1	STATE OF CONNECTICUT
2	CONNECTICUT SITING COUNCIL
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4	Docket No. 481
5	Application From Cellco Partnership d/b/a Verizon
6	Wireless for a Certificate of Environmental
7	Compatibility and Public Need for the Construction,
8	Maintenance and Operation of a Telecommunications
9	Facility located at 667, 665, 663, and 663R Main Street
10	in Cromwell, Connecticut
11	
12	Regular Hearing held at the Cromwell Town
13	Hall, 41 West Street, Cromwell, Connecticut, Thursday,
14	April 19, 2018, beginning at 3:00 p.m.
15	
16	Held Before:
17	ROBIN STEIN, Chairman
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1	Appearances:
2	Council Members:
3	JAMES J. MURPHY, JR.
4	Vice Chairman
5	
6	ROBERT HANNON,
7	DEEP Designee
8	
9	MICHAEL HARDER
10	DR. MICHAEL W. KLEMENS
11	ROBERT SILVESTRI
12	EDWARD EDELSON
13	DAVID LYNCH
14	
15	Council Staff:
16	MELANIE BACHMAN, ESQ.,
17	Executive Director and
18	Staff Attorney
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20	MICHAEL PERRONE,
21	Siting Analyst
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     Appearances:(cont'd)
     For the Applicant:
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          Hartford, Connecticut 06103
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THE CHAIRMAN: Good afternoon. I would like to call to order this meeting of the Connecticut Siting Council on Docket 481, today, Thursday, April 19, 2018, approximately 3 p.m.

My name is Robin Stein. I'm Chairman of the Connecticut Siting Council. Other members of the Council present are Senator James Murphy, Vice Chairman; Mr. Hannon, designee from the Department of Energy and Environmental Protection; Mr. Edelson; Dr. Klemens; Mr. Silvestri; Mr. Harder; and Mr. Lynch.

Members of our staff present are Melanie Bachman, our Executive Director, Staff Attorney; and Michael Perrone, our siting analyst.

This hearing 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 Cellco Partnership d/b/a Verizon Wireless for a certificate of environmental compatibility and public need for the construction, maintenance and operation of a telecommunication facility located at 667 665, 663 and 663R Main Street in Cromwell, Connecticut. The application was received by the Council on February 23, 2018.

As a reminder to all, off-the-record communication with a member of the Council or a member of the Council staff upon the merits of this application is prohibited by law.

The party to the proceeding is as follows, the applicant Cellco Partnership, Verizon Wireless, represented by Attorney Baldwin of Robinson & Cole. We'll proceed in accordance with the prepared agenda, copies of which are available next to Mr. Lynch on my left. Also available are copies of the Council's citizen guide to Siting Council procedures.

At the end of this evidentiary session we will recess and resume again at 6:30 for the public comment session. The 6:30 p.m. public comment session will be reserved for the public to make brief oral statements into the record.

I wish to note that the applicant, including their representatives and witnesses is not allowed to participate in the public comment session. I also wish to note for those who are here and for the benefit of your friends and neighbors who are unable to join us for the public comment session, that you or they may send written statements to the Council within 30 days of the

date hereof and such written statements will be 1 2 given the same weight as if spoken at the hearing. A verbatim transcript will be made in 3 this hearing and deposited with the town clerk's 4 office in Cromwell and Rocky Hill for the 5 convenience of the public. 6 Is there any public official who would 7 8 like to make a statement at this time. 9 10 (No response.) 11 12 THE CHAIRMAN: I wish to call your attention to the items shown in the hearing 13 program marked as Roman numeral 1D, items one 14 15 through 6, D9. Does the applicant have any objection to the item the Council has 16 17 administratively noticed? 18 MR. BALDWIN: No objection, Mr. Chairman. 19 20 THE CHAIRMAN: Accordingly, the Council 21 hereby administratively notices these existing 22 documents, statements and comments. 23 Attorney Baldwin, will you present your witness panel for the purpose of taking the oath? 24 Thank you, Mr. Chairman. 25 MR. BALDWIN:

Our witness panel consists today, up to my far left -- or right, Anthony Befera, principal engineer, real estate, regulatory with Verizon Wireless; Mark Brauer a radiofrequency engineer responsible for the Cromwell North Two proceeding. To my right, Mr. Robert Burns, a professional engineer and civil engineer for the project with All-Points Technology. Next to Mr. Burns is Matthew Gustafson, professional soil scientist with All-Points Technology. And last but not least, Mike Libertine, the Director of Siting and Permitting for All-Points Technology. And I offer them to be sworn at this time, Mr. Chairman. THE CHAIRMAN: Can you please rise for swearing in? 

1	ANTHONY BEFERA,
2	MARK BRAUER,
3	ROBERT BURNS,
4	MATTHEW GUSTAFSON,
5	MIKE LIBERTINE,
6	called as witnesses, being first duly sworn by the
7	Executive Director, were examined and testified on
8	their oaths as follows:
9	
10	MR. BALDWIN: Mr. Chairman, we have a
11	series of exhibits that we'd like to have admitted
12	to the record. I offer them now for
13	identification purposes subject to verification.
14	They are listed in the hearing program
15	under Roman 2, subsection B, Exhibits 1 through 4,
16	and include the application and the bulk file
17	exhibits listed in the program, the affidavit
18	publication, a sign posting affidavit, and the
19	applicant's responses to the Council
20	interrogatories dated April 12, 2018.
21	If I could ask my witnesses, did you
22	prepare or assist in the preparation of those
23	exhibits listed in the hearing program under Roman
24	2B, items 1 through 4?
25	Mr. Befera?

1	THE WITNESS (Befera): Yes.
2	MR. BALDWIN: Mr. Brauer?
3	THE WITNESS (Brauer): Yes.
4	MR. BALDWIN: Mr. Burns?
5	THE WITNESS (Burns): Yes.
6	MR. BALDWIN: Mr. Gustafson?
7	THE WITNESS (Gustafson): Yes.
8	MR. BALDWIN: Mr. Libertine?
9	THE WITNESS (Libertine): Yes.
10	MR. BALDWIN: Do you have any
11	corrections, amendments or clarifications to any
12	of those exhibits that you would like to offer at
13	this time? Mr. Befera?
14	THE WITNESS (Befera): No.
15	MR. BALDWIN: Mr. Brauer?
16	THE WITNESS (Brauer): I do have one
17	minor correction in the application behind tab 6.
18	The coverage plots should read for the blue
19	existing RSRP, neg 85 in building; and the green
20	existing RSRP, neg 95 should be in vehicle, and
21	that is for all four of the plots. That's all.
22	MR. BALDWIN: This is the legend in the
23	lower left-hand corner of those plots.
24	Mr. Burns, any corrections,
25	modifications or amendments to offer?

THE WITNESS (Burns): Yes. Based on the new power location under tab one, I would like to correct under tower location under coordinates. The new coordinates should be 41 degrees, 37 minutes, 56.625 seconds north by 72 degrees, 39 minutes, 10.727 seconds west.

> In addition under Roman numeral two, item E in the second sentence, the distance to the wetlands, the closest wetland area to the facility is located approximately 160 feet with the new location, and the additional wetland area exists approximately 360 feet to the northwest.

> > That's it.

MR. BALDWIN: Mr. Gustafson, any amendments or corrections to make?

THE WITNESS (Gustafson): Yes, behind tab eleven in the wetlands inspection report the second page of the wetland section field form, in the second paragraph under general comments the nearest wetland should be identified as 160 feet to the west in the first sentence. And in the second it should be 360 feet north of the proposed facility.

Thank you.

MR. BALDWIN: Mr. Libertine?

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THE WITNESS (Libertine): I just have --1 2 it's not really a modification. It's just a clarification just as a reminder to the Council as 3 we're reviewing any of the visibility report 4 information and photo simulations. That was all 5 prepared from the original site location which has 6 shifted approximately a hundred feet, and I'd be 7 8 glad to discuss what that change may or may not 9 do. MR. BALDWIN: And with those 10 corrections, modifications and clarification are 11 12 the exhibits listed in the hearing program under Roman 2B, items one through four true and accurate 13 to the best of your knowledge? 14 Mr. Befera? 15 16 THE WITNESS (Befera): 17 MR. BALDWIN: Mr. Brauer? 18 THE WITNESS (Brauer): MR. BALDWIN: Mr. Burns? 19 20 THE WITNESS (Burns): 21 MR. BALDWIN: Mr. Gustafson? 22 THE WITNESS (Gustafson): Yes. 23 MR. BALDWIN: Mr. Libertine? THE WITNESS (Libertine): 24 25 MR. BALDWIN: And do you adopt that

1	information as your testimony in this proceeding?
2	Mr. Befera?
3	THE WITNESS (Befera): Yes.
4	MR. BALDWIN: Mr. Brauer?
5	THE WITNESS (Brauer): Yes.
6	MR. BALDWIN: Mr. Burns?
7	THE WITNESS (Burns): Yes.
8	MR. BALDWIN: Mr. Gustafson?
9	THE WITNESS (Gustafson): Yes.
10	MR. BALDWIN: Mr. Libertine?
11	THE WITNESS (Libertine): I do.
12	MR. BALDWIN: Mr. Chairman, I offer them
13	as full exhibits.
14	THE CHAIRMAN: Okay. The exhibits are
15	admitted.
16	We'll now begin with cross-examination
17	by Mr. Perrone.
18	MR. PERRONE: Did you fly a balloon
19	today?
20	THE WITNESS (Libertine): Yes, we've had
21	a red weather balloon at tethered to a string
22	height of 120 feet. It's approximately between
23	three and four feet in diameter, the balloon
24	itself on top of the string, and that's been up
25	since about 7:25 this morning and will be up until

1 6 p.m.

MR. PERRONE: Describe the weather conditions during the balloon flight?

THE WITNESS (Libertine): It's been relatively calm all day. So that the balloon has essentially been at its full height, the proposed height of the tower for the vast majority of the day.

We have had intermittent light rain and a fairly low cloud cover and ceiling, but visibility is probably in the neighborhood of about a mile or two. So overall it has not -- it has not been too bad for -- overall for the balloon float, certainly to get an idea for the near views.

MR. PERRONE: Was the balloon located at the originally proposed location, or the hundred-foot shift to the east location?

THE WITNESS (Libertine): It was in the, what we're calling the modified or the shifted position, a hundred feet to the east of the originally proposed location.

MR. PERRONE: And with regard to that hundred-foot shift, is that an actual revision or an alternative, just to be clear?

1 THE WITNESS (Befera): It's a revision. 2 MR. PERRONE: Okay. And in response to 3 Council interrogatory number 15, there was discussion about the neighbors requesting the 4 Gardener's Nursery property to be explored, and 5 Cellco did that. It was mentioned at the 6 November 30, 2015, public information meeting. 7 8 Did you receive any other comments or 9 recommendations from that public information meeting? 10 THE WITNESS (Befera): 11 12 Next, I'd like to get more MR. PERRONE: into the 100-foot shift and some materials that 13 might possibly change as a result of that. 14 15 For example, the number of homes within a thousand feet. The originally proposed was 56. 16 17 Would that number change? 18 THE WITNESS (Burns): Yeah, with the shift the number of homes goes to 58 homes. 19 of the ones across the street have moved into that 20 21 thousand-foot radius. We lost a couple, gained a 22 couple, but overall it's 58 now. 23 MR. PERRONE: And I understand from the response to interrogatory 4 there's 450 24 25 cubic yards of net cut. Would that amount change?

1 THE WITNESS (Burns): 2 MR. PERRONE: What would you do with this net cut material? Would it be hauled off 3 site? 4 THE WITNESS (Burns): More than likely 5 it will be hauled off site. If there are areas 6 7 within the property that the property owner would 8 like to use it, they certainly can, but for all 9 intents and purposes it will be hauled off site. MR. PERRONE: And also with the 10 hundred-foot shift, page 23 of the application has 11 12 all the cost numbers. Would any of these cost numbers be impacted by the shift? 13 THE WITNESS (Burns): No. 14 15 MR. PERRONE: Now I'd like to get into any possible impacts of the RF as a result of the 16 17 shift. Would your proposed coverage distances or 18 coverage areas change as a result of the shift? THE WITNESS (Brauer): No. 19 The area 20 itself is -- is fairly flat. We don't anticipate 21 any change from a hundred-foot shift. 22 MR. PERRONE: So your propagation maps 23 with the existing proposed would remain essentially the same? 24 25 THE WITNESS (Brauer): Yes, they would.

1 MR. PERRONE: And would your proposed 2 capacity relief remain about the same? THE WITNESS (Brauer): Yes, it would. 3 MR. PERRONE: I understand in your 4 application under tab 17 there was an FAA 5 analysis, I believe the same elevation but 6 slightly different coordinates. 7 8 Would the shift impact your FAA 9 analysis? THE WITNESS (Brauer): It should not. 10 MR. PERRONE: I would like to get into 11 12 the visual impact areas. How would this shift affect the visibility of the tower from 16 Sunset 13 Drive, which is in the southwest? 14 THE WITNESS (Libertine): And just for 15 16 clarification, that's the property that abuts to 17 the southwest where we were standing essentially 18 at the edge of the driveway, or no? MR. PERRONE: Yes. 19 20 THE WITNESS (Libertine): We have a 21 photo that is actually taken from the end of the 22 cul-de-sac looking into the driveway. 23 photo number 13, I believe. So if I could direct everyone's attention to behind tab 9 to photo 24 number 13. 25

Again, we're looking at the end of the cul-de-sac looking in towards the property. Our subject property would be to the right, and in the right of the photo are the line of arborvitaes and white pines that we were standing alongside as we were viewing that property.

Essentially we'd be looking at a slight shift in this particular photo to the right, or eastward. I don't think it would be a substantially different view. As I say, the shift would probably more or less center it over the deciduous tree that is to the right.

I would offer, though, as you enter the property the -- the line of sight does become more obstructive -- obstructed, excuse me, because of the presence of the line of the arborvitaes that are essentially in the backdrop behind the cars there.

So I think the shift away certainly helps with the -- I guess if you would use the term -- with the tower "looming" over that property. It tends to push it a little bit further away and would help mute those views to some degree. But again, from that particular location we're looking at in the photograph, which

is not in the property proper, I don't think it would be substantially different.

MR. PERRONE: So in terms of the perceived height it would be about the same, but it's more about shifting it where it looks further away?

THE WITNESS (Libertine): Correct.

Because we're relatively flat the elevation is essentially the same as the original location from where we flew this. So I don't -- don't believe the elevation would appear any different, but certainly we'd be talking about a shift to the right.

MR. PERRONE: Okay. Would your year-round and seasonal visibility areas in acreages remain comparable with the shift?

THE WITNESS (Libertine): I think so.

It would be -- it would be very minor. In terms of the mapping that we present in the back of the report I don't think it would really change anything substantially. Certainly some of the specific views will change similar to what we just discussed.

Going back to that location nextdoor, one of the main benefits I see from the shift to

the east is certainly any of the lower portions of the facility, including the fence would certainly be obscured. There may have been some areas on that property where they may have been able to see through the original site. So there's certainly an improvement from that standpoint as well.

MR. PERRONE: Was there anything else in the visibility analysis that you believe would change as a result of the shift?

THE WITNESS (Libertine): Again, not substantially. I do think, as Mr. Burns indicated, that the shift a little bit further to the road may actually make the views a little bit more prominent, but it's a very short stretch. And when I say short, it's really less than the length of a car where you can actually see that tower from Main Street itself.

So those, those residents across the street that now fall within a thousand feet of the tower, I don't think it changes the view substantially for them, but certainly it can be a slight alteration.

If we had compared and had two balloons out there you probably would have seen it, but it would be -- to the naked eye it probably would not

1 really account to a whole heck of a lot. 2 MR. PERRONE: Okay. Now I'd like to turn to wildlife. My understanding is the 3 consultations with DEEP and U.S. Fish and Wildlife 4 were before this 100-foot shift. 5 6 Would the shift have any impact on the 7 conclusions regarding the northern long-eared bat 8 or the eastern box turtle? 9 THE WITNESS (Burns): No, they would The site conditions between the two 10 not. different locations are negligible. 11 12 MR. PERRONE: And regarding the northern 13 long-eared bat, did you receive a response from U.S. Fish and Wildlife within the 30-day period? 14 15 THE WITNESS (Burns): No, we did not. THE WITNESS (Libertine): And that's not 16 17 uncommon. MR. PERRONE: And I understand there's 18 19 some proposed seasonal restrictions on tree 20 clearing for the northern long-eared bat and 21 migratory birds. Would that not be applicable 22 because no tree clearing is proposed? 23 THE WITNESS (Burns): That is correct. MR. PERRONE: Okay. And I understand 24 25 the nearest important bird area, Great Meadows in

Rocky Hill -- about two and half miles to the north. How would that be impacted by the proposed facility?

THE WITNESS (Burns): I do not believe it would be impacted due to the two and half mile separating distance between the facility and that important bird area.

MR. PERRONE: Okay. One last item on visibilty. I understand in this proposal there's a four-sided or square platform instead of a triangular platform. Would there be a difference in visual impact with the square platform?

THE WITNESS (Libertine): Not substantially. Again, a selective amount of locations where you may get the full face of the square platform may look a little bit different, but in terms of its magnitude on the skyline it should not change significantly at all.

MR. PERRONE: Now turning to RF. Does Cellco have any plans to use the fourth side of the platform? I understand you're occupying three?

THE WITNESS (Brauer): Not currently, but it certainly is something if we decide to in the future we would.

1 MR. PERRONE: In response to Council 2 interrogatory 19, Cellco discusses the feasibility of small cells as an alternative. Would that 3 answer also apply to a DAS system? 4 THE WITNESS (Brauer): 5 6 MR. PERRONE: And on response to Council interrogatory 22 we have the dropped calls. 7 8 understand we have six out of the seven that don't meet the current standard. Would the proposed 9 facility allow any of those to meet the standard? 10 THE WITNESS (Brauer): Yes, it certainly 11 would. 12 You have several sites that are essentially overreaching where they're really 13 useful, and in taking away that coverage area you 14 15 will certainly improve the dropped calls statistics. 16 17 MR. PERRONE: Would you know which sectors you would expect the improvement in? 18 THE WITNESS (Brauer): Certainly the 19 20 Portland Alpha called out in the table in the 21 interrogatories. Cromwell North absolutely 22 would -- would improve. Rocky Hill two would 23 certainly improve. MR. PERRONE: Okay. Would the proposed 24

facility provide any capacity relief to the alpha

25

sector of the Portland facility, or is that too far away?

THE WITNESS (Brauer): Yeah, it would to a lesser extent than the other two that we outlined, the Cromwell north and the Rocky Hill two, but Portland is certainly serving in the area and it would benefit from the capacity offload.

MR. PERRONE: In the tower elevation drawing sheet A1, at the very top of the tower it has two MDBs -- Mary, Dan, Bill. What does MDBs stand for?

THE WITNESS (Burns): It's main distribution box.

MR. PERRONE: In response to Council interrogatory number five I understand that Cellco does not anticipate the need for blasting and a final Geotech survey will be performed. Would mechanical chipping be a preferred method to remove rock if you need to?

THE WITNESS (Burns): Yes, but we don't anticipate -- due to the fact that we're holding the existing grade out there and we're just boxing out for -- for the section, I don't anticipate hitting rock out there. But yes, it would be the preferred method if it did happen.

1 THE CHAIRMAN: Mr. Lynch has a followup. 2 MR. LYNCH: Just a followup on the blasting or the chipping. 3 If either were done would you give 4 advanced notice to all the neighbors? 5 THE WITNESS (Burns): I think we 6 certainly could, yes -- so, yes. 7 8 MR. LYNCH: A better answer. 9 MR. PERRONE: Turning to pages 19 and 20 of the application at the very bottom it mentions 10 a wetlands protection and restoration plan has 11 been developed, and see sheet C5. Is there a 12 wetland protection restoration plan? 13 I didn't see a C5 sheet. 14 15 THE WITNESS (Gustafson): I believe that 16 that was a holdover from the original tower 17 location which was substantially closer to wetland I do not believe that -- that is no longer 18 relevant in the new tower location, the additional 19 20 separating distance. So we're not currently 21 proposing a wetland protection plan. 22 MR. PERRONE: Are there some features in 23 the turtle protection plan that would be protective of wetlands? 24 THE WITNESS (Gustafson): Certainly. 25

The future such as, you know, the spill protection and the educational pieces would certainly overlap the wetland protection, yes.

MR. PERRONE: Okay. In the wetland inspection report, tab eleven, the wetland inspection field form -- actually the next page, I'm sorry. Page 2 under vernal pools it checks no for in wetland areas.

Is it correct to say that no vernal pools were identified at the project site as well?

THE WITNESS (Gustafson): That is correct.

MR. PERRONE: And moving onto the generator topic. I understand the size increased from 20 kW to 30.

Could you explain why it increased?

THE WITNESS (Befera): For a couple of reasons. First, it was a -- it's a -- it's a standard that was released by our headquarters going forward, and that was triggered by our desire. When Samsung starts producing the new dual-band radio heads we are going to replace the Nokia Alcatel Lucent single-band radio heads with Samsung dual-band radio heads.

And what that means is currently the

technology allows for -- you need a radio head for each of your four different frequencies that you're operating ultimately on the tower.

And similar with the new antenna structures, you see how they're too close together. Similar to those now, one being able to do 1900 and 2100 megahertz, and the other one being able to do 700 and 850 legacy megahertz.

The dual-band Samsung radio heads, which are not yet available for purchase but are supposed to become available later this year, will do the same thing and they'll be able to handle two of those four frequencies each per face.

So we should be able to consolidate from 12 radio heads to six radio heads, but these new dual-band radio heads, they take more juice. So -- and not only that, but the base band unit or the base station, the BBU, the Samsung product also draws more juice from the Alcatel Lucent BBU.

> THE CHAIRMAN: Senator Murphy?

SEN. MURPHY: In follow up to that I have a similar question, but you kind of answered my initial inquiry.

> But is it 30 you need, or 25 kW? THE WITNESS (Befera): Well --

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SEN. MURPHY: Because your answer goes on that you're sharing the generator. You would have a 30 kW. So it applied to me that you need the 25, but with your explanation you may need 30, and you're expecting the new party that comes on to be just a 20. Do I have that right? THE WITNESS (Befera): Well, actually if

THE WITNESS (Befera): Well, actually if the folks in our -- the smart people in our headquarters, they did the calculations and they said that we need, just for our stuff once we evolve to the Samsung product, we need 30 just for ourselves.

SEN. MURPHY: So you need 30. So if somebody else comes on and it's to be shared, the generator has got to be 30 plus whatever they need if they have the same type of heads that you're going to use?

THE WITNESS (Befera): Sure.

SEN. MURPHY: You're going to have to go up to 60 then.

THE WITNESS (Befera): Well, it's something that we do quite often when we do generator sharing. If another carrier comes along and they also want generator backup, then they

have the option of trying to get approval to place their own, or they could replace ours with one that's sized accordingly.

Whether they say they need 20, they can replace it with a 50. If they say they need 30 kW as well, they can replace with a 60 and we let them take the one that's there for use at another site.

SEN. MURPHY: I was wondering whether you -- but you've answered it to start with. 30 is what you need. I was wondering whether 25 is what you needed, but you're going with 30 to have a little bit extra. When you throw it in with the second carrier it was 50. It was just curiosity.

Okay. I'm satisfied. Thanks.

THE CHAIRMAN: I just have a theoretical question. Can you foresee in the future that you could have a combination instead of your system with diesel, in this case, it could be a combination of battery storage and solar?

I don't know how much solar you would need to, but I'm just thinking if where -- some of us anyway think that's -- would like to move in that direction at some point, and I know battery storage is becoming much more feasible.

THE WITNESS (Befera): I think to -- to 1 2 get 200 amps of consistent power from solar would require such a significant leased area you can no 3 longer consider it a tower compound. Now it's a 4 solar field with a tower in it. 5 THE CHAIRMAN: Okay. I didn't know how 6 much. 7 8 THE WITNESS (Befera): 200 amps. 9 THE CHAIRMAN: Okay. Mr. Lynch? 10 MR. LYNCH: Just a followup to that. 11 12 And could you use a fuel-cell as a backup if you had the proper -- you have natural 13 gas or propane? 14 15 THE WITNESS (Befera): We did look into fuel cells, and hydrogen fuel cells. But the 16 17 problem with that is that when you've got two days 18 to run these, you have an extended power outage, a 19 week, ten days and you've got 600 sites that you 20 need refilled every other day. 21 And you've got people running all over 22 the place trying to keep these things topped off 23 for you and not from running out. It's not as easy to refill hydrogen as it is to have people 24

refill low-sulfur diesel fuel or propane.

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MR. LYNCH: If you use natural gas to fire the fuel-cell and you had a line into the site wouldn't that eliminate that problem? THE WITNESS (Befera): Well, if you had a natural gas generator then you wouldn't have to worry about refilling or anything like that, but now you're -- now you're talking about if there's natural gas in the street. For instance, at this location you're talking about a significant increase in cost to run a natural gas line over a thousand feet from over the street. 

so I mean, we typically do our natural gas generators when we do like a rooftop cell. We want the generator close with the equipment. We do natural gas there, but typically when natural gas is available from the main in the building and the only distance we're running it is vertical.

THE CHAIRMAN: Dr. Klemens?

I guess we're off and running.

DR. KLEMENS: Thank you.

No, that was the question I asked in the field. Is that natural gas, in Sunset Drive in the street there? Because that would be a much shorter run than coming in off of the main road.

THE WITNESS (Befera): Well, now you're

talking about approaching yet another landowner for an easement to cross their property, where the gas line around that is avoided simply by doing a totally self-contained diesel with a belly tank.

DR. KLEMENS: You're not telling me there's any part of Sunset Drive that could access into the site for that? I mean, I don't know if there's even gas in Sunset Drive.

Well, it's a very peculiar configuration actually when you look at the tax map. It seems like the residence of Mr. -- I can't pronounce his last name -- is an in-holding in a larger parcel, and I don't even know who that parcel belongs to. It's a very strange -- strange lines on the map and I'm wondering if that parcel actually belongs to the subject, to the owner of the -- it's a strange thing when you look at it.

It's like a doughnut. The house sits inside the larger parcel.

THE WITNESS (Burns): Yeah, according to the tax maps, the Cromwell tax maps there is a small parcel that the house sits in, but according to the Cromwell tax maps it's owned by the same owner who owns the rest of the doughnut, if you will.

1 DR. KLEMENS: And we don't even know if 2 there's gas in Sunset Drive, anyway? THE WITNESS (Burns): Correct. 3 DR. KLEMENS: Thank you. 4 Mr. Edelson? 5 THE CHAIRMAN: 6 MR. EDELSON: One other question on the 7 generator. I notice you say it's -- basically you 8 have 96 hours. Is it 96 hours? 9 THE WITNESS (Befera): Forty-three. MR. EDELSON: Forty-three hours. 10 sorry. Other applicants have gone with 80 hours. 11 12 I'm wondering what determined a lower number? that something that is standard out of the 13 corporation? Or was it based on the size of the 14 15 tank? THE WITNESS (Befera): It's more or less 16 17 based on the size of the tank that you choose to 18 store. For a generator this size we're looking at a 132-gallon tank. With the sixties we would have 19 20 a 250-gallon tank. 21 We always -- you don't want to store 22 more fuel than is necessary. And with the 30 kW 23 we thought the 132-gallon tank was ideal, because even with the larger generators and the larger 24 25 tanks, our target was to try to get two days

1 before refilling was necessary during an extended 2 power outage, so that fit the equation. 3 MR. EDELSON: But you see my concern is that we have certain applicants who are using one 4 Is this a standard we should see for 5 number. Cellco? 6 THE WITNESS (Befera): It is a standard 7 8 for us. We cannot speak to the desires of our 9 competitors. MR. EDELSON: Right, but we should see 10 consistency on this? 11 12 THE WITNESS (Befera): I believe we will, yes. 13 14 THE CHAIRMAN: Mr. Lynch? 15 MR. LYNCH: I've got one more. I've got to still beat this horse. 16 17 For refueling, if there is an imminent 18 weather alert, whether it's a hurricane, tornado, blizzard, you know, and it's two or three days 19 20 out, do you go to these facilities and top these 21 tanks off so you can run for the proper amount of 22 time? 23 THE WITNESS (Befera): We do, actually, typically to 80 percent. We make sure that all of 24 25 our tanks are at least 80 percent in preparation

1 of a significant storm that could cause an 2 extended power outage. 3 MR. LYNCH: Thank you. THE CHAIRMAN: Mr. Silvestri? 4 5 MR. SILVESTRI: I'm sorry, Mr. Chairman, but I have to this one time. 6 7 THE CHAIRMAN: Everybody has used up 8 their quote of questions -- but go ahead. 9 MR. SILVESTRI: On that topic, March had a number of nor'easters as you're aware. 10 How did you prepare for resiliency and 11 potential power outages? 12 13 THE WITNESS (Befera): We -- we fared really well during those storms. We did have some 14 15 outages, but it wasn't very -- they weren't expensive. 16 17 They were -- at one point we had a 18 couple hundred generators -- sites on generator throughout all of New England, but most of them 19 were less than 24 hours. The power was restored 20 21 fairly quickly. I don't know if anyone lost power 22 at their home. I did, and it was restored within, 23 like, six hours. So nothing was extended. MR. SILVESTRI: But this would be an 24 25 instance as you mentioned earlier where you had

prepared to go out and top off the tanks before anything happened in these cases?

THE WITNESS (Befera): That's something that we do, and we have resources to do that with several days notice. We usually know almost a week in advance if something significant is headed our way, and we do have the resources with that leadtime to get the tanks at 80 percent minimum in preparation of that.

And we have rollup -- a cavalry of folks with hundred-gallon tanks on pickup trucks just waiting for our call. They're basically reserved for us all along rollup generators where we don't have permanent generators. We've got a cavalry of rollup generators either owned or reserved for us for rent in preparation for any type of storm so we can maintain the quality of our network in these outages.

MR. SILVESTRI: Thank you.

Thank you, Mr. Chairman.

MR. PERRONE: Looking at the sheet R1, I understand that the utility trench is on the south side close to the existing trees.

Would excavation for the utility trench adversely impact the roots of the existing trees?

THE WITNESS (Burns): I think that they 1 2 could, and we could put protection measures with the contractor in place. I could also shift it to 3 the other side of the road if that -- if that was 4 a concern or if, you know, if it became an issue. 5 6 MR. PERRONE: Do you know the total construction disturbance area? 7 8 THE WITNESS (Burns): It is -- yeah, 9 25,000 square feet. Sorry. MR. PERRONE: So would it be correct to 10 say that this would not require a DEEP general 11 permit? You would be under one acre? 12 THE WITNESS (Burns): Correct. 13 MR. PERRONE: Turning to response to 14 15 Council interrogatory 39, I understand Cellco has not yet submitted the project information to the 16 17 State Historic Preservation Office. Do you plan to file with SHPO? 18 THE WITNESS (Libertine): 19 Yes. 20 Verizon's protocol is to wait until they're fairly 21 far along on the siting process to ensure things haven't shifted, like this as it often does. 22 23 So once they have the confidence level, then they will go through the full NEPA process 24 which will include a formal submission to 25

1 the SHPO. 2 MR. PERRONE: Do you know roughly when? THE WITNESS (Libertine): Well, my guess 3 4 is after this hearing we'll probably regroup, and I'd say in the next three to four weeks that 5 process will likely begin. 6 7 MR. PERRONE: And lastly, the cost 8 topic. How is the cost of tower construction and 9 ground leasing recovered? For example, would it be allocated among national customers, regional 10 customers, Connecticut customers? 11 12 THE WITNESS (Befera): Well, our pricing 13 is done -- our pricing is done on a national basis. Building, maintaining and continually 14 improving our network is the cost of doing 15 business. 16 17 Nationwide our unlimited data plan in 18 California is priced the same as it is in Florida, as it is in Connecticut. 19 20 MR. PERRONE: So it's fair to say that 21 the costs of this project would be covered on a national level? 22 23 THE WITNESS (Befera): Yes. MR. PERRONE: Thank you. 24 That's all I 25 have.

THE CHAIRMAN: Okay. Thank you. Now we'll continue with cross-examination by councilmembers. We'll start with Senator Murphy.

SEN. MURPHY: I just have one item.

Mr. Libertine, a question. If the tower is increased in height and now we have a change in the location from when you did the evaluation, is there any substantial change adversely affecting any given area because of the movement of the tower you've discussed for this?

THE WITNESS (Libertine): Well, if we're talking about as proposed, at the 120-foot height today moving a hundred feet?

SEN. MURPHY: Right.

THE WITNESS (Libertine): Overall, no.

I would say that if you were to look through each individual photograph that's represented in the visual report you might say, well, this could shift from a seasonal to a full year-round and vice versa, but essentially in terms of the overall footprint I don't think it's going to have a substantial change.

DR. KLEMENS: So no one would get a drastic blast because it was up there instead of over there?

1 THE WITNESS (Libertine): 2 correct. I think if we started moving another hundred feet -- I know there was some 3 suggestion of, you know, could it be for, you 4 know -- at one point people were asking, could 5 maybe we move further? 6 7 I think there's going to be a tipping point where now it would become much more visible 8 to Main Street, but I think where we are talking 9 about now, within -- within a few hundred feet of 10 where we were originally proposed, and as long as 11 we stayed in the concrete manufacturer's yard, it 12 shouldn't have really a substantial change. 13 SEN. MURPHY: I think I have nothing 14 15 else at this time, Mr. Chairman. THE CHAIRMAN: Thank you. 16 17 Dr. Klemens? 18 DR. KLEMENS: Thank you, Mr. Chairman. 19 Just a couple of cleanup things. back to your simulation number 13. I think if you 20 21 look on the right-hand side of the photograph, is 22 that -- that's an outbuilding. Correct? 23 another property on Sunset drive, that's not a house there? 24 THE WITNESS (Libertine): 25 That's

1 correct. It's a shed. It's a shed. 2 DR. KLEMENS: And 3 understanding basically what you said, looking at the tower on simulation 13, that tower now is 4 almost going to be in line with the center of the 5 trunk of that deciduous tree? 6 7 THE WITNESS (Libertine): Generally, 8 yes. 9 DR. KLEMENS: So the tower is going to be a little bit more hidden, the bottom of the 10 tower, than it is now? 11 12 THE WITNESS (Libertine): I would agree with that, particularly once the leaves come out. 13 DR. KLEMENS: Correct. Thank you. 14 15 Now I looked at this, and from when I'm looking at the coverage maps -- and I generally 16 17 don't talk about these things. I leave it up to 18 my colleagues, but I see a very minimal benefit at the 700 megahertz, and certainly a coverage 19 improvement at the 2100 megahertz especially 20 21 anything near the dividend pond open space. 22 this really is a capacity rather than a coverage 23 application. Is that correct? THE WITNESS (Gustafson): Yes, it is. 24

It is mostly at capacity.

25

1 DR. KLEMENS: Thank you. Okay. Let's 2 get back to the wetlands report. Tab number eleven, please? I was intrigued first that you 3 went off the property. Correct? And you have 4 flags on some of those wetlands. Correct? 5 THE WITNESS (Gustafson): The wetland to 6 the north or to the --7 8 DR. KLEMENS: Both of them you flagged? 9 THE WITNESS (Gustafson): To the north and -- yes, correct. 10 DR. KLEMENS: Is that owned by -- this 11 12 property or? 13 THE WITNESS (Gustafson): DR. KLEMENS: Okay. Because it's 14 15 I raised the question, the Canterbury unusual. matter and I raised a question about what was in a 16 17 vernal pool there. And their response was that, well, it's off the site. We can't go there. 18 But this time you went off site? 19 THE WITNESS (Gustafson): This was a 20 21 unique circumstance. We had evaluated this property to the north, known as the Gardener 22 23 property, as an alternate tower location. So that these flags are an indication of an investigation 24 performed for that property. 25

1 So we were given express authorization 2 to do a wetland delineation on this property, 3 which is why you see these updated maps. Okay. So that leads me to DR. KLEMENS: 4 5 my next question. As I understand it you did the data in your field investigation in September of 6 2015 on the property? 7 THE WITNESS (Gustafson): I believe that 8 9 is correct, yes. 10 DR. KLEMENS: So I guess my question is particularly as in regards to wetland number two, 11 you say it's not a vernal pool. 12 How have you concluded that? 13 THE WITNESS (Gustafson): The indication 14 15 in the field form is for -- specifically for wetland one -- or for wetland two, sorry. 16 17 Wetland -- the wetland one identified -- we did 18 not determine if that was or was not a vernal pool based on the time of year restrictions. 19 20 I will say, however based on the characteristics of that wetland that it would not 21 22 be, you know, a classic vernal pool habitat due to 23 the outfall and inlet of, you know, moving water. DR. KLEMENS: Which wetland are we 24 25 talking about?

1 THE WITNESS (Gustafson): Wetland one. 2 I'm talking about wetland DR. KLEMENS: 3 two. THE WITNESS (Gustafson): Wetland two is 4 consistent of a dug pond, which certainly could 5 provide some vernal pool habitat. 6 Again, that at the time of the 7 inspection, that was off the property and it was 8 9 just field located, and it was not delineated on subsequent visits. During the investigation for 10 the Gardener property to the north, those 11 properties were investigated -- or those areas 12 were investigated. 13 DR. KLEMENS: So wouldn't it be more 14 15 accurate instead of, "no," to say, "potential." Seeing you weren't there at the correct season to 16 17 determine whether or not they were vernal pools? THE WITNESS (Gustafson): I think that 18 could be a correct statement to make that there 19 20 would -- could be potential habitat there. 21 DR. KLEMENS: Okay. Thank you. And following that line of reasoning if 22 23 wetland two was a vernal pool, the move that you have created with the tower, the relocation of the 24

tower, the revision has actually moved it out of

25

1 the vernal pool envelope. Is that correct? 2 THE WITNESS (Gustafson): That is 3 correct, yes. DR. KLEMENS: If it was a vernal pool? 4 THE WITNESS (Gustafson): 5 That is correct, yes. Previously it was within 85 feet, 6 which would put it within the hundred-foot vernal 7 pool. Now it is 160 which would be outside that 8 hundred feet. 9 So if wetland two was a 10 DR. KLEMENS: vernal pool, this redesign is actually beneficial 11 to the pool? 12 THE WITNESS (Gustafson): Correct. 13 Ιt should also be noted that due to the location it 14 would be in existing disturbed areas anyways, and 15 that, you know, which would be unsuitable habitat. 16 17 And based on the BDPs, we would not have 18 any increase in that disturbed area. So we would not be impacting any, you know, potential habitat 19 within the CTH. 20 21 DR. KLEMENS: Let's go to the box turtle 22 plan very quickly -- which is in here. I want to 23 make one correction which you'll probably find 24 humorous. We've invented a new Italian dish, terra 25

1 penne. It's tear-ah-pini [phonetic]. It was 2 unpaginated. When the DEEP asked for qualified, it 3 seems a lot of work is being expended on looking 4 for box turtles from a place that at least -- do 5 you think that's good box turtle habitat there? 6 THE WITNESS (Gustafson): No. 7 No, I do I assume you're talking about the compound 8 9 and access route? DR. KLEMENS: Well, the compound. 10 Yeah. THE WITNESS (Gustafson): Yes, I do not 11 12 believe those two are, you know, good habitat for box turtles. 13 DR. KLEMENS: So the DEEP has asked for 14 15 a herpetologist to do all of this work. Who is that going to be? 16 17 THE WITNESS (Gustafson): That is going 18 to be at the discretion of Verizon, but typically All-Points Technology, a representative of 19 All-Points Technology, either Dean Gustafson or 20 21 myself performs that work. 22 DR. KLEMENS: Have you ever found a box 23 turtle in any of these projects where you have to do these box turtle sweeps? 24 25 THE WITNESS (Gustafson): No, I have

1	not.
2	DR. KLEMENS: Well, it's a rather
3	expensive activity for questionable value.
4	Correct?
5	THE WITNESS (Gustafson): I would agree
6	with that statement.
7	DR. KLEMENS: Thank you. It's just a
8	statement. It's not you're following what you
9	have to do. I question the utility of some of it.
10	That's all.
11	I have no further questions,
12	Mr. Chairman.
13	THE CHAIRMAN: Thank you.
14	Mr. Silvestri?
15	MR. SILVESTRI: Thank you, Mr. Chairman.
16	I want to start with a couple blanks I
17	need to fill in on some other topics that were
18	discussed.
19	Going back to the generator, the fuel
20	tank is self contained on that. Is that right?
21	THE WITNESS (Befera): Yes.
22	MR. SILVESTRI: And all one piece, if
23	you will?
24	THE WITNESS (Befera): Yes, the
25	generator set more or less sits on top of it. It

is double walled with an alarm between the 1 2 interior wall and the exterior wall. 3 MR. SILVESTRI: Thank you. And Mr. Libertine, if I can go back to 4 the visuals with you for a few moments? If you 5 looked at number five -- is the new location, 6 would it have that tower shifted to the right as I 7 8 look at that picture? 9 THE WITNESS (Libertine): From that perspective, yes, slightly. 10 MR. SILVESTRI: Would that be true also 11 12 with number seven, also shifting to the right? THE WITNESS (Libertine): 13 similarly. That orientation is somewhat to the 14 15 northeast. So yeah, it would shift to the right, not dramatically, but certainly would shift. 16 17 MR. SILVESTRI: Just three more quick ones on the visual. Number eleven, would it then 18 shift to the right and be behind the trees? 19 THE WITNESS (Libertine): From that 20 21 location, most likely. But certainly the -- it 22 would start to encroach into the tree, yes. 23 MR. SILVESTRI: And then 24 was the last question I had on visual, if that was also moving 24 25 to the right?

THE WITNESS (Libertine): That may

actually -- bear with me one second so I can get

the right page number.

MR. SILVESTRI: Uh-huh.

THE WITNESS (Libertine): That might not shift dramatically in either direction just because that is essentially looking -- and we're calling it southwest. It's really west southwest. And where we're shifting that slightly to the east it might almost -- almost be a negligible differential just in that particular location.

MR. SILVESTRI: Thank you. Then another blank I wanted to make sure I had covered. Tree removal, any tree removal on both the compound and the access road?

THE WITNESS (Burns): No, sir.

MR. SILVESTRI: Thank you.

My next question was actually prompted by one of the offices I used to have many years ago down in the New Haven Harbor area on Waterfront Street. And in your response to Council interrogatory number 35 concerning the stealth tower design options, was any consideration given to constructing a Fox concrete silo somewhere on the property to blend into the

business that's going on there?

THE WITNESS (Libertine): It was not considered, and I'll just speak for my own personal, or professional opinion is that if we start talking about those types of stealth applications then we're talking about a much larger object on the horizon.

And because of the feedback that we got from the neighbors, our intention was in any way possible to try to minimize the profile. And I think doing some type of a silo certainly would start to create a very large diameter structure because we would obviously want to have enough room to contain those antennas within it.

And so we're probably talking about something in the 15-foot diameter range, maybe even more, 20, maybe to be able to accommodate that and allow room for the antennas to go in and for people to work on them.

So from my perspective when I looked at this question and remembered all we had been through on this site, my feeling was that, you know, we're in a fairly industrial location at that property itself. It's a relatively short tower. So from my perspective one thing I might

consider is to bring the antennas in tighter at the top, but I'm not sure that works necessarily for RF. So there's always that balancing act.

Beyond that, any of the other, what I would call the traditional options that we typically would like to look at, I think again would just create such a larger profile on the horizon. The challenge at the site is it's very flat, as anyone knows that has driven the area. There is good tree cover in the area, but it's not exceptionally tall tree cover there and it's mostly deciduous.

So we tend to be above the treeline by 30 to 50 feet, depending upon the location. So it's really difficult at that point to be thinking about doing a full tree, doing even a -- well, we're really moving away in the industry from flagpoles and internal antenna arrays just because of the limitations inherent with those.

So we are limited in terms of what we might be able to do here, but to answer your -your fist question is, no, I don't believe it was ever -- it certainly wasn't considered beyond anyone at this table, I don't believe, because --

THE WITNESS (Befera): No, for reasons

that you stated, that it would significantly increase just the mass of what we would have to put there as opposed to a relatively steep pole. So it wasn't considered.

MR. SILVESTRI: Okay. Thank you. You know, I looked at the existing cylindrical items that were their silos. It kind of put it back into my memory when I saw it and wanted to pose that question to you.

THE WITNESS (Libertine): No, from -from a contextual standpoint certainly there's
some merit and perhaps we didn't have neighbors as
close. That might be something. There's also a
cost factor there that I know that's probably not
as relevant, but that certainly comes into play as
well.

MR. SILVESTRI: Thank you.

I wanted to go back to page 8 of the application. It states that you're going to initially deploy 700 and 2100 megahertz services, and that you were to add the 850 and the 1900 when capacity is needed.

The question I want to pose to you is, will construction include the 850 and the 1900 components, or would those be added at some time

in the future? 1 2 THE WITNESS (Brauer): The antenna portion and the cabling will be ready. 3 The radio heads will be added later as needed. 4 5 THE CHAIRMAN: Mr. Lynch? 6 MR. LYNCH: Thank you. Just a followup? 7 MR. SILVESTRI: Yeah. 8 MR. LYNCH: You said that the other 9 sections wouldn't be used until they're needed. Any idea with the growth of the network 10 when that would be? 11 12 THE WITNESS (Brauer): Tomorrow -- no, the way things are going with 4G data usage we 13 have seen incredible growth year over year. 14 I believe I have testified at some of 15 the other hearings that our data growth was about 16 17 30 percent. It's ramped up to about 50 percent 18 year over year. So I would see those other two carriers being used within a couple of years. 19 And if I heard you right to 20 MR. LYNCH: 21 Mr. Silvestri, you're putting in the structure, 22 but you're not putting in the antennas? 23 THE WITNESS (Brauer): No. The antennas are ready. The cabling is ready. The only thing 24 that wouldn't be installed right off the bat would 25

be the actual radio heads themselves. 1 2 MR. LYNCH: Okay. Thank you. MR. SILVESTRI: Turning now to page 22 3 of the application. There's wording that 4 5 specifies a propane fuel generator, and I assume that's a typo? 6 THE WITNESS (Befera): Yes. Yes, that's 7 a typo overlooked from a previous application that 8 this was formed from. 9 MR. SILVESTRI: Thank you. You had 10 mentioned earlier about the public information 11 meeting on November 30th of 2015. Approximately 12 how many people attended the meeting? 13 THE WITNESS (Befera): About 10 or 12 14 individuals. 15 MR. SILVESTRI: Thank you. 16 17 If I can have you reference Council 18 interrogatory number 22, and this is concerning the ineffective attempts and dropped calls. 19 20 have two questions for you on this one. 21 The first one is, how does the system 22 differentiate between what I'll call an attempted 23 call that doesn't connect, versus a call that no 24 one answers? 25 THE WITNESS (Brauer): You mean, a call

that would go through and somebody on the other end simply doesn't --

MR. SILVESTRI: Yeah, you're going to call me and I don't pick up the phone, versus some technical problem that happened that you're calling an ineffective attempt?

THE WITNESS (Brauer): Oh. Well, simply that if the call does go through and the other end acknowledges the connection, that a regular -- that's a normal functioning call. So that's not -- that's not a drop. That's not an ineffective attempt. That's just normal.

If anywhere along the line the call, let's say for you don't have enough resources, that's flagged as an ineffective attempt due to resources. If you're in the area where it's poor RF and you simply can't make the connection, some of those don't get picked up because you don't have the phone, your user equipment having the ability to report back to -- I can't get on because there is no -- there is no RF there.

If you half-make a call and it gets through the process and you drop off the system because of poor RF, it's already logged that the user equipment was attempting to make that and it

1 was unsuccessful. 2 MR. SILVESTRI: But the last part would 3 be your dropped call. Correct? THE WITNESS (Brauer): If -- if you 4 haven't established a connection yet, if you're 5 only in initial communication it's not an 6 established call that drops. It's an ineffective 7 attempt because it hasn't started yet. 8 9 MR. SILVESTRI: Okay, but I don't have 10 voicemail -- hypothetically. The phone is ringing. I don't pick it up. I'm still not sure 11 how you differentiate that between my trying a 12 call and then the line goes dead? 13 THE WITNESS (Brauer): Well, usually if 14 15 you don't pick up, if there's no voicemail I would assume that it would keep ringing until you hit 16 17 end. 18 MR. SILVESTRI: Well, would that be an ineffective attempt? 19 20 THE WITNESS (Brauer): No, that would 21 be -- that would be a normal termination, a normal 22 call termination. 23 MR. SILVESTRI: Let me ask a similar question then on the dropped call part of it. 24 does your system differentiate between a call that 25

1 was lost, or what you call a dropped call, versus 2 I'm tired of talking to you, now I'm hanging up? 3 THE WITNESS (Brauer): Whenever you hit end, or on some of the older phones you would 4 close the clamshell. The phone reports back that 5 that's a normal termination of the call. 6 MR. SILVESTRI: So it's that button, 7 it's the end button --8 9 THE WITNESS (Brauer): It's the end button. 10 MR. SILVESTRI: -- that differentiates? 11 12 THE WITNESS (Brauer): Yeah. MR. SILVESTRI: Okay. Thank you. 13 MR. LYNCH: Mr. Chairman? 14 15 Just getting clarification of what --Mr. Silvestri and I had some similar question. 16 17 Did I hear you correctly saying that you 18 differentiate between failure to generate a call 19 and a dropped call? 20 THE WITNESS (Brauer): Yes. 21 MR. LYNCH: And which is the bigger 22 problem -- for your system, that is? 23 THE WITNESS (Brauer): Dropped calls are, generally. We take both of them very 24 seriously. Our customers don't want to have 25

either one, but in the industry a drop is 1 2 considered more -- I would say given more weight, if you will. 3 MR. LYNCH: I would have thought the 4 5 opposite, but that's just me. 6 Thank you very much. 7 MR. SILVESTRI: Two more questions for 8 The NDDB map that's within attachment five 9 of the response to the Council interrogatories, that's the original proposed location. Not the 10 revised one. Correct? 11 12 THE WITNESS (Gustafson): Yes, that is 13 correct. MR. SILVESTRI: The last question I have 14 15 for you, Mr. Brauer, goes back to one of the 16 questions that came up about capacity and 17 coverage. The driver, if I heard correctly on 18 this project you mentioned, is capacity. Is that 19 correct? 20 THE WITNESS (Brauer): Yes. 21 MR. SILVESTRI: And coverage is second? 22 THE WITNESS (Brauer): Yes. 23 MR. SILVESTRI: Capacity being relief 24 for your other cell sites? 25 THE WITNESS (Brauer): Yes.

MR. SILVESTRI: Okay. Looking then at the secondary method for coverage, the middle school and TPC would be high on the list of trying to get coverage from this tower?

THE WITNESS (Brauer): The middle school area, the Route 99, sort of, the Players Club area, yes. Those are the main drivers.

MR. SILVESTRI: Was there any thought then on locating this tower at TPC?

THE WITNESS (Brauer): I certainly wouldn't have minded that, but I'm not sure if -I'm not sure if we ever got into any kind of negotiations with them.

THE WITNESS (Befera): TPC has been kind enough to let us put a permanent -- I'm sorry, a temporary cell up here on wheels. We call it a CROW, cell repeater on wheels. They have allowed us to do that for the PGA tournament each summer and we did talk to them about some small cells to try and be right on top of the action there, and we didn't get anywhere with them.

We did pursue, but they really weren't interested. They said for the PGA tournament we'll let you bring something in here to let you amplify your single, because we understand that's

1 important for a lot people and we know that it's 2 deficient throughout the course, but they had no interest in a permanent installation whether it be 3 a macro cell, a tower or a small cell. 4 MR. LYNCH: You're doing it again, Bob. 5 6 That was one of the questions I had on there, too, TPC -- because I know you're bringing the portable 7 8 during the tournament. 9 Will this new facility prevent you -- or you wouldn't need to bring in a portable? 10 THE WITNESS (Brauer): That's correct. 11 12 This would alleviate much of that need. MR. LYNCH: 13 Thank you. MR. SILVESTRI: I'm all set, Mr. 14 15 Chairman. Thank you. 16 THE CHAIRMAN: Mr. Hannon? 17 MR. HANNON: I was going to pass, but 18 everybody else is pitching in. I figure I might as well, too. I have hopefully three quick 19 20 questions. When we were at the site and when we 21 were out towards the area where the proposed 22 23 driveway is, it looked as though a portion of this roadway that you are proposing has already been 24 Is that correct? 25 cut out.

THE WITNESS (Burns): I believe the

property owner has done some work out there. I

don't know why it wasn't -- I don't think it was

based on this, but I don't have any more

information than that.

MR. HANNON: Because then my followup to

MR. HANNON: Because then my followup to that is, how does that impact your 450 cubic yards of material?

THE WITNESS (Burns): That's a good question. I think that, just looking at it, it looks like it was scraped away, maybe a foot, a foot and a half.

Typically we're going to be boxing out about ten inches. So maybe some of that 450 cubic yards of excavation that we have to haul away, we've got to push into this area, that one area. So it actually could help us so that we don't have to truck away as much as we thought.

MR. HANNON: That's fine. And my last question is, why not propane backup?

THE WITNESS (Befera): It really doesn't matter to us whether we do propane or diesel as long as it's self-contained. The propane has its advantages and the diesel also has its advantages.

The propane, although not as easy to get

filled when you have multiple propane tanks across the geography during an extended outage, it does have a thousand-gallon tank and can run our generator for five days, versus the two days on the diesel.

Our -- our default system for generators is typically diesel because there we have more of a crew on retainer for refills in short notice.

It's more self-contained. It takes up less space.

It doesn't require the ten-foot spark zone that prohibits additional carriers to locate their equipment into the compound.

So it makes for the need for a larger compound, but in a place like, you know, in a location like this the -- the business was such and the environmental history was such that diesel was -- was allowed by our environmental reviewers.

MR. HANNON: And then just to follow up on that, when you go in and actually complete a final grade for the enclosed area? Is there -- well, I know there's a way.

But is it feasible to possibly pitch that just slightly towards the concrete manufacturing operation and away from the wetlands, wetland number two in particular?

THE WITNESS (Burns): The idea behind 1 2 this was to not change the existing drainage patterns. Right now, that existing drainage 3 pattern, although it's flat as a pancake if you 4 look at some of the overall topo -- which I did on 5 the GIS map in Cromwell. You can actually pull up 6 the topography feed -- it kind of flows to the 7 8 northwest. 9 Those wetlands are to the east. So the idea -- I'm sorry, the West. The idea would be to 10 maintain that existing drainage pattern and it 11 12 would flow away from the wetland. MR. HANNON: I'm done. 13 THE CHAIRMAN: Thank you. 14 15 Mr. Edelson? 16 MR. EDELSON: I just wanted to confirm 17 going back to the public information meeting, 18 there were attempts to contact the Mayor and the Town Manager. As of January they haven't 19 20 responded. 21 Has there been any update on that in the last four months? 22 23 THE WITNESS (Befera): No. MR. EDELSON: And Mr. Libertine, when 24 you mentioned there was feedback from some of the 25

property owners, was that at the public information meeting, or that was a subsequent information interaction?

THE WITNESS (Libertine): No, that was from the public information meeting. We were here for well over an hour and a half just discussing the proposal. So there were some thoughts primarily asking about the property to the north, the Gardener property which we later then did some investigations on.

MR. EDELSON: I just wanted to know if there had been subsequent discussions?

THE WITNESS (Libertine): Not that I'm aware of.

MR. EDELSON: So we discussed a lot about how this is about capacity. And when we look at the, you know, the maps, we see excellent coverage, but we know this is a very congested part of the state.

And so if it occurs to me that, well, why at only a 120-foot tower? Why not a taller tower that would give you more ability to alleviate coverage issues -- not coverage issues, capacity issues in a further area? Why keep it to 120 and not go for a further higher tower?

THE WITNESS (Brauer): Well, when we -when we took a look at the locations that were
available to us we started modeling various
heights. And once you reach a minimum height and
still have approximately half of the offload
from -- that you want from the surrounding sites,
that's where it would stop.

If it was a taller tower, yes, you certainly could take away more from the surrounding sites, but then you might end up with a problem on the new tower you just built taking too much traffic. So we try to lower, we try to keep it as low as possible and keep the offload as even as possible.

MR. EDELSON: So I'm not sure I really follow all of that in terms of the modeling, but it sort of implies to me that you end up with more towers as a result. Would that be a conclusion of that because you're, rather than having a few, fewer taller towers you're going to have more?

THE WITNESS (Brauer): I would say it's the opposite. If you have taller towers now you're seeking to offload that, that new set of taller towers. So you're potentially looking at more locations to offload what you just built.

If you try to make it as balanced and as even as possible you are -- you're making everything stable, or as stable as the user will let you make it. And I feel you would minimize the need for new towers, new locations.

MR. EDELSON: Well, I'm not going to belabor it, and obviously there's a deficiency in my understanding of this. But I'm concerned because of your comment about how what was written here said, we'll add, you know, the other frequencies later. And I think you're making an astute observation that later is now, that things are moving so quickly.

And I know personally, you know, I'm amazed how much data I'm using. And two years ago I would have said I would never be using that much data on my smartphone. It just never occurred to me that it would be that much and I'm just one person. So I've got to believe you multiply that by a couple million people, things are growing very fast.

THE WITNESS (Brauer): It is certainly keeping us on our toes.

THE WITNESS (Befera): A significant driver to that is the reintroduction of the

all-you-can-eat plans, the unlimited data plans.

And that is to compete with our competitors who are on TV cutting our phone bills in half with chainsaws.

MR. EDELSON: No, I used to actually look at my data and worry about it. And now it's like, who cares? You know, why not another video? Even if I don't want to watch it I'm still bringing it down. So it is a problem because it just creates more and more demand on that.

But the other aspect we should talk about a little bit is, you know, these things, these devices have gone from nice to have ten years ago to almost essential, especially from an emergency point of view.

And that's what leads me to my -- and I don't think I'm going to be able to change anything here, because we don't have a standard that says you've got to meet this, but I think we've got to go back and look at that 43 hours.

The cell phones are becoming really critical during a time of emergency, and when I say emergency, like a natural disaster when electricity outage is there. And I'm feeling like 48 hours, two days in a community like this, or in

my community doesn't sound like a lot when we've seen outages of four or five days.

Now I realize, you know, you have the capacity to refuel the tank. It's not like you can't refuel, but we end up in these situations where roads are blocked and the ability to move trucks around with diesel fuel, or propane for that matter, anything but a natural gas pipeline does prevent that.

So I would encourage you to take that message back to say, what should the standard be?

Because as I've said, we've seen other competitors come in with 80 hours. That just seems a little more moving in the right direction to me.

My last thing, I just want to, you know, truth in advertising. So on page 20 it did refer to this wetlands plan as attachment one and it wasn't there, but that was part of the original application. So this application did not include sheet C5 and that was for the original site.

So that was, to be clear, something that wasn't included in the application. Because I realize you're saying now, well, for the revision I don't need C5, but the document we received was for the original site, the original siting.

THE WITNESS (Gustafson): I'd like to provide clarification on that. I believe that was a holdover similar to the propane generator that was discussed. That was a holdover in the template document. A wetland protection plan was never proposed for either location.

MR. EDELSON: So that was an error in the --

THE WITNESS (Gustafson): That is correct, sir.

MR. EDELSON: Okay. That clarifies that.

THE WITNESS (Libertine): The thought being that, just for further clarification, that the proper erosion and soil sedimentation controls as part of construction would be more than adequate, even in the original location, and now that we've moved it further away -- so we apologize. That is another, I think, typo that was just carried over.

MR. EDELSON: As you said, the site is as flat as a pancake. And so I think that wetland was, even though it was within the hundred feet, it wasn't going to be impacted by what you're doing there, at least from my point of view?

1 THE WITNESS (Gustafson): That's 2 correct. 3 MR. EDELSON: Thank you. THE CHAIRMAN: Mr. Harder? 4 5 MR. HARDER: Yes. Thank you Mr. Chairman. 6 I just have one question that concerns public input. 7 Mr. Libertine, you said there were a 8 9 number of comments at the public meeting. you indicate whether any of those, or if you got 10 any responses to the notices to the abutters? 11 for any other communications, if you had any 12 13 objections or anything like negative comments regarding the proposal? 14 15 THE WITNESS (Libertine): Well, I would certainly characterize the meeting as very cordial 16 17 and productive. I would say that the majority of 18 folks there had concerns primarily with esthetics. Most of the folks there identified themselves from 19 20 the neighborhoods to the south. 21 And so that's why the idea was brought 22 up by several folks about looking at sites just to 23 the north because they felt it was further removed, that gentleman, the Gardener property 24 which we've referred to had a substantial amount 25

of land to get kind of creative on. So that was more or less the general consensus and the crowd was, could you at least take a look at that so we might have even further distance between the factory and their homes?

I think everyone recognized the need for the tower, but again as is not uncommon in those situations in public input meetings, folks usually have a concern about what they're going to see from their properties.

MR. HARDER: Okay. Thank you.

THE CHAIRMAN: Mr. Lynch?

MR. LYNCH: Most of the specific questions I had regarding the site have already been asked by the Council, but I have a couple general questions with regards to your network itself.

Going back to interrogatory number 19 that Mr. Perrone asked you about the small cells, he asked you about DAS. But in your system you've done a number of smaller cells on buildings and so on throughout the state.

Would doing something like that in this area also eliminate the possibility of building this tower?

THE WITNESS (Brauer): In this

particular area I would say no, because we do have

larger areas of unimproved space such as where

Watrous Park is where there is no utility pole

infrastructure for us to colocate on.

And certainly over towards the golf course where most everything is underground, there are some utility poles over that way, but we couldn't -- we can't fill in the same area.

MR. LYNCH: I was really talking about small cells on the buildings, not necessarily on poles, but that's irrelevant.

As far as your search ring, I'm always going from the past that you try to stay within a two-mile radius, you know, for your coverage and, I guess, capacity, but Portland was over three miles away and across the river.

Can you really actually reach Portland from this new location?

THE WITNESS (Brauer): Yeah, our

Portland cell site is -- it's on a very prominent
hilltop and it does reach across the river because
the -- the terrain drops down where the river is,
and then comes back up. You have a line of sight
right to the -- right to the location.

1 THE CHAIRMAN: That makes sense. 2 you. 3 And lastly, we've talked about emergency power for electric, but if you lose your trunk or 4 5 basement phone service what happens to the cell site? 6 THE WITNESS (Brauer): If you look the 7 backhaul to the cell site, even if it has power it 8 9 has no service. MR. LYNCH: All right. Thank you. 10 That's all, Mr. Chairman. 11 12 THE CHAIRMAN: Thank you. I assume the 13 answer to my question is somewhere in here, but did you get any response from other carriers as 14 far as interest? 15 THE WITNESS (Befera): 16 No. 17 THE CHAIRMAN: Okay. And how many carriers theoretically could go on this pole? 18 Because I can't -- well, answer the question 19 because I --20 THE WITNESS (Befera): It would be -- it 21 22 would be a function of, I think our intention here 23 is to design a 140-foot pole and not purchase the last 20 feet. So it would be 120 feet, but 24 extendable to 140 for carriers that want greater 25

than 120 feet in height. That could accommodate two additional.

And there would be -- if someone would be able to make 110 feet work, that would be a fourth carrier. We can design it to hold someone at 100 feet as well. We can design it to hold someone also at 90 feet.

It all depends on when we design the tower with the tower manufacturer what we give them for loading. If we say we want one of our array at 6 different levels of this 140-foot proposed structure, they will design it with the antennas we tell them we want it loaded for, and that includes of course the foundation and the steel.

So I mean, we could design it for anything that we want. It's just that, you know, it's more or less for companies out there doing what we do in this area. So that's why I think we keep falling back to the four.

It used to be six. Now it's four and we keep falling back to the four, but -- but the intention here was because some carriers might need more height than we do in this area. Maybe their network isn't as mature with the surrounding

1 sites as ours is. So the 20-foot extendable 2 option was -- was really what we thought we would 3 lean to. THE CHAIRMAN: 4 So the question is, is 5 the extra 20 feet -- from a visibilty, is that pretty significant? 6 THE WITNESS (Libertine): If we were to 7 go up another 20 feet, I think it would be -- yes, 8 9 we'd start to see expansion of footprint, and certainly some of the near views would be 10 substantially more impactful, yes. 11 12 Anytime we go up and we go up over 13 15 feet or so, that's pretty normal especially in a terrain like this where it's relatively level. 14 15 THE CHAIRMAN: So actually if I'm correct, under whatever the federal statutes, you 16 17 can go up another 10 percent, which is 12 feet. 18 Right. So I don't know where the 140 came in? THE WITNESS (Befera): It's just when 19 20 you -- I mean, of course --21 THE CHAIRMAN: Are you rounding up? 22 THE WITNESS (Befera): No. 23 typically, I mean, you can have them build whatever additional height that you -- that you 24

want as they have the original tower design, but

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just generally speaking when you want to -- when you want a tower to be extendable for someone else, it will be their burden to bear on the visual impacts of going higher than what we're proposing, 120 feet. We're not proposing more than 120 feet.

That would be their burden to bear, but it's just how it's typically done is if you're going to have a tower that's extendable you're basically designing that tower at the full height because your foundations need to be designed for that future potential capability.

THE CHAIRMAN: Yeah, but that's not

my -- I understand that theoretically you could

design it, well, to go put the foundation, but

under the law without going through an extensive

process coming back -- and I don't know all the

details, my understanding is you could increase it

by 10 percent?

THE WITNESS (Libertine): Can I make a clarification on that? That from a -- from a federal standpoint is absolutely true. You would not have to go back through section 106 under NEPA. And Ken, please?

Mr. Baldwin can correct me if I'm wrong,

but I think any extension would still have to come back in front of the Council for reapproval.

MR. BALDWIN: It certainly would,
Mr. Chairman. I think we're talking about
similar --

THE WITNESS (Libertine): Three different things.

MR. BALDWIN: Similar but different things. Whether a tower extension would satisfy the requirements as an eligible facilities request under the 2012 Tax Relief Act is one question, and that would limit that height extension based on those standards and not give the Siting Council the ability to deny that application.

However if AT&T theoretically comes in and says I, like this tower site, but I need 160 feet, they can come back to the Siting Council and ask for that extension even beyond those EFR standards. And then the siting Council would evaluate it as it would any tower extension. And I think in that instance, since it wouldn't satisfy the criteria you certainly could deny that application if you didn't like the additional visual impact.

So I think there's one aspect legally,

that that would perhaps tie the Council's hands on a lower extension, one, an extension that satisfied the EFR criteria. If something goes beyond those criteria and is no longer an eligible facilities request, then the Council reviews their proposal as it would any tower extension in accordance with the state standards.

THE CHAIRMAN: That was what I was trying to elicit, the difference that under the --well, you said it. I'm not even going to attempt to restate what you said because I think you did a good job.

THE WITNESS (Libertine): Mr. Chairman, just to hopefully close the record on, I think, your original question. My understanding is the tower will be designed for the foundation support four total carriers at this time, and that would accommodate a 12 or a 20-foot extension if necessary, but it would allow for four carriers.

THE CHAIRMAN: Okay. And you would have enough room on the ground to have, worst-case from our view, four separate generators with four separate tanks?

THE WITNESS (Burns): The site is designed now for four carriers including Verizon.

1 So, yes. 2 SEN. MURPHY: Attorney Baldwin, I thought under that federal regulation that came 3 down some years that it was 4 percent or 10 feet, 4 5 whichever was the greater. Is the cap as to 6 whether they take a look at whether they qualify or not? 7 THE CHAIRMAN: You want to clarify? 8 9 I think, subject to check, MR. BALDWIN: I think it's the greater of 10 percent or 20 feet, 10 I believe, that would satisfy the federal -- the 11 12 criteria under the eligible facilities request. SEN. MURPHY: 13 Ten percent or 20 feet. Or 20 feet, the greater 14 MR. BALDWIN: 15 of. 16 SEN. MURPHY: The greater of? So it's 17 not 10 percent or 10 feet, because it's 20 feet. 18 Right? MR. BALDWIN: I believe that's the case. 19 And there is the talk of 20 SEN. MURPHY: 21 20 feet going up here on this one, which is the 22 greater of the two. 23 MR. BALDWIN: I think Mr. Befera's comments are more historic than anything else. 24 That has been Verizon's standard for as long as 25

I've been doing this, and frankly something that 1 2 the Council has asked for before just to allow for that additional height if other carriers needed 3 additional height. 4 THE WITNESS (Libertine): And in this 5 6 industry ten-foot increments are pretty standard for separation across up here. 7 8 SEN. MURPHY: And this goes back some 9 time, and we really haven't had one. But it appeared to me that if you fall within the 10 purview, our saying no is almost a no-no under the 11 12 criteria. Again, if you satisfy the 13 MR. BALDWIN: eligible facilities request requirements the 14 15 statutes say very clearly it must be approved. 16 SEN. MURPHY: Right. 17 THE CHAIRMAN: Yes, Mr. Perrone? 18 MR. PERRONE: Just one last question. Mr. Befera, I understand you updated us 19 20 that no other carriers have expressed an interest

Just as a further update, did you hear anything else from the Town as far as interest in

in colocating the facility. As of the date of

filing of the application the Town had not

expressed an interest.

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1	colocating?
2	THE WITNESS (Befera): No, not since the
3	filing of the application we have not.
4	MR. PERRONE: Thank you. That's all I
5	had.
6	THE CHAIRMAN: Okay. Mr. Lynch?
7	MR. LYNCH: To go back to the increasing
8	of the tower's height, wouldn't you need a
9	ten-foot separation anyhow with the tower, with an
10	additional carrier going up or down?
11	THE WITNESS (Brauer): Typically what we
12	have done is that ten-foot separation. Yes,
13	that's becoming kind of our standard.
14	MR. LYNCH: Thank you.
15	THE CHAIRMAN: Okay. The Council is
16	going to recess until 6:30, at which time we will
17	resume with the public portion of the hearing.
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19	(Whereupon, the above proceedings were
20	concluded at 4:32 p.m.)
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1 CERTIFICATE 2 I hereby certify that the foregoing 80 3 pages are a complete and accurate computer-aided transcription of my original verbatim notes taken 4 of the Regular Hearing in Re: DOCKET NO. 481, APPLICATION FROM CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A CERTIFICATE OF ENVIRONMENTAL 5 COMPATIBILITY AND PUBLIC NEED FOR THE 6 CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS FACILITY LOCATED AT 667, 665, 7 663, AND 663R MAIN STREET IN CROMWELL, CONNECTICUT, which was held before ROBIN STEIN, 8 Chairman, at the Cromwell Town Hall, 41 West Street, Cromwell, Connecticut, April 19, 2018. 9 10 11 12 13 14 Robert G. Dixon, CVR-M 857 Notary Public 15 A Plus Reporting Service 55 Whiting Street, Suite 1A 16 Plainville, CT 06062 My Commission Expires: 6/30/2020 17 18 19 20 21 22 23 24 25

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