AGENDA
CITY OF DOVER BOARD OF ADJUSTMENT
WEDNESDAY – April 18, 2012 9:00 AM – CITY HALL

ROLL CALL

APPROVAL OF AGENDA

APPROVAL OF MINUTES OF March 21, 2012 MEETING

NEW BUSINESS

Applicant #V-12-02:
200 Plaza Drive, Cellco Partnership, LLC has requested a variance from the requirements of Article 4 §4.1 of the *Zoning Ordinance* pertaining to the height of buildings for the R-8 Zone.

Subject property is zoned R-8 (One Family Residence Zone). The owner of record is State of Delaware.

ADJOURN
29 Del.C. § 10004(e)(2)

THE AGENDA ITEMS MAY NOT BE CONSIDERED IN SEQUENCE. THIS AGENDA IS SUBJECT TO CHANGE TO INCLUDE THE ADDITION OR THE DELETION OF ITEMS, INCLUDING EXECUTIVE SESSIONS.

CITY OF DOVER
BOARD OF ADJUSTMENT
March 21, 2012

A Regular Meeting of the City of Dover Board of Adjustment was held on Wednesday, March 21, 2012 at 9:00 AM with Chairman Sheth presiding. Members present were, Mr. Sheth, Mr. Senato, Mr. Keller, Mr. Hufnal and Colonel Ericson.

Staff members present were Mrs. Townshend, Ms. Cornwell, Ms. Metsch and Mr. Rodriguez. Also present was Mr. Conny Malmberg and Mr. Doug Liberman.

APPROVAL OF AGENDA

Mr. Hufnal moved to approve the agenda as submitted, seconded by Mr. Senato and the motion was unanimously carried 5-0.

APPROVAL OF THE REGULAR BOARD OF ADJUSTMENT MEETING MINUTES OF JANUARY 18, 2012

Mr. Keller stated that he would first like to clarify that he was not in attendance at the January 18, 2012 Board of Adjustment meeting; however, in reviewing the minutes he would note on Page 1 under representatives fourth paragraph beginning with Ms. Cornwell; it stated "the legal notice was published in the Delaware State Newspaper on January 12, 2012." That date would not have provided for the minimum of ten (10) days' notice to the public; however, he had clipped a copy of the public legal notice from the newspaper on which it is noted that this publication was ran January 8, 2012 which would be in compliance with the ten (10) day notice.

Mr. Keller further stated on Page 2, while again he was not in attendance; however, is starts with "Mrs. Diehl stated that in the packet there is a "phot" he would presume that this would either be "plot" or "photograph" as opposed to "phot."

Mr. Keller further stated that at the top of that same page the minutes are dated January 18, 2011 he presumes this should be 2012.

Mr. Keller further stated that in paragraph 5 starting with "responding to Mr. Sheth, Mrs. Diehl replied that Mr. Lloyd wanted to spruce up the sign and add the LDG message center." All other language is the LED which he feels the latter should be.

Mr. Keller further stated at the top of Page 3 upper right hand corner the date is noted as January 18, 2011 which should be January 18, 2012.

Mr. Keller further stated at the bottom of this same page next to last paragraph beginning with "Colonel Ericson moved to approve variance applicant #V-12-01" it ends with saying "seconded by Mr. Hufnal and the motion was unanimously carried 5-0; however, he was not in attendance so this should be represented by 4-0.

APPROVAL OF THE REGULAR BOARD OF ADJUSTMENT MEETING MINUTES OF JANUARY 18, 2012

Mr. Senato moved to approve the regular Board of Adjustment meeting minutes of January 18,

2012, as amended, seconded by Mr. Hufnal and the motion was unanimously carried 5-0.

OPENING REMARKS CONCERNING DEVELOPMENT APPLICATIONS

Mrs. Townshend presented to the audience the policies and procedures that would be followed during these hearings.

Mrs. Townshend stated that because there is no public hearing required for this application, there is no mailing required; however, we placed an ad in the paper on March 4, 2012 to state that the Board would be meeting to review this old business matter.

OLD BUSINESS

Applicant #V-11-08:
508 S. State St., Yozima, LLC was granted a variance from the requirements of Article 4 §4.13 of the *Zoning Ordinance* pertaining to the permitted lot coverage at the Board of Adjustment meeting of August 17, 2011.

Subject property is zoned RGO, SWPOZ Tier 3, and H. The Tax Parcel ID # is ED05-077.09-03-70.00-000. The owner of record is Yozima, LLC.

Representative: Mr. Conny Malmberg, Attorney Representing the Applicant; and Mr. Doug Liberman, Larson Engineering.

Mrs. Townshend stated that in your packet you have a memorandum from me as well as the August 17, 2011 Report issued to the Board of Adjustment and the minutes from the August 17, 2011 Board of Adjustment meeting. You also have a letter dated February 21, 2012 from the applicant.

Mrs. Townshend stated that she would provide a brief overview of the application.

Colonel Ericson stated that before you begin, he has some concerns. We should not be having a meeting. We vote on a variance, which we did in August 2011 and we said yes, now if we had said no, for one year they could not bring up this subject again. We said yes and the contractor has to do what is agreed upon within one (1) year or we have to do it again. He does not see where there is a legal basis for having this meeting. As far as trying to determine what we meant in our motion, it is very clear. During discussion and the meeting minutes of August 2011, we stated that "we wanted pavement area done with pavers." Then, at the end of the meeting, the Staff comments stated that "the motion should include that requirement." The motion is very clear and had a requirement in it. He does not understand where there is a misunderstanding.

Mr. Sheth stated that since we published the meeting and gave the dates to the applicant, we will proceed with the meeting. We will also ask Mr. Rodriguez, City Solicitor, for his comments.

Colonel Ericson stated that we can't go back and change something that we have already approved and part of that motion was that there would be pavers.

Mr. Rodriguez questioned if the variance expired after one (1) year? Responding to Mr. Rodriguez, Mrs. Townshend stated that it did not expire. The issue, and she consulted with the Deputy City Solicitor on this was about what the proper protocol would be. In the testimony given in the application submission and the testimony at the meeting, they talked about having an area of pervious pavers which ultimately was not included in the construction. At this point, we need to get that issue resolved. She talked with Mr. Pepper, Deputy City Solicitor, and he stated that the only way that this could be considered would be to bring it back to the Board.

Colonel Ercison stated that it already has been back to the board. If you read Mr. Hufnal's motion when he moved, it reduced the amount of impervious cover and it was discussed in the minutes. That is what the Staff recommended and what we agreed to in our motion. It has already been decided, so why are we meeting again on the same topic? How can we go back and amend something that we have already approved, especially within that one (1) year timeframe?

Mr. Rodriguez stated that the change from the applicant and the Staff recommendation is what is being considered today.

Colonel Ericson stated that the Staff recommended it; however, we passed a motion that stated you had to put it in based on Staff recommendations.

Mr. Hufnal stated that he feels that his motion was very clear; however, he would like to hear what they have to say as to why it was changed versus what we had approved. Responding to Mr. Hufnal, Colonel Ericson questioned how could we go back and change something that we are supposed to leave alone for a year.

Mr. Hufnal stated that it does not state that we have to change it we can stick to our ruling. However, he would like to hear why they did not provide the things that we had approved.

Colonel Ericson questioned if it would be legal to go back and change something during this year period when we are not supposed to? Responding to Colonel Ericson, Mr. Rodriguez stated that Staff's recommendation and your order previously has not been completely complied with, they made changes and that is the reason for this hearing today because of that change.

Colonel Ericson questioned if this should then be a different variance? Responding to Colonel Ericson, Mrs. Townshend stated that the one (1) year timeframe indicates that if you have denied a variance they cannot apply for that same variance.

Colonel Ericson stated that if we approve it, they have one (1) year to do it. That does not mean that we go back and change everything. Responding to Colonel Ericson, Mrs. Townshend stated that at this point, they constructed the site differently than what was presented during the variance application and they want to keep it that way rather than changing it to what you saw.

Mr. Sheth stated that the purpose of this hearing is to hear from the City Solicitor on what it is that we can legally do and if we deny the variance, they cannot come before this Board again for one (1) year; however, they can always come back within a year for any other reasons, this is the question.

Mr. Senato stated that on August 17, 2011 everything was approved, a motion was made based on what the applicant presented on August 17, 2011 and his understanding is that they have one (1) year. He feels that we would be setting a precedence if we approve something for an applicant and then prior to the year being up whether it is denied or approved, then this is going to set a precedence where anyone else can come in wanting to make a change.

Mrs. Townshend stated that she would like to make a clarification of why it is coming back this way. In the motion made by the Board, it gives general reference to the removal of the ramp, the revised landscaping, reducing the amount of impervious cover, and needing to submit the revised Final Plan. It does not explicitly state that the pavers are part of that. If you recall, the pavers, even though they are pervious, because there is not an agreed upon calculation, still count toward the lot coverage. They did not exceed the lot coverage what she feels happened is that it is not explicitly stated in the motion that the variance is predicated on having the pavers even though it is clear from the discussion of the Board. The issue becomes was that implicitly part of the motion. It is really a clarification of the motion because in discussion with the applicant of why is there asphalt and not pavers, what was relayed to her was that this was a part of the requirements and it still counted as impervious cover so it was a change they made. She wanted clarification from the Board that either it was or it wasn't a change that would have been permitted under the variance. She did not feel that it was.

Colonel Ericson stated that he looked at the testimony and the minutes and it would seem to him that this is what we talked about the whole meeting and is why we put that in there. There was no discussion from the applicant that this would be a problem.

Mr. Keller stated he feels that an important point that Mrs. Townshend stated is that the motion to approve, the first statement is based upon the testimony received today. There were exhibits during the course of that variance application hearing which represented paver's not hot mix for that question. The testimony itself by Mr. Liberman and I quote "The existing asphalt is being removed and pavers are being put in in that area. This product is a porous concrete product that allows grass to grow up through; however, more importantly; it allows water to run through the area." His reaction to the testimony that day was that this was a positive selling point. That was the testimony and the motion based on that testimony was to approve the request with the exhibits presented to this Board showing the pavers as well as the testimony. Even if you go back one or two years ago, there were exhibits showing the type of pavers and this represented to him just a disregard for what was approved and what was planned.

Mr. Sheth asked Mr. Rodriguez if it was legal to conduct business and his impression was that it is, so you can ask the applicant these questions. Responding to Mr. Sheth, Mr. Rodriguez stated that he feels that it is legal. If you look at the variance recommendations that the Staff made in Paragraph 2 that was not complied with. This is pointed out in the memorandum from Mrs. Townshend and is what you need to hear today. It has been paved over even though it is considered impervious anyway and not left as recommended by Staff previously.

Mr. Rodriguez stated that he feels that if you do not clarify it then later on someone could come back and say well you paved it over and it was in the directive that you couldn't pave it over you had to leave it like it was and you have not followed what Staff and what the Board decided and this is what needs to be clarified today.

Mr. Sheth questioned if any member had a conflict of interest and there was none.

Mr. Malmberg stated that he will confess he did not get a chance the review the old minutes. The variance request that was heard last year was one where we were trying to achieve as much pervious coverage as possible to get the percentage of request down as low as possible. One of the things that we proposed at that variance hearing was to come in with pervious pavers which in most cases, are considered pervious surfaces. Mrs. Townshend, if he recalls at that hearing stated, "she was unsure if it counted as impervious surface or not and that she would have to get an opinion from Jared Adkins." One of our proposals as far as saw cutting this and changing that was to reduce our number by putting in these pavers. It was something that we affirmatively suggested and basically the response at the hearing and response after the hearing by the Staff was we are not going to let you count that as pervious surface. We have not paved over where the pavers were or paved anything. What we did not do is cut-out blacktop and put in pavers which really did not work very well anyway to try and achieve a higher number because we did not have to do that to achieve the approved number. We were here asking this Board for a number, a variance from the eight-five (85) percent lot cover area ratio. We meet the approved variance that this Board granted last time around. We are not asking for anything greater. We also agree that a hearing is not required today because we are within the ratios that were requested last time around.

Mr. Malmberg further stated that Mr. Townshend suggested that we have this hearing because it was unclear whether or not pavers were a condition of approval regardless of whether or not we met the impervious surface coverage ratio that we requested. The variance we requested is very straightforward and very simple. We wanted a variance from the 85% to 89.1% that was approved. In your report, it says that we are requesting 89.1% and 88.2% was approved. Those numbers are reversed. We are actually requesting less impervious surface today then you granted. We are requesting a lower variance then you already approved. The pavers were a side issue and something that we came up with that really aesthetically does not work well at all. We came up with this to try and drive the number down a little bit. We do not need them to meet the variance that you granted and do not feel that we need to be here today for this variance hearing.

Mr. Sheth questioned what would have happened if you did not come to this Board? Responding to Mr. Sheth, Mr. Malmberg stated that they were requested by the City to come to this Board because of language in the discussion that we initiated by offering to put pavers in to get more pervious surface. At the hearing, it was raised by Mrs. Townshend whether this counted as pervious surface or not and wanted an opinion from Mr. Adkins. It has always been our opinion that it is pervious surface; however, it was determined that it was not. We complied with the variance that you approved without saw cutting blacktop and putting in these pavers which aesthetically does not improve things it actually makes it look worse and does not functionally help the project at all.

Colonel Ericson questioned is it the way it looks why you primarily did not want the pavers? Responding to Colonel Ericson, Mr. Malmberg stated that we came up with pavers as a way of maintaining drive aisles and parking areas that are required; however, creating more pervious surface. It was raised at the hearing, as he recalls, we may not allow you to count that as pervious surface so you granted us a percentage that we did not have to do these pavers to achieve the variance that we were granted. As we did the saw cuts and the planters everywhere

else on site, we ended up with less variance, below the lot coverage ratio that was granted.

Mrs. Townshend stated that she thinks that you are accurate as it relates to the December 2009 hearing. She will look at the report that was provided for the August 17, 2011 meeting. On the top of the last page it states "in December 2009 the Board of Adjustment approved a Variance V-09-04 to allow the site to exceed 85% lot coverage. That variance allowed for 88.2% lot coverage. The current variance request is that the lot coverage be permitted at 89.1%. The Variance approved in 2009 expired and the current variance would exceed what was initially approved." At that point in time, we knew from the Kent Conservation District that we would still, from a stormwater management standpoint, count the pavers as impervious. What she thinks the discussion was is that it still needed the variance because it was still going to count as impervious; however, because of the pervious characteristics that it helped to justify exceeding the lot coverage because you are counting it as impervious but it is not entirely impervious.

Mr. Malmberg stated that he is reading the decision and it states "The Board granted an 89.1% impervious surface." Responding to Mr. Malmberg, Mrs. Townshend stated correct, this was using the pavers which counted towards the impervious surface; however, helped to justify the variance by virtue of it having semi pervious characteristics. This is why we are here today because it is not explicitly stated in the decision that the variance being granted was tied to the pervious pavers.

Mr. Keller stated that one of the exhibits presented from the August 17, 2011 meeting was an engineering drawing submitted by Larson Engineering showing a pervious paver area of 1,135 square feet. What he was alluding to earlier in this discussion is that he relied upon exhibits shown during the course of that presentation and replied upon testimony as to the advantage and importance of pervious pavers. He does not note Mr. Malmberg's attendant at the August 2011 hearing. In his estimation, that application was not totally an application for a variance from the lot coverage allowing the 89.1%; however, there were several considerations taken under discussion of additional Staff recommendations and those are highlighted in Mr. Hufnal's motion. The motion starts with the mention of based upon testimony presented with the conditions.

Mr. Hufnal stated that the plan that we have been given today shows the pavers and this was part of our decision even though it was not specifically identified in the motion, this was the understanding.

Mr. Sheth stated that he would like a summary from Mrs. Townshend. If we deny this application they would not be able to come back for one (1) year?

Mr. Malmberg stated that there is not a denial here and so the prohibition that states you cannot come back for one year is not applicable. He may be recalling his attendance at the 2009 hearing; however, the issue is the same.

Colonel Ericson questioned that at one point you stated that you had more pervious area now then what was presented to the Board in August 2011? Responding to Colonel Ericson, Mr. Malmberg stated that we do not feel that we need to be here. The only reason that we are here is because Staff requested we be here because of the discussion regarding pavers; however, the

request is for a number for impervious surface coverage and we are below that number because of a different saw cut that we did that created more pervious surface. Originally, it was a Staff recommendation and we avoided it, going on memory here, because we thought that it would be a higher maintenance issue and it ended up being more attractive than the pavers and gave us more pervious surface so we are actually below the approved pervious surface requested.

Mr. Sheth questioned if they had not come here, they would not have received their Certificate of Occupancy? Responding to Mr. Sheth, Mr. Malmberg stated that this is only because Staff suggests that. Our position is that this Board either does or does not grant us a variance of the 85% impervious surface coverage where now were at 88.5%.

Mr. Hufnal stated that he agreed. If we approved it at 89.1% and the coverage is less than we approved, what are we here for?

Mr. Sheth stated that we need to resolve this issue so that it does not come up in the future with something else.

Colonel Ericson stated that maybe this should not be here. The reason that we wanted the pavers in there as discussed and put in the motion, is because we wanted water to be able to go through the ground and drain off and not become a problem area. If in fact there new designer saw cuts and gives us more pervious area, than what we originally agreed to, couldn't your office approve that in lieu of? Responding to Colonel Ericson, Mrs. Townshend stated that she does not believe that. She discussed this with Mr. Pepper. She does not believe that she has the administrative authority to change the variance in terms of what was contributing as they are still over the 85% and truthfully until we received this letter for the Board, we did not have anything.

Colonel Ericson questioned if there was any way to approve or substantiate the fact that there is more pervious area than what was presented to the Board in August? Responding to Colonel Ericson, Mrs. Townshend stated to submit as-built Plans that would be certified by the Engineer.

Mr. Liberman was sworn in.

Mr. Liberman stated that he would like to go back through Mr. Keller and Colonel Ericson's concerns with what we have done from the start and then to where we are at this point. This is the original Board of Adjustment Plan that was presented where we were seeking a variance for 88.2% impervious surface area. What we proposed was that there would be an area on the deck that would be saw cut for a landscape aisle and a concrete ramp that would also get saw cut, replaced, and landscaped. Along the southern property line, the contractor paved all the way up to the wall that separates this property and the Hospital property. We would take that area out that would get us to 88.2%. The variance request was granted and then later expired. We came back with the plan that Mr. Keller discussed. That is the plan that we are coming back to address where they have constructed the landscape island. The area that we were proposing to do the pervious pavers did not count and was not counted as pervious in our calculations. We argued that it was pervious; however, Staff denied that and stated that it was considered to be impervious. The southern property line was to remain as paved because they did not want to just saw cut this area and leave it as it would be a maintenance issue. Subsequent to the hearing since we were not getting credit for an area that was already paved, it did not make sense to saw cut

out and spend the $10,000 to $12,000 to put these pavers in this area so it was left as paved. What they did was the ramp as discussed, the curb island, and the southern property line. The contractor did a really nice job by constructing a curb along the edge of the parking lot making it a landscaped area that is now a mulched landscaped area along the southern property line. The impervious area as it is with this area being paved is 88.5%. If you go back and look at the plan that we presented previously when we started talking about the paver area, it would get us down to the 89.1%; however, if we included the paver area it would have gotten us down to 85.9%. The variance was granted because this paver area was not considered pervious. The variance was granted at 89% so we added in the landscape bed along the southern property line versus what was originally approved at 88.2% and we are at 88.5% and the only difference with the .3% more than what was originally approved is the angle that the trash dumpster had to be put in to make it so that the trash truck could get in and pick-up the dumpster and we also did not account for the concrete pad that the bike rack sits on.

Mr. Liberman further stated that as to what Colonel Ericson discussed earlier, was that we wanted to have the water flow through the paver area which he feels is a valid point. What we have associated with this site is that there is an underground stormwater infiltration system that serves the entire site where all the runoff from this whole area goes through this infiltration system and already goes into the ground. Regardless of whether it goes through here we have a trench drain. Anything that falls on the upper deck or falls on the back of the lot in this area goes into the trench drain through a water quality structure and then into an infiltration system so it does go into the ground. We essentially have no run-off from this site for anything below a ten (10) year storm which would be a 5.24 inch rainfall storm. Everything else that comes in is stored in the underground system and then infiltrates.

Mr. Sheth stated that on August 17, 2011 you had the same knowledge about everything and you were agreeable. The only thing that has changed is that it cost you $12,000. Responding to Mr. Sheth, Mr. Liberman stated yes this is correct.

Mr. Malmberg stated that at the hearing it was decided that we were not going to include the pavers as pervious surface; however, as he argued two (2) years later, it should be because it is a pervious area and it does ultimately end up in a subterranean stormwater area that goes through in 2009. In 2011 Mr. Liberman did this as a proposal from us and he calculated it both ways. He did not think until the actual hearing that Staff said that they weren't going to permit this.

Mrs. Townshend stated that we stated that in giving direction for the Board of Adjustment application, she talked to Jared Adkins at the Kent Conservation District and what he indicated is they counted toward impervious cover from a stormwater standpoint. If this is how they are going to count it, then from a lot coverage standpoint, we counted the same. We knew that going into the hearing and it is reflected in the report. While it did not refer to Jared Adkins it referred to the fact that it is counted as impervious cover.

Mr. Liberman stated that their plans were already submitted prior to getting the report calling it that. This is why it remained on the plan. The bigger issue and the point with asking for the 89.1% was that initially, they did not want to do the work on the southern property line because they thought this would be a maintenance issue. What they have done is a better situation and a better finished product than the pavers and then a saw cut edge along that property line by

constructing the curb and putting the landscaped island in along that southern property line.

Colonel Ericson stated that it would seem to him that it would be Mrs. Townshend's administrative power to say we want to reduce the amount of impervious coverage. The fact is they are processing the water through an infiltration system and it will not run off through the streets and that she would make the decision since this is information that we did not have at that time. Based on your recommendations and the Staff Report, you should have the authority to make that determination as the problem regarding runoff has been resolved in a different way.

Mr. Rodriguez stated that he thinks what Staff wants is a clarification to the changes that you heard today and if it effects granting of the variance.

Colonel Ericson stated that the trouble he has with this is that the clarification is not necessary; in our remarks and the reason that we voted is that we wanted the pavers there. There is no doubt in his mind when he reads everything he does not see how he could vote against this. It seems like they have a valid point in that they have a way to process the water so that it is not running out into the street causing problems. If in fact there is now different ways to look at it as things have changed after our meeting, does Mrs. Townshend have the administrative power to make that decision? Responding to Colonel Ericson, Mr. Rodriguez stated that she does not feel that she does. He would suggest that a motion would be appropriate by the Board stating that the changes that you have heard do not affect the granting of the variance of V-11-08.

Mr. Sheth stated that the Board has a problem in that they make their decision and motion on the basis of what was presented and that presentation changes and then another case comes along, of course we would work on the current case; however, this sets a precedence.

Colonel Ericson questioned if they had a motion that states that we stick by our original decision? This decision is based upon having the pavers; however, we have given administrative authority to the City to re-evaluate how they are processing water and Mrs. Townshend would then have the final say so.

Mr. Hufnal stated that it is under our approval; however, under the 89.1% that we had already granted.

Mr. Sheth stated because Kent Conservation District is comfortable with the water flow and he is comfortable with the 89.1% that we would approve this request.

Mr. Senato stated that the problem he has with this is that on August 17, 2011 we were presented all the facts and information that Mr. Liberman from Larson Engineering presented and based on that information there was a motion made and seconded and then passed. The problem that he has with that is that since that time, there has been a definite change whether it is for the plus or minus in the decision that we rendered giving them approval for the variance. He agrees with everything that has been stated today. The problem he has with this is it is telling him whether it is for the better or for the worse in a variance that we approve that we could have other situations come up. With this, his point is that there have been changes within less than a year from the original motion which bothers him.

Mr. Sheth stated that he is glad that this happened because the applicant feels that this is the best for them and the City is looking at whether we are violating any rules or is this worse than the previous approval. This gives the City the benefit to look at it and ensure that the best decision is being made.

Mrs. Townshend stated that based on what you are saying, she wants to agree with Mr. Senato and provide some background. Staff is stating that they would like clarification from the Board. We are not saying that what they are presenting is not acceptable and she feels that they have made a reasonable case that what they are presenting is probably better than what was approved in the first place. The challenge in terms of whether or not we have administrative authority to do these things is that maybe if it had come about a bit differently, there might have been the sense that we could have dealt with these things administratively. We found out when we went to do the Certificate of Occupancy inspection that this issue was not resolved. Typically, if we deal with things ahead of the curve, we can try and work through an administrative process or say let's get clarification on this. The issue is, we did not know to be able to try to resolve it administratively so we were at a decision point where we issued a temporary Certificate of Occupancy pending this; however, especially since this is a property that has a very long history of litigation she did not want to put the City or the Board or the applicant in a position of her administratively going against what the Board's decision was to get it occupied.

Mr. Sheth stated that he appreciated the applicant's patience while this issue was worked out and that the City did not ignore our decision made in the past. Responding to Mr. Sheth, Mr. Malmberg stated that he agreed.

Mr. Senato stated that he is not disagreeing with what you are saying; however, his point is that this could come up again and if a decision is made by the Board based on information received by the applicant whether it is less six (6) months later than what we approved or more, there should be a period of time where that should happen and not just arbitrarily which is what bothers him.

Colonel Ericson recommending having a motion to say that the interpretation of what we said in the August 17, 2011 meeting was in fact that we expected pavers to be put in there to help water control; however, we have seen a new plan and if the City Planner agrees with her information, she has the authority to overcome that restriction and allow that in lieu of pavers.

Colonel Ericson further stated that they were here today to clarify this; however, there is a new plan and we would like to give the City Planner the authority to look at the new plan and if the water flow control problem is solved with the new plan, you are authorized to not require pavers and use the new plan. Would this be satisfactory? Responding to Colonel Ericson, Mr. Rodriguez stated that it sounded perfect to him.

Mr. Keller stated that he still had some reservations for what appears to be evolving into a process whereby the Board of Adjustment is taking on construction field change matters. He is not convinced yet that it seems proper. We had evidence and exhibits presented in the August 17, 2011 meeting where these all parlayed into the overall application process of the applicant. Had there not been mention of whether it was pavers or hot mix asphalt is a matter of their side of what was presented. It was touted by their engineering firm as to the benefits of such

construction and this is not the first time that this project has seen one kind of plan approval of some sort only to be executed in a matter contrary to that and it ends up at the Board of Adjustment. This should have been more suitably brought to the attention of the City at the time they were about to pave with asphalt this portion of the project contrary to what was exhibited to this Board, considered by the Board, and approved by the Board namely the pavers. He does not know why there is not a field change process within the City. If this does not change the impervious ground coverage area, he does not see why it is not unlike a field change that would be represented to the City Engineering Staff for subsequent approval. His pause is what was represented by the applicant to the extent of some matters of positive discussion about the pavers to be utilized and the benefits therefrom only to now request after the fact we forego, and the fact that it has already been paved, to cast in the wind what was the decision of the Board.

Mr. Malmberg stated a couple of points that may or may not help. First, procedure is obviously important; however, from the applicant's perspective, we are trying to get you to focus on substance and you are getting bogged down on City procedures, which is not unimportant. If you look at the substance of what we are requesting, of this Board in 2009 when he was here is to approve what has been done. It was a better solution than the one that was suggest late last year. Late last year when the application was submitted, it was with this concept of pavers to try and get the numbers down. Mrs. Townshend indicated that she knew it was not going to be counted as impervious surface; however, that is not the case. We got the Staff report a couple of days before the hearing so that design was submitted to this Board with the idea of trying to create more impervious surface. That is the only reason to do it, because these things are ugly in a parking lot. They do not add anything to this project. It is needlessly wasted money without any significant contribution because it does not increase the water flow that runs into the ground and recharges the ground because that is all being captured anyway. It is aesthetically much less attractive and was a bad solution. It was submitted to this Board with the previous design as an argument that we are really not asking for 89.1% we are asking for 85.9%. That got rejected in that hearing.

Mr. Malmberg further stated that when it came to the actual construction, by the way during this period of time, Mr. Zimmerman's interest in this project went away and new people took over, they saw 89.1% lot coverage ratio that they had to hit and decided that this was a more attractive and more reasonable way to do it. The new folks understanding of what they needed to do was create impervious surface at 89.1% or less.

Colonel Ericson moved that the question put before the Board is whether our decision regarding V-11-08 on August 2011 the Board considered the pavers as a necessary part of the plan and we agreed that in fact it was our votes that depended upon that; however, at today's meeting we have been advised there is a new plan that will be more attractive to the facility and the surrounding area. It will be a better plan for capturing and filtering the water than what was presented to us originally; therefore, we ask that administrative authority be given to the City Planner to determine if this new Plan meets City requirements and if so the City Planner has the authority to approve the new Plan, seconded by Mr. Hufnal.

Mrs. Townshend would add that it recognize that it is not going to meet the requirement on lot coverage; however, it is below what the variance was given so it is within the context of the variance.

Mr. Keller stated that ultimately, we are talking about lot coverage and the previous application approved regardless of construction features approved for lot coverage not to exceed 89.1% is that correct? Responding to Mr. Keller, Mrs. Townshend stated that yes that is correct.

A roll call was taken regarding the vote as follows:

Yea	***Nay***
Mr. Hufnal	*Mr. Senato*
Colonel Ericson	*Mr. Keller*
Mr. Sheth	

The motion was carried and passed with a 3-2 vote.

Mr. Senato moved to adjourn the meeting, seconded by Colonel Ericson and the motion was unanimously carried 5-0.

Meeting adjourned at 10:00 AM

Sincerely,

Diane Metsch
Secretary

City of Dover

Board of Adjustment

April 18, 2012

V-12-02

Location:	Toll Plaza Building on State Route 1
Applicant:	Cellco Partnership
Owner:	State of Delaware
Tax Parcel:	N/A
Application Date:	March 16, 2012
Present Zoning:	R-8 (One Family Residence Zone)
Present Use:	Toll Plaza Building
Reviewed By:	Janelle M. Cornwell, AICP
Variance Type:	Area Variance
Variance Requested:	Allow a structure to exceed the maximum height of 35 feet. Allow for an additional 41 feet in height.

Project Description:
The applicant is requesting a variance from the *Zoning Ordinance* of Article 4 Section 4.1 Zoning Bulk and Parking Regulations. Specifically, they are requesting a variance to allow a structure to exceed the maximum height requirement by 41 feet for an overall height of 76 feet. The proposal is for a 70-foot cellular tower that has a six foot lightening rod attached to the top for a total height of 76 feet. The antenna will also exceed the 70-foot tower height.

Adjacent Land Uses
The adjacent properties are a mixture of commercial, residential and agricultural uses. The properties to the north are zoned CPO (Commercial and Professional Office Zone). The properties to the north and east across State Route 1 are zoned A (Agricultural Zone). The properties to the west are zoned R-8 (One Family Residence Zone).

Code Citation

Article 4 Section 4.1
Bulk and parking regulations for one-family residence zones [are as follows]:

	R-8
Minimum required:	
Lot area	8,000 SF
Lot width (ft.)	70
Lot depth (ft.)	100
Front yard (ft.)	25
Side yard (ft.)	10
Total Side yard (ft.)	20
Rear yard (ft.)	30
Off-street parking	
Per dwelling unit	2
Maximum permitted:	
Building height	
Stories	2½
Feet	35
Lot coverage	35%

Exceptional Practical Difficulties Tests

Article 9, §2 dictates the specific powers and duties of the Board of Adjustment with regard to granting variances. In order to grant a variance the Board must determine in that exceptional practical difficulties exists.

Specifically the Board must determine:

2.1 Variance – The board shall have the authority to authorize variances from provisions of the zoning ordinance that are not contrary to public interest where the board determines that a literal interpretation of the *Zoning Ordinance* would result in undue hardship or exceptional practical difficulties to the applicant. In granting variances, the board shall determine that the spirit of the *Zoning Ordinance* is observed and substantial justice done.

2.11 Area Variance. A variance shall be considered an area variance if it relates to bulk standards, signage regulations, and other provisions of the *Zoning Ordinance* that address lot layout, buffers, and dimensions. In considering a request for an area variance, the board shall evaluate the following criteria and document them in their findings of fact:

(a) the nature of the zone in which the property lies;
(b) the character of the immediate vicinity and the contained uses therein;
(c) whether, if the restriction upon the applicant's property were removed, such removal would seriously affect neighboring properties and uses; and

(d) whether, if the restriction is not removed, the restriction would create unnecessary hardship or exceptional practical difficulty for the owner in his efforts to make normal improvements in the character of that use of the property that is a permitted use under the provisions of the zoning ordinance.

1. The nature of the zone in which the property lies.

Applicant Responses:

The subject property lies within the DelDOT right of way for Route 1 and thus is presently not zoned. However, pursuant to the City of Dover Code, to guard against future road vacations which could create unzoned parcels and to ensure the City retains some measure of zoning control over such properties, the right of way parcel is deemed to have adopted the zoning classification of the immediately adjacent parcel. As such, the property upon which the Toll Plaza and the adjacent service center sits is considered to be zoned R8. This zone permits a wide variety of residential and institutional uses (some with Planning Commission approval needed), as well railroads and public utility rights of way and infrastructure. Commercial telecommunications towers are permitted in the R8 zone subject (unless a variance is needed) to Planning Commission approval. The nature of the zone in this instance should not preclude this installation under its particular facts as the R8 zoning is a placeholder zoning classification imposed over a multi-lane, limited access highway, is certainly with the classification of a utility, and would be located adjacent to a commercial/office use associated with the existing Toll Plaza.

Staff Response:

The site is located within a residential zone of the city. Zoning in the city extends to the center of the right-of-way. The site is located within the State right-of-way for State Route 1.

2. The character of the immediate vicinity and the contained uses therein.

Applicant Responses:

The subject property is located in the right of way for the Route 1 Toll Plaza adjacent to what is, at that point, a 10-lane highway with fully functional toll plaza. Adjacent to the toll plaza is the service center facility upon which this monopole is proposed. As this is technically right of way, it has east and west boundaries only. The most proximate development to the site is the Monster Mile facility, along with associated parking areas. The closest residential properties would be located either 1,500 feet across Delaware Route 1 or 1,000 feet to the east of the proposed location, separated from this site by a large swath of state owned land. The bleachers for the racetrack are substantially higher than the height of the proposed monopole. The isolated nature of this area, coupled with its proximity to the racetrack, ensure that the 76 foot tall monopole would not be out of character with what surrounds the property.

Staff Response:

The character of the vicinity is a mixture of institutional and agricultural uses. The area is bounded by wooded area and State Route 1. The property to the west is open space used as camper parking during NASCAR race weeks. The only structures in the immediate vicinity are the Toll Plaza Service Building which the cell tower is

proposed to be located near and the toll booths in State Route 1. The use where the cell tower is proposed is an institutional use.

3. Whether, if the restriction upon the applicant's property were removed, such removal would seriously affect neighboring properties and uses.
   Applicant Responses:
   The applicant believes that the granting of this application would have no adverse impact on surrounding properties or uses. As the Board is likely aware, these installations take up minimal space. In this instance, the proposed installation is located at the rear of a developed service facility, adjacent to woodlands. It is bordered by a limited access highway and the Dover Downs racetrack facility, whose existing facilities exceed the 76 foot height of this installation. The addition of a single, 70' monopole, roughly 3 feet in diameter (with a six foot lightening rod at the top) will not be out of character with the area nor will it detract from the uses that currently are located in this area. In addition, this installation will serve to improve the quality of Verizon Wireless's coverage in this area by assisting in resolving current capacity shortfalls that exist in this heavily travelled area of Dover, particularly during race weekend and other events.

   Staff Response:
   The additional 41 feet in height would not impact surrounding uses. The height would not be as noticeable as it would be if it were located in the open fields on the adjacent property. The site is surrounded by woodlands, the Toll Plaza Service Building, and State Route 1. The location of the proposed cellular tower is at the back of the property next to woodlands with no impact on properties or uses.

4. Whether, if the restriction is not removed, the restriction would create unnecessary hardship or exceptional practical difficulty for the owner in his efforts to make normal improvements in the character of that use of the property that is a permitted use under the provisions of the zoning ordinance.
   Applicant Responses:
   The application is being pursued due to existing capacity concerns within Verizon Wireless's network. Previously, these concerns only manifested themselves during the race weekends at Dover Downs and they could be addressed through the use of temporary facilities. These usage concerns, which result not only from cell phone calls but the increased use of text messaging, email and downloading capabilities provided by and expected from today's smartphones, have now risen to the extent that they are no longer just present on race weekends and can no longer be corrected through the use of temporary facilities. The radio frequency spectrum licensed to Verizon Wireless by the FCC is exhausted.

   To handle these issues, new sites are necessary to provide additional capacity for new and existing customers. As the Board will recall, we were before it with a facility located along Route 13 to assist in addressing these concerns. The application before you is another piece of that same puzzle. The present height limitation in this District of 35 feet would preclude any ability to effectively offload some of the existing capacity issues to this facility. If forced to maintain 35 feet in height, the required coverage footprint for offloading could not be met and the

facility could not serve its intended purpose. Indeed, most of the Verizon Wireless locations in the area are established at 100 feet or higher.

In addition, it cannot be overlooked that the zoning classification imposed upon this property is somewhat artificial. That is to say, it is road right of way that is being occupied by this facility. This right of way is also occupied by existing highway, a toll plaza and existing service center, all nonresidential uses. It is only because this portion of the right of way borders other state lands zoned R8 that this residential classification has been imposed upon this portion of the right of way. Indeed, were the monopole shifted 500 feet or so to the north, the property would be considered zoned with the commercial classification of the adjacent Dover Downs facility, thus providing for much more relaxed height limitations. Thus, the unnecessary hardship imposed upon this property is related, in part, to the residential zoning classification that is imposed upon this portion of the highway right of way.

Staff Response:
The denial of the variance requested would create an exceptional practical difficulty as this area is near capacity and exceeds capacity during large events. This could impact the quality of service and the ability to provide adequate service by the company limiting the normal improvements in the character of the use of the property. The denial of the variance could also create degradation in customer services for Verizon Wireless customers in the area that would also be an exceptional practical difficulty as the company would be unable to do adequate business in the area. The decrease in height would reduce the effectiveness of the services. (As stated in the Radio Frequency Design Analysis Report)

Variance Recommendations:
Staff recommends approval of the area variance for reasons as follows:

- The applicant has demonstrated exceptional practical difficulty as a shorter cellular tower would reduce the effectiveness of services provided and the tower is needed to provide adequate services.
- The variance would not negatively impact the neighborhood as there are no other structures within the neighborhood that are taller than the proposed cellular tower. The site is surrounded by woodlands that would partially block the structure from visibility
- The placement of a cellular tower is in keeping with the use in which it is located as there is public infrastructure and institutional uses in the area.

AREA VARIANCE CRITERIA LIST

1. **The nature of the zone in which the Property lies.** The subject property lies within the DelDOT right of way for Route 1 and thus is presently not zoned. However, pursuant to the City of Dover Code, to guard against future road vacations which could create unzoned parcels and to ensure the City retains some measure of zoning control over such properties, the right of way parcel is deemed to have adopted the zoning classification of the immediately adjacent parcel. As such, the property upon which the Toll Plaza and the adjacent service center sits is considered to be zoned R8. This zone permits a wide variety of residential and institutional uses (some with Planning Commission approval needed), as well railroads and public utility rights of way and infrastructure. Commercial telecommunications towers are permitted in the R8 zone subject (unless a variance is needed) to Planning Commission approval. The nature of the zone in this instance should not preclude this installation under its particular facts as the R8 zoning is a placeholder zoning classification imposed over a multi-lane, limited access highway, is certainly with the classification of a utility, and would be located adjacent to a commercial/office use associated with the existing Toll Plaza.

2. **The character of the immediate vicinity and the uses contained therein.** The subject property is located in the right of way for the Route 1 Toll Plaza adjacent to what is, at that point, a 10-lane highway with fully functional toll plaza. Adjacent to the toll plaza is the service center facility upon which this monopole is proposed. As this is technically right of way, it has east and west boundaries only. The most proximate development to the site is the Monster Mile facility, along with associated parking areas. The closest residential properties would be located either 1,500 feet across Delaware Route 1 or 1,000 feet to the east of the proposed location, separated from this site by a large swath of state owned land. The bleachers for the racetrack are substantially higher than the height of the proposed monopole. The isolated nature of this area, coupled with its proximity to the racetrack, ensure that the 76 foot tall monopole would not be out of character with what surrounds the property.

3. **Whether, if the restriction upon the applicant's property is removed, such removal would seriously affect neighboring properties and uses.** The applicant believes that the granting of this application would have no adverse impact on surrounding properties or uses. As the Board is likely aware, these installations take up minimal space. In this instance, the proposed installation is located at the rear of a developed service facility, adjacent to woodlands. It is bordered by a limited access highway and the Dover Downs racetrack facility, whose existing facilities exceed the 76 foot height of this installation. The addition of a single, 70' monopole, roughly 3 feet in diameter (with a six foot lightening rod at the top) will not be out of character with the area nor will it detract from the uses that currently are located in this area. In addition, this installation will serve to improve the quality of Verizon Wireless's coverage in this area by assisting in resolving current capacity shortfalls that exist in this heavily travelled area of Dover, particularly during race weekend and other events.

4. **Whether, if the restriction is not removed, the restriction would create unnecessary hardship or exceptional practical difficulty for the owner in his ability to make normal improvements to his property or permitted uses.** The application is being pursued due to

existing capacity concerns within Verizon Wireless's network. Previously, these concerns only manifested themselves during the race weekends at Dover Downs and they could be addressed through the use of temporary facilities. These usage concerns, which result not only from cell phone calls but the increased use of text messaging, email and downloading capabilities provided by and expected from today's smartphones, have now risen to the extent that they are no longer just present on race weekends and can no longer be corrected through the use of temporary facilities. The radio frequency spectrum licensed to Verizon Wireless by the FCC is exhausted.

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In addition, it cannot be overlooked that the zoning classification imposed upon this property is somewhat artificial. That is to say, it is road right of way that is being occupied by this facility. This right of way is also occupied by existing highway, a toll plaza and existing service center, all nonresidential uses. It is only because this portion of the right of way borders other state lands zoned R8 that this residential classification has been imposed upon this portion of the right of way. Indeed, were the monopole shifted 500 feet or so to the north, the property would be considered zoned with the commercial classification of the adjacent Dover Downs facility, thus providing for much more relaxed height limitations. Thus, the unnecessary hardship imposed upon this property is related, in part, to the residential zoning classification that is imposed upon this portion of the highway right of way.

CELLCO PARTNERSHIP

d/b/a verizon wireless

WIRELESS COMMUNICATION FACILITY

DOV TOLL

200 PLAZA DRIVE

DOVER, DE 19901

KEY LOCATION MAP



KEY LOCATION MAP

SCALE: 1"=500'

500' 250' 0 500' 1000'

LIST OF DRAWINGS

T-1 KEY LOCATION PLAN & PROJECT DATA
T-2 TAX/ZONING MAP & 200' PROPERTY OWNERS LIST
SP-1 OVERALL SITE PLAN
SP-2 ENLARGED SITE PLAN & ELEVATION
SP-3 ANTENNA DETAILS
C-1 EQUIPMENT SHELTER CONSTRUCTION DETAILS
C-2 CONSTRUCTION DETAILS

OWNERS CERTIFICATION

I, _____, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, AND THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DATE_____ SIGNATURE_____

ENGINEERS CERTIFICATION

I HEREBY CERTIFY THAT I HAVE PREPARED THIS PLAN PLAT AND THAT ALL DIMENSIONS AND INFORMATION ARE CORRECT.

NAME: TITLE AND LICENSE NUMBER:

JOHN CLAUDIO FERRANTE DE P.E. NO. 13889

DATE_____ SIGNATURE_____

GENERAL NOTES

1. THE PROPOSED FACILITY IS UNMANNED, OCCUPANCY IS LIMITED TO PERIODIC VISITS BY VERIZON PERSONNEL FOR ROUTINE MAINTENANCE AND INSPECTION APPROXIMATELY ONCE OR TWICE A MONTH. THEREFORE NO NEW PARKING IS PROPOSED.
2. POTABLE WATER AND SANITARY SEWER SERVICES ARE NOT REQUIRED OR PROPOSED FOR THE NEW FACILITY.
3. ONE BUILDING MOUNTED LIGHT IS PROPOSED.

BULK REQUIREMENTS

ZONING BASED ON R-8 (NEAREST ZONE TO MONOPOLE)

MINIMUM LOT	REQUIRED	EXISTING	PROPOSED
SIZE (SF)	8,000	NA	NA
WIDTH (FT)	70	NA	NA
DEPTH (FT)	110	NA	NA
SETBACKS			
FRONT/ROW LINE (FT)	30	256.2	114.1
ONE SIDE (FT)	25	NA	NA
BOTH SIDES (FT)	50	NA	NA
REAR (FT)	40	NA	NA
MAXIMUM HEIGHT/ STORIES	2 1/2	NA	NA

FREESTANDING TELECOMMUNICATIONS TOWERS

EQUIPMENT SHELTER			
GROSS AREA (SF)	NA	NA	230
HEIGHT (FT)	NA	NA	10.75'
FRONT/ROW LINE (FT)	NA	NA	114.1
SIDE SETBACK (FT)	NA	NA	NA
BOTH SIDES (FT)	NA	NA	NA
REAR SETBACK (FT)	NA	NA	NA
TOWER SETBACKS			
REAR (FT)	NA	NA	NA
SIDE (FT)	NA	NA	NA
FRONT/ROW LINE (FT)	NA	NA	138.0
HEIGHT (FT)	NA	NA	70

Ⓥ VARIANCE GRANTED NOT REQUESTED

Ⓣ TO TOP OF LIGHTING ROD

PROJECT DATA

PROJECT:	DOV TOLL
LOCATION:	200 PLAZA DRIVE DOVER, DE 19901
LOCATION:	WITHIN RT 1 R.O.W.
ZONING:	ZONING BASED ON R-8 (NEAREST ZONE TO MONOPOLE)
PROPERTY OWNER:	CITY OF DOVER
POWER PROVIDER:	DOVER ELECTRIC UTILITY (302) 736-6700
GAS PROVIDER:	CHESAPEAKE UTILITIES (302)-734-6700
TELCO PROVIDER:	VERIZON
APPLICANT:	CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 5175 CAMPUS DRIVE PLYMOUTH MEETING, PA 19462

SITE DATA

LATITUDE = N 39° 11' 02.00"
LONGITUDE = W 75° 30' 55.2"
DATUM NAD 83

USGS ELEVATION DATA
GROUND ELEV. = 34' AMSL
DATUM NAVD 88

TRUE NORTH DETERMINATION, GROUND (AMSL) ELEVATION, LATITUDE AND LONGITUDE COORDINATES ARE BASED ON USGS MAP INFORMATION

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY
B	03/10/12	REVISED PEER COMMENTS	JAM	JS
A	01/19/12	ISSUED FOR PRELIMINARY REVIEW	JAM	JS

CELLCO PARTNERSHIP
d/b/a verizon wireless
5175 CAMPUS DRIVE
PLYMOUTH MEETING, PA 19462

D.E. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 2666

E 2 PROJECT MANAGEMENT LLC

87 HIBERNIA AVENUE
ROCKAWAY, N.J. 07866
PHONE: (973) 299-5200
FAX: (973) 299-5059
www.E2PM.com

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT. THIS DRAWING AND THE DESIGN FEATURES OR CONSTRUCTION DISCLOSED ARE PROPRIETARY TO E2 PROJECT MANAGEMENT LLC AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION, SHALL NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST AND SHALL BE RETURNED UPON REQUEST.

I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

JOHN CLAUDIO FERRANTE, P.E. D.E. No. 13889
LICENSED PROFESSIONAL ENGINEER

KEY LOCATION PLAN & PROJECT DATA

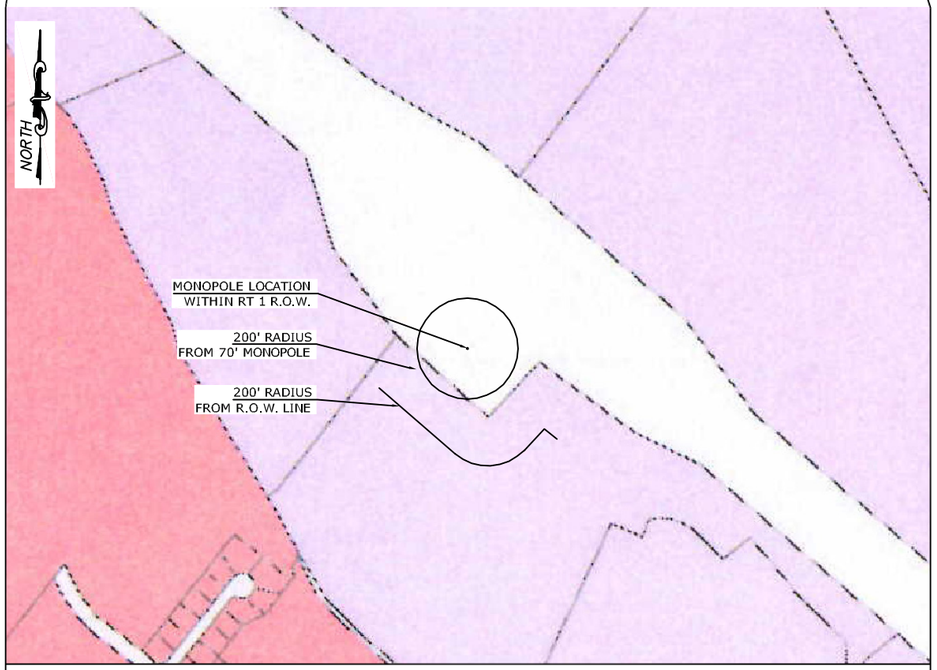
DRAWING ISSUE STATUS CURRENTLY -
A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)_____
C=(SPECIFY)_____
D=(SPECIFY)_____

B

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

FIRST ISSUE: 01/19/12	DRAWING NO. T-1
DRAWN BY: JAM	
CHECKED BY: JCF	
SCALE: AS SHOWN	SHEET NO: 1 OF 6
PROJECT #: P-07-24-48	PRINT DATE: 03/10/12

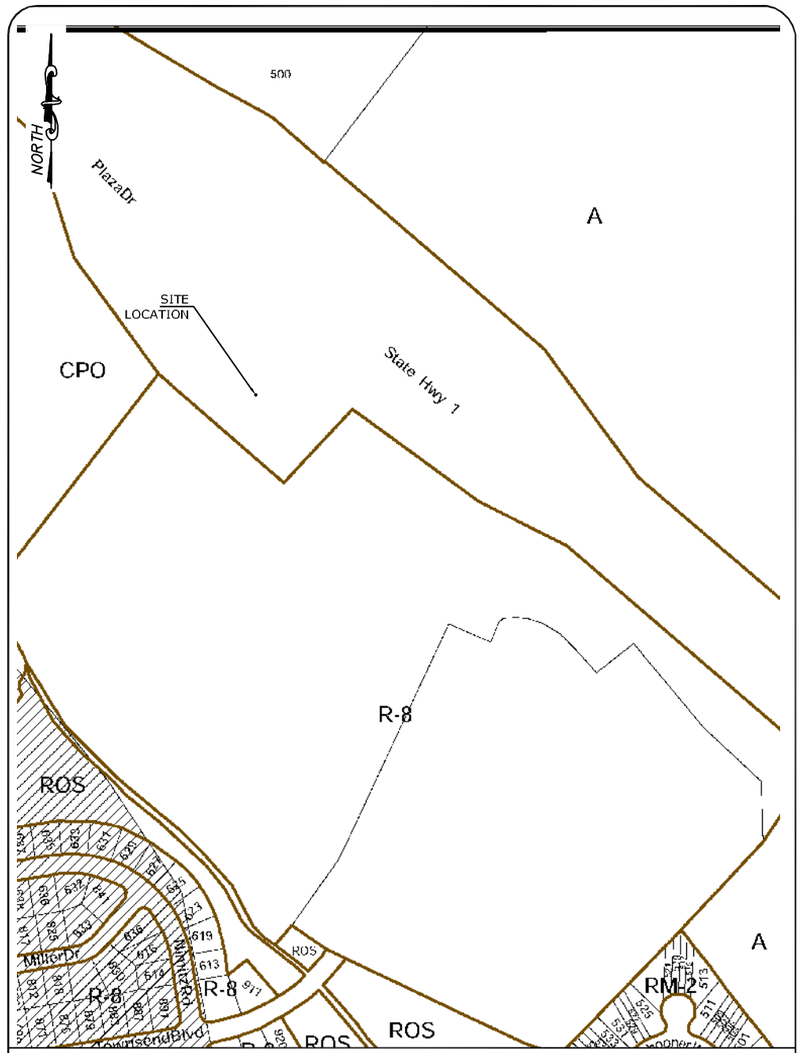
FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll cof\dwg\Cd's Rev B



TAX AND 200' PROPERTY OWNERS MAP

SCALE: 1" = 300'

200' PROPERTY OWNERS LIST



ZONING MAP

SCALE: NTS

Zoning
A Agriculture
C-1 Neighborhood Commercial
C-1A Limited Commercial
C-2 Central Commercial
C-2A Limited Central Commercial
C-3 Service Commercial
C-4 Highway Commercial
CPO Commercial Professional Office
SC-1 Neighborhood Shopping Center
SC-2 Community Shopping Center
SC-3 Regional Shopping Center
RC Recreational and Commercial
IO Institutional and Office
M Manufacturing
IPM Industrial Park Manufacturing
IPM-2 Industrial Park Manufacturing- Technology Center
R-7 One Family Residence
R-8 One Family Residence
R-10 One Family Residence
R-15 One Family Residence
R-20 One Family Residence
RG-1 General Residence
RG-2 General Residence
RG-3 Group Housing
RG-4 Multistory Apartments
RG-5 Mid Rise Apartments
RGO General Residence and Office
RM-1 Medium Density Residence
RM-2 Medium Density Residence
ROS Recreational and Open Space
MPH Mobile Home Park
TND Traditional Neighborhood Design
COZ-1 Corridor Overlay Zone
H Historic District
Airport Environs Overlay Zone (AEOZ)
65 Noise Zone A
70 Noise Zone B
75 Noise Zone C
80 Noise Zone D
CZ Crash Zone
APZ I and APZ II Accident Potential Zones I & II

ZONING LEGEND

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY
B	03/10/12	REVISED PEER COMMENTS	JAM	JS
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I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

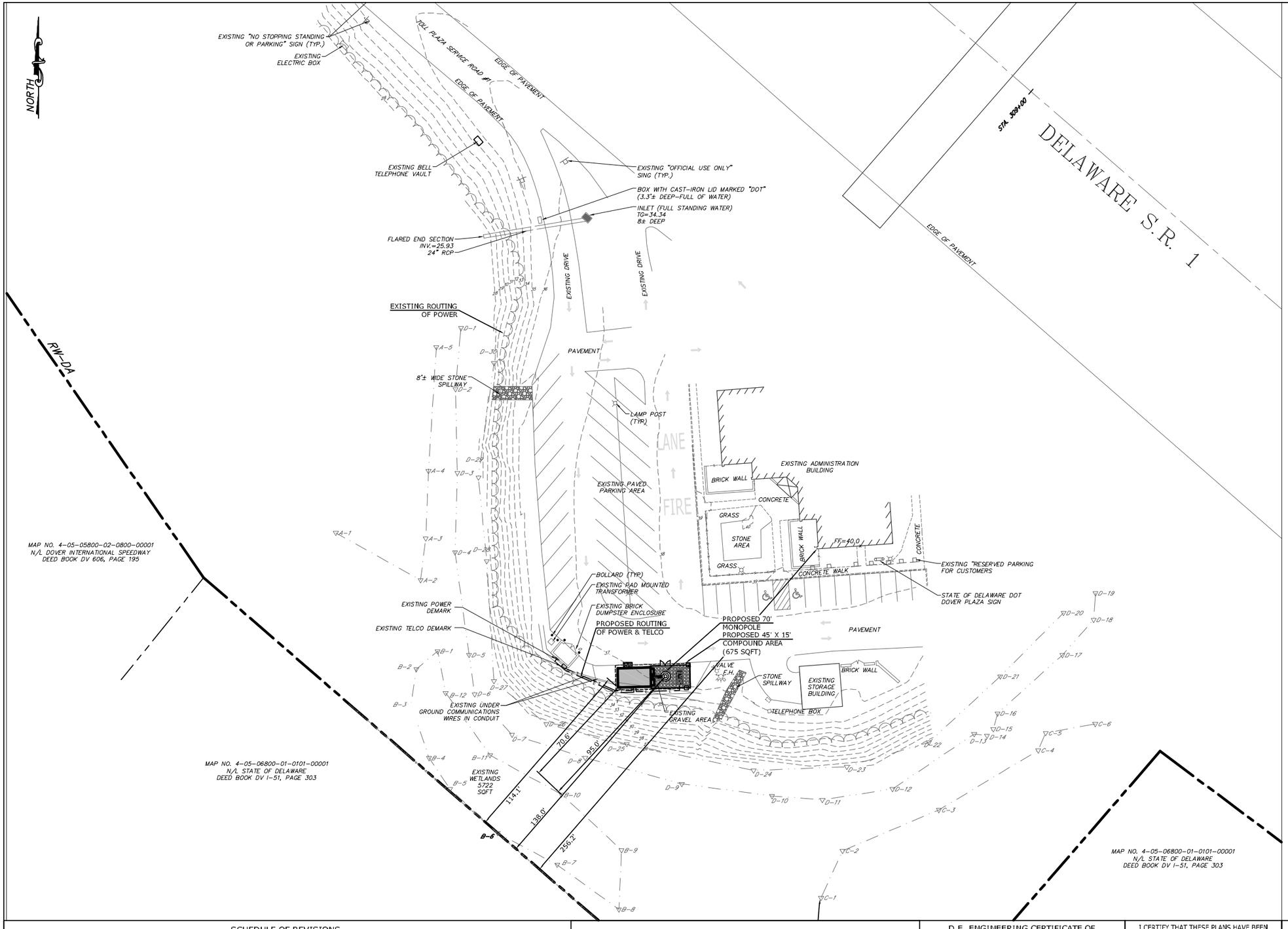
JOHN CLAUDIO FERRANTE, P.E. D.E. No. 13889
LICENSED PROFESSIONAL ENGINEER

TAX/ZONING MAP & 200' PROPERTY OWNERS LIST

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

DRAWING ISSUE STATUS CURRENTLY - B
A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)_____
C=(SPECIFY)_____
D=(SPECIFY)_____

FIRST ISSUE: 01/19/12	DRAWING NO. T-2
DRAWN BY: JAM	
CHECKED BY: JCF	
SCALE: AS SHOWN	SHEET NO: 2 OF 6
PROJECT #: P-07-24-48	PRINT DATE: 03/10/12
FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll cot\dwg\Cot's Rev B	



OVERALL SITE PLAN

30' 15' 0 30' 60'

SCALE: 1"=30'

LEGEND

- PROPERTY LINE
- EDGE OF PAVEMENT
- EXISTING CONTOUR LINE
- EXISTING UNDERGROUND WATERLINE
- PROPOSED UNDERGROUND TELEPHONE CONDUIT
- PROPOSED UNDERGROUND ELECTRIC CONDUIT

MAP SURVEY REFERENCE:

EXISTING CONDITIONS SHOWN HERON ARE BASED ON PLANS ENTITLED "SPECIAL PURPOSE SURVEY" PREPARED FOR E2 PROJECT MANAGEMENT BY ANDERSON ENGINEERING ASSOCIATES INCORPORATED DATED 11/28/11,REVISED 3/5/12 TO ADD WETLANDS AND RIGHT OF WAY LINES AND FIELD OBSERVATIONS BY E2 PROJECT MANAGEMENT, LLC, ROCKAWAY, NJ 07866

IN ACCORDANCE WITH PART II - CODE OF ORDINANCES APPENDIX B - ZONING ARTICLE 5. - SUPPLEMENTARY REGULATIONS NO WETLANDS AREA LOCATED WITHIN 100' OF THE SITE ARE GREATER THAN A QUARTER ACRE THEREFORE NO BUFFER IS REQUIRED

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY
B	03/10/12	REVISED PEER COMMENTS	JAM	JS
A	01/19/12	ISSUED FOR PRELIMINARY REVIEW	JAM	JS

CELLCO PARTNERSHIP
d/b/a verizon wireless
5175 CAMPUS DRIVE
PLYMOUTH MEETING, PA 19462

D.E. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 2666

E 2 PROJECT MANAGEMENT LLC
87 HIBERNIA AVENUE
ROCKAWAY, NJ. 07866
PHONE: (973) 299-5200
FAX: (973) 299-5059
www.E2PM.com

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I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

JOHN CLAUDIO FERRANTE, P.E. D.E. No. 13889
LICENSED PROFESSIONAL ENGINEER

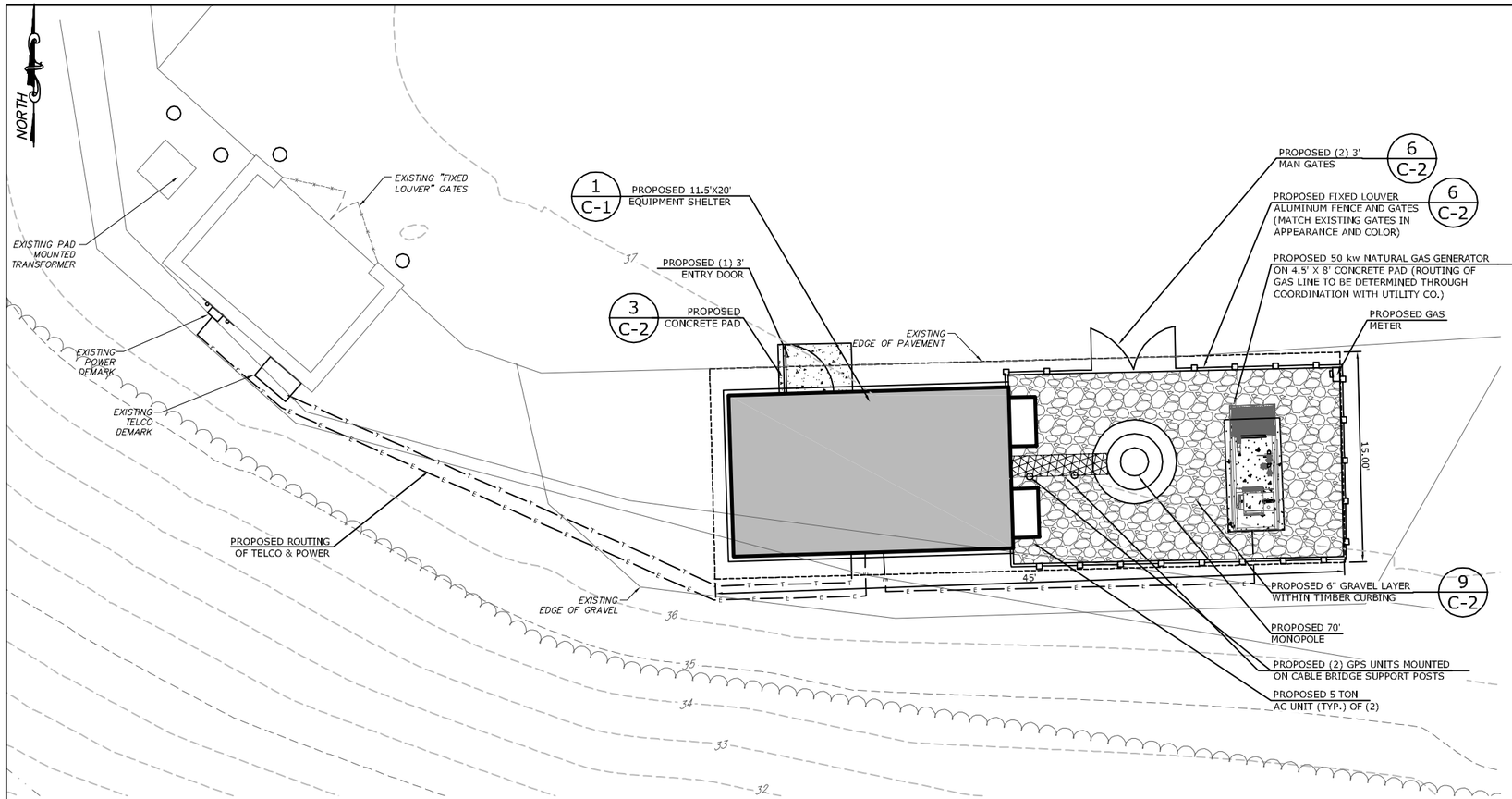
OVERALL SITE PLAN

DRAWING ISSUE STATUS CURRENTLY - B

A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)_____
C=(SPECIFY)_____
D=(SPECIFY)_____

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

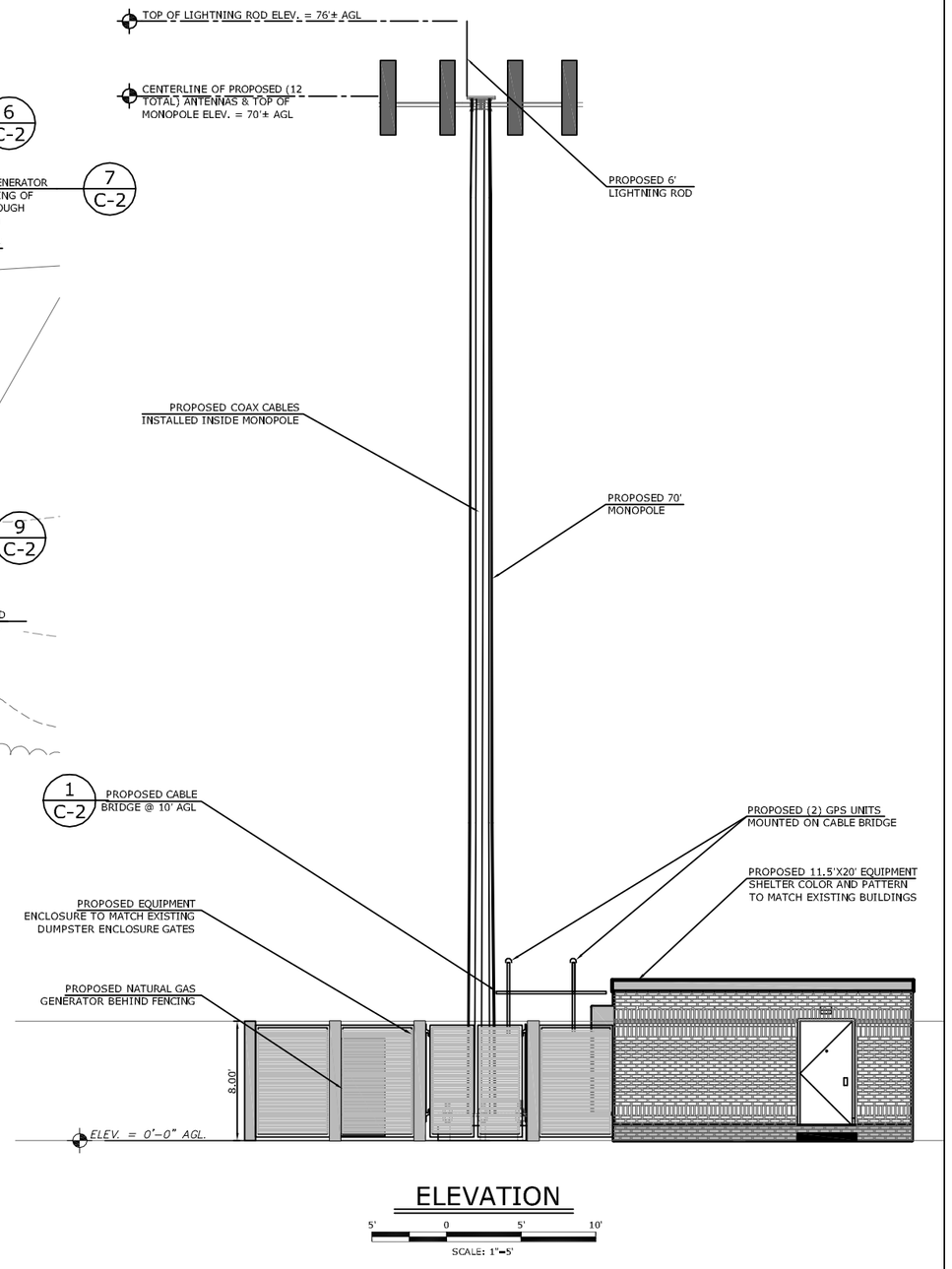
FIRST ISSUE: 01/19/12
DRAWN BY: JAM
CHECKED BY: JCF
SCALE: AS SHOWN
PROJECT #: P-07-24-48
DRAWING NO. SP-1
SHEET NO: 3 OF 6
PRINT DATE: 03/10/12
FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll\dwg\CD's Rev B



ENLARGED SITE PLAN

5' 0 5' 10'

SCALE: 1"=5'



ELEVATION

5' 0 5' 10'

SCALE: 1"=5'

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY
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d/b/a **verizon** *wireless*
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LICENSED PROFESSIONAL ENGINEER

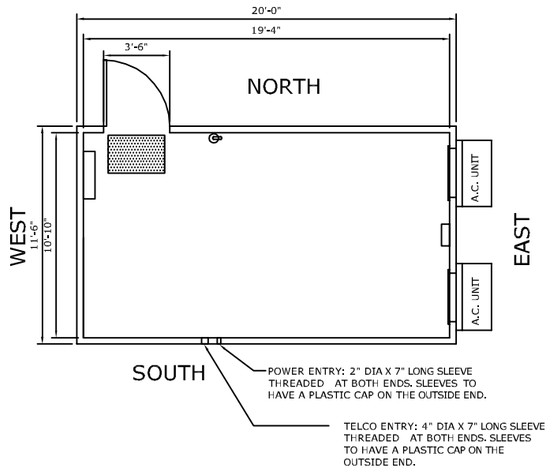
ENLARGED SITE PLAN & ELEVATION

DRAWING ISSUE STATUS CURRENTLY - **B**
A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)_____
C=(SPECIFY)_____
D=(SPECIFY)_____

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

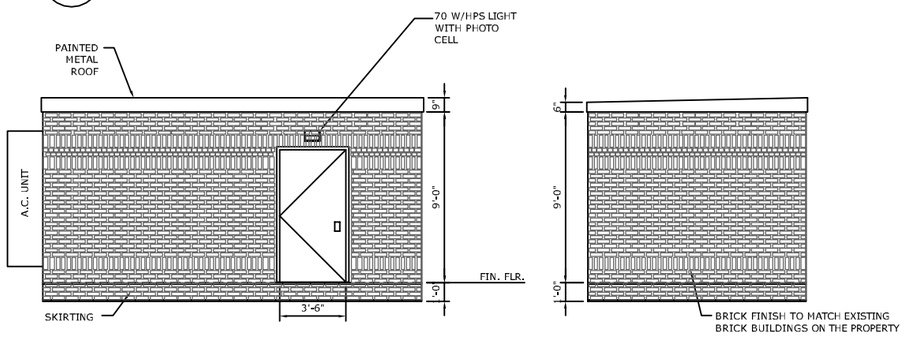
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DRAWN BY: JAM	
CHECKED BY: JCF	
SCALE: AS SHOWN	SHEET NO: 4 OF 6
PROJECT #: P-07-24-48	PRINT DATE: 03/10/12

FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll co\dwg\Cd's Rev B



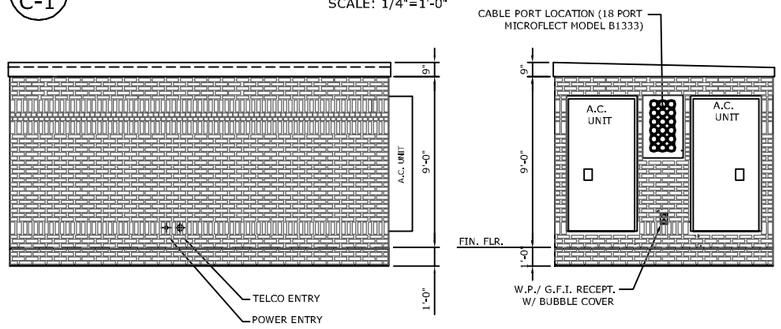
1 / C-1 SHELTER FLOOR PLAN

SCALE: 1/4"=1'-0"



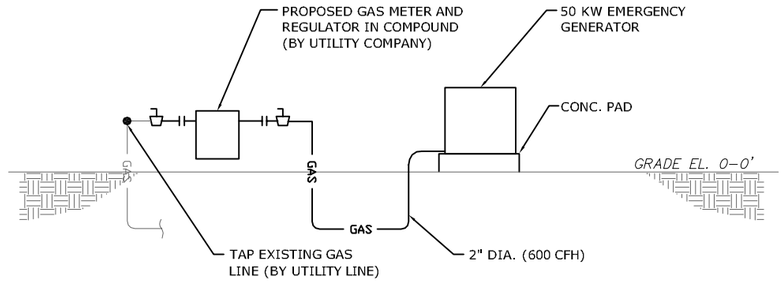
2 / C-1 SHELTER NORTH ELEVATION

SCALE: 1/4"=1'-0"



3 / C-1 SHELTER SOUTH ELEVATION

SCALE: 1/4"=1'-0"



4 / C-1 NATURAL GAS RISER DIAGRAM

SCALE: N.T.S.

SCHEDULE OF REVISIONS				
B	03/10/12	REVISED PEER COMMENTS	JAM	JS
A	01/19/12	ISSUED FOR PRELIMINARY REVIEW	JAM	JS
REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY

CELLCO PARTNERSHIP
d/b/a **verizon** *wireless*
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JOHN CLAUDIO FERRANTE, P.E. D.E. No. 13889
LICENSED PROFESSIONAL ENGINEER

EQUIPMENT SHELTER CONSTRUCTION DETAILS

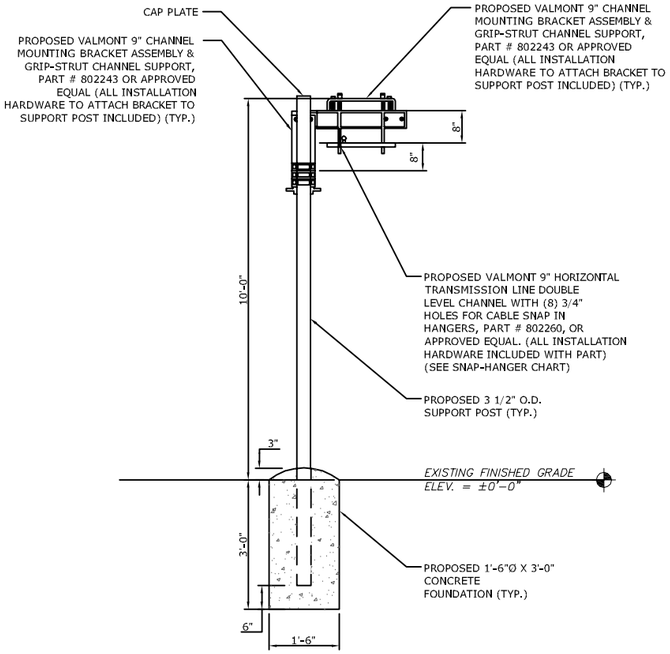
DRAWING ISSUE STATUS CURRENTLY -
A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)_____
C=(SPECIFY)_____
D=(SPECIFY)_____

B

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

FIRST ISSUE: 01/19/12	DRAWING NO. C-1
DRAWN BY: JAM	
CHECKED BY: JCF	
SCALE: AS SHOWN	SHEET NO: 5 OF 6
PROJECT #: P-07-24-48	PRINT DATE: 03/10/12

FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll co\dwg\C#'s Rev B



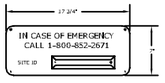
1 C-2 CABLE BRIDGE SUPPORT DETAIL

SCALE: N.T.S.



NOTES

1) SIGN SHALL BE MOUNTED ON EXTERIOR SIDE OF GATE LEADING INTO COMPOUND.
2) MOUNTING HEIGHT TO BE 5'-0" ABOVE GRADE TO CENTERLINE OF SIGN.

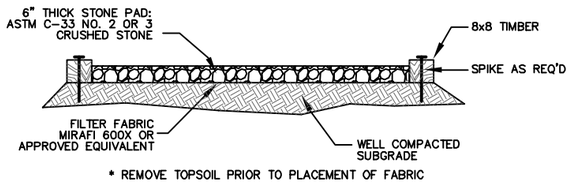


NOTES

1) SIGN SHALL BE MOUNTED ON EXTERIOR SIDE OF SHELTER DOOR.
2) MOUNTING HEIGHT TO BE 5'-0" ABOVE SILL TO CENTERLINE OF SIGN.

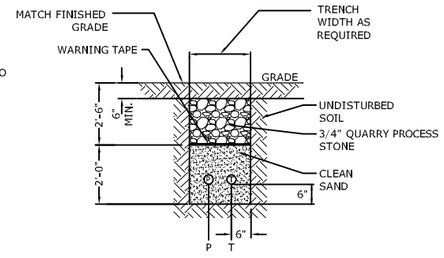
5 C-2 SIGN DETAILS

SCALE: N.T.S.



9 C-2 CRUSHED GRAVEL DETAIL

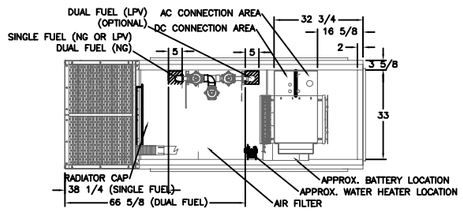
SCALE: N.T.S.

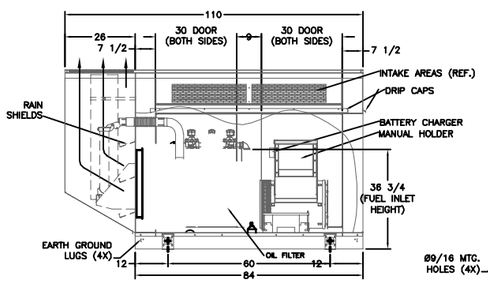


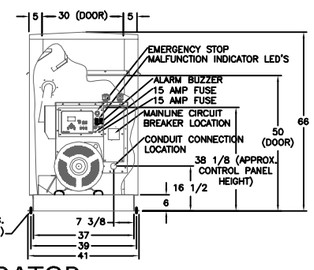
(1) 2-1/2" DIAMETER SCHEDULE 40 PVC CONDUIT FOR TELCO
(1) 2" DIAMETER SCHEDULE 40 PVC CONDUIT FOR POWER

2 C-2 TRENCH DETAIL

SCALE: N.T.S.



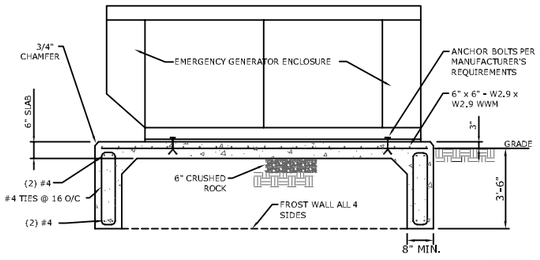




7 C-2 NATURAL GAS GENERATOR

N.T.S.

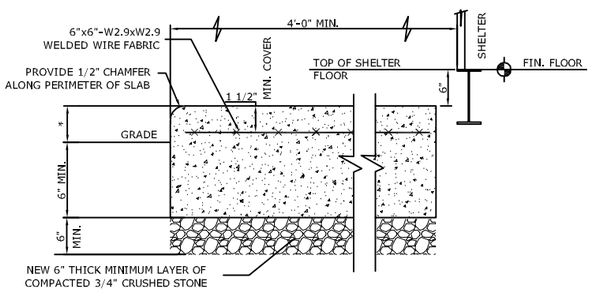
(50KW, 200 A 120/240 V, 1P; NG PRESSURE 7-11" H2O)



NOTE:
PAD SIZE: 4'-6" W x 8'-0" L
(COORDINATE WITH ACTUAL EQUIPMENT)

8 C-2 GENERATOR FOUNDATION

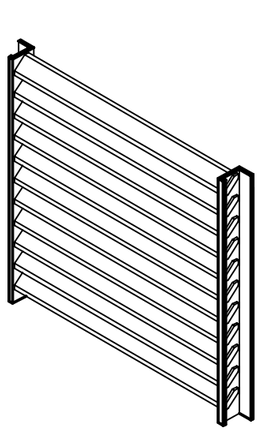
N.T.S.

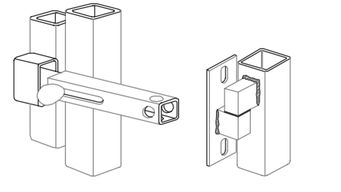


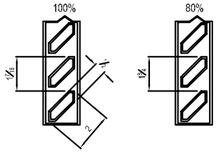
* 8" MAX.. IF GREATER THAN 8" PROVIDE A SECOND STEP.

3 C-2 DOOR PAD DETAIL

SCALE: N.T.S.





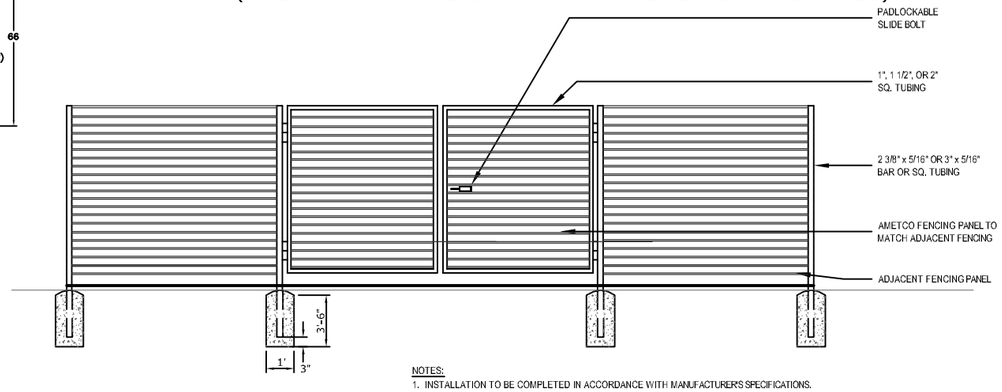


NOTES:
1. IT IS RECOMMEND THAT THE TITAN DESIGN BE USED HORIZONTALLY.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
4. AMETCO'S ALUMINUM FENCING SYSTEM IS 100% MANUFACTURED IN THE UNITED STATES.
5. DO NOT SCALE DRAWINGS.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com.info REFERENCE NUMBER 048-129

4 C-2 ALUMINUM FENCE SYSTEM

SCALE: N.T.S.

(TITAN DESIGN FIXED LOUVER)
BY AMETCO MANUFACTURING CORPORATION
4326 HAMANN PARKWAY P.O. BOX 1210 WILLOUGHBY, OHIO 44096
800-321-7042 WWW.AMETCO.COM OR APPROVED EQUAL
(COLOR TO MATCH EXISTING DUMPSTER ENCLOSURE GATES)



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.

6 C-2 GATE DETAIL

SCALE: N.T.S.

(TITAN DESIGN FIXED LOUVER SWING GATE)
BY AMETCO MANUFACTURING CORPORATION OR APPROVED EQUAL
(PAINT TO MATCH EXISTING DUMPSTER ENCLOSURE)

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES	DRAWN BY	CHK. BY
B	03/10/12	REVISED PEER COMMENTS	JAM	JS
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CELLCO PARTNERSHIP
d/b/a verizon wireless
5175 CAMPUS DRIVE
PLYMOUTH MEETING, PA 19462

D.E. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 2666

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JOHN CLAUDIO FERRANTE, P.E. D.E. No. 13889
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DETAILS

DRAWING ISSUE STATUS CURRENTLY -
A=ISSUED FOR PRELIMINARY REVIEW
B=(SPECIFY)
C=(SPECIFY)
D=(SPECIFY)
B

PROJECT:
ROUTE 1 DOVER TOLL PLAZA
200 PLAZA DRIVE
DOVER, DE 19901

FIRST ISSUE: 01/19/12
DRAWN BY: JAM
CHECKED BY: JCF
SCALE: AS SHOWN
PROJECT #: P-07-24-48
DRAWING NO. C-2
SHEET NO: 6 OF 6
PRINT DATE: 03/10/12
FILE: Projects\Telecom\VERIZON\Delaware Sites\dov toll\cd\dwg\CD's Rev B

PO Box 165
Fairview Village, PA 19409
Phone: 610.304.2024
Fax: 610.584.5387
info@dBmEng.com

February 1, 2012
Claire DiNardo
Arionda, LLC
209 N. Haddon Avenue
Haddonfield, NJ 08033

Subject: **Electromagnetic Emissions Analysis**
"DOV-TOLL PLAZA"
200 Plaza Drive
Dover, DE 19901
N 39º 11' 02.00" (NAD 83)
W 75º 30' 55.20" (NAD 83)
34' AMSL (NAVD 88)

Ms. DiNardo:

I have received and executed your request that I perform an independent evaluation and certification of the anticipated radio frequency emission levels for the Verizon Wireless telecommunications facility proposed at the above referenced coordinates. The intention of this study is to verify compliance with Federal Communications Commission (hereafter "FCC") guidelines for human exposure limits to radiofrequency electromagnetic fields as per FCC Code of Federal Regulation 47 CFR 1.1307 and 1.1310. As a registered Professional Engineer, I am bound by a code of ethics to hold paramount the safety, health, and welfare of the public. All statements and calculations offered herein are made in an objective and truthful manner pursuant to that code.

Summary of Findings
The maximum exposure to radiofrequency emissions from the proposed Verizon Wireless facility will be far below FCC exposure limits. **Using upper limit assumptions for the Verizon Wireless equipment configuration the cumulative radiofrequency exposure levels would be at least one-hundred-seventy (170) times less than the FCC limits at all locations of public access.** The following chart (Figure 1) specifically illustrates anticipated exposure levels for a variety of scenarios. All exposure limits have been calculated using the methods prescribed in FCC Office of Engineering and Technology (OET) Bulletin 65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields". These upper-limit conditions include maximum traffic loading, significant subscriber growth, six degrees of main beam down-tilt, and 100% constructive interference from ground reflection. Additionally, signal attenuation due to environmental clutter such as buildings, trees, and roadways has been ignored which will overestimate actual power densities. Also worth mentioning is the fact that the FCC exposure limits already include a significant margin

of safety. Continuous exposure at 100% of FCC limit is considered by the scientific community to be just as safe as continuous exposure at 1% of FCC limit.

Horizontal Distance from Facility (Ft.)	Height Above Ground (Ft.)	Maximum Power Density µW/cm2 (micro-watts per square centimeter)						% of FCC Limit						Cumulative % of FCC limit across all bands
		150 MHz	700 MHz	850 MHz	1900 MHz	2100 MHz	2600 MHz	150 MHz	700 MHz	850 MHz	1900 MHz	2100 MHz	2600 MHz	
0	6	N/A	< 0.2	< 1.1	< 1.1	N/A	N/A	N/A	< 0.03	< 0.2	< 0.11	N/A	N/A	< 0.34
100	6	N/A	< 0.3	< 1.9	< 1.9	N/A	N/A	N/A	< 0.05	< 0.33	< 0.19	N/A	N/A	< 0.57
200	6	N/A	< 0.1	< 0.5	< 0.5	N/A	N/A	N/A	< 0.02	< 0.08	< 0.05	N/A	N/A	< 0.15
1320 (1/4 mi.)	6	N/A	< 0.1	< 0.1	< 0.1	N/A	N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	N/A	< 0.03
FCC Exposure Limits for General Population		300 µW/cm²	467 µW/cm²	567 µW/cm²	1000 µW/cm²	1000 µW/cm²	1000 µW/cm²							

Figure 1 – calculated exposure levels near the proposed telecommunications facility

Applicability of the National Telecommunications Act of 1996

This Act states that "no state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the (Federal Communications) Commission's regulations concerning such emissions". As indicated above, this proposed facility will be in full compliance with the FCC's emissions standards and as such is beyond regulation in that regard.

Technical Parameters of Consideration

The above calculations were based on the equipment configuration information furnished by representatives of Verizon Wireless. Specifically for this installation, Verizon Wireless plans to install a total of not more than twelve (12) panel style antennas arranged in three sectors at azimuths of 340˚,115˚, and 255˚ in the horizontal plane with respect to true north. The antenna centerline height above ground level is planned at 70'. Transmitting through these antennas will be up to eight (8) CDMA radios in the 850

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Fairview Village, PA 19409
Phone: 610.304.2024
Fax: 610.584.5387
info@dBmEng.com

MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio, up to eight (8) CDMA radios in the 1900 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio and one (1) LTE radio in the 700 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio.

Co-location of Other Wireless Providers

In an attempt to halt the proliferation of telecommunications structures and preserve as much of their natural landscape as possible many municipalities have adopted telecommunications ordinances that specifically encourage co-location by wireless providers. **From the standpoint of radiofrequency exposure**, the installation of the proposed Verizon Wireless equipment would in no way preclude the use of this facility by other providers.

Background Information

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits

occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

Occupational / controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population / uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. **In the case of this study, the general population exposure limits have been applied as they are the more conservative set of standards.**

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Additional Remarks

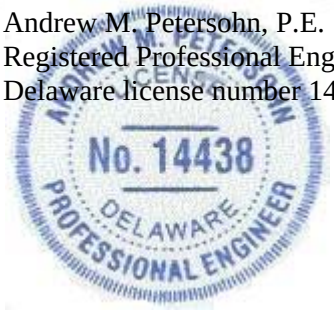
The radio frequency emission levels from Verizon Wireless and other PCS and Cellular communications base stations are similar to that of other two-way communications systems like those used by police, fire and ambulance personnel. In contrast, commercial broadcast systems like television and radio often transmit at power levels ten times greater or more than the systems discussed above.

The biological effects on humans of non-ionizing radiofrequency exposure have been studied extensively now for decades. There have been thousands of reports produced by government agencies, universities, and private research groups that support the standards adopted by the FCC. **To date, there have been no credible studies conducted whose results showed evidence of any adverse health effects at the above exposure limits.**

Sincerely,



Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438



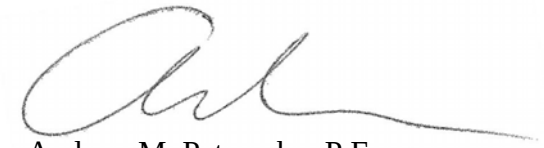
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dBm ENGINEERING, P.C.

DECLARATION OF ENGINEER

Andrew M. Petersohn, P.E., hereby states that he is a graduate telecommunications consulting engineer possessing Master and Bachelor Degrees in Electrical Engineering from Lehigh University (2005 and 1999, respectively). His corporation, dBm Engineering, P.C., has been retained by representatives of Verizon Wireless to perform an electromagnetic emissions analysis for a proposed telecommunications facility.

Mr. Petersohn also asserts that the calculations and/or measurements described in this report were made personally and in a truthful and objective manner. Mr. Petersohn is a Registered Professional Engineer licensed in Pennsylvania, Delaware, Maryland, Virginia, New York, New Jersey, and Florida. He has over a decade of engineering experience in the field of wireless communications. Mr. Petersohn is an active member of the National Society of Professional Engineers (NSPE) and the Institute of Electronic and Electrical Engineers (IEEE). Mr. Petersohn further states that all facts and statements contained in the foregoing document are true and accurate to the best of his knowledge. He believes, under penalty of perjury, the foregoing to be correct.



Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438

Executed this the 1st day of February, 2012.

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dBm ENGINEERING, P.C.

February 8, 2012
Claire DiNardo
Arionda, LLC
209 N. Haddon Avenue
Haddonfield, NJ 08033

Subject: **FAA Screening**
Proposed Telecommunications Facility:
"DOV-TOLL PLAZA"
200 Plaza Drive
Dover, DE 19901
N 39º 11' 02.00" (NAD 83)
W 75º 30' 55.20" (NAD 83)
34' AMSL (NAVD 88)

Ms. DiNardo:

I have received and executed the request that I perform an independent screening analysis of the proposed seventy (70') foot telecommunications facility at the above referenced coordinates. The intention of this study is to verify compliance with Federal Aviation Administration's (hereafter "FAA") guidelines for notice requirement as per Federal Aviation Regulation 77.13. As a registered Professional Engineer, I am bound by a code of ethics to hold paramount the safety, health, and welfare of the public. All statements and calculations offered herein are made in an objective and truthful manner pursuant to that code.

Summary of Findings
Based on the coordinates, ground elevation, and total structure height supplied by representatives of Verizon Wireless, this proposed facility does not exceed Federal Aviation Regulation 77.13 and, as such, **does not require filing with the FAA** of form 7460-1 "Notice of Proposed Construction" **and lighting of the facility is not required.** The Towair results are attached.

Sincerely,

ANDREW M. PETERSOHN LICENSE No. 14438 DELAWARE PROFESSIONAL ENGINEER

Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 6394.70 MTRS (6.39470 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	39-08-36.00N	075-27-46.00W	DOVER AFB	KENT DOVER, DE	6.4	3932.8000000000002

PASS SLOPE(100:1)NO FAA REQ - 5570.0 Meters (18274.0 Feet)away & below slope by 29.0 Meters (95.1400 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	39-08-21.00N	075-29-10.00W	DOVER AFB	KENT DOVER, DE	6.4	3932.8000000000002

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7617.86 MTRS (7.61789 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	39-13-11.00N	075-35-26.00W	DELAWARE AIRPARK	KENT DOVER/CHESWOLD, DE	13.4	1091.8

PASS SLOPE(50:1) NO FAA REQ - 2942.0 Meters (9652.11 Feet)away & below slope by 32.0 Meters (104.989 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	39-11-57.00N	075-29-15.00W	CHANDELLE ESTATES	KENT DOVER, DE	6.7	772.10000000000002

PASS SLOPE(25:1): NO FAA REQ-HELIPORT 3907.84 MTRS (3.90779 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
HELI	C	39-08-58.00N	075-30-18.00W	DELDOT HELISTOP	KENT DOVER, DE	9.1	18.300000000000001

Your Specifications

NAD83 Coordinates	
Latitude	39-11-02.0 north
Longitude	075-30-55.2 west

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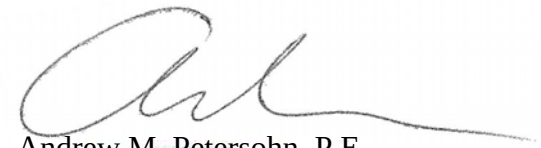
Measurements (Meters)	
Overall Structure Height (AGL)	23.2
Support Structure Height (AGL)	21.3
Site Elevation (AMSL)	10.4
Structure Type	
TOWER - Free standing or Guyed Structure used for Communications Purposes	

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DECLARATION OF ENGINEER

Andrew M. Petersohn, P.E., hereby states that he is a graduate telecommunications consulting engineer possessing Master and Bachelor Degrees in Electrical Engineering from Lehigh University (2005 and 1999, respectively). His corporation, dBm Engineering, P.C., has been retained by representatives of Verizon Wireless to perform a Federal Aviation Administration screening analysis for a proposed telecommunications facility.

Mr. Petersohn also asserts that the calculations and/or measurements described in this report were made personally and in a truthful and objective manner. Mr. Petersohn is a Registered Professional Engineer licensed in Pennsylvania, Delaware, Maryland, Virginia, New Jersey, New York and Florida. He has over a decade of engineering experience in the field of wireless communications. Mr. Petersohn is an active member of the National Society of Professional Engineers (NSPE) and the Institute of Electronic and Electrical Engineers (IEEE). Mr. Petersohn further states that all facts and statements contained in the foregoing document are true and accurate to the best of his knowledge. He believes, under penalty of perjury, the foregoing to be correct.



Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438



Executed this the 8th day of February, 2012

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February 3, 2012
Claire DiNardo
Arionda, LLC
209 N. Haddon Avenue
Haddonfield, NJ 08033

Subject: **Interference Analysis for Proposed Telecommunication Facility**
"DOV-TOLL PLAZA"
200 Plaza Drive
Dover, DE 19901
N 39º 11' 02.00" (NAD 83)
W 75º 30' 55.20" (NAD 83)
34' AMSL (NAVD 88)

Ms. DiNardo:

I have received and executed the request that I perform an independent evaluation of the potential for harmful interference generated by the proposed Verizon Wireless telecommunications facility at the above referenced location. The intention of this study is to determine if the manifestation of harmful interference is a viable concern through the close examination of the radio frequency (hereafter RF) parameters of the installation. As a registered professional engineer, I am bound by a code of ethics to hold paramount the safety, health, and welfare of the public. All statements and calculations offered herein are made in an objective and truthful manner pursuant to that code.

Summary of Findings
After close examination of the details of this proposal, it is my professional opinion that **no potential exists for the manifestation of harmful interference** as a result of the proposed Verizon Wireless telecommunications facility. My findings indicate that Verizon Wireless will be operating in full compliance with all applicable standards as outlined in their Federal Communications Commission licensure.

Sincerely,

Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438

Licensure Discussion

Verizon Wireless is bound by its Federal Communications Commission (hereafter FCC) licensure to transmit only the specific frequencies and power levels for which they are licensed. In Kent County, Delaware these licenses include the 'B' Cellular Band, the 'F' PCS band and the recently auctioned 'F' AWS, and 'A' and 'C' 700 MHz bands. Other communication facilities and services such as emergency responders, television broadcasting, AM/FM broadcasting, mobile to mobile radios, and home electronics operate at different frequencies, once again, allocated by the FCC. For this reason, the manifestation of **direct**, harmful interference is precluded by virtue of Verizon Wireless being the only entity licensed to utilize these specifically defined portions of the RF spectrum. As such, there will be no direct, significant radio frequency emissions that fall into any band other than that for which Verizon Wireless is licensed. However, when non-linear elements (such as amplifiers) are introduced in the RF path the possibility exists for **indirect** interference caused by harmonic and inter-modulated frequency emissions that may fall outside the licensed spectrum. Due to the fact that the harmonic and inter-modulated output of Cellular and PCS transmitters is extremely low (as required by FCC type approval), this only becomes a concern when there are multiple telecommunication installations in close proximity to one another. This problem is easily avoided by insuring adequate antenna separation when service providers co-locate on a structure; the industry standard of 10' between centerlines has proven adequate. In this case, Verizon is the only carrier currently proposing use of the monopole so the point is moot. **In the unlikely event that future radio frequency interference is reported, it is Verizon Wireless policy to identify and mitigate any interference issues as quickly as possible.**

Facility Discussion

According to the information supplied by representatives of Verizon Wireless the proposed design for this facility includes a total of not more than twelve (12) panel style antennas arranged in three sectors at azimuths of 340˚, 115˚, and 255˚ in the horizontal plane with respect to true north. The antenna centerline height above ground level is planned at 70'. Transmitting through these antennas will be up to eight (8) CDMA radios in the 850 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio, up to eight (8) CDMA radios in the 1900 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio and one (1) LTE radio in the 700 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio.

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Additional Remarks

The radio frequency emission levels from Verizon Wireless and other PCS and Cellular communications base stations are similar to that of other two-way communications systems such as those used by police, fire and ambulance personnel. In contrast, commercial broadcast systems such as television and radio often transmit at power levels ten times greater or more than the systems discussed above. Due to the relatively low power output, the potential for harmful interference is greatly reduced as the harmonic and inter-modulated emissions are typically in the noise floor of most receivers when only a few hundred feet away.

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DECLARATION OF ENGINEER

Andrew M. Petersohn, P.E., hereby states that he is a graduate telecommunications consulting engineer possessing Master and Bachelor Degrees in Electrical Engineering from Lehigh University (2005 and 1999, respectively). His corporation, dBm Engineering, P.C., has been retained by representatives of Verizon Wireless to perform an interference analysis for a proposed telecommunications facility.

Mr. Petersohn also asserts that the calculations and/or measurements described in this report were made personally and in a truthful and objective manner. Mr. Petersohn is a Registered Professional Engineer in Pennsylvania, New York, Maryland, Delaware, Florida, New Jersey and Virginia. He has over a decade of engineering experience in the field of wireless communications. Mr. Petersohn is an active member of the National Society of Professional Engineers (NSPE) and the Institute of Electronic and Electrical Engineers (IEEE). Mr. Petersohn further states that all facts and statements contained in the foregoing document are true and accurate to the best of his knowledge. He believes, under penalty of perjury, the foregoing to be correct.



Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438



Executed this the 3rd day of February, 2011.

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February 23, 2012
Claire DiNardo
Arionda, LLC
209 N. Haddon Avenue
Haddonfield, NJ 08033

Subject: **Radio Frequency Design Analysis**
"DOV-TOLL PLAZA"
200 Plaza Drive
Dover, DE 19901
N 39º 11' 02.00" (NAD 83)
W 75º 30' 55.20" (NAD 83)
34' AMSL (NAVD 88)

Ms. DiNardo:

I have received and executed the request that I perform an independent evaluation and design review for the Verizon Wireless telecommunications facility proposed at the above referenced coordinates. The intention of this study is to provide an objective, professional opinion regarding the proposal from a Radio Frequency design perspective. Specifically, how the site complements the existing network and what capacity objectives it fulfills. As a registered Professional Engineer, I am bound by a code of ethics to hold paramount the safety, health, and welfare of the public. All statements and calculations offered herein are made in an objective and truthful manner pursuant to that code.

Summary of Findings
In my professional opinion, the proposed facility is extremely well suited to provide enhanced network capacity for the City of Dover. Specifically, the Verizon Wireless facilities serving North Dover that are trending toward capacity exhaustion will be effectively offloaded by the proposed. The proposal is the most effective means of satisfying the capacity demand in Dover and the location and proposed antenna height are the least intrusive means of providing adequate capacity for Verizon Wireless subscribers in the targeted portions of Dover. The designed antenna height is the absolute minimum acceptable in order to achieve a high percentage of the site's capacity goals.

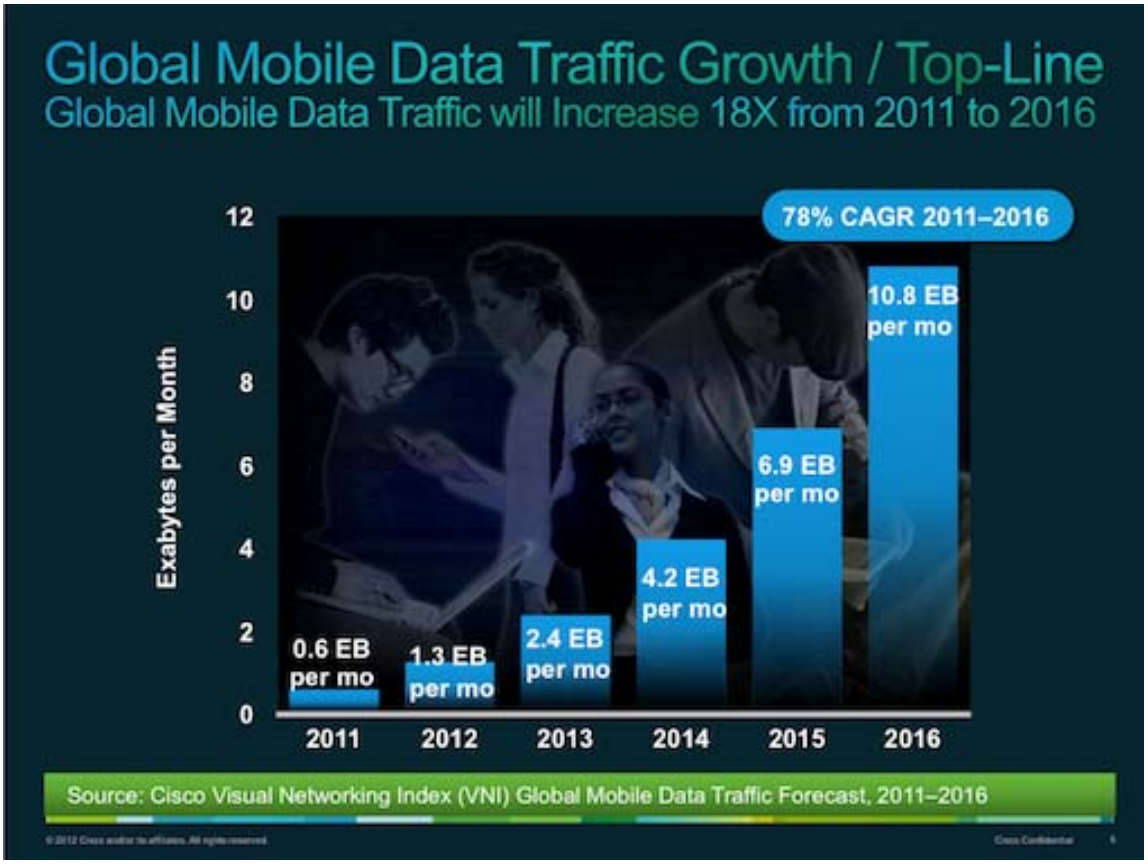
Sincerely,



Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438

Network Capacity in Dover

The Verizon Wireless facilities currently serving the Dover area are nearing their data capacity upper-limit "ceiling". The recent addition of site number 171 has temporarily alleviated the congestion condition but the long-term solution includes the addition of the proposed site. Spurred on by smart-phones, data cards, and the various applications and content available, an exponential growth in data use over the past few years has left providers, equipment manufacturers, and the FCC looking for solutions and radio spectrum to address the demand. As illustrated below, Cisco has recently predicted a 78% compound annual growth rate for global mobile data traffic between 2011 and 2016 resulting in an anticipated 18 fold increase in traffic during that time frame. Because Verizon Wireless can only broadcast and receive in the bands for which they are licensed, there is a finite amount of data throughput that can be supported even using the most modern equipment offered by base-station manufacturers. The traffic demand in the Dover has already begun to overrun the available resources particularly during NASCAR race weekends and other events that create an influx of traffic. Without proper action, the data growth trend will result in a significant degradation in customer experience including services that effect public safety.



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Existing Verizon Wireless Service

Verizon has eight (8) existing sites in the areas targeted for capacity enhancement. These sites will be the first tier of neighbors of the proposed facility:

Cell Number	Name	Structure Type	Antenna Centerline Ht (ft)	Street Address
11	DOVER DOWNS	Monopole	110	0 Bacon Avenue
25	WEST DOVER	Tank	126	1260 West North Road
26	FOX HALL	Tank	115	1293 Walker Road
213	NORTH DOVER	Self-support Structure	188	2030 N. DuPont Hwy
214	DOVER RACE	Self-support Structure	98	1407 North DuPont Hwy
215	SOUTH DOVER	Tank	118	391 United Way
171	RACEWAY LIQUORS	Monopole	70	889 DuPont Hwy
299	EAST DOVER	Self-support Structure	215	2319 White Oak Road

Use of Existing Towers

The capacity issues in Dover described above dictate that the portion of Verizon's network in north Dover mature more rapidly than most parts of Kent County and Delaware as a whole. In order to accommodate the growing and spiking traffic trends here, the network design needs to evolve rapidly into one able to accommodate the load typically seen in larger cities. This includes a higher site density per square mile comprised of shorter facilities situated as close as possible to the traffic concentrations. For these reasons it is not feasible to enact the necessary capacity offload by simply adding resources to the existing sites, instead a higher number of facilities is required. In fact, five (5) of the neighboring sites detailed above are within a two (2) mile radius of the proposed and there will be nine (9) Verizon Wireless facilities within a three (3) mile radius of the race track if the proposed is approved and constructed. A network design of these guidelines carefully controls the sites' coverage footprints and effectively splits the geography into smaller, better defined cells enabling greater capacity to the subscriber base. These sites are already dimensioned to their fullest and "piggy-backing" additional sites on these structures violates one of the basic tenets of high-capacity design in that it will not divide the geography into smaller pieces.

Proposed Verizon Wireless Capacity Upgrade

Illustrated in purple below in Figure 1, the proposed facility with a 70' antenna centerline will provide consistent signal dominance to a significant portion of geography in the areas targeted for capacity offload. Specifically, portions of heavily traveled Route 1 and areas that are used for parking during NASCAR race weekends. Any decrease in the height of the proposed antenna will decrease the dominance area and diminish the effectiveness of the proposed facility serving as a detriment to the overall network capacity. A failure to address the pending capacity shortage will undoubtedly result in

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excessive voice and data service outages and interruptions for Verizon Wireless customers in Dover including those that will impact public safety.

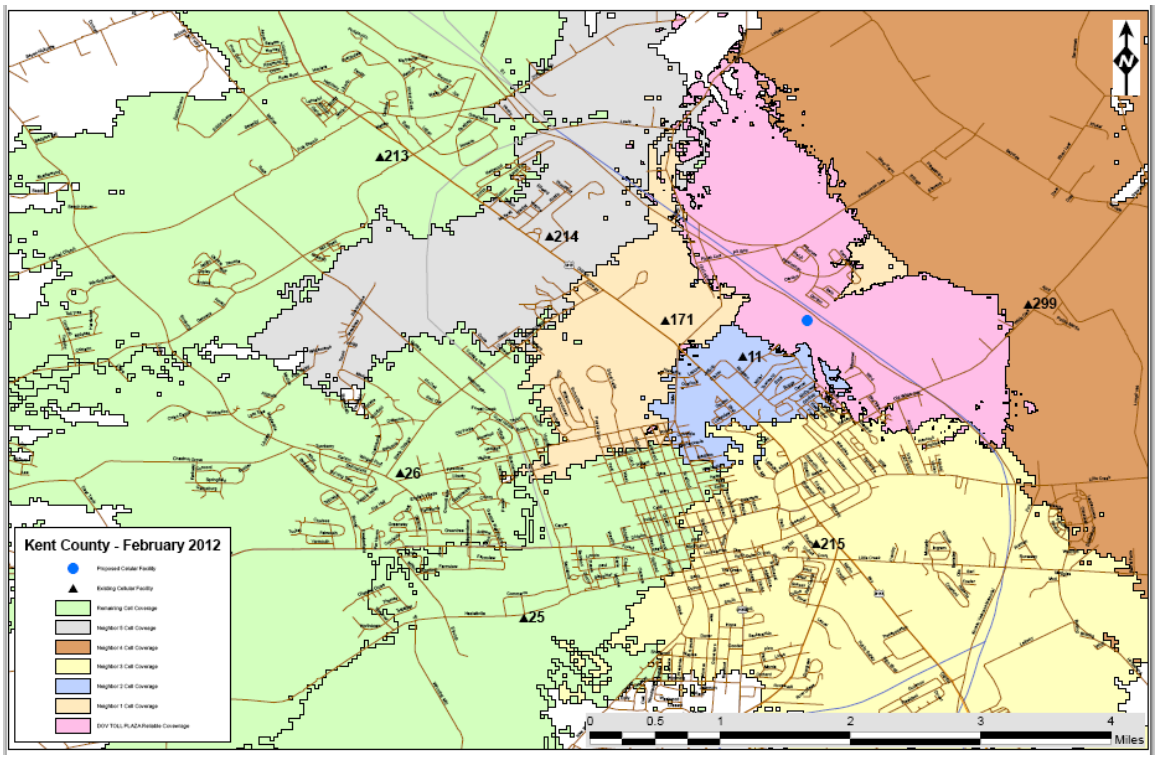


Figure 1 – Proposed Capacity Offload

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Reliable Service

The term "reliable" is used to describe areas where a Verizon Wireless subscriber has the ability to place, receive, and maintain a phone call. Additionally, the concept of reliable service extends beyond just voice communication; access to the data network with a high probability of success and adequate throughput is now a component of reliable service. Without adequate capacity, there cannot be reliable service as users attempting to access the network through an overburdened facility will be rejected until such time that resources become available. If the network is not dimensioned properly, delays in network availability are as detrimental as coverage gaps as both will result in a denial of service to the customer. Reliable service provided from a facility is affected by many factors including surrounding topography, clutter types, foliage, and subscriber loading. Because the network must maintain reliability under all conditions, these factors are taken into consideration when designing a facility upgrade.

Emergency Services Implications

Wireless devices are widely used by municipal emergency services for voice and data services including those that impact public safety. Additionally, enhanced 911 (E911) services, which allow a mobile caller to be located by the dispatch center, are dependent on an adequate service level to allow a voice connection, find the caller, and provide help in an emergency.

Technical Parameters of Consideration

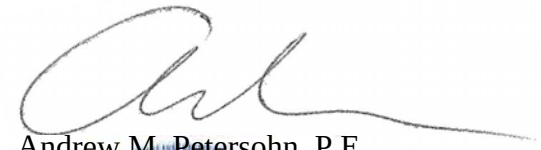
The above calculations were based on the equipment configuration information furnished by representatives of Verizon Wireless. Specifically for this installation, Verizon Wireless plans to install panel style antennas arranged in three sectors with azimuths evenly spaced in the horizontal plane with respect to true north. The antenna centerline height above ground level is planned at 70'. Transmitting through these antennas will be up to eight (8) CDMA radios in the 850 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio, up to eight (8) CDMA radios in the 1900 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio and one (1) LTE radio in the 700 MHz band (per sector) at a maximum of 100 watts ERP (effective radiated power) per radio.

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Andrew M. Petersohn, P.E.
Registered Professional Engineer
Delaware license number 14438



Executed this the 23rd day of February, 2012.

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