In The Matter Of:

Tarpon Towers II, LLC

Hearing

October 22, 2019

BCT Reporting LLC

55 Whiting Street, Suite 1A

Plainville, CT 06062

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Docket No. 486

Tarpon Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 796 Woodin Street, Hamden, Connecticut

Continued Hearing held at the Connecticut Siting Council, Ten Franklin Square, Hearing Room Two, New Britain, Connecticut, on Tuesday, October 22, 2019 beginning at 1 p.m.

H e l d B e f o r e:

ROBERT SILVESTRI, Hearing Officer

A p p e a r a n c e s:

Council Members:

ZACHARY V. ALEXANDER, ESQ.
PURA Designee

ROBERT J. HANNON,
DEEP Designee

DANIEL P. LYNCH, JR.
MICHAEL HARDER
EDWARD EDELSON

Council Staff:

MELANIE A. BACHMAN, ESQ.,
Executive Director and Staff Attorney

ROBERT MERCIER,
Siting Analyst

A p p e a r a n c e s (Continued):

For Tarpon Towers II, LLC:
COHEN & WOLF, P.C.
657 Orange Center Road
Orange, Connecticut 06477
BY: VINCENT MARINO, ESQ.

For Cellco Partnership d/b/a Verizon Wireless:
ROBINSON & COLE
280 Trumbull Street
Hartford, Connecticut 06103-3597
BY: KENNETH C. BALDWIN, ESQ.

MR. SILVESTRI: Ladies and gentlemen, good afternoon. This hearing is called to order this Tuesday, October 22, 2019, at 1 p.m. My name is Robert Silvestri, member and presiding officer of the Connecticut Siting Council.

This evidentiary session is a continuation of the public hearing held on September 19, 2019 at the Memorial Town Hall in Hamden. It is held pursuant to the provisions of Title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act upon an application from Tarpon Towers, II, LLC for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility at 796 Woodin Street, Hamden, Connecticut. This application was received by the Council on July 15, 2019.

A verbatim transcript will be made of this hearing and deposited with the clerk's offices in the Hamden Town Hall and New Haven City Hall for the convenience of the public.

We will proceed in accordance with the prepared agenda, copies of which are available at the table near the door.

We'll continue with the appearance of the applicant to verify the new exhibit marked as Roman numeral II, Item B-13 on the hearing program.

Attorney Marino, would you please begin by identifying the new exhibit you have filed in this matter and verifying the exhibit by the appropriate sworn witnesses?

MR. MARINO: Yes, Mr. Chairman. Thank you very much. Vincent Marino of the law firm of Cohen and Wolf, and I'm joined today by my four witnesses.

Mr. Chairman, there are two Late-Filed exhibits that we are presenting today. The first one is a wetland impact evaluation report, and the second one being a revised viewshed analysis map. For purposes of verification, I'll simply ask the panel, and I believe the wetland impact evaluation report was prepared by Mr. Gustafson.

K E I T H C O P P I N S,

M I C H A E L P. L I B E R T I N E,

D E A N E. G U S T A F S O N,

D O U G L A S J. R O B E R T S,

having been previously duly sworn, continued to testify on their oaths as follows:

DIRECT EXAMINATION

MR. MARINO: So Mr. Gustafson, if you can please respond to the following questions: Did you assist in the preparation of the Late-Filed exhibit that is marked B-13 and is referenced as the wetland impact evaluation report?

THE WITNESS (Gustafson): Yes.

MR. MARINO: And is the information contained therein true and accurate to the best of your knowledge, belief and information?

THE WITNESS (Gustafson): Yes, it is.

MR. MARINO: Are there any errors or omissions that need to be corrected with respect to that document?

THE WITNESS (Gustafson): No.

MR. MARINO: And as far as you're aware, is that document complete?

THE WITNESS (Gustafson): It is.

MR. MARINO: And accurate?

THE WITNESS (Gustafson): It is, yes.

MR. MARINO: And with respect to the revised viewshed analysis map, I believe Mr. Libertine?

THE WITNESS (Libertine): Yes.

MR. MARINO: Did you assist in the preparation of that Late-Filed exhibit?

THE WITNESS (Libertine): Yes.

MR. MARINO: And are there any errors or omissions contained in that document?

THE WITNESS (Libertine): No.

MR. MARINO: As far as the best of your knowledge and belief, is the information contained therein true and accurate?

THE WITNESS (Libertine): Yes, it is.

MR. MARINO: And just for purposes of completeness, my other two witnesses, are you aware of any errors or omissions contained in either of the two Late-Filed exhibits that need to be corrected?

THE WITNESS (Roberts): Doug Roberts. No.

THE WITNESS (Coppins): Keith Coppins. No.

MR. MARINO: I offer them at this time.

MR. SILVESTRI: Does any party or intervenor object to the admission of the applicant's new exhibits?

MR. BALDWIN: No objection.

MR. SILVESTRI: Thank you. The

exhibits are admitted.

MR. MARINO: Thank you, Mr. Chairman.

(Applicant's Exhibit 11-B-13: Received in evidence - described in index.)

MR. SILVESTRI: We will begin with cross-examination of the applicant by staff. Mr. Mercier.

MR. MERCIER: Thank you. I don't have any other questions pertaining to the previous material or the new materials. Thank you.

MR. SILVESTRI: Thank you. We'll go now to our Council members. Mr. Alexander?

MR. ALEXANDER: No additional questions.

MR. SILVESTRI: Thank you. Mr. Edelson?

MR. EDELSON: No additional questions.

MR. SILVESTRI: Thank you. Mr. Harder?

MR. HARDER: No questions.

MR. SILVESTRI: Thank you. Mr. Hannon?

MR. HANNON: I have no questions.

MR. SILVESTRI: Thank you. And Mr. Lynch?

CROSS-EXAMINATION

MR. LYNCH: One quick question. Maybe it will be longer than a quick question. The propagation maps that are in the application, who produced those?

THE WITNESS (Coppins): Verizon.

MR. LYNCH: That's all I wanted to know. Thank you.

MR. SILVESTRI: Thank you, Mr. Lynch. I have no further questions either.

And I think we'll change places now. We'll proceed with the appearance of the intervenor, Cellco Partnership doing business as Verizon Wireless.

(Witnesses excused.)

MR. SILVESTRI: Attorney Baldwin, could you please introduce your witnesses?

MR. BALDWIN: I will, Mr. Chairman. Thank you. The witness panel for the intervenor, Verizon Wireless, is listed in the hearing program. To my immediate left is Mr. Ziad Cheiban, a radio frequency engineer with Verizon Wireless, and his colleague, Mark Brauer, who the Council has seen before, also a radio frequency engineer with Verizon Wireless. We're also going

to borrow Doug Roberts. He's already been sworn in, so I don't think he needs to be sworn again, but there was some assistance that Mr. Roberts provided in our interrogatory responses. So if it's okay with the Chair, we'll keep him at the table in case there are any questions that come up regarding the generator itself.

With that, I would offer Mr. Brauer and Mr. Cheiban to be sworn.

MR. SILVESTRI: If the gentlemen would please rise, and Attorney Bachman, could you please begin by swearing in the intervenor's witnesses?

Z I A D C H E I B A N,

M A R K B R A U E R,

called as witnesses, being first duly sworn by Ms. Bachman, were examined and testified on their oaths as follows:

D O U G L A S R O B E R T S,

having been previously duly sworn, testified further on his oath as follows:

MS. BACHMAN: Thank you.

MR. BALDWIN: Mr. Chairman, it's a little bit unique here in that Verizon is an intervenor in this proceeding. There are various

sections of the application narrative that we will verify and attest to this afternoon relating to the issue of need since Verizon is the carrier, the anchor carrier on this facility.

There are also portions of Exhibits E, F and G that the radio frequency engineers will verify for us this afternoon, as well as Interrogatory Responses 1 through 7 which are a part of Cellco's Exhibit Number 2 as listed in the hearing program under Roman III, subsection B.

So with that, I will ask our witnesses to verify those portions of the application and the interrogatory responses from the intervenor, as well as Mr. Roberts, with respect to Number 8 and 9 in particular.

DIRECT EXAMINATION

MR. BALDWIN: First, for Mr. Brauer and Mr. Cheiban. Did you prepare or assist in the preparation of those portions of the application narrative dealing with Verizon's need for this facility, as well as portions of Exhibits E, F, G and Interrogatories Number 1 through 7?

THE WITNESS (Cheiban): Yes.

THE WITNESS (Brauer): Yes.

MR. BALDWIN: And is the information

contained in those exhibits and the portions of the application narrative true and accurate to the best of your knowledge? Mr. Cheiban.

THE WITNESS (Cheiban): Yes.

MR. BALDWIN: Mr. Brauer.

THE WITNESS (Brauer): Yes.

MR. BALDWIN: Do you have any corrections, modifications or amendments to offer to any of the information contained in those portions of the application and exhibits? Mr. Cheiban?

THE WITNESS (Cheiban): There was a typo in the response to Question Number 3. The coverage gap is .1 mile and --

THE COURT REPORTER: I didn't hear that.

MR. SILVESTRI: Could you repeat that, please?

THE WITNESS (Cheiban): Yes. For Question 3, we had the size of the coverage gap inside the tunnel was .1 miles, and we had omitted the word "mile" from the response.

MR. SILVESTRI: Thank you.

MR. BALDWIN: That was in direct response to, I think, Mr. Harder's question at the

original hearing that that word "mile" was left out. We apologize for that typographical error.

Mr. Brauer, any corrections or modifications?

THE WITNESS (Brauer): I do not.

MR. BALDWIN: And is the information contained in the those exhibits true and accurate to the best of your knowledge?

THE WITNESS (Cheiban): Yes.

THE WITNESS (Brauer): Yes.

MR. BALDWIN: And do you adopt that information as your testimony in this proceeding?

THE WITNESS (Cheiban): Yes.

THE WITNESS (Brauer): Yes.

MR. BALDWIN: Mr. Roberts, with respect to the intervenor's interrogatory responses Numbers 8 and 9 related to the generator, is that information that you prepared or assisted in the preparation of?

THE WITNESS (Roberts): Yes.

MR. BALDWIN: And do you have any corrections or modifications?

THE WITNESS (Roberts): No, I don't.

MR. BALDWIN: And is that information true and accurate to the best of your knowledge?

THE WITNESS (Roberts): Yes, it is.
MR. BALDWIN: And do you adopt that information as your testimony in this proceeding?
THE WITNESS (Roberts): I do.
MR. BALDWIN: Thank you. Mr. Chairman, I offer them as full exhibits.
MR. SILVESTRI: Does any party or intervenor object to the admission of the Cellco Partnership, Verizon Wireless exhibits?
MR. MARINO: No objection, Mr. Chairman.
MR. SILVESTRI: Thank you. Then the exhibits are admitted.
(Cellco Partnership d/b/a Verizon Wireless (Cellco) Exhibits III-B-1 and III-B-2: Received in evidence - described in index.)
MR. SILVESTRI: We'll begin with cross-examination of the intervenor by staff. Mr. Mercier.
MR. MERCIER: Thank you.
CROSS-EXAMINATION
MR. MERCIER: Reading Interrogatory 1 and some of the narrative, it talks about Cellco's interference with adjacent sites from their current site on the West Rock tower. When you're

using the term "interference," can you just please elaborate as to what types of issues are occurring in the network?

THE WITNESS (Cheiban): Yes. So we reuse the same frequencies at pretty much every cell site. And when a cell site covers more than its desired objective, it basically prevents the neighboring sites from providing the capacity that they need to provide. And so it's basically self-interference within our own cellular system from one site to another.

MR. MERCIER: Okay. So the propagation, it spreads out too far, and it's picking up traffic that otherwise should not be picked up?

THE WITNESS (Cheiban): It picks up traffic that it should not pick up, and it also reduces the signal quality of the neighboring sites, and so they cannot provide the capacity that they're capable of providing.

MR. SILVESTRI: Mr. Lynch had a question.

MR. LYNCH: Just a follow-up. This leads into a question I had. Either with West Rock or the new tower, your proximity to the

sound, you have to -- Mr. Brauer, maybe this is really for you -- do you have to angle your antennas until there's no interference with anything going across the sound?

THE WITNESS (Brauer): Yes, in certain instances where especially more towards Fairfield County where the sound is much narrower, we have had to take steps to mitigate interference across the sound. And with the West Rock tunnel site, it being so large, early on we did have to pull it back, so to speak, from crossing the sound.

MR. LYNCH: Thank you. That's my question.

MR. SILVESTRI: Thank you, Mr. Lynch. Mr. Mercier -- oh, I'm sorry, Mr. Edelson.

MR. EDELSON: The way you described that, it seems to me would be inherent in any cellular system, there's always going to be some overlap of one cell to another. So what is making this kind of -- am I right about that?

THE WITNESS (Cheiban): That's correct.

MR. EDELSON: Because you're always using the same frequency?

THE WITNESS (Cheiban): That is correct, yes.

MR. EDELSON: So as I move from one circle into another circle of one cell site to another, I have to change my frequency as I go to the next one probably because that's what will be free, but those -- I just go back to my first point. There's always overlap. What makes this interference more significant than what's common?

THE WITNESS (Cheiban): Okay. So there is always overlap, that is true. We try to keep the overlap to a minimum. And we actually reuse the same frequencies in every cell site. So it's like the older systems, you know, like analog and so on, actually used to set a different frequency at every site. These sites are using the same frequencies. And what's making this situation, you know, that we need to take action to improve it is that this cell site on top of the ridge, it covers so far, and even by putting in the best antennas we can find, we still cannot control the overlap. And so we basically need to do something more drastic to improve -- to minimize that overlap.

MR. EDELSON: I've got some more questions on this, but maybe I'll wait.

MR. SILVESTRI: Thank you, Mr. Edelson.

MR. EDELSON: I just wanted that clarification.

MR. SILVESTRI: Mr. Mercier.

MR. MERCIER: I guess related to that, you were talking about how you take measures to prevent signals from crossing Long Island Sound or heading in that direction unimpeded. Are there other measures you have -- has Verizon undertaken at this site such as other downtilt for other sectors going out towards the problem areas at the adjacent sites, or could you go at a lower height at the existing West Rock tower?

THE WITNESS (Cheiban): So going at a lower height wouldn't significantly improve the situation because it's the height of the ridge that's really causing the propagation to go as far as it does. And so basically we're looking at the forecast of the traffic that we have in that area covered by the beta sector of the Hamden site on top of the ridge. And basically we're currently in exhaust. And even with -- there basically was no change that we could model that we thought would solve this problem other than taking that site down and building sites to -- you know, that basically produce less overlap with the

neighboring sites.

MR. MERCIER: Now, when you said the beta sector, is that true for the frequencies listed in Interrogatory 1, you had 700, 850 and 2100?

THE WITNESS (Cheiban): Correct.

MR. MERCIER: So all three of those are having this exhaustion problem by picking up too much traffic?

THE WITNESS (Cheiban): So 850 LTE is not currently on that site, but we modeled it, and it does overpropagate also.

MR. MERCIER: Reading through Interrogatory 1, you had three sites listed, Hamden 4, Hamden 2, and New Haven North 2. I looked at the propagation models. I didn't see the New Haven North 2 on these plots. Is it listed? Is it shown on here? Is it mislabeled or --

THE WITNESS (Cheiban): It is not listed on these plots. It's actually the -- so these plots are done with the first tier neighbor sites. And this one happens to be a second tier neighbor, so it was not listed on these plots.

MR. MERCIER: Okay. So even though

it's, I'll just say, farther away, it's still having interference issues?

THE WITNESS (Cheiban): That is correct.

MR. MERCIER: Okay. Looking at the propagation models of the proposed site at Woodin Street, it's pretty close to the Hamden 4 and Hamden 2 sites that you list in Interrogatory 1. So you don't anticipate any interference given the close proximity of this tower to those two locations?

THE WITNESS (Cheiban): No, we do not.

MR. MERCIER: Again, the 700 megahertz plots you gave us, there's really no difference in them, so essentially what you're saying is there wouldn't really -- there'd be no difference overall in the coverage footprint, it's just the amount of traffic picked up per site would change. Is that correct? I don't really see much of a difference.

THE WITNESS (Cheiban): Give me a minute to kind of review. So there is a slight change in the coverage if you look at State Highway 69, for example.

MR. MERCIER: Where is that, to the

northwest?

THE WITNESS (Cheiban): To the northwest, yes.

MR. MERCIER: So I understand that part. I just meant on the east side of the ridge.

THE WITNESS (Cheiban): On the east side, no, there is no difference. The one improvement would be the tunnel.

MR. MERCIER: And the other improvement would be the capacity relief?

THE WITNESS (Cheiban): That's correct.

MR. MERCIER: Okay. Now, does 1900 megahertz service currently exist on the West Rock tower?

THE WITNESS (Cheiban): It is not on that tower.

MR. MERCIER: Okay. I was looking at the 2100 megahertz plots, and I noticed the Woodin Street site doesn't really extend to the north along the ridge in the Wintergreen School area along Main Street. Would there be any kind of a detriment to the customer service experience in that area if it does not reach as it previously did? The existing West Rock tower seems to cover that, and the new site does not.

THE WITNESS (Cheiban): That is correct. So that will be covered by the other frequencies even though the 1900 may not get there.

MR. MERCIER: Okay. So there could be some minor problems if there's an increase in customer traffic?

THE WITNESS (Cheiban): No, because we're able to balance the load on the different frequencies, and basically the most appropriate frequency for that area would be the one carrying traffic --

MR. MERCIER: Which would be, what, 700 in this case and 850?

THE WITNESS (Cheiban): 700 and 850 would definitely get it.

MR. MERCIER: Okay. Now, when you mentioned that it extends into the tunnel, does it actually get through the tunnel to the other side, or is there enough coverage on the other side to connect?

THE WITNESS (Cheiban): There is some coverage on the other side. Right now the experience is a little bit choppy inside the tunnel, and that is expected to be resolved.

MR. MERCIER: I assume it's both tunnels that would be --

THE WITNESS (Cheiban): Correct, both sides.

MR. MERCIER: Great. Thank you. I have no other questions.

MR. SILVESTRI: Thank you, Mr. Mercier.

I just wanted to have a follow-up seeing that we're talking about the propagation plots in Exhibit F. If you look at them, what I'm seeing in the 700 and 2100 megahertz range, you do have expanded coverage showing parts of Hamden, but I'm also seeing reduced coverage in the areas of Woodbridge. So my question to you, what type of problems will those areas of Woodbridge experience and what would be done to mitigate those problems?

THE WITNESS (Cheiban): So that is correct, there will be a reduction in the coverage in the Woodbridge area, and we're expecting to co-locate or find another site in that area so that we can compensate for the decrease in coverage.

MR. SILVESTRI: So something else will either have to be built or adjusted to cover that?

THE WITNESS (Cheiban): That is correct.

MR. SILVESTRI: Thank you. We'll continue with Mr. Alexander.

MR. ALEXANDER: Sure. Just to follow up on that question. Do you anticipate that those gaps in Woodbridge would be filled prior to the decommissioning of the current tower, or would --

THE WITNESS (Cheiban): That is our plan. That's what we're working towards.

MR. ALEXANDER: Okay. That's all I have.

MR. SILVESTRI: Thank you, Mr. Alexander. Mr. Edelson.

MR. EDELSON: So it seems like there are three concepts here, and I'm trying to make sure I understand how they interplay. And usually we talk about coverage, and that's where these maps are very helpful. Then we talk about capacity, and then we talk about interference. And I'm having a little trouble understanding how some of those relate, especially interference and capacity. And what I'm particularly interested in is how you measure the latter two. We can see these maps, you know, they're pretty visual. They

raise questions like have been raised in terms of tradeoff of coverage here versus coverage there. But when we look at coverage, if we looked only at coverage, we'd say there's nothing much here. There's hardly any shift. There's some minor tradeoffs from one area to another. But your argument seemed to be more in the area of capacity and interference, and yet we have nothing quantitative to look at in this submission about how do we go about evaluating capacity from a public need.

So I think my first question is, when you use the word interference, and I'm a phone user, what does interference mean to me?

THE WITNESS (Cheiban): So in this specific instance we're talking about self-interference from our own cell sites, and that basically what you see is decreasing quality. So you would not be getting, you know, the throughputs that we normally -- our objective is to have the highest throughput so that we can serve many users and they all get a good experience. So when the signal quality decreases, that is no longer the case. So basically you get long, you know, the page load, you know, if you're

looking at a web site, the page doesn't load quickly, you know, things like that.

MR. EDELSON: So it affects the speed on data?

THE WITNESS (Cheiban): Correct.

MR. EDELSON: Does it effect dropped calls?

THE WITNESS (Cheiban): It could affect dropped calls. If the signal quality degrades below a certain level, it does affect that.

MR. EDELSON: What's your metric for evaluating that? I mean, how do you monitor your network to say, oh, at the Hamden site we're currently -- interference is too high, I've got to go to management to say we've got to make a change? You have to be able to justify that.

THE WITNESS (Cheiban): Correct.

MR. EDELSON: So I'm assuming you've got something, some indicator that says we passed some threshold, interference is now too high at this site.

THE WITNESS (Cheiban): So, I mean, there's more than one way to look at this. We look at it more from the capacity standpoint. And we can see that a certain sector or a certain cell

site is congested beyond what our target is. So we have metrics that we can look at and say, okay, this site is basically -- has reached exhaust on its capacity and we need to do something about it.

MR. EDELSON: So just to be clear, interference really translates to capacity reduction?

THE WITNESS (Cheiban): The presence of -- so the excess overlap, let's look at it this way, the excess overlap decreases the signal quality which degrades the capacity. So, I mean, we're doing two things here: We're reducing the excessive overlap, and then the area that is, you know, currently covered by the beta sector of the Hamden site which on the ridge is now going to be covered by three sectors of the new site. So we are splitting that traffic roughly three ways between the sectors. So we basically are adding, you know, we have more hardware handling that traffic.

MR. EDELSON: So as I understand it, our responsibility is to make sure the public benefit to doing this is there. That's the discussion here. It's easy for me to go home to my wife and show her a propagation map and say,

oh, by putting this tower in we've expanded coverage. But why aren't we seeing something quantitative about currently that capacity is -- I think you used the word excess -- is not sufficient?

THE WITNESS (Cheiban): Correct.

MR. EDELSON: All we hear is really some subjective words that you've been using, you know, it's excessive or things like that. Can't we get something more quantitative to say we've now hit -- either we're hitting, or we forecast that we will hit a certain capacity threshold?

THE WITNESS (Cheiban): So, I mean, we do forecast that, but we have not -- it was not part of the submission. But that is like our internal engineering process is we look at the current capacity, and we forecast it out, and, you know, we see at which, you know, future date the site will exceed its capability.

MR. EDELSON: So how do you measure capacity? What's your -- what is it -- I don't know what to use -- bandwidth, available bandwidth? I'm looking for, like I say, a metrics, something more quantitative.

THE WITNESS (Brauer): Really there's

two major metrics, and one is data volume, and that's kind of self-explanatory. It's the sheer amount of usage that's coming from a specific sector. And the other is the data, the throughput speeds. As Ziad was saying earlier, when your signal quality goes down, your data speeds go down, your users start to hang on the site longer and longer and longer using up more of the site's bandwidth, not letting other users onto the site, and it just cascades into a usage problem. So it's data volume and data speed.

MR. EDELSON: Right. But again, even on the data speed, I mean, I find myself looking more and more on my phone seeing what's the speed right now, and it varies throughout the day. So I'm thinking if I'm in your shoes, it's something about like uptime availability, more than 80 percent of the time I've got speeds of this or higher. But again, I'm making that up. I don't know if that's really what you're using to measure. And I want to be able to say to the public we need to do this because what Verizon is telling us is they are below what their service objective is. But right now I don't know what the service objective is, and I don't know where we

are relative to that number right now.

So I guess what I'm hearing is that's not part of the submission. You only really talked, let's say, in visual terms about coverage. It's not a coverage issue that we're really referring to, but we're referring to an interference issue that's giving rise to a capacity issue. So let me -- so I'm a little frustrated and feeling that it doesn't provide me as a commissioner with the information I need to vote on this one way or another as far as public need.

Switching gears a little bit, I hear a lot about 5G and other technologies keep changing. Is there a non-hardware solution to this? Is there a thought that there's a software solution that should have been looked at, or could be looked at, to resolve the interference?

THE WITNESS (Cheiban): So, I mean, we have looked at, you know, whatever solutions are available to us to improve the situation on the current site. And we are currently, you know, above the capacity objective for the site, and therefore, like we were mentioning, the throughputs are degraded, there is nothing that we

currently have in our toolbox that would alleviate the situation other than building a new site.

THE WITNESS (Brauer): And I would just like to add to that. When the technologies change, certainly you get a benefit from speed, interference mitigation, that kind of thing, but if you don't change your site's footprint, you still run into the same issues.

MR. EDELSON: Right. And this is more for my education, but we hear so much about 5G. If we were at 5G, would this mitigate some of this problem because of the characteristics of that technology? And I realize that's not a solution that can happen in the next six to nine months.

THE WITNESS (Brauer): There is a little bit of a capacity boost going to the 5G technology, but it's running into the exact same limitations as 4G.

MR. EDELSON: And I understand your dilemma which is user requirements or utilization rates are going up faster than you can keep up with sometimes, so, you know, the size of the videos are getting bigger and bigger and everything that they want to look at. So it's a difficult game.

So let me just see here. I think that's most of my questions. Well, in Question Number 5, I think Robert was really trying to get at projections, and I don't think your answer really addressed projections. This is about projecting exhaustion, something I'm very familiar with, exhaustion. If I read just your response the way it reads, it almost sounds like this is a one-off, this is the only particular site that we have exhaustion is the New Haven 3 cell site.

THE WITNESS (Cheiban): No, it's actually the Hamden -- so it's the Hamden site itself, the one on the ridge that is in exhaust. And the dilemma we have is because it covers so much -- so when it covers a larger geographical area, there's a lot of users that depend on that site, and we cannot meet our service objective covering such a large area with a single site. We need to basically split that traffic among either multiple sectors or multiple sites.

MR. EDELSON: So the second sentence says, None of the antenna sectors at New Haven 3 are currently in, quote, capacity exhaust.

THE WITNESS (Cheiban): Right.

MR. EDELSON: Maybe I'm not

understanding that sentence.

THE WITNESS (Cheiban): So we're saying the Hamden site itself is -- all right. So it's basically a two-part thing. So the new site is going to provide the capacity increase to the neighboring sites, but they are not currently in exhaust except for the one that's up on the ridge.

MR. EDELSON: Okay. I thought it was the one up on the ridge, because of its propagation, was limiting the capacity of the other sites.

THE WITNESS (Cheiban): It is doing both. Itself it's capturing a very large user base and cannot provide the adequate throughput to all those users, and at the same time it's limiting -- I mean, it's decreasing the capacity of the neighboring sites because of the overlap.

MR. EDELSON: Right.

MR. ALEXANDER: I'm just trying to understand this issue a little better. So the interference in capacity, the way they sort of relate, the interference is like the actual signal, the waves are causing interference or wave canceling when they're overlapping too much or --

THE WITNESS (Cheiban): No, they're not

canceling. Because we use the same frequency, basically you get both signals at the same time which degrades the quality of the signal and decreases the capacity.

MR. ALEXANDER: And would a user in that area be taking capacity from potentially two towers? Are they -- I guess I'm wondering if being in that area of overlap the user would be bouncing between service from two towers that are both covering that same area.

THE WITNESS (Cheiban): The user would be handing off between both towers, but at any given point they would be on a single tower.

MR. ALEXANDER: Okay. Thank you.

MR. EDELSON: Just to get back to this concept of projection because at least the way I read the question we were concerned about going forward. Now, is this something we're going to see more of? This is a congested area down in that area of Connecticut, and I can see a lot of data utilization going up and up, you know, as fast as you can imagine. And I think that's what the question was intended to look at. Are we looking forward seeing any problems besides this? And I think your answer, as I understand it right

now, is no, it's only this one area around the tower that we're going to be moving away from that currently has capacity exhaustion. Am I saying it right?

THE WITNESS (Cheiban): Let me qualify that. So we do projections. I mean, we have a team of engineers that do projections pretty much on an ongoing basis, and we definitely, like as you had said, we are trying to keep up with the increase in usage everywhere. So, you know, currently what we're forecasting is, you know, this site on the ridge is in exhaust right now. We don't even need to project it out. If you project it out, it gets even worse. The first tier neighbors are not currently in exhaust, but that's not to say that there will not come a time where that will happen. The usage keeps increasing, and it could happen.

MR. EDELSON: Okay.

THE WITNESS (Brauer): The foreseeable future.

MR. EDELSON: Right. I understand we're not going out to the year 2100 or something like that, but I think the nature of the question was, your, let's say, operating projection in the

near term you have projected, and no one else has a problem, or no other site has a problem?

THE WITNESS (Cheiban): I mean, essentially that's correct.

MR. EDELSON: I guess one last question. When we were talking about the propagation of the signal, what you basically said was it's the height of the existing tower that's the problem, but I thought we could, or you could, adjust the power of a particular antenna that would affect how far it propagates. Is that a misnomer on my part?

THE WITNESS (Cheiban): No. I mean, as a general statement that is correct. The real issue here is the height of the ridge. I mean, the ridge itself is very high. And so that site covers a very large area. And even -- I mean, we've tweaked the site. It's not like we haven't made any changes to it. Even with the best antennas and so on that's available to us, we still project it's going to be in exhaust. We basically ran out of options.

MR. EDELSON: I'm referring here more to the interference.

THE WITNESS (Cheiban): Right.

MR. EDELSON: That, I mean, in my mind my model is the signal propagates sort of in a big circle.

THE WITNESS (Cheiban): Right.

MR. EDELSON: And that circle is too big, and so it's now overlapping too much with the circle from another antenna and another antenna over here. And one way that you're -- I think what you're proposing is a lower antenna. An antenna at a much lower height will not propagate as big a circle, less interference. I'm asking can you reduce the size of the circle by reducing the power of the antenna? I think I'm hearing you say maybe that's already been tried.

THE WITNESS (Cheiban): Yes, we've modeled different options, and we came to the conclusion that we basically are out of viable options on this site.

MR. EDELSON: Okay. I think that's it for me, Mr. Chairman.

MR. SILVESTRI: Thank you, Mr. Edelson. I just wanted to continue a little bit on Mr. Edelson's train of thought. What I heard is that, and what I see, is that the ridge antenna is basically exhausted. Is that correct?

THE WITNESS (Cheiban): That's correct.
MR. SILVESTRI: All right. And this new tower that's being proposed would provide relief for the ridge also, correct?
THE WITNESS (Cheiban): We would be at some point getting off of that tower on the ridge. So what's important is that the area that's covered by that antenna on the ridge, you know, it contains a certain number of users, and those users, instead of being served from that one sector on the ridge, is going to be served by the three sectors of the new site. So that by itself will provide capacity relief.
MR. SILVESTRI: Okay. So the ridge is going to go away eventually if this is approved?
THE WITNESS (Cheiban): Correct.
MR. SILVESTRI: But we just talked a little while ago about Woodbridge now going to lack coverage in that area. Why wouldn't the next step, rather than building the tower in Hamden, be to build a tower in Woodbridge to plug that gap and give you relief off the ridge?
THE WITNESS (Cheiban): Can you ask that one more time?
MR. SILVESTRI: Sure. The ridge is

going to go away with this proposal?

THE WITNESS (Cheiban): Correct.

MR. SILVESTRI: In the process, you're going to lose coverage in Woodbridge. We just talked about that a few minutes ago.

THE WITNESS (Cheiban): Yes.

MR. SILVESTRI: Okay. So my question to you is, why not ignore the Hamden site that's being proposed and instead build something else in the Woodbridge area to still provide coverage in Woodbridge and relieve the ridge tower?

THE WITNESS (Cheiban): So the sector that is pointed towards Hamden is the one that has the biggest issue as far as capacity, and building something in Woodbridge would not propagate that far because the ridge itself would block it, if I understood your question correctly.

MR. SILVESTRI: So if you build something in Woodbridge, it would only be for Woodbridge and wouldn't cover anywhere else that you think you need the coverage?

THE WITNESS (Cheiban): That's correct. There's the ridge in between the two.

MR. SILVESTRI: I think I got that right. Okay. Thank you. Mr. Lynch.

MR. LYNCH: Just as a follow-up to the Chairman's question, if you build something in Woodbridge, the antennas don't necessarily have to be on a tower to cover that area?

THE WITNESS (Brauer): Yes, that's correct. Whenever we go into an area to look for new sites, we always try to utilize whatever is there, whether it be rooftops, water tanks, existing towers, first.

MR. LYNCH: And I know you're using a lot of, on top of buildings, small little cell towers on buildings.

THE WITNESS (Brauer): Yeah. Well, when we're talking about replacing a large cell site with large area coverage, we would be talking about another macro, not necessarily the smaller.

MR. LYNCH: Thank you.

MR. SILVESTRI: Thank you, Mr. Lynch.

I just have one other follow-up on this one before I go to Mr. Harder. Would a small cell at or near the tunnel, the small cells that are near the tunnel, solve the problem?

THE WITNESS (Brauer): The amount of small cells you have to utilize to take over that site's footprint is not -- it would be too great

of a number of small cells, plus there are areas that don't have the infrastructure in them like just to the north of the parkway there's a lot of hiking areas there that don't have, say, utility pole infrastructure that we could put small cells on. So it's not technically feasible to do that with an area that large with small cells.

MR. BALDWIN: Could I just clarify, Mr. Silvestri?

MR. SILVESTRI: Sure.

MR. BALDWIN: Was your question specific to the tunnel or the coverage footprint for the proposed cell site?

MR. SILVESTRI: No, coverage for the proposed site.

MR. BALDWIN: Thank you.

MR. SILVESTRI: Thank you, attorney.

Mr. Harder.

MR. HARDER: Thank you. Just one question. I guess it's kind of a technical question. How do you define exhaustion?

THE WITNESS (Cheiban): So we have certain criteria for what is acceptable throughput for the users, and the system collects metrics on aggregate, you know, what's the average throughput

that users are getting. And once it dips below that threshold, which it typically can be 3 or 5 megahertz per second, then that site is in exhaust if it's doing that on a consistent basis.

MR. HARDER: And the throughput is data speed?

THE WITNESS (Cheiban): Correct.

MR. HARDER: Thank you. That's all.

MR. SILVESTRI: Thank you, Mr. Harder.

Mr. Hannon.

MR. HANNON: Based on the questions that have been asked and answered, I do not have any further questions.

MR. SILVESTRI: Thank you, Mr. Hannon.

Mr. Lynch.

MR. LYNCH: I have a couple that will play off of some of the questions that have already been asked. But first I want to get through a couple of simple housekeeping type things as far as, you're responsible for the emergency generator?

THE WITNESS (Roberts): That is correct.

MR. LYNCH: Now, I've asked this question before, so it won't be a surprise. Do

you have regular scheduled maintenance and for refilling, and is there any priority towards like the storm we had last week, the nor'easter, for making sure that these propane tanks are full?

THE WITNESS (Roberts): Surely. First of all, we have a 500 gallon tank which gives us 400 gallons of burnable fuel. The maintenance on the generator itself, it's exercised on a weekly or alternate week basis for approximately half an hour. And they monitor offsite with a switch the condition of the generator itself, fuel, and items like that. So there's always a constant knowledge of what's out there at the cell site itself.

A site like this, it's relatively easy to refill as opposed to some of the more mountaintop. So I would assume, you know, if we knew that there was a nor'easter coming up or a hurricane coming up the coast, I would assume that they would hit all the sites that are critical and very remote first and work their way down to the ones that are behind a house, if you will, in Hamden.

MR. LYNCH: You answered the second part of my question already.

THE WITNESS (Roberts): Sorry.

MR. LYNCH: The other thing, if your macrocell goes down due to a storm or some type of outage and it also takes down the phone trunk line, is there any agreement with the phone company, in this case I think it's Frontier, to get that line started? So if the phone truck line goes down and your cell site goes down, no matter what the emergency is -- generator is, is there any priority for getting -- I think it's Frontier --

THE WITNESS (Roberts): In this case I believe it would be Frontier.

THE WITNESS (Cheiban): I'm not sure who the fiber provider is. So we use fiber to the cell site, it's not trunk lines, and they can be provided by different companies. I'm not sure which one is going to be used for this cell site. But there definitely is a process where if there's an outage it gets escalated to them and then to the ratepayer within a certain time frame.

MR. LYNCH: So my follow-up would be, the priority is get the phone line working, and then get the generator to put power to the cell site?

THE WITNESS (Cheiban): So the

generator turns on automatically if we lose power. If there's also a fiber cut and then -- I mean, there is some redundancy in the fiber network, but if that cut is close to the cell site, then it typically takes the site down, and then it would not need to go through a ratepayer process to splice the fiber back.

MR. LYNCH: Now I'm going to go over to your propagation maps, and I'm going to come at it from a different angle. Now, I know, Mr. Brauer, you were there at the last hearing when the public spoke.

THE WITNESS (Brauer): Yes.

MR. LYNCH: And they were talking about they have very good coverage with Verizon. And I'm going to give a shout out to both Verizon and your competitors because your television commercials, radio, say that you've got 95 percent of the country covered, and I think you reached that goal or close to it. There may be a moose up in Maine or Michigan upwards that doesn't get reception, but they don't pay their bill anyhow, so I wouldn't worry about it.

Now, the reason I mention that is because I'm holding a cell phone here in my hand,

and the people that spoke, the lady and the gentleman who said they have good Verizon coverage, they are still looking at this as a cell phone. It's not anymore. It's a communication device. It's an entertainment device. You know, what I want to know as I look at your propagation map, I don't care about coverage, I want to know what the data you're providing, what it's going to bring to the coverage area. I know you've got everyone has so many apps on their phone, they all use Wi-Fi, they all have streaming, they play games, you know, you put, whatchamacallit, MapQuest and Garmin out of business, you know, with all the data that comes through on your phones.

The other day I'm in my club, and I wanted to know what the batting average of Mickey Mantle and Roger Maris had in 1961. They asked their phone. They had it in a minute. So what I want to know from either one is with all this data that you need the capacity for, what are you bringing to these coverage areas? You don't necessarily have to break it down with the different frequencies. I want to know what's coming, or what's there, and then tell me what's

coming.

THE WITNESS (Cheiban): I'm sorry, can you like summarize the question again because I kind of lost the last part?

MR. LYNCH: What I'd like to know is with all the data that you need your extra capacity for, I know it's not for covering, you know, can-you-hear-me-now days anymore, because I've been here long enough to realize that we're asking these questions when you switch from analog to digital. But what I'd like to know really is -- and for all the people out there that are using -- not necessarily using their phone but using tablets, and, you know, laptops also use your service. I don't really understand, because I don't have many of these things on my phone, what it is that is actually -- I guess maybe the question should be, how does all this data get produced and put back to my phone or my tablet, how does that, you know, how does that work and what's coming in the future as far as maybe 5G, or what's this data going to be used for I guess is the simple question?

THE WITNESS (Brauer): Anything where you would bring in a data service from the

internet from and anything that requires data, whether it be OnStar in a vehicle, tablets, laptops, smart TVs, really anything.

MR. LYNCH: And I heard this morning as I'm driving in that Verizon just cut a deal with Disney for some streaming products. Is this something we have to look forward -- it's going to cost $6 to get it. Is that something we have to look forward to in the future that all these apps that we have on our phone we're going to be charged for?

THE WITNESS (Brauer): Well, I would say some you will be charged for, but there's a lot of other free ones out there too.

MR. EDELSON: Can I --

MR. LYNCH: Go ahead.

MR. SILVESTRI: Mr. Edelson, go ahead.

MR. EDELSON: I think what we're getting at is when we look at the coverage, you know, what we think about is the dropped calls, but I think when I look at young people, they want to know can I get a video without buffering at every one of these locations that's in blue or green. That's what I think is -- and that's the data intensity --

MR. LYNCH: That's what I was looking at.

MR. EDELSON: For the score of Roger Maris, I mean, when you think about how much data that is, it's like, you know, 10 bytes or something like that. So you guys can handle that in a heartbeat. But when children out there or young adults say I want to watch Star Wars, all of them simultaneously, I want to watch it on my phone, and he's right next to me using Verizon also, he wants to watch a different Star Wars over here. Now we're talking big amounts of data.

So is there a metric you have that will basically answer the question we've got enough that we can say to people, yes, you can watch video on your phone without buffering at all of the coverage sites?

THE WITNESS (Cheiban): That is definitely our goal. That's basically why we keep increasing the capacity on the existing sites, adding new sites. Basically, we look at this on an ongoing basis, and whenever we see -- we forecast there's going to be a deficiency in the future, we start projects to resolve that.

MR. EDELSON: I think what you're

trying to get at, can we get a map that's -- when we look at this map, or whatever map you're looking at, and it's -- I'm looking over your shoulder -- blue, in that blue area is Verizon also saying not only is there coverage, but there's coverage to provide enough data capacity that you could watch a video without buffering or extensive buffering?

THE WITNESS (Brauer): Well, certainly the coverage maps that we have produced, the blue areas are what Verizon would consider reliable service that you can do whatever you need to do on your device.

MR. EDELSON: Okay. That's quite a commitment, but all right.

THE WITNESS (Brauer): Well, it's not 100 percent guaranteed because there are many other variables, but that's the general --

MR. EDELSON: Okay. I don't know if that helps.

MR. LYNCH: To follow up on Ed's question. In any upcoming applications that you submit, could you break down rather than the coverage areas for can-you-hear-me-now into what data you'll be looking to service within that

area? Is this something you can provide in future applications?

THE WITNESS (Cheiban): So the amount of data that we can handle in a certain area?

THE WITNESS (Brauer): I think we could do something. I have to double check.

MR. LYNCH: The misnomer is most of the people out there, as we saw at the hearing a couple weeks ago, still think this is just a cell phone. They don't realize what's coming. So that's all I'm asking is if you can just give them a little, if they ever decide to read the application, give them a little update on why you need this extra capacity.

THE WITNESS (Cheiban): That's something we'd have to look at. We have not produced that data currently.

MR. SILVESTRI: To try to clarify I think whatever he's trying to get at, the old paradigm was you look at the map and its coverage just to talk. All right. The new paradigm is there's a lot more services that are going out there.

Mr. Brauer, if you mentioned that the blue also represents other services besides

talking on a phone, you know, getting into streaming, getting into whatever apps that are there, I believe that's the type of thing that we're looking for. So it's the new paradigm, as I would call it, you know, not only talking on a phone but other services that's provided.

MR. ALEXANDER: Sort of as, I guess, a follow-up or maybe a clarification, the different frequencies, so the higher frequencies, again, this 2100 megahertz, do those carry more data, do they have a higher maximum throughput if you're operating at a higher frequency versus the 750 megahertz?

THE WITNESS (Cheiban): So they do, but it's not a function of them being -- so it's kind of indirectly. We have more spectrum allocated from the FCC at the higher frequencies. It's actually easier to allocate more bandwidth at the higher frequency than it is at the lower frequency. So our 2100 actually carries more data, but that's kind of indirectly related to the fact that it's a higher frequency.

MR. ALEXANDER: Okay. So an increase on the map in the 750 or 700 megahertz spectrum versus an increase in the 2100 megahertz spectrum,

you can't just compare the coverage in terms of geographic area or the radius that's added, you could be getting additional capacity or bandwidth in the 2100 megahertz frequency for the same sort of geographic area in the 700 megahertz, right? So I guess what I'm trying to say is there's not necessarily a one-to-one, you're losing some 700 megahertz coverage but you're gaining some 2100 megahertz coverage, that 2100 megahertz coverage could have a greater impact on capacity and user experience than the lost 700?

THE WITNESS (Cheiban): That is correct. If I understand your question correctly, we get more bang for the buck on the 2100 than we do at 700 for capacity. 700 does better with coverage. 2100 does better with capacity.

MR. ALEXANDER: Okay. Thank you.

MR. SILVESTRI: Mr. Lynch.

MR. LYNCH: Did I hear right that the -- and you can confirm it or not -- that the FCC is going to open up or has opened up the 600 megawatt frequency?

THE WITNESS (Brauer): I believe the 600 megahertz was already finished because I know T-Mobile had gotten some. I don't believe Verizon

got any of that.

MR. LYNCH: Okay. So that went out to bid in auction?

THE WITNESS (Brauer): Again, I'm pretty sure that's already done.

THE WITNESS (Cheiban): That happened late last year.

MR. LYNCH: Okay. You just verified that. I had heard it, and I just didn't know whether that was the case.

THE WITNESS (Cheiban): That one is done. The FCC offers spectrum every few years.

MR. LYNCH: That's all, Mr. Chairman.

MR. SILVESTRI: Thank you, Mr. Lynch.

I have one question for clarification. And if I could have you reference Exhibit G, the site search map. The legend on the bottom left has a box that has existing towers within 4 miles of the proposed facility. The question I have for you, are those all Verizon towers?

THE WITNESS (Cheiban): No, and we're not on every single one of these towers.

MR. SILVESTRI: So the follow-up question, if they're not, did you consider tower sharing on any of those towers to try to solve

your problem?

THE WITNESS (Cheiban): Yes, we did. We actually prefer to be on existing towers, it's a faster, smoother process for us, but in this case we could not find a tower that would serve our purposes, for an existing building that would serve our purposes.

MR. SILVESTRI: From what area? I mean, from capacity, from overlap or --

THE WITNESS (Cheiban): Since we're taking down one site, we need to make sure that we cover the areas that were previously or currently covered by the site. And so, you know, we needed to be in a more restricted geographical area that would meet our objective, and there were no existing structures in there.

MR. SILVESTRI: Thank you. Mr. Mercier, did you have a follow-up?

MR. MERCIER: Sure. Thank you. Just to reiterate some of the things you've talked about. So looking at the coverage plots, now you're stating that the blue, roughly, would correspond to acceptable data speeds for all types of apps and other uses. Is that correct?

THE WITNESS (Brauer): Yes.

MR. MERCIER: So when you look at the Woodbridge area, there's some areas with no color, but there is still service there, just not up to Verizon's standards; is that correct? I mean, there's sites on the other side of the ridge that are not shown.

THE WITNESS (Cheiban): Yeah, so a couple of things. We do need to enhance the coverage in the Woodbridge area, but this map is not showing you our entire network. It's basically showing only the first tier neighbor of the site that we're discussing, but we do need to enhance the coverage in Woodbridge, that is true.

MR. MERCIER: Okay. Then we talked about when this site, if it's constructed and goes online, then you would decommission entirely the West Rock Ridge site, or are you going to keep one or two sectors up there to cover Woodbridge or some other location?

THE WITNESS (Cheiban): That's going to depend on the progress we make on Woodbridge. It may go either way. It may be that we need to keep one or two sectors temporarily until we have our site that covers the area in Woodbridge.

MR. MERCIER: Just out of curiosity,

why wouldn't -- it's probably another issue, but why wouldn't the West Rock Ridge tower serve that Woodbridge area rather than take it down and build something entirely new, is it too limited geographically?

THE WITNESS (Cheiban): I mean, it's a possibility. I think we also need more coverage in Woodbridge, and there are existing structures in that area. So we anticipate that we'll be able to do something without having to build a brand new facility, but I don't have all the details right now in my mind to discuss it in detail.

MR. MERCIER: Okay. But it is anticipated that eventually all the equipment that Cellco has on this particular West Rock Tower will be removed?

THE WITNESS (Cheiban): Eventually, that's correct.

MR. MERCIER: Just one other question regarding your interference issues. I understand the West Rock Ridge tower projects quite a ways. Why is that signal so dominant though? Why wouldn't a user just pick up the closer tower rather than pick up a tower that's on West Rock Ridge that might be miles out?

THE WITNESS (Cheiban): Because the tower on the ridge has, you know, what we call line of sight to those areas, so basically the signal is not obstructed by any buildings or anything. And it still reaches those far away areas with a stronger signal than a site that might be closer but does not have line of sight.

MR. MERCIER: Thank you.

MR. SILVESTRI: Just a follow-up on the line of sight aspect of it. Hypothetically, if the new tower is approved and built and you still look at coverage for Woodbridge, could you turn the antenna that are on the ridge, point it to Woodbridge and get line of sight coverage that way?

THE WITNESS (Cheiban): So we have sectors, we have antennas on the current site on the ridge that do cover Woodbridge, and that's what we were just discussing. If we don't have -- you know, if we have not enhanced our coverage in Woodbridge, then we might keep those antennas there until we're ready to decommission. So we'd basically do a decommission in stages. We would not be taking out all the sectors at once. So that will depend on how things play out in

Woodbridge.

MR. SILVESTRI: But it's not a question of just trying to turn and redirect them?

THE WITNESS (Cheiban): We don't need to turn them. They are already pointed in that direction. Some of them are already pointed. So we point in different directions.

MR. SILVESTRI: Thank you. Any other questions from Council members?

Mr. Edelson.

MR. EDELSON: Further to Mr. Lynch. So doing a speed test right here right now in this room where I think we would say this is an area that has coverage for Verizon, at least from my bars, that seem pretty good, but I've got 4.1 download megabits per second and upload .36. From Verizon's performance objectives, is that acceptable? Unacceptable? How would you view those kinds of numbers? Would that be an example of possible congestion, or I should say capacity exhaustion?

THE WITNESS (Cheiban): Those numbers are marginal. They are basically like right on the edge near what's considered unacceptable. And that's typically a problem inside buildings, you

know, even -- that's basically a problem that we face whenever you're inside a building that doesn't -- you know, where the signal doesn't propagate for various reasons, you know, whether windows or whatnot. It's a common problem.

MR. EDELSON: But again, this goes to the maps. That's why I brought it up. Because we show the map, the color that says inside buildings. And I know I can get a phone call here. I just got one. But from the standpoint of my trying to do something that was data intensive like a video, I think I'd be a very frustrated user and I'd say I don't have coverage in this building at this particular point in time. And I think that's what we're trying to move to.

And I don't know, Mr. Chairman, but maybe this is a bigger issue than just this particular project, that we've got to think about are the coverage maps really what we need to be looking at in the standpoint of the old approach to can I make a phone call or can't I, important in and of itself, but do we need a different kind of exhibit for us to be able to say the public need is different today than it was 20 years ago, how do we look at that public need and evaluate

it.

MR. SILVESTRI: Point well taken, Mr. Edelson. The other thing we have to watch is where do we draw the line on proprietary information.

MR. EDELSON: Well, that does lead me to my other question because I've been obviously frustrated here that I'm looking for some kind of metric, and I kind of was half expecting the answer would be we have that but we can't share it with you, but I didn't hear that. So I'm glad you said that, because as I sit here right now -- and I'm not saying it's going to be my final answer -- but I'm going to say I'm thinking it's insufficient. You're making an argument about not coverage but capacity, and yet we don't have anything that helps us to look and say you're right, you do not have sufficient capacity in that area, it needs to be addressed with a new tower. And I'm unable right now to put my hands on the data that tells me you've made that case. Now, if there's proprietary reasons, we have ways to deal with that, but I didn't hear that argument so --

MR. SILVESTRI: Mr. Lynch had a follow-up.

MR. LYNCH: All the things we were discussing going into the coverage area more or less pertain to residential or private usage. Is there any difference that their data would be applied to commercial or business usage?

THE WITNESS (Brauer): I'm not aware of any difference for commercial or industrial versus residential usage.

MR. LYNCH: Thank you.

MR. SILVESTRI: Any additional questions?

MR. BALDWIN: Mr. Chairman, if I might, maybe perhaps on some tortured redirect, because I hear Mr. Edelson's point, and I think it's a good one, but I don't want to discount entirely the use of the propagation maps that have been provided in the application because they do provide evidence of a need.

REDIRECT EXAMINATION

MR. BALDWIN: And perhaps the missing link on the coverage plot, and I'll ask Mr. Brauer and Mr. Cheiban, if you provided a coverage plot that took the beta sector coverage off the existing West Rock Ridge tower and did not superimpose the coverage from the proposed Hamden

relo site, would there be gaps in service northeast of the ridge in the areas currently served by that beta sector antenna?

THE WITNESS (Cheiban): Yes.

MR. BALDWIN: So --

THE WITNESS (Cheiban): Taking away both sites.

MR. BALDWIN: Taking away both sites, would there be gaps in service that would open up, and those gaps would be shown on a propagation map similar to the ones that have been provided?

THE WITNESS (Cheiban): Correct.

MR. BALDWIN: So the second map showing proposed Hamden relo coverage with the existing surrounding sites show coverage in those areas that might otherwise show as gaps in service if the West Rock Ridge beta sector antennas were taken off the air? That got convoluted. I apologize.

THE WITNESS (Cheiban): Say it one more time.

MR. BALDWIN: So the coverage that we see in the proposed map, the second set of coverage maps shows --

THE WITNESS (Cheiban): With the new

site.

MR. BALDWIN: With the new site, yes -- shows coverage in those areas that would otherwise be somewhat void of coverage if you take down the existing West Rock Ridge beta sector antennas?

THE WITNESS (Cheiban): Correct.

MR. BALDWIN: If you take down the beta sector West Rock Ridge antennas without filling in those gaps in service, would you in some respects also be satisfying some of your concerns for interference with some of those sites further away?

THE WITNESS (Cheiban): We would, but at the cost of having a big coverage gap.

MR. BALDWIN: I guess my point -- and you raise a good point, Mr. Edelson, with respect to the capacity issue, but I also don't want to lose focus on the fact that there is a coverage benefit. That coverage area that is provided -- if you don't have coverage, you don't provide any of these services, right, voice, data, anything? So the coverage benefit is real, and I think perhaps we could have provided you with that additional map that showed that void in service, and perhaps that's on us, we should have also

provided that.

But we hear you on the other issues because I think that's a fair point. I think it's a fair point. It's been one we've struggled with for years, to be honest with you, on the whole capacity issue. And we've tried a couple of times to satisfy that question, and we'll think harder about it as we go forward as more of these sites become more capacity issues than coverage issues in particular.

MR. SILVESTRI: Thank you, Attorney Baldwin.

Any other questions from the Siting Council members or Mr. Mercier?

(No response.)

MR. SILVESTRI: Attorney Marino?

MR. MARINO: No questions.

MR. SILVESTRI: Thank you. Before closing the evidentiary record of this matter, the Connecticut Siting Council announces that briefs and proposed findings of fact may be filed with the Council by any party or intervenor no later than November 21, 2019. The submission of briefs or proposed findings of fact are not required by this Council, rather we leave it to the choice of

the parties and intervenors.

Anyone who has not become a party or intervenor, but who desires to make his or her views known to the Council, may file written statements with the Council within 30 days of the date hereof.

The Council will issue draft findings of fact, and thereafter parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, no new evidence, no argument, and no reply briefs without our permission, will be considered by the Council.

I hereby declare this hearing adjourned. I thank you all for your participation. And please drive safely.

(Whereupon, the witnesses were excused, and the above proceedings were adjourned at 2:12 p.m.)

CERTIFICATE

I hereby certify that the foregoing 66 pages are a complete and accurate computer-aided transcription of my original stenotype notes taken of the Council Meeting in Re: DOCKET NO. 486, TARPON TOWERS II, LLC APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A TELECOMMUNICATIONS FACILITY LOCATED AT 796 WOODIN STREET, HAMDEN, CONNECTICUT, which was held before ROBERT SILVESTRI, HEARING OFFICER, at the Connecticut Siting Council, Ten Franklin Square, Hearing Room Two, New Britain, Connecticut, on Tuesday, October 22, 2019.

Lisa L. Warner, CSR 061
Court Reporter
BCT REPORTING SERVICE
55 WHITING STREET, SUITE 1A
PLAINVILLE, CONNECTICUT 06062

I N D E X

I n d e x (Continued):

APPLICANT'S EXHIBITS

(Received in evidence)

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

(CELLCO) EXHIBITS

(Received in evidence)