions w/SBA re: contract with the Town for the extension and our antenna equipment. No response regarding contract in this time period. Without a contract we could not proceed further with necessary Special Permit application for the extension (Special Permit amendment required instead of simpler Site Plan Review due to tight restrictions imposed on initial tower permit in ~2006 based in large part on abutter complaints about proposed tower during Planning Board Special Permit hearing).

June 2018 — Conservation Commission Order of Conditions for 100 ft lattice tower at Fire Station within the buffer zone. Included some plan revisions to be made before SPR at PB.

Site Plan Review Hearing before Planning Board for Banta-Davis Tower, Proctor Rd. Tower, and Fire Station Tower – Approvals granted

Hearing was preceded by months of planning and engineering, preparation of drawings and photo-simulations, coordination with ConsCom and Planning Board staff.

Monitoring 1022 Site: Learn that T-Mobile is planning a “bump-out” of their antenna section at 70 to 80’ but has yet to file a request for modification with the Town. (Later we learn that they filed and acted on a Building Permit that did not show the bump-out. Building Commissioner followed up and required T-Mobile to get PB approval for the site change from the PB.

July 2018 — Historic Commission approval (certificate of Appropriateness) of removal of existing lattice tower (not to be replaced), mounting of antennas directly to rear of Police Station, and installation of air conditioner through side window (for cooling of console and other equipment)

August 2018 – March 2019

FCC licensing received for new frequencies for Police, Fire and School by August 2018. Waiver for continued use of T-Band for FD to require longer approval process. DPW frequency holdup due to need for signoff by Ayer; research into alternate frequencies.

Progress on tower construction at 3 sites (Fire Station tower foundation tested not to spec; after weeks of additional testing and counter-proposals re: possible cost-reductions, the Town insisted on removal and replacement which took place later in the spring 2019)– all three sites completed at this time (August 2019) with antennas in place. Base equipment not yet installed, in storage at CyberComm. Progress on Police Station interior renovations to accommodate new equipment. Completed installation of antennas on rear of building. Existing tower at Police Station not yet removed. Each site included abutter notice of site work involving heavy equipment. Banta-Davis tower required PB approval in February 2019 for a modification in the Site Plan Approval to allow a change in the access drive orientation to improve ease of maintenance by DPW and reduce amount of paving. Proctor site included extensive coordination over months w/Eversource over best route for provision of electrical to site and laying of conduit to allow for eventual fiber connection.

Slow progress on Contract with SBA, back and forth between Town Counsel and SBA counsel. Draft Contract between SBA and Town finally received end of January 2019. Contract included a \$500/month lease payment to SBA. Town had expected nominal \$1/year lease based on contract for antenna on SBA-

owned monopole at 872 Bedford Road, in place for many years, nominal lease anticipated on Middlesex tower, and standard throughout the industry for public safety communications and industry desire for good relations with communities in which they seek permits. No previous indication from SBA that they would be charging the Town for the lease.

March - April 2019

Repeated attempts to follow up with SBA to negotiate rent, by Town Administrator, Langone, and Town Counsel finally resulted in email exchange between Town Counsel and SBA contact on March 1, 2019, apologizing for the delay in responding and revealing for the first time that the Town would need to sign two separate agreements for the site, one with SBA for \$500/month as per the contract received in late January, and another for \$500 with T-Mobile. T-Mobile held the lease rights on the ground space and SBA had acquired only the tower and lease rights for the tower. Their ground lease with the landowner included a payment of 25% of any additional income received for leases, which meant an additional \$250 payment due from the Town, or \$15,000/year.

At the Town Administrator's request, Town Counsel followed up with the SBA contact to seek reconsideration, noting in their email that the Town "was expecting to pay nominal rent, as it does on the other SBA site and **as all of our other communities pay to locate public safety communication equipment within their Town.**" [emphasis added]. Counsel also noted that the proposed lease amount would require the Town to solicit an RFP before executing such a lease and asked SBA to circle back with T-Mobile regarding the decision to charge standard rent for public safety equipment. Langone also followed up and received no response from SBA.

Receiving no response, Counsel followed up again 2 weeks later in mid-April and finally received a response on April 22, 2019 in which SBA acknowledged their lease arrangement at 872 and the need for public safety communications and their willingness to sometimes offer discounted rates for same, but that this did not apply to all sites. They offered to reduce the overall monthly lease payment to \$1100/month (\$13,200/year). They also offered to reduce the annual escalation from 4% to 3%. (The email exchange I have doesn't indicate when the Town was informed of the 4% escalation on the initially proposed \$15,000/yr rent, but it occurred sometime during the period of these email exchanges.

This exchange between Town Counsel and the SBA representative took place 1 week before 2019 Annual Town Meeting held over 3 days on April 29-May 1, 2019.

April 2, 2019 - Working Group Meeting

Working group meeting to review progress on system deployment and discuss issue of 1022 and unexpected lease payment situation. The working group understood they did not have the authority (or appropriation) to enter into a lease agreement on this cost level on 1022. Reviewed other issues with 1022 including: Unexpected complexity of Town's potential involvement with 3 overlapping leases, Unacceptable lack of follow-through and apparent lack clear decision-making structure at SBA, Unknown potential issues that might arise with T-Mobile, Expected increased expenditure of Town Counsel time to wade through the contract negotiations with two parties, and Lack of Town control over the site for a critical component in the system. Revisited list of Town-owned parcels originally reviewed in 2016 and 2017, concluding that the abandoned quarry site west of the 1022 site was the only option. Originally hadn't focused on it because of existence of 1022 and concerns about ledge and wetlands on site. Agreed to ask Conservation Administrator to visit the site with working group member to see if there was any chance the site could be permitted under the Wetlands Protection Act and local wetlands bylaws and to pursue other no-cost information regarding the viability of the site.

April 2-15, 2019

Confirm with Town Counsel that the Town could legally build a tower here, reviewing old deeds from Lowell Registry. Site visit with Conservation Administrator; can't speak for Commission but opines that

it might work. Authorize Langone to ask Motorola for coverage modeling of site at several possible tower heights and a time frame to complete them. Authorize Green Mountain to get an estimate from their engineer for doing wetlands flagging, preliminary site engineering, and permitting application to ConsCom. Ask Green Mountain to develop a detailed cost estimate for a Town-built tower of various heights on this site.

Ask Tim to ask Counsel continue outreach to SBA. April 15 email: "In the meantime, TIM, please ask Counsel to continue to reach out to SBA regarding a better monthly lease proposal at 1022."

May 9, 2019 - Working Group Meeting

Working group meeting (week after Town Meeting) to review coverage plots for 110/130/150 foot towers and cost estimates for tower, at different heights, tower installation, engineering, permitting. Unanimous agreement that the site is potentially viable and that 130 foot tower is ideal height for current and future coverage needs (accounting for tree growth throughout western part of town). All is dependent on confirming the site is eligible for an Order of Conditions from ConsCom through a NOI filing. Coordinate with Town Administrator to arrange presentation of the information and the cost information to the BOS to get their approval to expend Town funds for an NOI filing with ConsCom and SPR with PB.

At this meeting the working group also made decision to not accept the Fire Station tower foundation and to require it to be removed and redone.

Later that day Town Administrator receives notice from Town Counsel that the last best offer from SBA is \$13,200/year with 3% annual escalation.

May 2019

Site visit of Carlisle Public Safety staff to CyberComm facility to review equipment setup for console and other equipment.

May 14, 2019 - BOS Mtg

7:15 pm Agenda Item. Present update of status of the new towers, the issues with the Fire Station foundation, the fiber, and the status of the co-locations, particularly the issues surrounding the lease for 1022 Westford. Presented preliminary cost figures for the proposed new tower in comparison to the escalating lease costs at 1022 over the expected 50+ life of the proposal. Reiterated critical need for a site in this immediate area, and that this Town-owned tax-taking abandoned quarry site is the only potentially viable solution. Made recommendation that work on the 1022 site be suspended and request authorization to proceed with NOI and SPR on the Town-owned site to the west of 1022 to determine if the wetlands and other potential site issues will be surmountable.

May 15-July 2019

Proceed with NOI filing with ConsCom and SPR with PB. EcoTec flags wetlands and provides report identifies an isolated vegetated wetland and a separate isolated vegetated wetland/vernal pool within the former quarry site. Preliminary engineering drawings and site plans developed for tower within the isolated vegetative wetland, protective measures related to the possible vernal pool, proposed tree removal to allow for an access drive from Westford Street, and photo-simulations of the proposed tower seen from various sites along Westford Street, including abutters' access driveway locations and Sorli south field. Legal Public Notices for both hearings sent separately to abutters. All but one member of ConsCom visited the site prior to the NOI hearing on July 18. Voted to issue Order of Conditions, asked for compensatory plantings to screen facility, change in color of fencing for compound, and identification of trees near vernal pool to be marked for removal, leaving the stumps in place. PB SPR approval granted on July 29. In response to abutters concerns, working group representatives state that the site cannot proceed without Town Meeting approval.

August 2019

Appeal of ConsCom OOC filed August 5 by abutter Karen Alexander, accepted by DEP August 12. DEP site visit scheduled for August 30.