City of Santa Fe

Agenda

CITY CLERK'S OFFICE
DATE 6/17/15 TIME 2:24pm
SERVED BY Geraldine Gurule
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BOARD OF ADJUSTMENT
Tuesday, July 7, 2015 at 6:00 P.M.
200 Lincoln Ave. Santa Fe NM
City Council Chambers

A. ROLL CALL
B. PLEDGE OF ALLEGIANCE
C. APPROVAL OF AGENDA
D. ELECTIONS OF OFFICERS (BOA Chair, Vice Chair and Secretary)
E. APPROVAL OF MINUTES: Minutes of June 2, 2015
F. FINDINGS/CONCLUSIONS: None
G. OLD BUSINESS

1. **Case #2013-116 & 2014-82.** Cellular Phone Task Force, Arthur Firstenberg and Fifty-One Citizens from the October 30, 2013 appeal the decision of the Land Use Department to Issue a Building Permit #13-2097 and the Cellular Phone Task Force: Arthur Firstenberg and Twenty-One Citizens appeal the July 15, 2014 Decision of the Land Use Department to Issue a Building Permit #14-813 to John Malone and Verizon Wireless Regarding Replacement of Telecommunications Antennas at 1402 Agua Fria. *Postponed from May 5, 2015 BOA Meeting* (Consolidated for appeal, Zachary Shandler, Case Manager)

H. NEW BUSINESS

1. **Case #2015-62.** 802 Canyon Road Special Use Permit. Neema Sadeghi, requests Special Use Permit to allow a Restaurant Use. The property is zoned RAC (Residential Arts and Craft). (Noah Berke, Case Manager).

I. STAFF COMMUNICATIONS
J. MATTERS FROM THE COMMISSION
K. ADJOURNMENT

NOTES:

New Mexico law requires the following administrative procedures be followed by zoning boards conducting "quasi-judicial" hearings. In "quasi-judicial" hearing before zoning boards, all witnesses must be sworn in, under oath, prior to testimony and will be subject to cross-examination. Witnesses have the right to have an attorney present at the hearing. The zoning board will, in its discretion, grant or deny requests to postpone hearings. Persons with disabilities in need of accommodations, contact the City Clerk's office at 955-6520, five (5) working days prior to meeting date.

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BOARD OF ADJUSTMENT MEETING
Tuesday, July 7, 2015

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CASE #2013-116 & 2014-82. CELLULAR PHONE TASK FORCE. ARTHUR FIRSTENBERG AND FIFTY-ONE CITIZENS FROM THE OCTOBER 30, 2013 APPEAL OF THE DECISION OF THE LAND USE DEPARTMENT TO ISSUE A BUILDING PERMIT #13-2097 AND THE CELLULAR PHONE TASK FORCE. ARTHUR FIRSTENBERG AND TWENTY-ONE CITIZENS APPEAL THE JULY 15, 2014 DECISION OF THE LAND USE DEPARTMENT TO ISSUE A BUILDING PERMIT #14-813 TO JOHN MALONE AND VERIZON WIRELESS REGARDING REPLACEMENT OF TELECOMMUNICATIONS ANTENNAS AT 1402 AGUA FRIA	Appeal denied	2-17
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CASE #2015-62. 802 CANYON ROAD SPECIAL USE PERMIT. NEEMA SADEGHI REQUESTS SPECIAL USE PERMIT TO ALLOT A RESTAURANT USE. THE PROPERTY IS ZONED RAC (RESIDENTIAL ARTS AND CRAFTS)	Approved w/staff conditions	17-19
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MINUTES OF THE
CITY OF SANTA FE
BOARD OF ADJUSTMENT
City Council Chambers
July 7, 2015

A. CALL TO ORDER

A regular meeting of the City of Santa Fe Board of Adjustment was called to order by Gary Friedman, Chair, at approximately 6:00 p.m., on Tuesday, July 7, 2015, in the City Council Chambers, 200 Lincoln Avenue, Santa Fe, New Mexico.

B. ROLL CALL

Members Present
Gary Friedman, Chair
Rachel L. Winston, Vice-Chair
Colleen Dearing
Patricia Hawkins
Douglas Maahs
Donna Reynolds

Members Excused
Daniel H. Werwath

Others Present
Lisa Martinez, Director, Land Use Department-
Dan Esquibel, Current Planning
Noah Berke, Current Planning
Zachary Shandler, Assistant City Attorney
Melessia Helberg, Stenographer

B. PLEDGE OF ALLEGIANCE

C. APPROVAL OF AGENDA

MOTION: Colleen Dearing moved, seconded by Douglas Maahs, to approve the Agenda, as presented.

VOTE: The motion was approved unanimously on a voice vote.

D. ELECTION OF OFFICERS (BOA CHAIR, VICE CHAIR AND SECRETARY)

MOTION: Colleen Dearing moved, seconded by Douglas Maahs, to elect Daniel Werwath as Secretary of the Board of Adjustment for the ensuing year.

VOTE: The motion was approved unanimously on a voice vote.

MOTION: Douglas Maahs moved, seconded by Patricia Hawkins, to reelect Rachel Winston, as Vice-Chair of the Board of Adjustment for the ensuing year.

VOTE: The motion was approved unanimously on a voice vote.

MOTION: Patricia Hawkins moved, seconded by Rachel Winston, to reelect Gary Friedman as Chair of the Board of Adjustment for the ensuing year.

VOTE: The motion was approved unanimously on a voice vote.

E. APPROVAL OF MINUTES – JUNE 2, 2015

MOTION: Douglas Maahs moved, seconded by Colleen Dearing, to approve the minutes of the meeting of June 2, 2015, as presented.

VOTE: The motion was approved unanimously on a voice vote.

E. FINDINGS/CONCLUSIONS: NONE.

F. OLD BUSINESS

1. **<u>CASE #2013-116 & 2014-82</u>. CELLULAR PHONE TASK FORCE. ARTHUR FIRSTENBERG AND FIFTY-ONE CITIZENS FROM THE OCTOBER 30, 2013 APPEAL THE DECISION OF THE LAND USE DEPARTMENT TO ISSUE A BUILDING PERMIT #13-2097 AND THE CELLULAR PHONE TASK FORCE. ARTHUR FIRSTENBERG AND TWENTY-ONE CITIZENS APPEAL THE JULY 15, 2014 DECISION OF THE LAND USE DEPARTMENT TO ISSUE A BUILDING PERMIT #14-813 TO JOHN MALONE AND VERIZON WIRELESS REGARDING REPLACEMENT OF TELECOMMUNICATIONS ANTENNAS AT 1402 AGUA FRIA. *Postponed from May 5, 2015 BOA Meeting.* (Consolidated for appeal, Zachary Shandler, Case Manager.)**

A Memorandum dated June 23, 2015 for the July 7, 2015 Meeting of the Board of Adjustment, with attachments, to Members of the Board of Adjustment, from Zachary Shandler, Assistant City Attorney, is incorporated herewith to these minutes as Exhibit "1."

A letter dated June 24, 2015, with attached updated Radio Frequency Exposure Post-Installation FCC Compliance Assessment, sent via email, to Zachary Shandler, Assistant City Attorney, from Mark W. Williams, Sherman and Howard, regarding Verizon Wireless Site: NM4 Silva, 1401 Agua Fria Street, Santa Fe, NM 87505, is incorporated herewith to these minutes as Exhibit "2."

A letter dated May 11, 2015, to the Board of Adjustment and Zachary Shandler, Assistant City Attorney, from Arthur Firstenberg, regarding Land Use Cases No. 2013-116 and 2014-82, Appeals of Cellular Phone Task Force et al regarding 1402 Agua Fria, is incorporated herewith to these minutes as Exhibit "3."

An Affidavit of Arthur Firstenberg, *In the matter of the application of Verizon Wireless for a Telecommunications Facility at 1402 Agua Fria Street*, Land Use Cases No. 2013-116 and 2014-83, notarized on July 7, 2015, with attachments, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "4."

A document from ATSI, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "5."

A document headed *696-900/1710-2170MHz*, Amphenol Antenna Solutions, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "6."

A *Verizon Transmitter Timeline*, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "7."

A document with a heading of *2013 FCC Compliance Assessment*, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "8."

A document with a heading *Verizon Agua Fria Neighborhood*, with attachment, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "9."

A copy of *Legal Requirements*, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "10."

A copy of Section 704 of the Telecommunications Act, entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "11."

A copy of *Points of Appeal* entered for the record by Arthur Firstenberg, is incorporated herewith to these minutes as Exhibit "12."

Chair Friedman asked Mr. Esquibel if he would like to lead off with respect to this case.

Mr. Esquibel said no, Zachary Shandler is the case planner for the appeal.

Chair Friedman asked Mr. Shandler if he has anything to start off with, with respect to the case.

Mr. Shandler said no.

Chair Friedman said, "This case was called, I wasn't present for that hearing, I apologize, but Rachel Winston led that hearing. I know there was a lot of public comment and opportunity for people to speak, with respect to the issue, on both sides, and then we closed the public comment of the case at the conclusion of that hearing. And what I would like to do though, with respect to this matter, is we have to finish it up, obviously a vote has to be taken by the Board of Adjustment, but I also would like to allow each side to be able to have their representative, their counsel do a closing statement with respect to their position. And I understand Mr. Durkovich is representing the Appellant, correct sir."

Mr. Durkovich said that is correct.

Chair Friedman said he will start with Mr. Durkovich and then have the attorney for Verizon speak on behalf of Verizon, and asked if that is okay and Mr. Durkovich said that is okay. He said following these presentations, he will allow Zachary Shandler, counsel for the City, to speak if he would like.

Chair Friedman gave each person 15-20 minutes to address the issues

Chair Friedman said he wants each side to have the opportunity to address the issues, but he is taking no new testimony with respect to this, as counsel will understand, a closing statement which is a summation of the issues.

Presentation by Appellant

Mr. Durkovich presented information using enlarged drawings of the documents entered for the record by Arthur Firstenberg.

Steven Durkovich, Attorney for Appellant, office at 534 Old Santa Fe Trail, and home address 1607 Camino Cruz Blanca. Mr. Durkovich said, "The first thing I would like to do, is first you were kind enough to inform both of us about what the rules were beforehand, and it's perfectly acceptable."

Mr. Durkovich said, "If the Chairman could give me a little nudge when I get to 12 minutes and then another nudge when I get to 15, I'll try to keep it within that period."

Chair Friedman asked Ms. Helberg to let him know in 12 to 15 minutes.

Ms. Helberg said Mr. Esquibel is doing the timing and he can do that.

Mr. Durkovich said, "The first thing, my understanding is, is that the Board has accepted the Affidavit of Arthur Firstenberg as submitted [Exhibit "4"]."

Chair Friedman said he is okay with submitting that as part of the record.

Mr. Durkovich said, "So what I would like to do, is I would like proceed as if that is a part of the record, which it is, and then I'm just going to go.

Chair Friedman said that is okay.

Mr. Durkovich said, "First again, thank you for the opportunity to be here, and for the opportunity to talk on this subject. One of the nice things about being an attorney is you get to learn about new things, and you get to talk about new things, and this is kind of a new thing for me."

Mr. Durkovich said, "By way of background, I'm an attorney and I don't have any immediate experience with electromagnetic waves of this frequency. In other words, I have some experience with ionizing radiation. I don't have any experience with non-ionizing radiation, but I think I understand the principles. Sometime back, I was counsel for 3-4 years to a number of people who were injured at St. Joseph's Hospital in Albuquerque because of radiation overdoses. And in that capacity, I got some sort of an acquaintance with how this works."

Mr. Durkovich continued, "And what I would like to begin with, is to start talking about, again, what the issue is in front of the committee. This is for the Board of Adjustment in making a decision about *[inaudible]* within the Agua Fria neighborhood. Usually, the issue in this kind of case is someone doesn't want someone as a neighbor because they are undesirable in terms of how they act. Or there is a business that has undesirable characteristics. And what is different about this is the thing that is at issue, which are the electromagnetic waves, this is the microwave emitted. They aren't anything that anybody can see. In other words, the neighborhood doesn't know about them, so they're not disagreeable, because again someone doesn't like the way they're acting in terms of the disability to them. But it's because it's of the inherently dangerous nature of these waves. An analogy in the law is there is a different set of standards that apply when you put an inherently dangerous animal or property onto your property. You are held to a higher standard when you place, like say a tiger, a body of water, a bear, anything like that. There is a heightened responsibility and you're held strictly liable under the law."

Mr. Durkovich continued, "It is our contention here that the same sort of principles apply because what you have here is an inherently dangerous process going on. And that this is inherently dangerous there can be no argument, no argument, that these electromagnetic waves of these frequencies, they can cause injury and they do cause injury. And the only question is a question of proximity and that's how close you are to them, the duration of your exposure and the intensity of the waves that are being emanated. That you will most certainly suffer injury. Now the injury that is acknowledged by everyone, and that's why there are FCC maximums that are applied to this, the injuries that are caused and that everyone knows about are thermal injuries. And thermal injuries are more or less immediate. In other words you're going to learn about the more or less immediately, and that's one category. Okay."

Mr. Durkovich continued, "But then there is a whole different category of injuries, and those are delayed injuries. Now by way of example, if you talk about ionizing radiation and the kind of stuff you're familiar with, that's X-rays, that sort of thing. X-rays can cause immediate thermal injuries, but they also cause delayed injuries. And initially, when we exploded the bomb over Hiroshima, all we knew about was that a bunch of people, again, there was going to be a bomb, the heat was going to be intense and people were going to die as the result of that. And again, tons of people died of thermal injuries."

Mr. Durkovich continued, "What we didn't know at the time is, in fact, there are delayed injuries that occur as a cause of the radiation. And so, even though the bomb was exploded in 1945, it wasn't until the 1960's that we began to learn that there were cancers that were being caused as a consequence of that. And it wasn't until the 1970's that we learned that there were birth defects that were arising. And since then, there is a whole host of other problems that have occurred to the people who were involved in the Hiroshima blasts, immune system problems, and all sorts of things."

Mr. Durkovich continued, "Now my point in this, is the only reason we know that information is, subject to the dropping of the bomb on Hiroshima, the people in Hiroshima have been the subject of something called the Hiroshima study since then. And they come out with decennial, every 10 years, additions to what has happened. And they were able to follow a defined population, and you knew pretty much where everyone was at the time of the blast, and they are able to calculate the amount of radiation that they received. And so it's over time that we have learned that the problems aren't just the immediate problems of thermal injury, but there are delayed problems, and there are delayed problems caused by the effect of the ionizing radiation on their various tissues."

Mr. Durkovich continued, "Now. The difficulty with this radio wave radiation we are talking about is microwave radiation. There has been no such study. And while the thermal injuries, that's acknowledged, there's no way of knowing scientifically in any immediate sense what the delayed effects are. And that's because of the fact that there's no way to have a study. Usually, double blind studies are set up where you have two cohorts, two different sets of people, and one group gets something and the other group doesn't get it. And over a period of time, you compare what the results are. But there's no way that anyone is ever going to be able to get that information on this type of radiation, because no one is willing to sit still and be under these things for a prolonged period of time as the test subject. In other words, they would be the test subject if they're the ones who aren't subject to it, but no one is willing to volunteer for a 2 year period, a 20 year period, or a 30 year period to be within a close proximity of these towers. So that's the essential issue. We have something, and again it's this microwave transmission that will, in fact, cause thermal injuries. And the FCC has set forth numbers at which they say it will cause injury. That's established. Okay we don't know anything other than the thermal, but it those things that people are concerned about."

Mr. Durkovich continued, "Now. One of the issues tonight is there's been a ruling, okay, that the only thing that will be considered is the thermal issue. In other words, anything that is over the FCC maximum. Okay. So, let's consider that right now. In the setting of the maximums, the FCC has set maximums, and these have been set according to the regulatory process. In other words, it's not totally scientific. There's scientific information that go forward, and then the interest groups argue back and forth and they adopt a standard. While they've adopted a standard, and there are two standards. And one

standard is for, let me just put this up.... One standard is for occupational exposure. And there's another standard and it's for public exposure. And the difference between the occupational exposure and the public exposure is this. The limits for the public exposure are five times more stringent than the limits for the occupational exposure. And the reason for that is the people who are exposed to this kind of radiation, this is the employees of the company. It's all an issue of awareness. They are aware there's a problem, they are not in the full time, and when they are exposed to it, they know the dangers, and they can limit their exposure to it."

Mr. Durkovich continued, "The reason why the FCC says that there are limits for the public, is because the public is unaware of the dangers. The public can't see these things. They can't measure them. They don't have any feel, I mean. And in this case, the neighborhood never even had any idea for a period of essentially 5 years that there were in fact antennas that were beaming this information out. And this is something worth talking about now. Even had they heard that there were antennas on top of 1302, that wouldn't have meant much to them because of the fact that most people think..."

Mr. Esquibel said, "10 minutes."

Mr. Durkovich said, "10 minutes left, or I've gone 10 minutes.

Mr. Esquibel said, "10 minutes left."

Mr. Durkovich said, "Okay, thank you very much. The public ordinarily thinks of antennas as receiving signals. The antenna in this particular instance, okay, it does both. It receives signals and information, but it also beams out all of the energy that is at issue here. And again, there were 6 that were applied for, and in fact there are 9, there are 9 that are there. But, even had the public known about 9, it wouldn't mean anything because they don't understand that these antennas aren't receiving things, they're beaming out the radiation that can cause injury to them. So it's all a matter of awareness, and again, this is why we're here."

Mr. Durkovich continued, "The employees and Verizon have always been aware that the antennas that they put up, that they are emitting radiation that can cause thermal injury, for which the FCC has defined limits. They have always known that, okay."

Mr. Durkovich continued, "There's a history. And here's the history. The history is in 2005, Verizon applied for an equipment enclosure, and they didn't apply for a permit on an antenna enclosure, even though they were putting in antennae. Had they applied for the antennae enclosure, there would have been a public hearing required. So they made no application for that, and instead, again, they applied for an equipment enclosure and they got a permit. And at the same time after they got that permit, they put the antennae on top of the roof, this is in the enclosure, and there was no permit application. The City, at that time, was informed that this permit is for equipment enclosure only, and antennas must be applied for separately, but notwithstanding that fact, Verizon made no application. And so Verizon installed it and it started beaming again these microwave transmissions out and the neighborhood was totally unaware of it. And there was no way for them to be aware of it, because again, the whole danger here is that they can't see it. You don't know what's going on."

Mr. Durkovich continued, "In 2013, Verizon asked to add 3 more antennas to the existing 6 and there was a permit application, and that's when the City issued the permit and the neighborhood appealed. And since then, it's been operating with 9 antennae, and even the antennae have been changed slightly, in that some of them, one antenna can broadcast at two separate bands, in other words, so you have 2 frequencies going out with a single antenna. All of that has been happening. There was no hearing after the initial appeal, and then Verizon reapplied for the entire facility, the City issued the permit and the neighborhood appealed again."

Mr. Durkovich continued, "Now what should have been an absolute prerequisite for their application, this is Verizon's application, is an initial assessment like the one you just got, stating we are putting in these antennae, and here's what the maximums are under the FCC, and here's our determinations right now as to how much they are emitting from each sector. They never did that, okay. And so what has happened here, we're kind of in the odd position is that the City Council is getting this at the end of the application process. In other words, you're finding out what these things actually put out. And the way that arose is, in the appeal process, this is the last appeal, is the neighborhood hired their own expert and you have that before you, that's ATSI. Okay, and what ATSI said is that, in fact, they were in violation of the FCC maximums with respect to their entire rooftop and this is for the employees who were working there. And then they also said that over.... this is as to height, that they were also in excess of what the permitted requirements were in the adjoining properties. And so it was a result of what the neighborhood did, that Verizon said we're going to submit our own compliance report and that's what you have now."

Mr. Durkovich continued, "The problem with the compliance report that Verizon has submitted, and you've gotten since the last hearing is that all that it covers, is it just covers the rooftop of its own facility, and there are no measurements as to what it is over the other houses in the immediate area. And in fact, if you read the ATSI report, which is an independent report, it is in excess of what the appropriate limits are under the FCC requirements. In other words they haven't met the measure to begin with, and then it's more serious for this property, this at 1404 which is the metal roof, because the metal roof acts as a reflector and a magnifier. So what it does, is it jacks up what the facilities are, and it also rebounds it inside. Now a question comes up and you say, well who cares if, at roof level, it's over the FCC requirements because no one is going to be up on the roof. Well there will be people on the roof from time to time. Number two, what it means is anyone in the adjoining area, they're never going to be able to build a two-story home. If they wanted to add a facility up top, they're not going to be able to do it."

Mr. Durkovich continued, "And the point is, is what we have shown, that the neighborhood is shown, is that the level is in excess, both of the occupational limits, for the employees, and it's also in excess of what is acceptable for the public, and this is the public that doesn't know. And the thing I want to emphasize is the Public is absolutely at risk because there's no way you can dodge this stuff. There's no way you know what the intensity is of these rays at any one time, because they are a function of how busy, how many calls are coming out at any one time. So everyone is at risk for the thermal requirement. And again, no one really knows what can happen otherwise, this is otherwise than thermal injury because there

has been no scientifically established testing and likely there won't be and there can't be. Okay. And this is what puts the people at risk in this neighborhood. Now there have been some 60 people who have said, we don't want this in the neighborhood. It is because of their concern about what happens and the fact that they can't see it. "

Mr. Durkovich continued, "What's the relevance to this body, to the Board of Adjustment. Here's the relevance to the Board of Adjustment of all this. As a body, it seems to me that this is an extremely difficult topic to kind of get your arms around. It's because of the fact that it doesn't treat the usual thing that's involved in zoning issues. That's usually a business practice or a personal practice, something like that. And this is absolutely an esoteric area of science. And to my knowledge, the City staff doesn't have any independent expert who can independently assess this data on their own. Okay. In other words, they don't know. And so the body, this body, your body is peculiarly dependent up this hearing process that's going on right now. In other words, you're dependent on Verizon to give you all the pertinent information and you're dependent on the neighborhood to get every bit of information that you can get so you can decide that."

Mr. Durkovich continued, "And so in that context, there has been a bunch of due process issues that have been raised. In other words, there hasn't been a right to cross examine. Certain information again can't be presented, that sort of business. My thought that what the Board of Adjustment might want to consider is this. Is that again, given the fact that we don't have staff that can give us independent expertise on it, and we're dependent on both sides, let's have both sides tell us all they can tell us, okay, because this is a tough thing. And insofar as limiting the testimony, and again, I know how long these things go and I know how much chaff you get with the wheat in each one of these things. Nonetheless, again, I think it's something that what you want to do is solicit as much information as you can to determine whether or not you should permit this."

Mr. Durkovich continued, "And so, let's talk about again, what are the points on appeal and what are the issues. And again, let me just summarize."

Chair Friedman asked Mr. Durkovich to wrap-up his presentation soon, noting the time has expired, although he is willing to give him a little additional time. Chair Friedman told Mr. Durkovich that he can have an additional 5-10 minutes.

Mr. Durkovich said, "So, here's the point, is number one. This is why you should grant the neighbors' appeal is they never ever appropriately again made a permit application. And usually, in any other zoning matter, you have to do that as a prerequisite. Again, this is an inherently dangerous process. They alone knew how dangerous it was, and they ignored the requirements for the period of time that we're talking about, okay. They did that, and then the second thing is, to begin with, they never gave a submission of compliance with the FCC maximums to begin with. And then since then, we have proven that they have not complied with the existing FCC maximums. Now you're going to say there's conflicting evidence on that, and there is conflicting evidence. But here's the way you resolve that, I think, is number one, the neighborhood, they submitted a calculation of an independent testing laboratory. It's not owned by the neighborhood, the neighborhood has no interest in it."

Mr. Durkovich continued, "And what they did, is not only did they do the testing, but they gave the formulas and said here's the way we come up with the numbers, okay. We're telling you how we came up with the numbers. And in response to that, Verizon submitted their own testing, and Verizon hasn't given you their own numbers, their own calculations."

Mr. Durkovich continued, "Then the second thing, and this is why I would urge you to look at Mr. Firstenberg's Affidavit. He takes the calculations that they made for their own rooftop on 1402, and he demonstrates why they are wrong. And so we're not just saying they're wrong, he says this is why, and he goes through it. And then he has his calculations verified by Vincent Cardenas who is the Engineer who did the ATSI study to begin with and who is in Vancouver now. So what you have is you have clear evidence of the fact that they are in violation as to their own employees up here, this is number one, and again, they made no calculations to the neighborhood and that's why we're here."

Mr. Durkovich continued, "And most importantly, the only thing that the neighborhood has in this circumstance to protect them from what's going on here is you. Because you're the only ones that can say, again, it's safe or it's not safe, based on the evidence. And so I think you have a peculiar role, and it's a hard role because of the fact that you don't know all this stuff. But again, given the information that we have given you, I think it's clear that they are in violation. And what are the consequences of that. The consequences of that are this, in the event you say all right, we're not giving you a permit, it's not like Verizon's going to go out of business. All Verizon has to do is find another location where they're not in the middle of a housing area and/or put a tower that goes way up high, and they have the means to do either one of these things. The neighborhood, in the event the neighborhood is decided against, the neighbors have no real alternative. They have to move if they have the means to move, okay. But Verizon can easily move, and again, Verizon was the one who moved in and didn't satisfy the legal prerequisites to begin with."

Mr. Durkovich continued, "So I think, and I might be over-simplifying things, I think it's a fairly simple decision. Verizon didn't make its initial application as it should. It has never had a valid permit even though it was approved on two separate occasions because of the fact it's been appealed. And it has been transmitting since 2005 in violation of the rules."

Mr. Durkovich continued, "So what we would ask you, again, is to look at the evidence, look at the information we presented to you, and then just allow Verizon, and you can give them 3 months or 2 months to find another location where they can erect a tower that's high enough so it doesn't threaten the surrounding people, or find a locale that accomplishes that. Or if they can't find either of those, it's unfortunate, but you can't put the people in this neighborhood at risk because of what they're doing. And thank you for your time."

Presentation by Appellee

Mark Williams, Attorney for Verizon Wireless, said, "Good evening and thank you very much for letting us present before you. My name is Mark Williams, I represent Verizon Wireless. And with me today are Kathy Lang, Verizon Wireless, Tom Navares and Mark Wessel who is an IAAA engineer who created the report, and I'm going to talk about the report."

Mr. Williams presented information referring to several of the enlarged drawings of the documents entered for the record by Arthur Firstenberg.

Mr. Williams continued, "Mr. Durkovich mentioned that this is a difficult decision for you. We are positive that it's really a fairly simple decision for you, because the issue before you this evening on the appeal is whether we have complied with the Code, and whether we provided the certification that was required. And in both of those instances, the answer is yes. Verizon Wireless also has the ability to stay at its facility because it followed the process. We said at the last hearing that, in fact, in 2005, the company was required to obtain its own permit for the antennas. Didn't do it. Don't have an explanation for it. We were wrong. We owned up to that at that hearing. And as a result of that, we filed our application again, and as we are allowed to do under the Santa Fe Code, we are entitled to have an administrative review, which was done. In addition, there was notice that was provided to the neighbors, pursuant to the Code, and nobody objected. So we complied with those aspects of the Code. In addition, we were also required to pay a fine, which we did. And therefore, we have the right to stay there under the Code. We complied with that process that's laid out by the City and we're allowed to stay there."

Mr. Williams continued, "I'm going to talk about the certifications and the reports you have, and I will let you know that there really is no conflict. Because, one that was prepared by Verizon Wireless by an independent engineer is a certification that meets your Code with actual measurements. And the one that was prepared by ATSI is a theoretical one that has no measurements that were actually made. No on site inspection. It doesn't comply with your Code one bit. And, as your Attorney has very clearly indicated to you in his Memorandum to you, both at the last meeting and at this meeting, under Federal law when the site is in compliance, and our report shows it's in compliance, then you may not consider evidence of the health effect of UF in your ruling."

Mr. Williams continued, "Now the reason we've done that, is because, as the court cases which Mr. Firstenberg has been a part of have indicated, the FCC has made its own studies and its own decision that if it's within those limits which are fairly low, that they are safe. And the report we prepared and was filed with you, both the previous one and the most recent one, demonstrate that the site is in compliance. And so, from that standpoint, the FCC is the one that determines that and preempts these issues and makes it easy to you to decide, because you have a certified report, I'm going to talk about in a minute, that demonstrates this site is in compliance."

Mr. Williams continued, "I am going to address Mr. Durkovich's presentation and points more toward the end of my comments."

Mr. Williams continued, "But this evening, what we have is the very narrow issues I've just talked about. Have we, did we comply with the Code. Yes. Did we pay our penalty. Yes. Did we follow the process. Yes. And therefore, as a result, under your Code, we are entitled to remain on the site and the appeal should be denied."

Mr. Williams continued, "I want to give you a little more detail about this site. The site is in a commercial zone, zoned C-2. And as Mr. Shandler indicated in his comments, the height limit is up to 100 feet, this is at 22 and some odd-feet. So the site itself is compliant with the Code for the commercial district. The site is concealed, and it's never been concealed from anybody. The fact that there were building permits for the shelter were public. Nothing has been concealed by anybody. But there is an ethos in the Santa Fe Code which asks that, when possible, wireless facilities be concealed and shrouded to keep the esthetic nature of the City. And so, in fact, this complies with that. The telecommunications portion of the Code also says that the City encourages innovation in telecommunication. By having this site is allows us all, all citizens to use their devices. And we have more and more and more and more devices and fewer land lines that we rely on every day, and importantly, emergency service provides rely on, on a daily basis."

Mr. Williams continued, "Now, Mr. Durkovich has said that, and Mr. Firstenberg also indicated, that there are 9 antennas. The fact is, there's only 6 antennas up there. Period, end of story. There's always been 6 antennas. There were plans Mr. Firstenberg offered you last time that showed 9 antennas. But the fact is, there were 6 antennas to begin with and there's 6 antennas sitting there today. No more. So part of their report and part of the basis of their appeal is flawed on that very issue."

Mr. Williams continued, "And, at the last hearing, as the minutes of the last hearing demonstrated, and I'm paraphrasing, and certainly the minutes will correct me, '*Mr. Esquibel noted that the antennas comply with the height location in Code.*' So you have, not only our evidence, but evidence from your staff that demonstrates that."

Mr. Williams continued, "Let me talk about these reports. At the last hearing, this Board asked that Verizon Wireless submit an updated report for your review. That's precisely what the minutes say. And so we prepared this report which you have before you and I hope you have it in color...I'm told you do have it in color. The yellow that I have on this is my chicken scratch, so you don't have that on yours. But this is a certification. It was prepared by Mr. Russell who is a member of the Institute of Electrical and Electronic Engineers, an international body. He is also a member of the International Committee of Electromagnetic safety, and is on a committee within that organization on radio-frequency safety. So you have somebody who knows what he's talking about when he prepared this document."

Mr. Williams continued, "And I want to contrast the two, if I may, before you. The Code provision notes that we are to provide the certification of a qualified independent party, based on the inspection of the approved telecommunications facilities, that they remain in compliance with radio-frequency emissions by the FCC. So, we have an independent person who is on two of the most important boards in the world, and we have a report issued, A Radio-frequency Exposure Post-Installation FCC Compliance Assessment prepared and issued by someone who is on two of the most important boards in the world on this topic."

Mr. Williams continued, "Now it's important to note, that on the last page it's certified. When we get to the ATSI, you will note that it's certified. And the next very important thing is that actual field measurements were made. So Mr. Russell went out and actually made field measures with this contraption which is on page 14 of the report, which determines the survey methodology. So he actually went out and inspected it, in accordance with your Code. This is the exact same unit that is used by the FCC, it's the identical one that is used in order to determine what the actual frequencies are there. So you have someone who is independent, who went out and actually did measurements and gave you a report."

Mr. Williams continued, "And before I go further on this, let me just talk about this ATSI report. First of all there is no certification of this report. Number two, on the very last page, Mr. Cardenas makes no conclusion that it does exceed it, he says it may exceed it. But here's the important thing. It says, '*Analysis was conducted using information provided to ATSI via email from Kelly Shelling and Arthur Firstenberg,*' which have no idea what that is. So the gentleman did not go to the site at all to make any type of measurements to give you any sort of comparison. So there's really no evidence in conflict, because the report that was prepared by ATSI is not even valid for these purposes. It's not evidence that you should consider, because it wouldn't even be admissible in a court of law. Whereas this is something that would be admissible."

Mr. Williams continued, "So let me talk through this. The FCC Compliance Assessment on the first page at the bottom, in the summary notes, '*Compliance Status – in Compliance.*' And it shows the Verizon max MPE measured occupational is 70%. That's the actual, that's what he measured when he went out there. Let me walk you through this. One of the important things that the ATSI did, it measured the peak theoretical value, and I'm going to go through more specifics in a minutes. What this report prepared by Mr. Russell did were the spacial averages of the actual measurements. And what you have here, on page 6 are actually measurements that showing in green areas, going on to the next page, are below the general population MPE."

Mr. Williams continued, "So one of the other critical mistakes that was made in the presentation, factually, and I like to go on facts, not theory, which is what is in the ATSI Report is that there was no ground level plotting. Well in fact, on page 7, you have both rooftop plots and you have ground level plots. And what this shows is, is the vast majority is green or within the percentage compliance for the MPO established by the FCC. So whatever is on the roof and disburses out is in compliance. And this report also demonstrates that the entire site is compliant, not just here, but going out as well. So if it's compliant here, it's going to be compliant outside. The report also notes what signage is on the roof. There were some comments about that."

Mr. Williams continued, "Let me talk about some of the issues in this ATSI report, which further demonstrates it is not a valid report and not something you should consider. As I indicated, it's not certified. Not done with any inspections. There was no visit. There was no actual field measurement, there's no backup data. So therefore, not only does it not comply with the Santa Fe Code, it doesn't comply with the FCC Code or the OETC standards that were referred to. It's all theoretical. It also contains, from our perspective, and this is fact, but it's inflammatory, it contains some typographical errors in their use. On page 10, it suggests to you that these sites are operating at 80,000 watts which is just simply not true. It should be 80,000 milliwatts, which means that it is at 80 watts. But that is incorrect. In

addition, the ratio that was used by Mr. Cardenas included rooftop reflection coefficient of 2.56. There is, in bringing this up folks, is if you look in the OET Bulletin 65, which is the FCC one, it says that is used for FM radio. And what this would do is distort the calculations that he has here. In addition, under the OET Bulletin 65, it says that you don't add or overlap the frequencies and the percentages. And that's what he's done here."

Mr. Williams continued, "Mr. Firstenberg, and I just got this Affidavit right now, just like I got this thing at the last minute at the last one. Mr. Firstenberg, with all due respect, is not an engineer. And while he can do calculations, neither he nor Mr. Cardenas made actual measurements. The important thing that you have here is you have, and let me tie this back, is what the FCC said, is that if it's in compliance and you have a certification, you have a report that says it is, you can rely on that, and that you do not then look at the health effects of electromagnetic frequency. So therefore, this is done for you and makes your decision easier...."

Mr. Esquibel advised Mr. Williams he has 10 minutes left.

Mr. Williams said, "I'm probably not going to use it, but thank you sir. I appreciate it."

Mr. Williams continued, ".....as I indicated, because of the incorrect use of the formulas. And he has a number of boards here. Mr. Durkovich pointed this board out and various other calculations that were used. Here's the one that has an incorrect usage of the 2.56 coefficient that applies to FM Radio, according to the OET Bulletin. In addition, the report uses multiple beams, 6 beams, when there are actually only 3 sectors. This is also something that the OET Bulletin says is incorrect. The point being here is that the ATSI report is not evidence that you should consider. What you should consider is the report that was filed and prepared by Verizon Wireless's independent engineer that says, on the front of it, that it is in compliance. And that's what you require under you Code. Verizon Wireless has complied with the Code in terms of getting the application, it has complied with getting the permit, it's complied with paying the penalty it should have paid and it's also complied with having the certification done for you."

Mr. Williams continued, "There was an additional Affidavit from a gentleman I don't know, Mr. Millman, who we also assert that you should not consider whatsoever, including Mr. Firstenberg's, because it doesn't have any basis in actual measurement. The Millman Affidavit is based upon the ATSI report, and as I have demonstrated to you it is not a valid report, and therefore should not be considered at all."

Mr. Williams continued, "Let me address certain of Mr. Durkovich's points, and then let me be done. Mr. Durkovich had a discussion about thermal versus delayed injuries. As I indicated, because the site is compliant, based on the report that Verizon Wireless has supplied you by the independent engineer, you are not to consider the health effects of radio-frequency. I have demonstrated to you that the report deals with both the occupational and the general population. It deals with the occupational, and what it does, with the calculations at the back of his report..."

Chair Friedman advised Mr. Williams he has 5 minutes left for his presentation.

Mr. Williams said, "Thank you sir."

Mr. Williams continued, "The back of his report has these calculations. I'm not going to ask you to go through these calculations, because again, what has happened is the FCC has done this work for you. It has its experts and that's why the standard was set by the FCC and that's why Congress enacted Section 332 and, a portion of it which says that you are not to consider the health effects. So this work has already been done for you in this process."

Mr. Williams continued, "Mr. Durkovich also indicated that there was no ground level measurement. The report, if you look on the page, has both rooftop and ground, and shows in the green area that all is in compliance."

Mr. Williams continued, "So let's talk about the last point he made, which is the due process issue. The process that was set forth by the Code was that we had to get a building permit, we didn't do it. We acknowledged that mistake. We came back, applied, received it via administrative approval, complied with the Code as both Mr. Shandler and the staff have indicated we have done. We were assessed a penalty. We're paid that. So we too have the right to be on this location which is approved by the City of Santa Fe."

Mr. Williams continued, 'No further cross-examination need be made because the very limited fact is, are we compliant now. Yes. Did we file a certificate from an FCC engineer that shows we are compliant with FCC regs. The answer is yes. And the report that they've given you does not satisfy those criteria and needs to be dismissed. So what we ask you to do is to deny this appeal and let Verizon Wireless continue. Thank you very much. I appreciate your time."

Chair Friedman asked Mr. Shandler if he has anything he would like to say in submission.

Zachary Shandler, Assistant City Attorney, said, "Yes, Mr. Chair. I have four points in closing."

Chair Friedman said, "Thank you."

Mr. Shandler said, "Number one, Verizon admitted they failed to get a building permit in 2006. The Land Use Department administrative penalty, the double fee against Verizon. Then the Land Use Department required Verizon to go through the public notice process with signs, posters and mailings and public input to the Land Use staff to properly obtain a permit, and that process was completed."

Mr. Shandler continued, "Number two, I just want to preserve for the record, I don't want to object, but just preserve for the record the submittal of late evidence. The appearing party knows how to submit timely evidence, and in fact, in this packet they submitted some 10 days in advance, so I just want to preserve that objection for the record."

Mr. Shandler continued, "Three. Let me read the Code on certification: *'The applicant shall provide to the Land Use Director the certification of a qualified independent party(s) that, based on an inspection of an approved telecommunication facility(s) their structural integrity remains intact and they remain in compliance with the radio-frequency exposure limits set out in 47 CFR 1.310 Table 1A and B.'*

That's what the City Council has as the requirement, an independent party, and they submit this certification document and that's what you have in your packet today. Mr. Durkovich said well there's no expertise on staff to independently review that, and that's why the City Council has made it as the certification document of this qualified, independent party. Mr. Durkovich has said, the only thing the citizens can do is get upset at the City, but I think that's an unfair contention. I think they can go to the City Council and they can try to change this provision if they're unhappy. They could protest at the site. It's a landlord/tenant relationship. If that's how the community feels, they can talk to the landlord about that, but it's not that they're powerless because this Board won't or can't do anything."

Mr. Shandler continued, "My final point, as Mr. Durkovich said, 'There is certain sort of information that can't be presented.' And that's an understated way of saying, the courts have ruled you can't factor in the allegation of effect or telecommunications or cell signals on people. You may not like that ruling. You may be sympathetic to the people who testified about their illnesses. You may have your own personal beliefs, but as a Board member, you must follow the law. In my June Memo, I cite to the District Court ruling that stated, *'Even if the City Code was construed to require the City to regulate wireless facilities on the basis of the alleged impact of RF emissions on the health of the petitioner and others, it would expressly conflict with and be preempted by federal law.'* That's the District Court Ruling, Arthur Firstenberg versus City of Santa Fe. So the appealing party knows the case. It was appealed to the Court of Appeals. He lost. He asked the State Supreme Court to hear the case. They refused. So this is a powerful board. A very powerful board. But you're not more powerful than the State's ruling court. And so you need to follow the law, and you cannot factor in the allegations of telecommunication matters and RF in your ruling. Thank you."

Chair Friedman said, "So the matter ends with the summations. Thank you. I want to thank all...."

Mr. Durkovich asked to speak.

Chair Friedman said, "No, we're done with the closing statements. Thank you."

Mr. Durkovich said, "I just want to withdraw two issues."

Chair Friedman said, "Okay. Go right ahead."

Mr. Durkovich was speaking from the audience and Ms. Helberg asked him to come to the podium microphone and give his remarks for the record.

Mr. Durkovich said, "We are withdrawing our appeal of the height issue. And we are also withdrawing our appeal on the co-applicant issue. So, all the appeal deals with is again, is that they haven't complied with the requirements about the FCC maximums. In other words, they haven't hit that. And then the due process issues that we talked about. So the final two things you don't have to consider and we withdraw. Thank you."

Chair Friedman said, "The matter is now before this Board. First of all does the Board have any questions for staff, and there were none. Chair Friedman asked the pleasure of the Board.

MOTION: Rachel Winston moved, seconded by Patricia Hawkins, regarding Case #2013-116 and 2014-82....."

Mr. Firstenberg interrupted Ms. Winston saying, "I'm not withdrawing those appeal items."

Chair Friedman said, "A matter of order, we heard what you have to say, if you don't mind sitting down now. Thank you for your comment."

Mr. Firstenberg said, "For the record, we are not withdrawing any of our points of appeal."

Chair Friedman said, "We've corrected that for the record now. Thank you. What's the pleasure of the Board."

MOTION: Rachel Winston moved, seconded by Patricia Hawkins, regarding Case #2013-116 and 2014-82, consolidated appeal of the decision of the Land Use Department to issue Building Permit #13-2097 and Building Permit #14-813, to John Malone and Verizon Wireless regarding the replacement of telecommunications antennas at 1402 Agua Fria, to deny the appeal and affirm the decision of the Land Use Department to issue Building Permit #13-2097 and Building Permit #14-813.

VOTE: The motion was approved unanimously on a voice vote.

Chair Friedman said, "The appeal is denied, for the record. Thank you very much folks for being here. I know it's an emotional and contentious issue for you. I appreciate your thoughts on the matter, and counsel, thank you for your comments this evening. We're going to take a break before the next case, just a 5 minute break, folks."

Break 7:05 p.m. to 7:25 p.m.

H. NEW BUSINESS

CASE #2015-62. 802 CANYON ROAD SPECIAL USE PERMIT. NEEMA SADEGHI REQUESTS SPECIAL USE PERMIT TO ALLOT A RESTAURANT USE. THE PROPERTY IS ZONED RAC (RESIDENTIAL ARTS AND CRAFTS). (NOAH BERKE, CASE MANAGER.)

A Memorandum dated June 30, 2015 for the July 7, 2015 Meeting, to the Board of Adjustment, from Noah Berke, Senior Planner, Current Planning Division, in this matter, is incorporated herewith to these minutes as Exhibit "13."

A copy of *Tenant Improvements for Milad Persian Bistro, 802 Canyon Road, Santa Fe, New Mexico*, is incorporated herewith to these minutes by reference and is on file in, and copies can be obtained from, the City of Santa Fe Land Use Department.

Noah Berke presented information regarding this case. Please see Exhibit "13," for specifics of this presentation.

Chair Friedman asked, "So if you're facing El Farol, this is the building to the right."

Mr. Berke said, "This is the building to the right. This is on the corner of Camino del Monte Sol and Canyon Road."

Chair Friedman asked if the parking is on Camino del Monte Sol, and Mr. Berke said, "It is."

Public Hearing

Presentation by the Applicant

All those presenting and speaking to this case were sworn en masse

Neema Sadeghi, owner, was sworn. Mr. Sadeghi said, "I am currently renting 802 Canyon Road for, hopefully, to be able to open a restaurant. I do not plan on having any live entertainment, and all of the improvements that are being done to the building will be in ADA compliance to make the bathrooms handicapped approved, and basically, following all the Codes that are required. Currently, the building already has a brick oven inside, there's the grease trap, there's a hood in there. The previous tenants just dry-walled everything over. However, all of the structures for the kitchen remain."

Mr. Sadeghi continued, "The Vigil family has been renting this place since the 60's as a restaurant and a gallery. And all I would like to request is the special use permit for the parking to legally nonconform, so I can use the space for a restaurant basically."

Chair Friedman asked Mr. Sadeghi if he has anything further to add.

Mr. Sadeghi said, "My hours are probably going to be from 11:00 a.m. to 10:00 p.m., and then 11:00 a.m. to 11:00 p.m. on the weekends, if possible. And I'm only going to be serving beer and wine, that's in accordance with selling at least 60% of food."

Chair Friedman noted the patio in front of the restaurant.

Mr. Sadeghi said, "There is a patio in the front and there is a patio in the rear, and those only will be used, weather permitting as well.

Speaking to the Request

Marilyn Bane, 622½ Canyon Road, previously sworn, said she is a neighbor and one of the two people at the ENN meeting. She said, "I would like to ask you to approve this. I think it will be an addition to Canyon Road. And since there is a City Parking Lot directly opposite, it seems to me that the benefit and the ability for people to park in addition to the spaces that are allocated for him, would be helpful, and Canyon Road can use it. I would very much appreciate it if we could welcome him. I should also say, I am the President of the Historic Neighborhood Association, and that is our position."

Chair Friedman thanked her for her service and for her comments.

Stefanie Beninato, P.O. Box 1601, Santa Fe, previously sworn, said "I would also ask that you approve this Special Use Permit so the restaurant can reopen or can reopen as a restaurant. It has been a restaurant for a very long time. And I don't think really the parking is an issue because of the City Parking Lot across the street. I think having someone who is brave enough in this economic climate to start a restaurant, that they should be encouraged, and that vacant things on Canyon Road really do not serve our community. Thank you very much."

Chair Friedman asked if the Board members have questions for the Applicant or staff, and there were none.

The Public Testimony Portion of the Public Hearing was Closed

MOTION: Douglas Maahs moved, seconded by Colleen Dearing, regarding Case #2015-62, requesting a Special Use Permit allowing for restaurant use at 802 Canyon Road, located with the RAC Zoning District, to approve the Applicant's request, incorporating Staff Finding of Fact and Conclusions of Law.

VOTE: The motion was approved unanimously on a voice vote.

I. STAFF COMMUNICATIONS

The staff had no communications.

Lisa Martinez, Director, Land Use Department, said she enjoyed her first meeting of the Board of Adjustment, and thanked them for all of the good information and good work, and for serving on this important Board.

Chair Friedman thanked her for attending.

J. MATTERS FROM THE BOARD

Ms. Winston congratulated Chair Friedman on his reelection.

I. ADJOURNMENT

There was no further business to come before the Board, and the meeting was adjourned at approximately 7:35 p.m.

Gary Friedman, Chair

Melessia Helberg, Stenographer

City of Santa Fe, New Mexico

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Patti J. Bushee, Dist. 1
Signe I. Lindell, Dist. 1
Joseph M. Maestas, Dist. 2
Carmichael A. Dominguez, Dist. 3
Christopher M. Rivera, Dist. 3
Ronald S. Trujillo, Dist. 4
Bill Dimas, Dist. 4

Response to Mr. Firstenberg's May 11, 2015 Letter

To: Members of the Board of Adjustment

From: Zachary Shandler ZS
Assistant City Attorney

Re: Appeal by the Cellular Phone Task Force, Arthur Firstenberg and fifty-one citizens from the October 30, 2013 Decision of the Land Use Department to Issue a Building Permit #13-2097 to John Malone and Verizon Wireless regarding replacement of telecommunications antennas at 1402 Agua Fria.
Land Use Case No. 2013-116

Appeal by the Cellular Phone Task Force, Arthur Firstenberg and twenty-one citizens from the July 15, 2014 Decision of the Land Use Department to Issue a Building Permit #14-813 to John Malone and Verizon Wireless regarding replacement of telecommunications antennas at 1402 Agua Fria.
Land Use Case No. 2014-82

Date: June 23, 2015 for the July 7, 2015 Meeting of the Board of Adjustment

Mr. Firstenberg's Letter

On May 11, 2015, Mr. Firstenberg submitted a letter to the Board of Adjustment and City Attorney's Office raising several procedural issues about the May 5, 2015 public hearing. The City Attorney's Office wishes to respond to these issues in writing for submittal in the record.

Issue #1: Examination and cross examination regarding to the updated radio frequency radiation compliance document.

Exhibit "1"

Mr. Firstenberg has alleged that he should have an opportunity to examine and cross-examine witnesses about RF issues, such as Verizon's updated radio frequency radiation compliance document, at the July hearing. City Code Section 14-6.2(E) (5)(l) provides that a telecommunication company, as part of an application and administrative review process, shall provide "certification" that the telecommunications facilities "remain in compliance with the radio frequency exposure limits set out in 47 C.F.R. 1.310 Table 1(A) and (B)." Verizon provided this document as part of its 2014 application packet. Since approximately eighteen months has passed since this submittal, Board Member Werwath, according to page twelve of the May 5, 2015 minutes, asked: "is it possible for Verizon to provide current FCC compliance for the current installed antennas....Can you provide an updated current document that you are in FCC compliance?"

Mr. Firstenberg's letter has asserted that the submittal of an updated compliance letter opens the door to allow him to conduct examination and cross examination regarding radio frequency radiation. The courts are clear that Mr. Firstenberg cannot attempt to call or cross examine witnesses about the substance of documents governing RF emissions. Mr. Firstenberg should be aware of these court rulings, since he has been a party to many of the key cases. The Courts have written:

"[F]ederal law provided (and still provides) that to the extent that the facilities comply with the regulations of the FCC concerning such emissions, state and local governments may not regulate the placement or modification of wireless facilities based on the alleged environmental effects of RF emissions."
Arthur Firstenberg v. City of Santa Fe, AT & T Mobility Services, LLC, pp. 5-6, (D-101-CV-201004296) (10/30/13), affirmed by N.M. Ct. of Appeals (No. 33, 441) and cert. denied by N.M. Supreme Ct. (No. 35,157)

"Section 704 thus expressly preempts state and local governments from regulating wireless facilities on the basis of the alleged environmental effects of RF emissions, such as health concerns."
Arthur Firstenberg v. City of Santa Fe, AT & T Mobility Services, LLC, p. 8, (D-101-CV-201004296) (10/30/13), affirmed by N.M. Ct. of Appeals (No. 33, 441) and cert. denied by N.M. Supreme Ct. (No. 35,157)

"As a result, even if the City's Code were construed to require the City to regulate AT & T's wireless facilities on the basis of the alleged impact of RF emissions on the health of Petitioner and others, it would expressly conflict with and be preempted by federal law."
Arthur Firstenberg v. City of Santa Fe, AT & T Mobility Services, LLC, p. 9, (D-101-CV-201004296) (10/30/13), affirmed by N.M. Ct. of Appeals (No. 33, 441) and cert. denied by N.M. Supreme Ct. (No. 35,157)

"Petitioner argues that the Court should disregard Section 704 of the TCA in light of the Americans with Disabilities Act ("ADA") and the due process and equal protection guarantees of the Fifth and Fourteenth Amendments. The Court rejects these arguments."

Arthur Firstenberg v. City of Santa Fe, AT & T Mobility Services, LLC, p. 9, (D-101-CV-201004296) (10/30/13), affirmed by N.M. Ct. of Appeals (No. 33, 441) and cert. denied by N.M. Supreme Ct. (No. 35,157)

"In effecting the congressional mandate, the FCC set limits on the RF emissions for cell phones and other devices... In order to prevail in a lawsuit based on an alleged injury caused by RF emissions from cell phones, a jury would have to accept the premise that FCC's regulations are inadequate to ensure the safe use of cell phones. This would allow cell phone providers to "be held liable even though they indisputably complied with" FCC regulatory requirements, thereby imposing a legal duty that would directly conflict with federal mandates. Such lawsuits are therefore conflict preempted."
Arthur Firstenberg v. Raphaela Monribot, 2015 WL 993820 para. 33, (N.M. Ct. of Appeals) (March 5, 2015).

Issue #2: City Appeal Hearing Procedures state: "The Presiding Officer shall cross examine the Applicant and the Applicant's witnesses on behalf of the parties, or permit direct cross examination."

Mr. Firstenberg has alleged that he did not get to cross-examine witnesses about RF and health issues at the May hearing. Witness testimony helps resolve factual disputes. At the May hearing, there was only one factual dispute: did Verizon build without a permit in 2005? Verizon and the City Attorney's Office did not put on witnesses for "examination" on this issue. This was because no witness had knowledge of what occurred ten years ago with the 2005 permit process. Therefore, there was no "cross examination" period to follow up because there was no "examination" period of witnesses. Instead, Verizon's attorney conceded that the action did occur.

Verizon did make Ms. Lisa Hansen, Verizon Real Estate Specialist, available for Board questions, but she did not have personal knowledge of the 2005 permit process. According to page seven of the May 5, 2015 minutes, the Board asked her four questions:

1. How many similar sites do you have in Santa Fe?
2. How many current antennas are in the structure, 6 or 9?
3. Is there any other entity trying to relocate in to that structure?
4. What is the cost to remove?

Ms. Hansen was unable to answer several of these questions. Assuming these questions constitute as an "examination" of Ms. Hansen, the generally accepted tenet of courtroom and administrative law is that a "cross examination" cannot exceed the scope of the "examination." Therefore, Mr. Firstenberg's wish to cross examine Ms. Hansen about issues beyond these types of questions, like RF and health issues, would not have been permissible.

Issue #3: City Appeal Hearing Procedures state: "The Appellant shall address questions to staff."

Mr. Firstenberg has alleged that he did not get to ask questions to City staff. The City Attorney's Office made a legal presentation and did not call any witnesses. The City Attorney's Office did make Mr. Dan Esquibel, Land Use Department, available for Board questions.

City Board and committee chairpersons, via generally understood Robert's Rules of Order principles, do allow a party to ask a question, via the chairperson, to staff (i.e. everything goes through the chair). According to the May 5, 2015 minutes, this procedure was used. For example, on page eight, there was back and forth from Mr. Firstenberg, via the chair, to City staff about the 2005 events:

"Mr. Firstenberg: In 2011, Santa Fe had revised its land development code so that telecommunications facilities are now a permitted use and no longer require a special exception....Thinking it could now surreptitiously legalize its facility, Verizon quietly applied for a building permit for the antennas."
Chairperson Winston: "Are you alleging that in 2005 the application was unpermitted?"
"Mr. Esquibel: I am not sure what the contractor did in 2005, or how they actually installed the equipment."

On page five of the minutes, the Board Member Reynolds asked Mr. Esquibel about Mr. Firstenberg's contention that the double fee sanction was too light:

"Ms. Reynolds: In looking at some of the ways you can remedy something that has taken place illegally, it looks like you could have done some other things. The common application was to double the fee, but there were other ways you can have addressed the illegal structure.
Mr. Esquibel: It has been a common practice for a long time...
Ms. Reynolds: But are there other ways?
Mr. Esquibel: In some cases where the applicant has not resolved the issue, it turns in to a violation and through the process it ends up in a court of law where the Judge will determine whether or not they need to remove it."

On the page eight of the minutes, Chairperson Winston asked Mr. Esquibel about Mr. Firstenberg's question about the height of the antennas:

"The Chair asked staff, 'Mr. Firstenberg says the boxes show the antennas .... Are 7' tall. What are the correct dimensions?"
"Mr. Firstenberg: In 2013 all of the antennas were 6' tall, and they were changed to 7' antenna. If you go by there you can see one antenna. The drawing did not show them sticking up."
Dan Esquibel: "There is an exception that the antennas can be 100 feet."

Therefore, the Chairperson or the Board members asked Mr. Firstenberg's relevant questions, via the Chair, to Mr. Esquibel.

Issue #4: Closing Arguments

Mr. Firstenberg has alleged that he should get a chance to make closing arguments and to re-open the public comment portion of the hearing. Chairperson Winston, near the end of the May hearing, closed the public comment portion of the hearing. City Appeal Procedures provide that the Appellant shall make closing argument prior to the close of the public hearing. Some chairpersons, however, interpret this provision to mean that once the public is done with their public comment, then the public comment portion of the hearing is closed and then the parties/lawyers get to make closing arguments.

The City Attorney's Office, however, does not object if the Chairperson would like to grant Mr. Firstenberg and the other parties/lawyers time to make closing remarks at the July hearing. Closing arguments may allow Mr. Firstenberg the opportunity to rebut any of the statements in this memorandum. This does not mean the City Attorney's Office consents to the public being allowed to make public comment a second time. They were allowed that opportunity for several hours at the May hearing and the public comment portion of the hearing is complete.

Issue #5: Supplementing the Record

Mr. Firstenberg has alleged that the City's failure to provide all permit documents/material to the Board about the 2005 permit, 2013 permit and 2014 permit has damaged his case. (City staff will supplement the record with these documents for the July hearing in case Mr. Firstenberg wants to raise this issue on district court appeal). He has claimed that his case was hurt because the Board did not have adequate time to review these documents, specifically regarding whether electronic roof shelters (a/k/a shroud) were permitted in 2005 and whether the current antennas exceed the height of the electronic roof shelters.

As a procedural matter, Mr. Firstenberg had prior access to these documents and actually used them as part of his presentation during the May hearing. Mr. Firstenberg could have submitted his alleged "key missing" documents earlier to staff because he knew the process of submittal. For example, he submitted a written witness list to staff ten days in advance of the hearing. He could have submitted these documents to staff at the same time so they could have been circulated in the Board packet in advance of the meeting.[1]

As stated in City Attorney's Office's April 10 memorandum, the debate of whether the antennas exceeded the height of the electronic roof shelters (a/k/a shroud) without a variance is a red herring. As stated in that memorandum, the antennas, without a shroud, may go up to 100 feet. This point was also made at the May hearing.

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[1] City staff had produced the exact same record in at least two prior public City Council meetings during the February-March 2015 timetable. This means members of the public, like Mr. Firstenberg, have known for months what was (and was not) in the record. Mr. Firstenberg, who regularly comes to the City Attorney's Office to make public record requests, and who met with staff in advance of the May hearing, as staff assisted him on submitting the proper notices to the residents, could have, but not, state: "you haven't been including all of the elevation drawings to clarify the issue of the height of the shrouds, you should add them."

City Code reads: "Telecommunications facilities located on existing structures shall not exceed the height of the structure upon which the facility is located *unless otherwise allowed under this section.*" SFCC 1987, § 14-6.2(E)(5)(b) (emphasis added). The next sentence of the subsection reads: "Telecommunications facilities located on new structures shall not exceed the maximum height for buildings otherwise allowed as set forth in Chapter 14 with the *exception* that in C-2, I-1 and I-2 districts the height limit of telecommunications facilities shall be one hundred feet." Code § 14-6.2(E)(5)(b) (emphasis added). Reading the two sentences together, the "Exception" language means that towers within the C-2, I-1 and I-2 districts can have a maximum height of 100 feet. One could also read the "Exception" language to mean this tower could be built on a new structure provided in the first sentence or an existing structure provided in the second sentence.

The City Attorney's Office memorandum also relied on a second explanation on the antennae height that the antennas were not visible from behind the shroud. This was based on observations of the site and review of the 2014 permit review. Based on public comment, the City Attorney's Office returned to the site. The City Attorney's Office does wish to clarify for the record: it does appear that the top of one pole-like structure (per each shroud) is slightly visible over the shrouds.[2] Yet, as stated above, the antennas without a shroud may go up to 100 feet.

Second, there was debate at the May hearing whether the shrouds were approved as part of the 2005 permit. Part of the confusion is whether they should be called electronic shelters, electronic roof shelters, enclosures or shrouds. This terminology may have changed over time. It is confusing because the 2005 permit also refers to a ground electronic shelter. There are clues to conclude that the shrouds were included in the permit authorization: (a) the 2005 permit request identifies the shrouds, called fiberglass antenna enclosures, in the drawings, and distinguishes them from the antennas; (b) the note on the 2005 permit states: "the antennas are not approved at this time"—it does not say the antennas *and* shrouds are not approved and (c) the permit states the material to be used is fiberglass and the shrouds were made of fiberglass. There are clues to conclude that they were not included: (a) the 2005 permit request did also identify a ground shelter that housed electronic equipment; (b) the permit request listed 216 square feet, which was the size of the ground shelter and not the shroud square footage and (c) the permit referred elsewhere to the 216 square footage number, where referring to the required surface water storage calculation.

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[2] What is the current pole-like structure? The 2005 permit request had an elevation drawing called "New East Elevation" that stated the shroud was 25'8" high and it showed a picture of a shorter antenna pole. The pole holds an antenna that is beneath the shroud. The 2013 permit request had an elevation drawing called "Existing Northwest Elevation" where the shroud appeared to be down to 25'4" high and antenna pole at 25'8" on the picture. The 2013 permit request had another elevation drawing called "New Northwest Elevation" which proposed that the antenna pole go up to 25'11" in the picture. (There was a short window of time between when the 2013 permit was approved to when it was appealed, which may have resulted in the installation of the "taller" pole.) The 2014 permit request has a drawing called the "New Northwest Elevation." In this drawing, the antennas and shroud are both shown at 25'8" in the drawing. With all of that information, the City Attorney's Office would expect that if or when the 2014 permit is released from "red tag" status (due to this appeal) that Verizon would follow the 2014 drawings and ensure that the pole and shroud are both at 25'8" in this matter.

Supplemental Material

2005 documents

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909
(505) 955-6646

* * * * * * ELECTRICAL PERMIT * * * * * * * * *

Application Number . . . . . 05-00000553 Date 4/11/05
Property Address . . . . . 1402 AGUA FRIA ST
Application description . . . MISCELLANEOUS
Subdivision Name . . . . . DORIS LUNA LOT LINE
Property Zoning . . . . . GENERAL COMMERCIAL
Application valuation 15000

Owner	Contractor
MALONE, JOHN	DW TOWER
VERIZON WIRELESS (LEASED)	PO BOX 91586
4821 EUBANK NE	ALBUQUERQUE NM 87109
ALBUQUERQUE NM 87111	(505) 872-8400

Structure Information SHELTER TO HOUSE EQUPMNT CELL SITE "VER"

Permit . . . . . ELECTRIC PERMIT
Additional desc . . . . . .
Sub Contractor . . . BROKEN ARROW ELECTRIC CO INC
Permit Fee 36.00
Issue Date . . . . 4/11/05 Valuation 0
Expiration Date . . 4/11/06

Qty	Unit Charge	Item	Extension
		BASE FEE	10.00
1.00	6.00	EA. ELEC/METER TROPS 150A-200A	6.00
1.00	20.00	EA. ELEC LOW VOLTAGE	20.00

Special Notes and Comments
I, THE OWNER OR AGENT FOR THE OWNER HAVE RECEIVED THE FOLLOWING REVIEW SHEETS. I UNDERSTAND I AM TO COMPLY WITH ALL CONDITIONS INDICATED ON THE REVIEW SHEETS. INITIALS_____

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	36.00	36.00	.00	.00
Grand Total	36.00	36.00	.00	.00

Applicant hereby agrees that all work done under this permit shall comply with the latest State and N.E.C Electrical Codes
Issued By _____ Date 4-11-05
Contractor _____ Date _____

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within thirty (30) days of its issuance (the "appeal period") pursuant to 14-7.4 SFCO (1997) and in the event an appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during this appeal period is done at my own risk and without reliance on the issuance of this permit. I further agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, alterating, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT

BIQOA.PMD 11/96

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909
(505) 955-6646 OR (505) 955-6645

* * * * * * * B U I L D I N G P E R M I T * * * * * * *

Application Number . . . . . 05-00000553 Date 4/07/05
Property Address . . . . . 1402 AGUA FRIA ST
Application description . . . MISCELLANEOUS
Subdivision Name . . . . . DORIS LUNA LOT LINE
Property Zoning . . . . . GENERAL COMMERCIAL
Application valuation 15000

Owner	Contractor
MALONE, JOHN	DW TOWER
VERIZON WIRELESS (LEASED)	PO BOX 91586
4821 EUBANK NE	ALBUQUERQUE NM 87109
ALBUQUERQUE NM 87111	(505) 872-8400

Structure Information: SHELTER TO HOUSE EQUPMNT CELL SITE "VER"
Construction Type . . . . . UPDATE
Occupancy Type . . . . . (OLD CODE) UPDATE
Flood Zone . . . . . UPDATE

Permit . . . . . BUILDING PERMIT COMMERCIAL
Additional desc . . . . . .
Permit Fee . . . . . 16.25 Plan Check Fee . . 100.69
Issue Date . . . . . 4/07/05 Valuation 15000
Expiration Date 4/07/06

Special Notes and Comments:
I, THE OWNER OR AGENT FOR THE OWNER HAVE RECEIVED THE FOLLOWING REVIEW SHEETS. I UNDERSTAND I AM TO COMPLY WITH ALL CONDITIONS INDICATED ON THE REVIEW SHEETS. INITIALS
LAND MGMT: SEE REVIEW SHEET
Approved based upon submitted plans

NOTE: ALL INSPECTIONS MUST BE SCHEDULED 24 HOURS IN ADVANCE

APPROVED BY _____ DATE 4.7.05

APPLICANT _____ DATE 4.7.05

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within thirty (30) days of its issuance (the "appeal period") pursuant to 14-2.4 SFCC (1987) and in the event an Appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during the appeal period is done at my own risk and without reliance on the issuance of this permit. I also agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, alterating, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT. BIDDERMO 11/99

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909
(505) 955-6646 OR (505) 955-6645

* * * * * * * B U I L D I N G P E R M I T * * * * * * *

Application Number . . . . . 05-00000553 Date 4/07/05

Special Notes and Comments
Conditions of Approval:
1. Provide for 50 cubic feet of surface storage (312x.16 =50). 2. Provide for dispersal of stormwater within 24 hours, as per code. 3. Provide appropriate erosion protection for the discharge and overflow from storage to result in non-erosive flows. 4. Provide appropriate erosion protection from new impervious surface to storage. 5. Maintain existing drainage pattern and conform to all other applicable terrain management code requirements 6. All disturbed areas shall be revegetated with native grasses or other drought tolerant plants or have other erosion control treatment.
FINAL GRADING AND DRAINAGE INPSECTION REQUIRED
Site is not in escarpment overlay or floodplain.
Contact Wendy Blackwell, 955-6127, with questions.
Shall comply with IFC 2003, The International Fire Code 2003 edition.

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	[illegible]	[illegible]	.00	.00
Plan Check Total	[illegible]	[illegible]	.00	.00
Grand Total	[illegible]	[illegible]	.00	.00

NOTE: ALL INSPECTIONS MUST BE SCHEDULED 24 HOURS IN ADVANCE

APPROVED BY _____ DATE 4-7-05

APPLICANT _____ DATE 4-7-05

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within thirty (30) days of its issuance (the "appeal period") pursuant to 14-7.4 SFCC (1987) and in the event an appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during the appeal period is done at my own risk and without reliance on the issuance of this permit. I also agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, alterating, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT. BIOOB.PMO 11/98

Plan Ck Fee B0021011050066 $169

Application Tracking # 05-553

City of Santa Fe

BUILDING PERMIT APPLICATION

PLEASE USE A BALL POINT PEN (PRESS FIRMLY)

↓ FOR OFFICE USE ONLY ↓

Type CMSC Class _____ Accepted by _____ Date Accepted 3/8/05

Amount Paid: Plan Check Fee $ 100.69 Water Budget Fee $ _____ Balance Due Permit Fee $ 162.29

Type of Construction: I II III IV V FR 1hr HT N

Occupancy Group: A B E F H I M R S U

Division: 1 11 12 2 24 3 4 5 6 7

Zone District _____ Occupant Load _____

↓ TO BE COMPLETED BY APPLICANT ↓

SITE ADDRESS 1402 AGUA FRIA Suite or Space # TRACT A

Subdivision _____ Lot _____ Block _____

Lot Square Footage Total .446 AC. ±

PROPOSED WORK: (Check all that apply)

- ☐ New Construction
- ☐ Additions
- ☐ Exterior Alterations/Repairs
- ☐ Interior Remodel
- ☐ Walls/Fences
- ☐ Grading/Utilities/Landscaping
- ☒ ~~Pools/Spas~~ SHELTER FOR EQUIPMENT
- ☐ Other
- ☐ Signs:
- ☐ Free Standing ☐ Wall Mounted
- Existing # _____ sq. ft. _____
- Proposed # N/A sq. ft. N/A
- Total # _____ sq. ft. _____

DESCRIPTION OF WORK: i.e. Bathroom addition, new 4 room residential addition, new 8 room residence, new commercial building, etc. (Note: Work listed herein must be depicted on accompanying plans and/or information if consideration of review requested)

SHELTER TO HOUSE ELECTRONIC EQUIPMENT FOR A WIRELESS CELL SITE

PROPOSED USE: i.e. residential, commercial, industrial, time share, retail, etc. COMMERCIAL

Construction Valuation $ ~~[illegible]~~

SQUARE FOOTAGE	Existing	Proposed	Total
Heated	151000	—	—
Garage	—	—	—
~~Patio/Porch~~ SHELTER	—	312	312
Total Roofed	—	312	312
Total Square Footage	—	312	312

Number of Plumbing Fixtures Proposed

Sinks — Showers — Tubs — Toilets — Urinals — Water Fountains — Other —

Type of Sewage Disposal

☐ Public Sewer ☐ Private System

No. of buildings N/A No. of stories N/A

Will the proposed construction result in an increase in the number of residential units?

☐ Yes ☐ No How many? _____

Will the proposed construction result in an increase in water use? ☐ Yes ☐ No

Property Owner JOHN MALONE - RURAL PROPERTY OWNER LEASED BY: VERIZON WIRELESS

Mailing Address 1021 EUBANK NE ALB, NM 87111

OWNER/BUILDER ☐ CONTRACTOR ☒

Daytime Telephone # _____

Contractor TBD TO BID

Mailing Address _____

State License # _____ City License # _____

Daytime Telephone # _____

I hereby certify that I am the duly appointed agent authorized to act on behalf of the property owner. I also certify that the information provided in this application is true and correct and it represents the current and proposed status of the subject property; that the plans submitted with this application are complete and in compliance with the building standards set forth in the Santa Fe City Code; and that the plans illustrate all public and private easements located on the property. I also certify that plans and submittals have been prepared in accordance with the submittal checklist. I further understand that failure to follow submittal checklist will result in the delay or rejection of my application.

Contact Name PATRICK GOODMAN Address TOWERCOM TECHNOLOGIES 4500 MONTGOMERY NE SUITE 5 ALB, NM 87109

Daytime Telephone 505 342 1999 Signature Applicant/Agent [signature] Date MARCH 8, 2005

Distribution: White - A, Canary - B, Pink - C, Goldenrod - D

BP014.pmd - REV 8/04

City of Santa Fe, New Mexico

05-553

Address Application Review

Preapplication Review: ☐ Yes ☐ No Application Review: ☐ Yes ☐ No

Date: 3/8/05 Processed by: [illegible]

Address Assigned: [illegible]

Legal Description: [illegible] Lot: ____ Block: ____ Tract: A Plat No: [illegible]

Proposed Construction: [illegible]

IDENTIFIED:

Zoning District C2

Hillside Overlay District N/A

Zip Code 87505

Census District 9

City Council District 3

Historic District ☐ yes ☑ no

- Downtown / Eastside ____
- Historic Review ____
- Historic Transition ____
- Don Gaspar ____
- Westside Guadalupe ____

Archaeological District ☐ yes ☐ no

- Historic downtown ____
- River & trails ____
- Suburban ____

Wellhead Protection Area ☐ yes ☐ no

Grading & Drainage

- Located in 100 Flood Plain ☐ yes ☑ no
- Escarpment Overlay District ☐ yes ☑ no
- Foothill ☐ yes ☑ no
- Ridgetop ☐ yes ☑ no
- Terrain Management Required ☐ yes ☑ no

In Moratorium Area ☐ yes ☐ no

Surface Disturbance:

- 2500 s.f. or more ☐ yes ☐ no
- Requires staff/Board Review ☐ yes ☐ no

☑ POSTING OF OFFICIAL ADDRESS - The property owner shall place the assigned street number in a readily visible location at the front entrance to the home or structure.

☐ Address shall be posted at construction site, in accordance with the Address Ordinance, within thirty (30) days of issuance of building permit.

☐ Approved subdivision plat with city approvals, county recording date, property line showing bearings and distances is applicable.

☐ Approved final development plan is applicable.

☐ Copy of Warranty Deed to the property dated prior to 1962 (Initial date of adoption of City of Santa Fe Subdivision Regulations) is applicable.

☐ Capital Impact Fees are applicable.

☐ Affordable Housing Agreement is applicable.

NOTIFIED: ____ TIME: ____ AM / PM DATE: ____

TR001 pmf/400

City of Santa Fe, New Mexico

ELECTRICAL REVIEW SHEET

DATE IN: _____ TRACT NO. 05-553

DATE OUT: 3/24/05

REVIEWED BY S.T.Mo Circle One: 10:00 AM 2:00 PM 4:00 PM

ADDRESS 1402 Agua Fria

ACTION: ( )APP (✓)CAPP ( )REJ ( )REJH

Forwarded to: B.P.G

(✓) Service equipment shall be located in rooms or spaces dedicated to such equipment.

(✓) Provide adequate working clearance about service equipment.

(✓) Boxes over 16 sq. inches shall not be installed in Fire Rated Walls.

( ) An engineer's stamp is required on these plans.

( ) Submit revised drawings.

1.) Conditional Approval, Per Elec. Engineers Design
2.) All Elec. Construction shall Comply with the 2002 National Elec. Code, New Mex. Elec. Code, New Mex. Bldg. Code.

Left message on _____ with _____

BI008.PMD-11/98

City of Santa Fe, New Mexico
LAND MANAGEMENT REVIEW SHEET

Date In: 3/16/05 Date Out: 3/16/05 Reviewed By: [illegible] Track No. 05-353

Project Address: 1410 Agua Fria St.

Plans Forwarded To: [illegible]

Action: ☑ Approved ☐ Conditional Approval ☐ Rejected

☐ N/A ☐ Comply with Storm Drainage Performance Standards; Storm Drainage SFCC 14-90.4.

☐ N/A ☐ Need 4 ft. wide sidewalk installation, repair or replacement next to property line along city rights-of-way or match existing.

☐ N/A ☐ Need installation of 18" C.M.P. culverts where applicable.

☐ N/A ☐ Locate and flag property boundary corners along city right-of-way, for inspection by this department.

☐ N/A ☐ No encroachment of structures, landscaping, fencing, etc. into city rights-of-way allowed.

☐ N/A ☐ Applicant to comply with visibility requirements at driveways and intersections.

☐ N/A ☐ Applicant to apply for license agreement for existing encroachments.

☐ N/A ☐ No retaining ponds or other structure encroachments allowed into utility, drainage or sewer easements.

☐ N/A ☐ Site plan, drainage plan, plat of survey, etc. must match as to lot configuration and location of easements.

☐ N/A ☐ Gates to open inward.

☐ N/A ☐ No drainage allowed into city right-of-way without approval of city Subdivision Engineer.

☐ N/A ☐ Parking not to encroach into public alley or any other city property.

☐ N/A ☐ This permit does not approve or authorize any construction on city right-of-way.

☑ OTHER: Approved per site plan

NOTIFIED: _____ TIME: _____ AM / PM DATE: _____

COMMENTS: _____

8/044.pmb-9/03

BP250002 City of Santa Fe 3/18/05
Application Tracking Individual Step Maintenance 15:42:08

Application number . . . . . : 03 00000553
Application type . . . . . : MISCELLANEOUS
Revision number . . . . . :
Agency/path/step/seq . . . : ZONING A 01 01
Date submitted, resulted . . 31805 31805
Approval code (F4) . . . . . AP APPROVED
Reviewed by (F4) . . . . . GP GARY PARK
Revised est cpl date 32305
Copies of plans 1
1=Add new comment 2=Change comment 4=Delete comment

Opt	Seq	Comments	Prt	Date
	1.00	Approved based upon submitted plans.	Y	31805
	2.00			
	3.00			
	4.00			
	5.00			
	6.00			

More...

F3=Exit F4=Prompt F8=Log maint F9=Add std comments F12=Cancel
F14=Req'd insp maint

BP255U02 City of Santa Fe 3/30/05
Application Tracking Action Log Maintenance 09:48:45

Application number . . . . . : 05 00000553
Address . . . . . : 1402 AGUA FRIA ST
Application type . . . . . : MISCELLANEOUS
Revision number . . . . . :
Path/step/seq . . . . . : B 01 00
Agency . . . . . : FIRE DEPARTMENT

Type information, press Enter.
Action date . . . . . : 3/22/05
Action by . . . . . : DRA DANIEL R. ARCHULETA
Action code . . . . . : AF APPROVED
Time spent (hours) 00
Correction report item . . N Y=Yes,N=No

1=Add new comment 2=Change comment 4=Delete comment

Opt	Sec	Comments	Print
_	1.00	shall comply with IFC 2003, The International Fire Code 2003 edition.	X
_	2.00		

Bottom

F3=Exit F9=Add std comment F12=Cancel

City of Santa Fe, New Mexico
Building Code Review

Date In: 3/16 Date Out: 4/1 Reviewed By: CJC Tracking No: 05-055

Plans Forwarded To: BFC

Project Address: 1402 AGUA FRIA

Action: ☐ ~~Approved~~ ☒ Conditional Approval ☐ Rejected

DESCRIPTION OF WORK ELECTRONIC EQUIPMENT SHELTER

SIZE OF BLDG. (total sq. ft.) 312 OCCUPANCY GROUP S-2

CONSTRUCTION TYPE: ☐ ~~IV~~ ☐ IV/1hr ☐ IV ☐ III/One hr ☐ IIN ☐ II/One Hr ☐ IIFR ☐ IFR

PRINCIPAL TYPE OF FRAME
- ☐ Masonry (wall bearing)
- ☐ Structural Steel
- ☐ Wood Frame
- ☐ Reinforced concrete
- ☒ Other FIBERGLASS
- ☐ Is there an elevator in this building?
  - ☐ Yes ☒ No

TYPE OF HEATING FUEL
- ☐ Gas
- ☐ Electricity
- ☐ Other

NOTE: Backup Heat is Required on Solar

TYPE OF SEWAGE DISPOSAL
- ☐ Public Sewer
- ☐ Private System (septic tank, etc.)

TYPE OF WATER SUPPLY
- ☐ Public
- ☐ Private (well, cistern)

FOR RESIDENTIAL BUILDINGS ONLY

Number of bedrooms _____

Number of bathrooms _____

- ☐ Must comply with Chapter 11 of the UBC and ICC/ANSI A117.1-1998.
- ☐ Must provide wall section and/or roof framing plan.
- ☐ Fuel fired furnaces and water heaters must be in one hour enclosure.
- ☐ Provide proper fire egress.
- ☐ Penetrations in fire-rated walls shall comply with Section 709.6 through 709.8.
- ☐ Submit revised drawings.
- ☐ New Mexico Licensed Architects/Engineers stamp required.

NOTE: THIS PERMIT IS FOR THE EQUIPMENT SHELTER ONLY — THE ANTENNAS ARE NOT APPROVED @ THIS TIME - SEPARATE PERMIT IS REQ'D.

Premises shall not be occupied until a Certificate of Occupancy has been issued pursuant to Sections 101 and 109 of the Uniform Administrative Code.

NOTIFIED: _____ TIME: _____ AM / PM DATE: _____

COMMENTS: _____

B1002.P95-8/01

BP250U02 City of Santa Fe 3/17/05
Application Tracking Individual Step Maintenance 15:06:59

Application number . . . . . : 05 00000551
Application type . . . . . : MISCELLANEOUS
Revision number . . . . . :
Agency/path/step/seq . . . . : GRADING & DRAINAGE B 01 01
Date submitted, resulted . . 31605 31705
Approval code (F4) . . . . . AP APPROVED
Reviewed by (F4) . . . . . WB WENDY BLACKWELL
Revised est cpl date 31905
Copies of plans . . . . . .
1=Add new comment 2=Change comment 4=Delete comment

Opt	Seq	Comments	Prt Date
_	1.00	Conditions of Approval: 1. Provide for 50 cubic feet of surface storage (312x.16 =50). 2. Provide for dispersal of stormwater within 24 hours, as per code. 3. Provide appropriate erosion protection for the discharge and overflow from storage to result in non-erosive flows. 4. Provide appropriate	Y 31705

More...

F3=Exit F4=Prompt F8=Log maint F9=Add std comments F12=Cancel
F14=Req'd insp maint

BP250U01 City of Santa Fe 4/01/05
Application Tracking Step Selection 16:01:58

Application number . . . . . : 05 00000553
Address . . . . . : 1402 AGUA FRIA ST
Parcel Code . . . . . : - - - - - - -
Application type . . . . . : MISCELLANEOUS
County Assessor Acct Num . : :
Tenant name, number . . . . : :

Type options, press Enter.
2=Change 4=Delete 5=View 6=Fast log 8=Action log maintenance 9=In/out maint

Opt	Agency description	Rev	Path Step	Req	--- Key Dates --- In	Est Cpl	-- Review Summary - Resulted	Stat	By
_	ELECTRICAL		A 01	Y	3/22/05	3/25/05	3/21/05	AP	STM
_	LAND MGMT (CITY-OWNE		A 01	Y	3/16/05	3/21/05	3/16/05	AP	RS
_	ZONING		A 01	Y	3/18/05	3/23/05	3/18/05	AP	GP
_	FIRE DEPARTMENT		B 01	Y	3/22/05	3/24/05	3/22/05	AP	DRA
_	GRADING & DRAINAGE		B 01	Y	3/16/05	3/19/05	3/17/05	AP	WB

More...

F3=Exit F5=Land inquiry F6=Add F7=Revisions F8=Misc info inquiry
F10=View 2 F12=Cancel F14=Action log inquiry F24=More keys

Routing AP 4/4/05

City of Santa Fe
Cashiers Office
Santa Fe, NM 87504
(505)955-4333

04/11/2005 10:23:07 AM
Your cashier was Amanda
B002101105098 791

Building Permits
broken arrow
11001.420500 $36.00

Total $36.00

Check $36.00
15214

Change $0.00

Tender

BP250V01 City of Santa Fe 4/01/05
Application Tracking Step Selection 16:31:58

Application number . . . . . : 05 00000553
Address . . . . . : 1402 AGUA FRIA ST
Parcel Code . . . . . : - - - - - - - -
Application type . . . . . : MISCELLANEOUS
County Assessor Acct Num . . :
Tenant name, number . . . . :

Type options, press Enter.
2=Change 4=Delete 5=View 6=Fast log 8=Action log maintenance 9=In/out maint

Opt	Agency description	Rev	Path Step	Req	--- Key Dates --- In	Est cpl	-- Review Summary - Resulted	Stat	By
_	ELECTRICAL		A 01	Y	3/22/05	3/25/05	3/21/05	AP	STM
_	LAND MGMT (CITY-OWNE		A 01	Y	3/16/05	3/21/05	3/16/05	AP	RS
_	ZONING		A 01	Y	3/18/05	3/23/05	3/18/05	AP	GP
_	FIRE DEPARTMENT		B 01	Y	3/22/05	3/24/05	3/22/05	AP	DRA
_	GRADING & DRAINAGE		B 01	Y	3/16/05	3/19/05	3/17/05	AP	WB

More...

F3=Exit F5=Land inquiry F6=Add F7=Revisions F8=Misc info inquiry
F10=View 2 F12=Cancel F14=Action log inquiry F24=More keys

Routing AP 4/4/05

City of Santa Fe
Cashiers Office
Santa Fe, NM 87504
(505)955-4333

04/11/2005 10:23:07 AM
Your cashier was Amanda
B0021011105098 T91

Building Permits
broken arrow
11001.420500 $36.00

Total $38.00

Check $38.00
16214

Change $0.00

Thank you

BP250001. City of Santa Fe 4/01/05
Application Tracking Step Selection 16:31:58

Application number . . . . : 05 00000553
Address . . . . . : 1402 AGUA FRIA ST
Parcel Code . . . . . :
Application type . . . . . : MISCELLANEOUS
County Assessor Acct Num . :
Tenant name, number . . . . :

Type options, press Enter.
2=Change 4=Delete 5=View 6=Fast log 8=Action log maintenance 9=In/out maint

Opt	Agency description	Rev	Path Step	Req	Key Dates In	Est Cpl	Review Summary Resulted	Stat	By
-	BUILDING		C 01	Y	3/18/05	3/21/05	4/01/05	AP	CJC

Bottom

F3=Exit F5=Land inquiry F6=Add F7=Revisions F8=Misc info inquiry
F10=View 2 F12=Cancel F14=Action log inquiry F24=More keys

verizon wireless

NM4 SILVA
CONCEALED ANTENNA INSTALLATION

SANTA FE, NEW MEXICO
SANTA FE COUNTY

APPROVED FOR CONSTRUCTION

SHEET INDEX

SHT	TITLE	REV
T1	TITLE SHEET	0
SP1	SPECIFICATION SHEET	0
C1	SITE PLAN	0
C2	VERIZON WIRELESS SITE PLAN	0
C3	ELEVATIONS	0
C4	SECTION & DETAILS	0
S1	ANTENNA ENCLOSURE & ROOF FRAMING PLAN	0
S2	ENCLOSURE DETAILS	0
S3	ENCLOSURE DETAILS	0
UC1	UTILITY COORDINATION SITE PLAN	0
E1	ELECTRICAL SITE PLAN	0
E2	SINGLE LINE DIAGRAM & PANEL SCHEDULE	0
G1	GROUNDING SITE PLAN	0
G2	TYPICAL GROUNDING ELEVATION	0
RF1	ANTENNA INFORMATION	0
SU1	SURVEY REFERENCE NOTES	3
SU2	METES & BOUNDS DESCRIPTIONS	3
SU3	ENLARGED PLAN VIEW	3

PROJECT INDEX

APPLICANT:
VERIZON WIRELESS
3521 EUBANK NE
ALBUQUERQUE, NM 87111

CONTACT: ERROL CHASSON
PHONE: 505-239-0925

ENGINEERS/DESIGNERS:
TOWERCOM TECHNOLOGIES LLC
4320 MONTGOMERY BLVD. NE, SUITE 5
ALBUQUERQUE, NM 87109

CONTACT: JASON DIXMAN, PE
PHONE: 505-232-4884

SURVEYOR:
TOWERCOM TECHNOLOGIES LLC
4320 MONTGOMERY BLVD. NE, SUITE 5
ALBUQUERQUE, NM 87109

CONTACT: L. DEAN VAN WATIG, PLS
PHONE: 915-779-2803

LEASING/ZONING:
G3 CONSULTING INC.
1599 ADAMS STREET
DENVER, CO 80206

CONTACT: MARK FINZ
PHONE: 303-815-3428

GENERAL PROJECT NOTES

1. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE PROPOSED PROJECT.
2. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE SUB SITE AND CONFIRM THAT WORK AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
3. ALL FIELD MODIFICATIONS BEFORE, DURING OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY A VERIZON WIRELESS REPRESENTATIVE.
4. INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, UNLESS INDICATED OTHERWISE.
5. NOTIFY VERIZON WIRELESS, IN WRITING, OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATIONS FROM A VERIZON WIRELESS REPRESENTATIVE AND ADJUSTING THE BID ACCORDINGLY.
6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
7. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FURNISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF A VERIZON WIRELESS REPRESENTATIVE.
8. THE CONTRACTOR IS RESPONSIBLE FOR RED-LINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. FOLLOWING THE FINAL INSPECTION BY VERIZON WIRELESS, THE CONTRACTOR SHALL PROVIDE VERIZON WIRELESS WITH ONE COPY OF ALL RED-LINED DRAWINGS.
9. VERIFY ALL FINAL EQUIPMENT WITH A VERIZON WIRELESS REPRESENTATIVE - ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY VERIZON WIRELESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH THE WORK AND CLEARANCES REQUIRED BY OTHERS RELATED TO SAID INSTALLATIONS.

GENERAL COMPLIANCE

1. NO HAZARDOUS OR COMBUSTIBLE MATERIAL WILL BE STORED WITHIN THE FACILITY.
2. DEVELOPMENT AND USE OF THIS SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.

ADA COMPLIANCE

1. THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. LANDINGS AND EXITS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES.

FCC COMPLIANCE

1. RADIATION FROM THIS FACILITY WILL NOT INTERFERE WITH OPERATION OF OTHER COMMUNICATION DEVICES.

FIRE COMPLIANCE

1. CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF 2A-10BC OR BETTER.
2. CONTRACTOR TO INSTALL FIRE DEPARTMENT APPROVED "KNOX BOX" PER DEPARTMENT REQS.

APPROVALS

THE FOLLOWING PARTIES HAVE COMPREHENSIVELY REVIEWED AND DO HEREBY APPROVE OF THESE CONSTRUCTION DOCUMENTS (ALL SHEETS INCLUDED) AS THEY PERTAIN TO EACH PARTY'S AREA OF EXPERTISE.

RF ENGINEER _____ DATE _____

VERIZON WIRELESS REAL ESTATE _____ DATE _____

REAL ESTATE _____ DATE _____

PROJECT MANAGER _____ DATE _____

DESIGNED FOR:
verizon wireless
4821 EUBANK NE – ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY:
TOWERCOM TECHNOLOGIES
TOWERCOM TECHNOLOGIES LLC
4320 Montgomery Blvd. NE, Suite 5 – Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4888

PROJECT NAME:
NM4–SILVA
CONCEALED ANTENNA
INSTALLATION

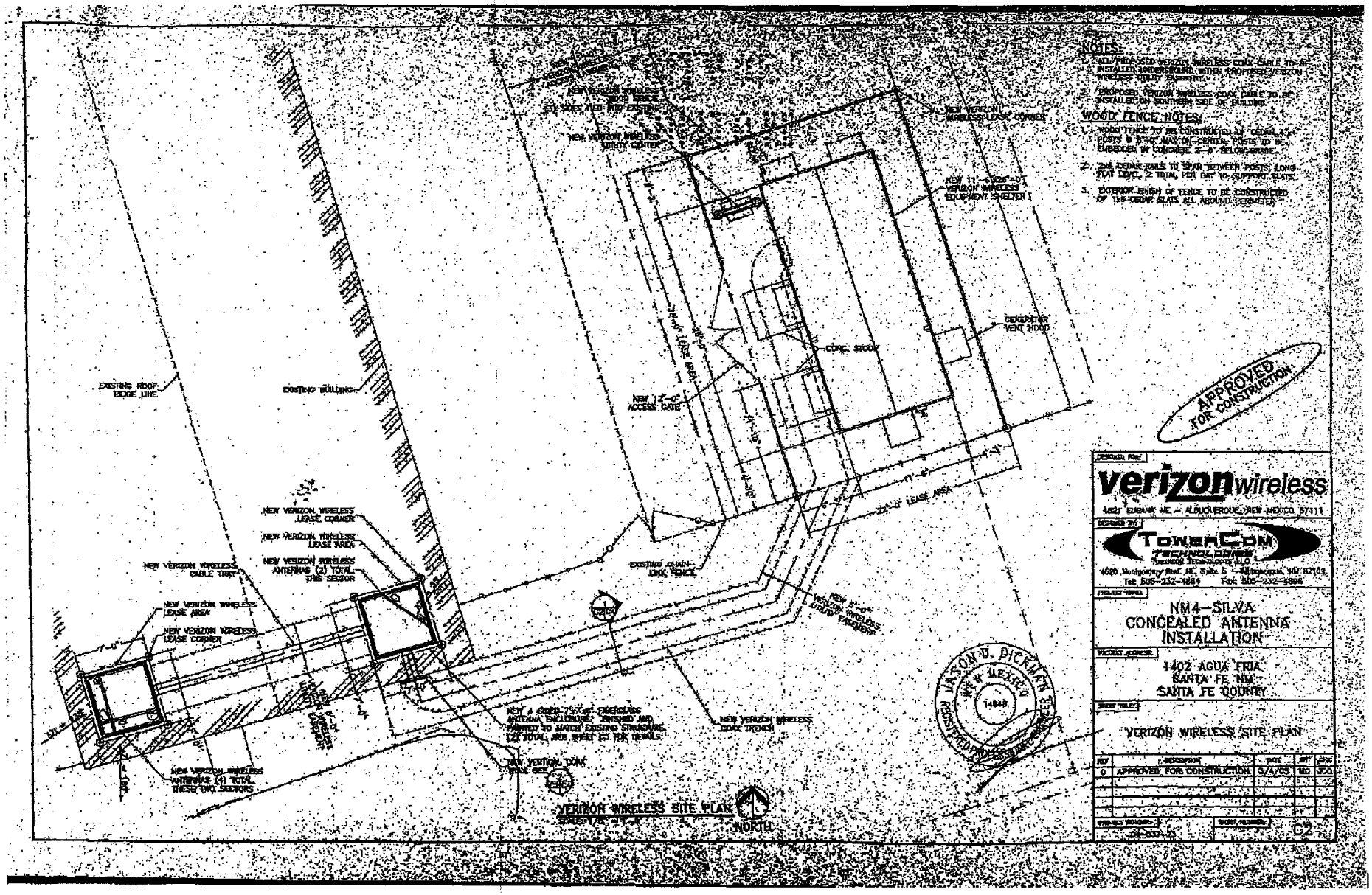
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE NM
SANTA FE COUNTY

SHEET TITLE:
TITLE SHEET

REV	DESCRIPTION	DATE	BY	CHK
0	APPROVED FOR CONSTRUCTION	3/4/05	MC	JDD

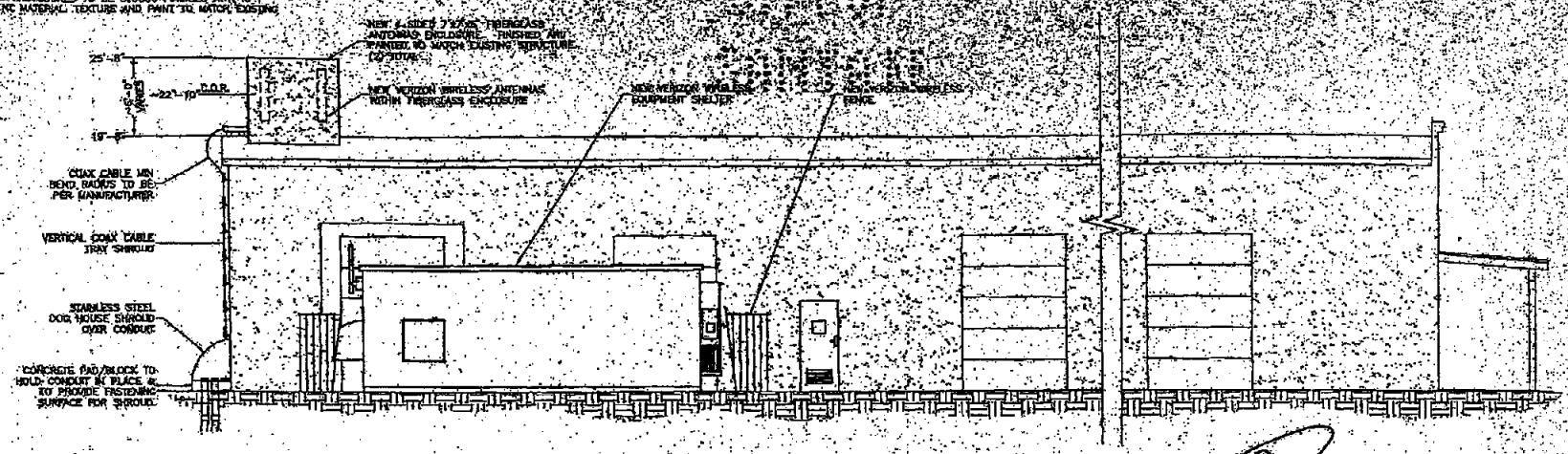
PROJECT NUMBER: 04-032-23

SHEET NUMBER: T1


NOTES:
1. ALL PROPOSED VERIZON WIRELESS COAX CABLE TO BE INSTALLED UNDERGROUND, WITH PROPOSED VERIZON WIRELESS UTILITY SUPPORT.
2. PROPOSED VERIZON WIRELESS COAX CABLE TO BE INSTALLED ON SOUTHERN SIDE OF BUILDING.
WOOD FENCE NOTES:
1. WOOD FENCE TO BE CONSTRUCTED OF CEDAR 4"x4" POSTS @ 10'-0" MAX ON-CENTER. POSTS TO BE EMBEDDED IN CONCRETE 2'-0" BELOW GRADE.
2. 2x4 CEDAR RAILS TO SPAN BETWEEN POSTS, LONG FLAT LEVEL, 2 TOTAL, PER BAY TO SUPPORT SLATS.
3. EXTERIOR FINISH OF FENCE TO BE CONSTRUCTED OF 1x6 CEDAR SLATS ALL AROUND PERIMETER.
NEW VERIZON WIRELESS WOOD FENCE (3) SIDES NEW AND EXISTING
NEW VERIZON WIRELESS UTILITY CENTER
NEW VERIZON WIRELESS LEASE CORNER
NEW 11'-6"x28'-0" VERIZON WIRELESS EQUIPMENT SHELTER
GENERATOR VENT HOOD
CONC. STOOP
NEW 12'-0" ACCESS GATE
EXISTING ROOF RIDGE LINE
EXISTING BUILDING
NEW VERIZON WIRELESS LEASE CORNER
NEW VERIZON WIRELESS LEASE AREA
NEW VERIZON WIRELESS ANTENNAS (2) TOTAL ONE SECTOR
NEW VERIZON WIRELESS CABLE TRAY
NEW VERIZON WIRELESS LEASE AREA
NEW VERIZON WIRELESS LEASE CORNER
NEW VERIZON WIRELESS ANTENNAS (4) TOTAL, THESE TWO SECTORS
EXISTING CHAIN-LINK FENCE
NEW 5'-0" VERIZON WIRELESS UTILITY EASEMENT
NEW 4 SIDED 75'x4' FIBERGLASS ANTENNA BUILDING, FINISHED AND PAINTED TO MATCH EXISTING STRUCTURE. 12'2 TOTAL, SEE SHEET S5 FOR DETAILS
NEW VERIZON WIRELESS COAX TRENCH
NEW VERIZON COAX BELL SITE
VERIZON WIRELESS SITE PLAN
SCALE: 1/8"=1'-0"
NORTH
APPROVED FOR CONSTRUCTION
JASON U. DICKMAN
NEW MEXICO
14848
REGISTERED PROFESSIONAL ENGINEER
DESIGNED FOR:
verizonwireless
4821 EDWARD NE. - ALBUQUERQUE, NEW MEXICO 87111
DESIGNED BY:
TowerCom TECHNOLOGIES
Towercom Technologies LLC
4620 Montgomery Blvd. NE, Suite 5 - Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4898
PROJECT NAME:
NM4-SILVA
CONCEALED ANTENNA INSTALLATION
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY
SHEET TITLE:
VERIZON WIRELESS SITE PLAN
REV | REVISION | DATE | BY | CHK
0 | APPROVED FOR CONSTRUCTION | 3/4/05 | MC | JDD
PROJECT NUMBER: 04-0001-25
SHEET NUMBER: C2

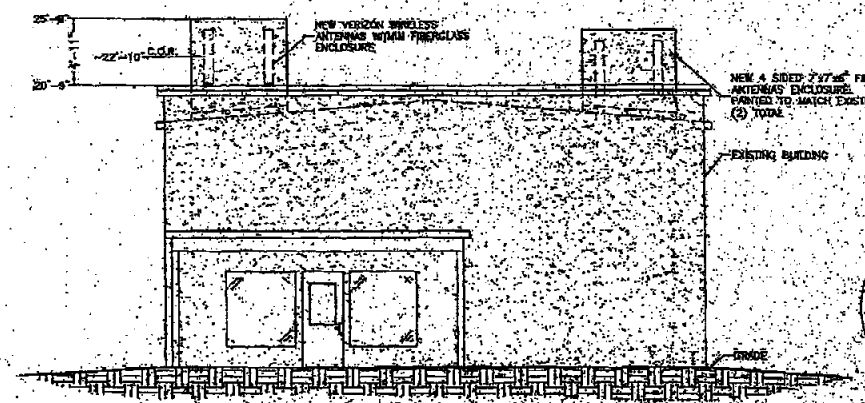
NOTES:

1. ALL ELEMENTS OF CABLE TRAY & DOGHOUSE TO BE PAINTED TO MATCH EXISTING BUILDING.
2. FIBERGLASS ENCLOSURES TO BE STUCCO FINISHED WITH AN TRANSPARENT MATERIAL TEXTURE AND PAINT TO MATCH EXISTING



NEW EAST ELEVATION
SCALE 1/8" = 1'-0"

APPROVED FOR CONSTRUCTION



NEW NORTH ELEVATION
SCALE 1/8" = 1'-0"

JASON D. DICKMAN
NEW MEXICO
14648
REGISTERED PROFESSIONAL ENGINEER

DESIGNED FOR:

verizonwireless

4802 EDWARD NE - ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY:

TowerCom Technologies
Tower Technologies LLC
4520 Montgomery Blvd. NE, Suite 3 – Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4898

PROJECT NAME:

NM4-SILVA
CONCEALED ANTENNA
INSTALLATION

PROJECT ADDRESS:

1402 AGUA FRIA
SANTA FE NM
SANTA FE COUNTY

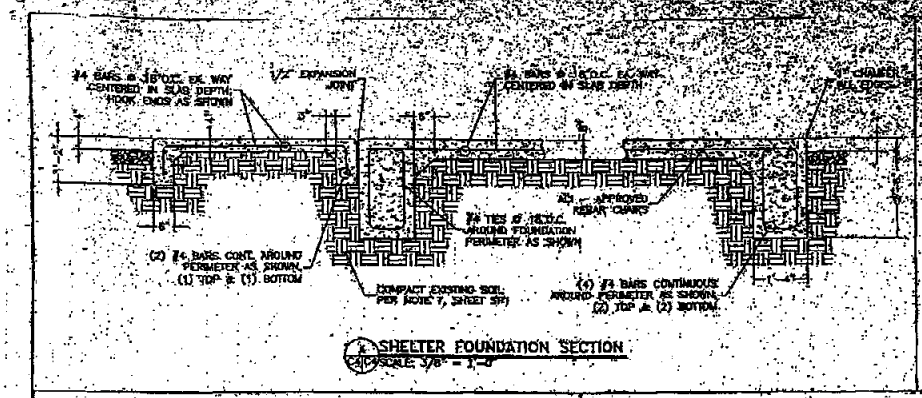
SHEET TITLE:

ELEVATIONS

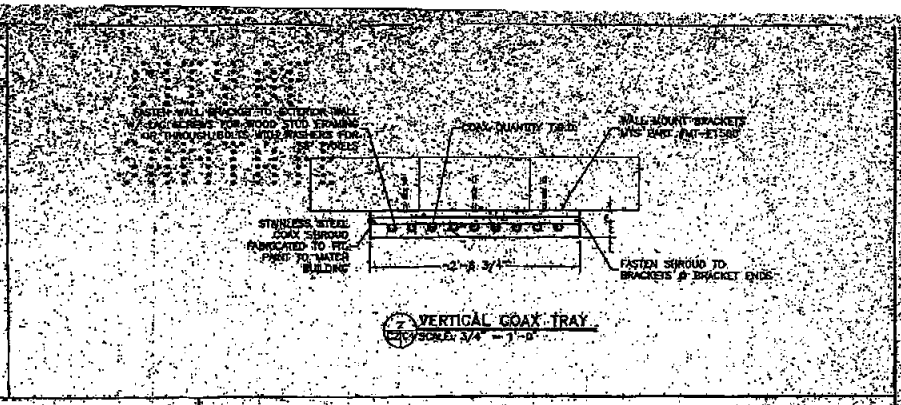
REV.	DESCRIPTION	DATE	BY	CHK.
0	APPROVED FOR CONSTRUCTION	3/4/05	MC	JDD

PROJECT NUMBER: 03-237-23

SHEET NUMBER: C3

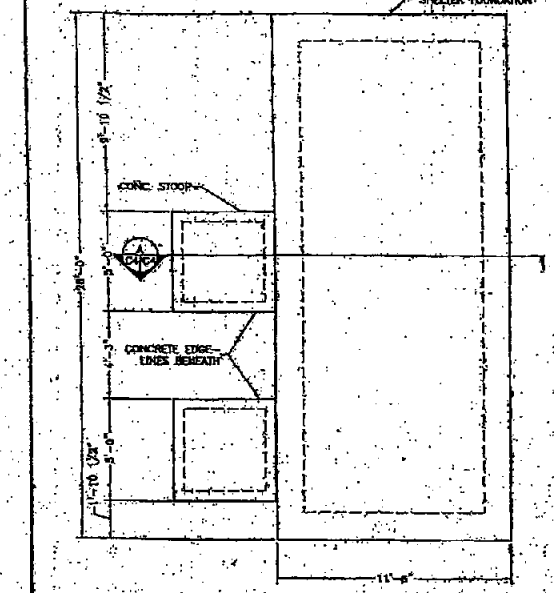


SHELTER FOUNDATION SECTION
SCALE: 3/8" = 1'-0"

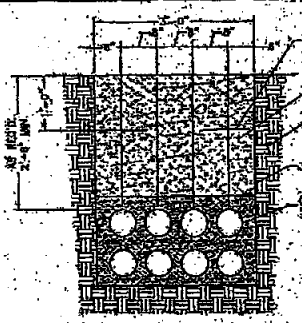


VERTICAL COAX TRAY
SCALE: 3/4" = 1'-0"

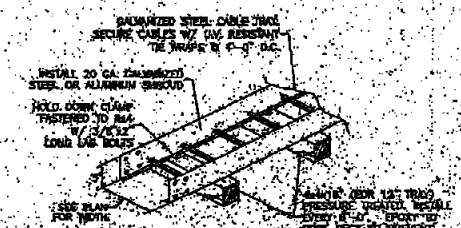
NOTE: FASTEN EQUIPMENT SHELTER TO FOUNDATION ACCORDING TO SHELTER DRAWINGS



SHELTER FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



COAX CABLE TRENCH SECTION
SCALE: 1/2" = 1'-0"



CABLE TRAY DETAIL
SCALE: 1/2" = 1'-0"

APPROVED FOR CONSTRUCTION

DESIGNED FOR:
verizon wireless
4821 BUBANK NE - ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY:
TowerCom Technologies
TowerCom Technologies, LLC
4330 Montgomery Blvd. NE, Suite G - Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4886

PROJECT TITLE:
NM4-SILVA
CONCEALED ANTENNA INSTALLATION

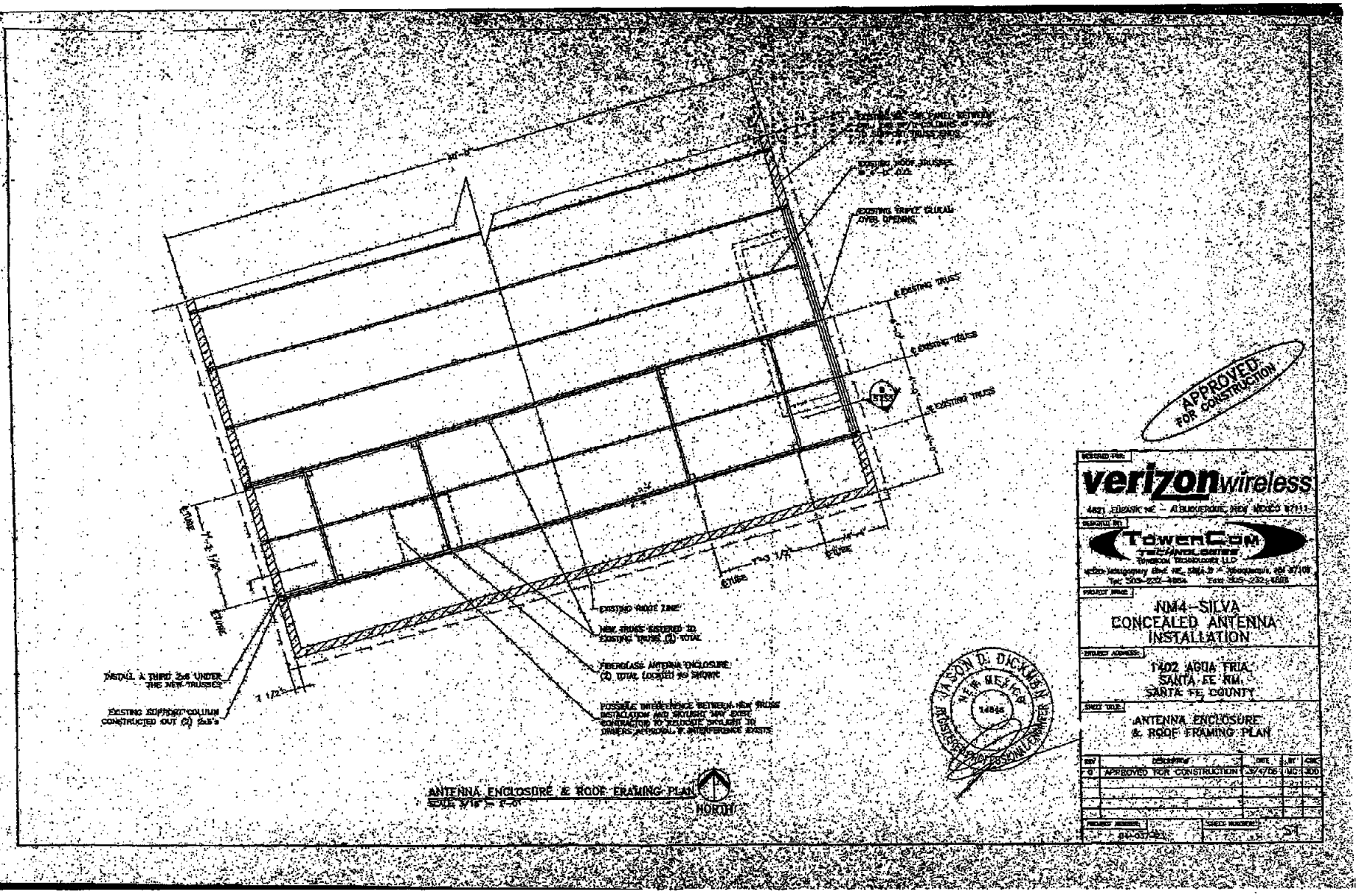
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY

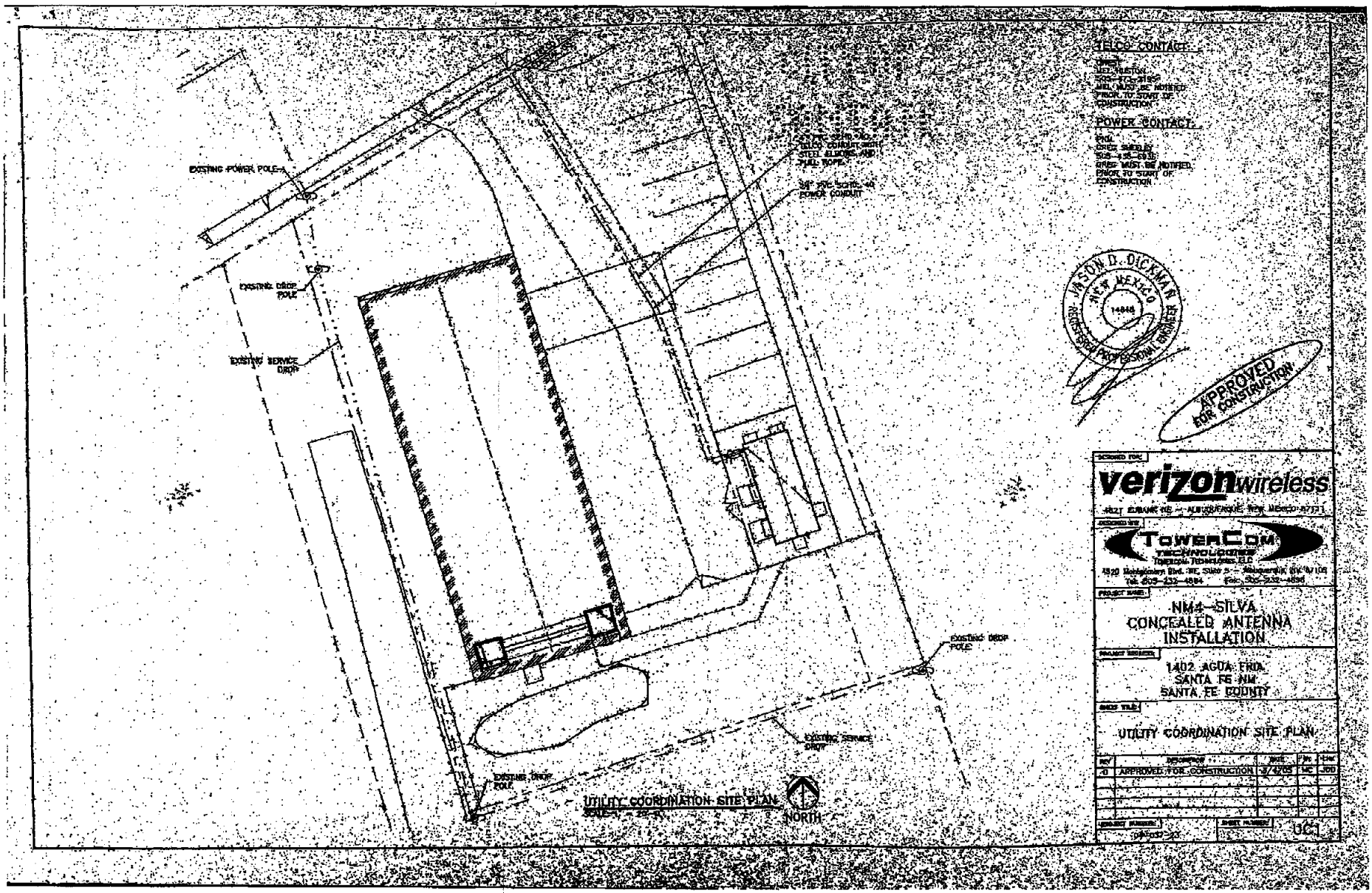
SHEET TITLE:
SECTIONS & DETAILS

REV.	DESCRIPTION	DATE	BY	CHK.
0	APPROVED FOR CONSTRUCTION	3/4/05	MC	JDD

PROJECT NUMBER: 844037622
SHEET NUMBER: C4

JASON D. DACKMAN
NEW MEXICO
14848
REGISTERED PROFESSIONAL ENGINEER


EXISTING TRIPLE GLULAM OVER OPENING
℄ EXISTING TRUSS
℄ EXISTING TRUSS
℄ EXISTING TRUSS
EXISTING ROOF LINE
NEW TRUSS ENTERED IN EXISTING TRUSS (2) TOTAL
FIBERGLASS ANTENNA ENCLOSURE (2) TOTAL LOCATED AS SHOWN
POSSIBLE INTERFERENCE BETWEEN NEW TRUSS INSTALLATION AND SKYLIGHT. NAV ADVISE CONTRACTOR TO RELOCATE SKYLIGHT TO DRAWER APPROVAL IF INTERFERENCE EXISTS
INSTALL A THIRD 2x6 UNDER THE NEW TRUSSES
EXISTING SUPPORT COLUMN CONSTRUCTED OUT (2) 2x6's
ANTENNA ENCLOSURE & ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"
NORTH
APPROVED FOR CONSTRUCTION
verizonwireless
4821 ELDERAN NE – ALBUQUERQUE, NEW MEXICO 87111
TowerCom TECHNOLOGIES
TOWERCOM TECHNOLOGIES, LLC
Tel: 505-232-4866 Fax: 505-232-4868
NM4-SILVA
CONCEALED ANTENNA INSTALLATION
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY
ANTENNA ENCLOSURE & ROOF FRAMING PLAN
JASON D. DICKMAN
NEW MEXICO
14848
REGISTERED PROFESSIONAL ENGINEER
REV 0 APPROVED FOR CONSTRUCTION 3/4/08 MC 300
S1


EXISTING POWER POLE
EXISTING DROP POLE
EXISTING SERVICE DROP
EXISTING DROP POLE
EXISTING SERVICE DROP
EXISTING DROP POLE
NORTH
TELCO CONTACT:
POWER CONTACT:
JASON D. DICKMAN
NEW MEXICO
14948
PROFESSIONAL ENGINEER
APPROVED FOR CONSTRUCTION
verizon wireless
TOWERCOM TECHNOLOGIES
NM4-SILVA
CONCEALED ANTENNA INSTALLATION
1402 AGUA FRIA
SANTA FE NM
SANTA FE COUNTY
UTILITY COORDINATION SITE PLAN
REV
DESCRIPTION
DATE
0
APPROVED FOR CONSTRUCTION
3/4/09
UC1

GENERAL ELECTRICAL NOTES:

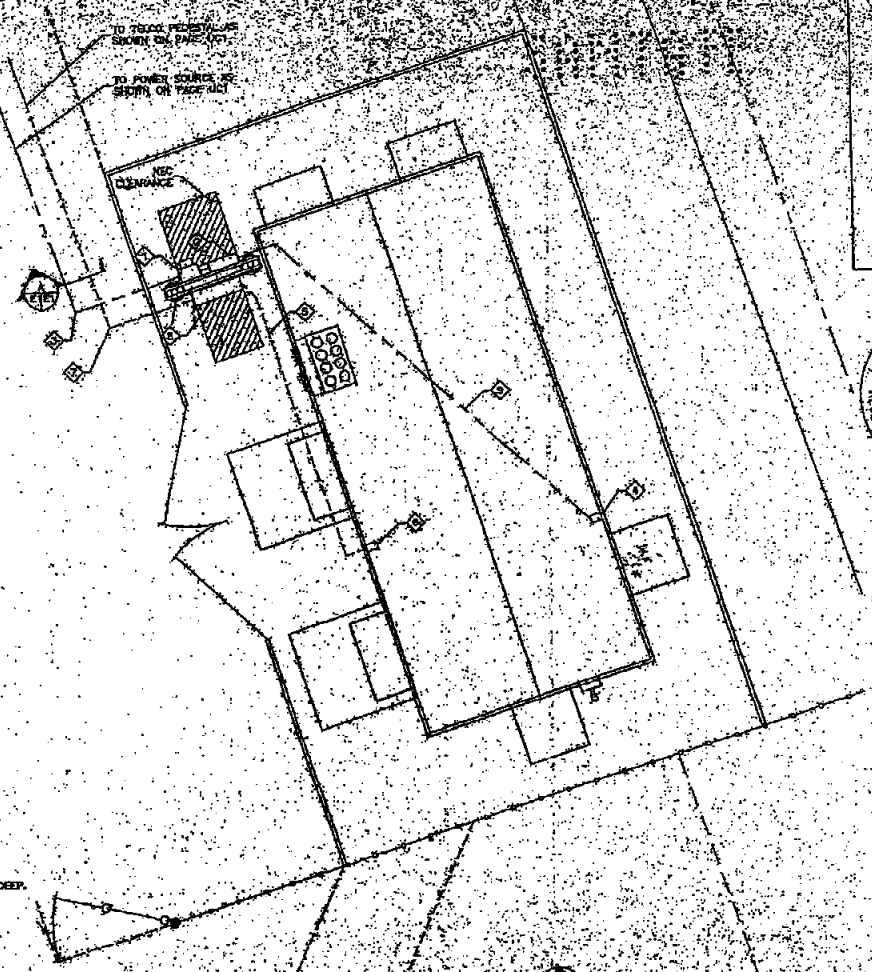
1. THE ELECTRICAL INSTALLATION WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES, LAWS AND ORDINANCES APPLICABLE TO ELECTRICAL WORK.
2. CONTRACTOR SHALL VISIT SITE AND VERIFY EXISTING CONDITIONS BEFORE BEGINNING WORK.
3. ALL MATERIAL AND EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW, FREE FROM DEFECTS AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.
4. ALL WORK TO BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK.
6. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER TYPE "THW" #12, AND #10 SOLID, #8 AND LARGER STRANDED.
7. CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE VERIZON WIRELESS PROJECT MANAGER U/PON COMPLETION OF THE JOB.
8. ELECTRICAL WORK SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED, INCLUDING BUT NOT LIMITED TO COMPLETE ELECTRICAL SYSTEMS POWER AND LIGHTING, TELEPHONE CONDUIT SYSTEM, SIGNAL SYSTEMS, PANELBOARD(S), CONTROL WIRING, GROUNDING, CONDUIT ONLY SYSTEMS, ETC., AS INDICATED ON ELECTRICAL DRAWINGS AND/OR REQUIRED BY GOVERNING CODES.
9. PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND REQUIREMENTS ON THE JOB, AND BY REFERENCE TO ARCHITECTURE, AND EQUIPMENT SUPPLIER'S DRAWINGS. SHOULD THERE BE ANY QUESTIONS OR PROBLEMS CONCERNING THE NECESSARY PROVISIONS TO BE MADE, PROPER DIRECTIONS FROM THE VERIZON WIRELESS PROJECT MANAGER SHALL BE OBTAINED BEFORE PROCEEDING WITH ANY WORK.
10. THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, ELECTRICAL SERVICE REQUIREMENTS AND COORDINATE ALL INTERCONNECTION REQUIREMENTS WITH LOCAL UTILITY AS NECESSARY.
11. THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS.
12. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL PERMITS AND RELATED FEES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, STATE OF NEW MEXICO ELECTRICAL SAFETY ORDERS, ALL CODES AND ORDINANCES AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION OVER THIS WORK.

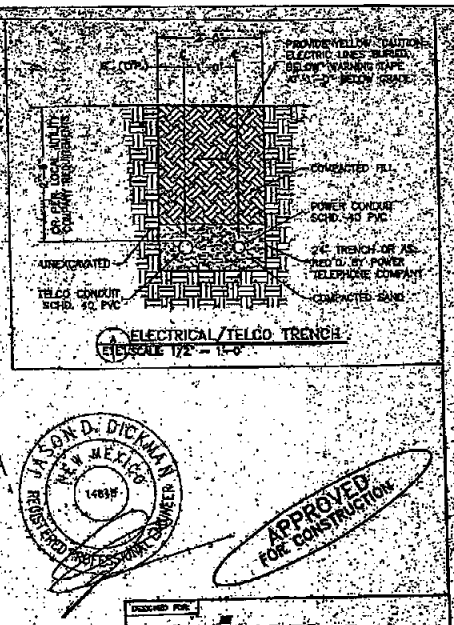
GENERAL POWER NOTES:

1. CONTRACTOR SHALL COMPLY WITH UTILITY'S ELECTRICAL SERVICE SPECIFICATIONS. OBTAIN A COPY AS NEEDED.
2. BOND THE SERVICE NEUTRAL TO THE GROUNDING ELECTRODE SYSTEM WITH A MINIMUM OF #2/0 AWG BARE COPPER CONDUCTOR.
3. EMERGENCY POWER RECEPTACLE PER VERIZON WIRELESS REQUIREMENTS.

KEYED NOTES:

1. 200 AMP METER, SPECIFIED ON SINGLE LINE DIAGRAM.
2. MAIN DISCONNECT, SPECIFIED ON SINGLE LINE DIAGRAM.
3. POWER CONDUIT TO POWER POLE, PVC 2½", SCHD 40, 30" DEEP.
4. J BOX AT SHELTER -- BOND #2 TO SYSTEM GROUND.
5. TELCO CONDUIT TO TELCO ENTRY, PVC 2½", SCHD 40 WITH PULL ROPE 36" DEEP. ALL ELBOWS TO BE LONG SWEEP 90'S.
6. TELCO ENTRY AT EQUIPMENT SHELTER. CONDUIT MUST BE INSTALLED PRIOR TO POURING CONCRETE FOR ENTRY STOOP.
7. TELCO CONDUIT, PVC 4", SCHD 40 WITH PULL ROPE, 36" DEEP ALL ELBOWS TO BE STEEL LONG SWEEP 90'S
8. SOUTHWEST TELCO CABINET 36"x36"x72" MODEL No.: TC-03B03612 OR VERIZON WIRELESS APPROVED CABINET
9. POWER CONDUIT TO SHELTER J BOX, 2½" PVC SCHD. 40, 30" DEEP





JASON D. DICKMAN
NEW MEXICO
14831
REGISTERED PROFESSIONAL ENGINEER

APPROVED FOR CONSTRUCTION

DESIGNED FOR:
verizon wireless
4821 EUBANK NE — ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY:
TOWERCOM TECHNOLOGIES
Tower Com Technologies, LLC
8320 Montgomery Blvd. NE, Suite 5 — Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4883

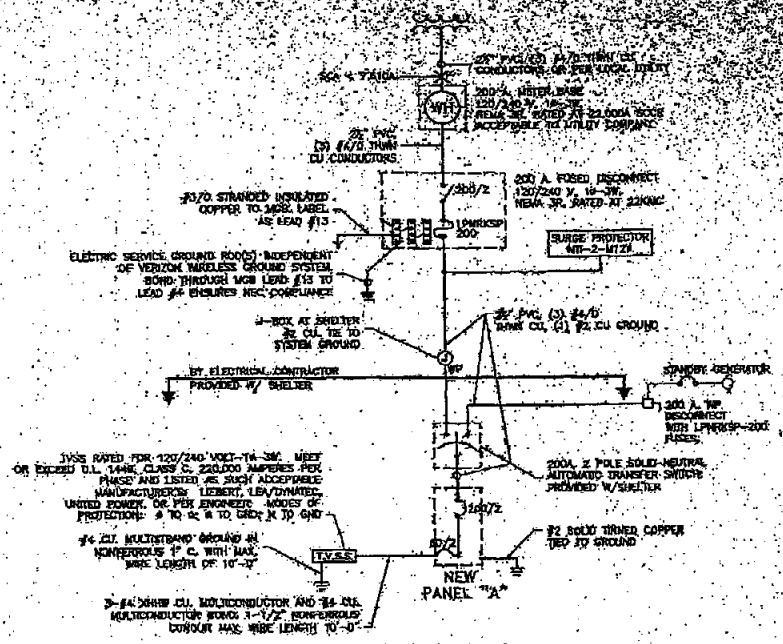
PROJECT NAME:
NM4-SILVA
CONCEALED ANTENNA INSTALLATION

PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY

SHEET TITLE:
ELECTRICAL SITE PLAN

REV	DESCRIPTION	DATE	BY	CHK
0	APPROVED FOR CONSTRUCTION	3/4/05	MC	JDD

PROJECT NUMBER: 04-1117-22
SHEET NUMBER: E1



SINGLE LINE DIAGRAM
SCALE N/A

REFER TO SHELTER DRAWINGS FOR PANEL SCHEDULE

PANEL SCHEDULE
SCALE N/A

APPROVED FOR CONSTRUCTION

FAULT ANALYSIS FOR COMM SITE:

ASC = 7,610A BASED ON ONE-WAY CONDUCTOR LENGTH OF 175' FROM METER TO TRANSFORMER, WITH 3/0 COPPER CONDUCTORS.

LOAD SUMMARY FOR COMM SITE:

DESIGN LOAD = 42 KW
@ 175.2 AMPS, 240V
100% LF

JASON S. DICKMAN
NEW MEXICO
14820
PROFESSIONAL ENGINEER

DESIGNED FOR:
verizonwireless
4821 EDWARD NE – ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY:
TowerCom Technologies
Tomorrow Technologies LLC
4520 Montgomery Blvd. NE, Suite 5 – Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4688

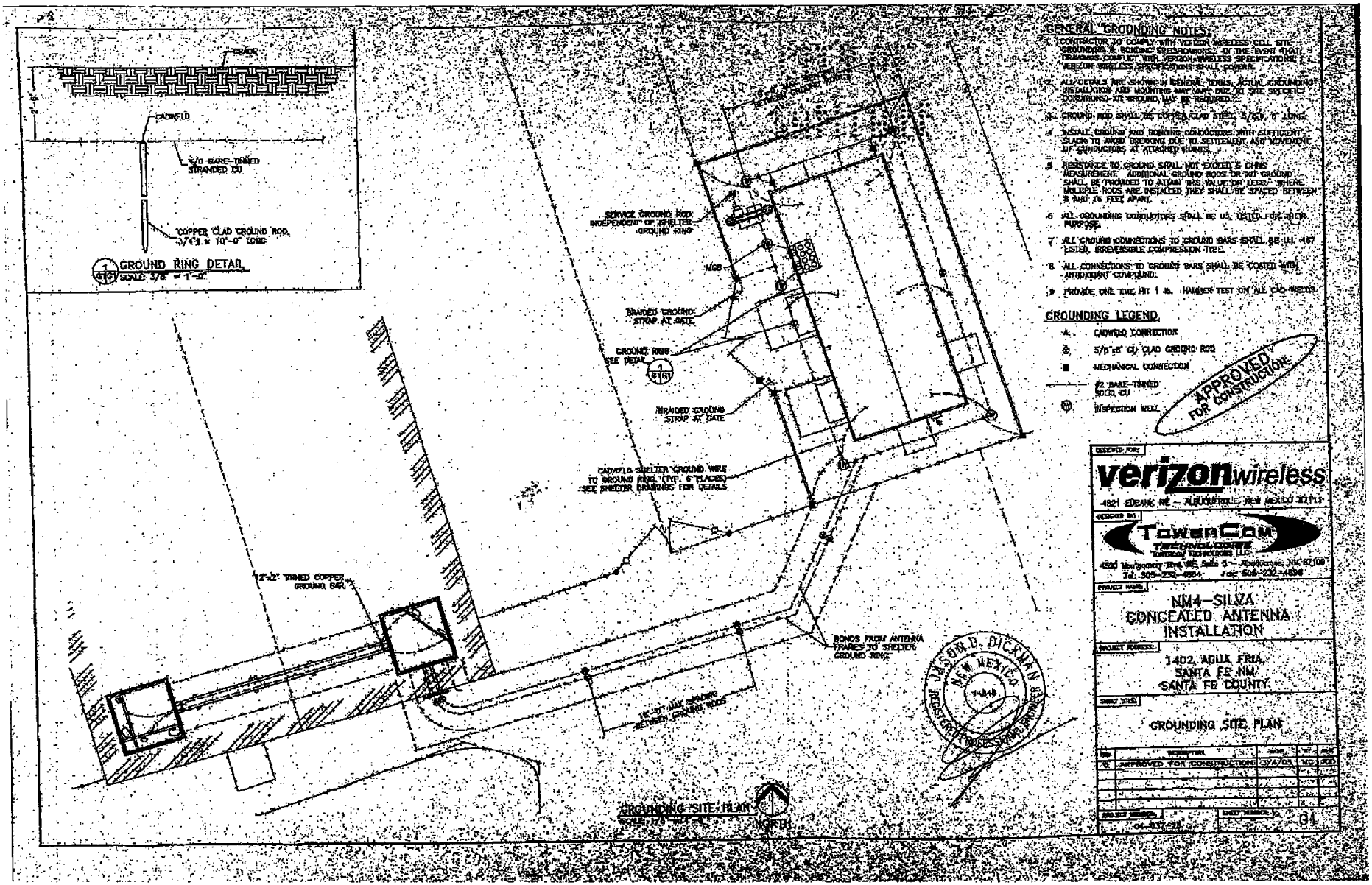
PROJECT NAME:
NM4-SILVA
CONCEALED ANTENNA INSTALLATION

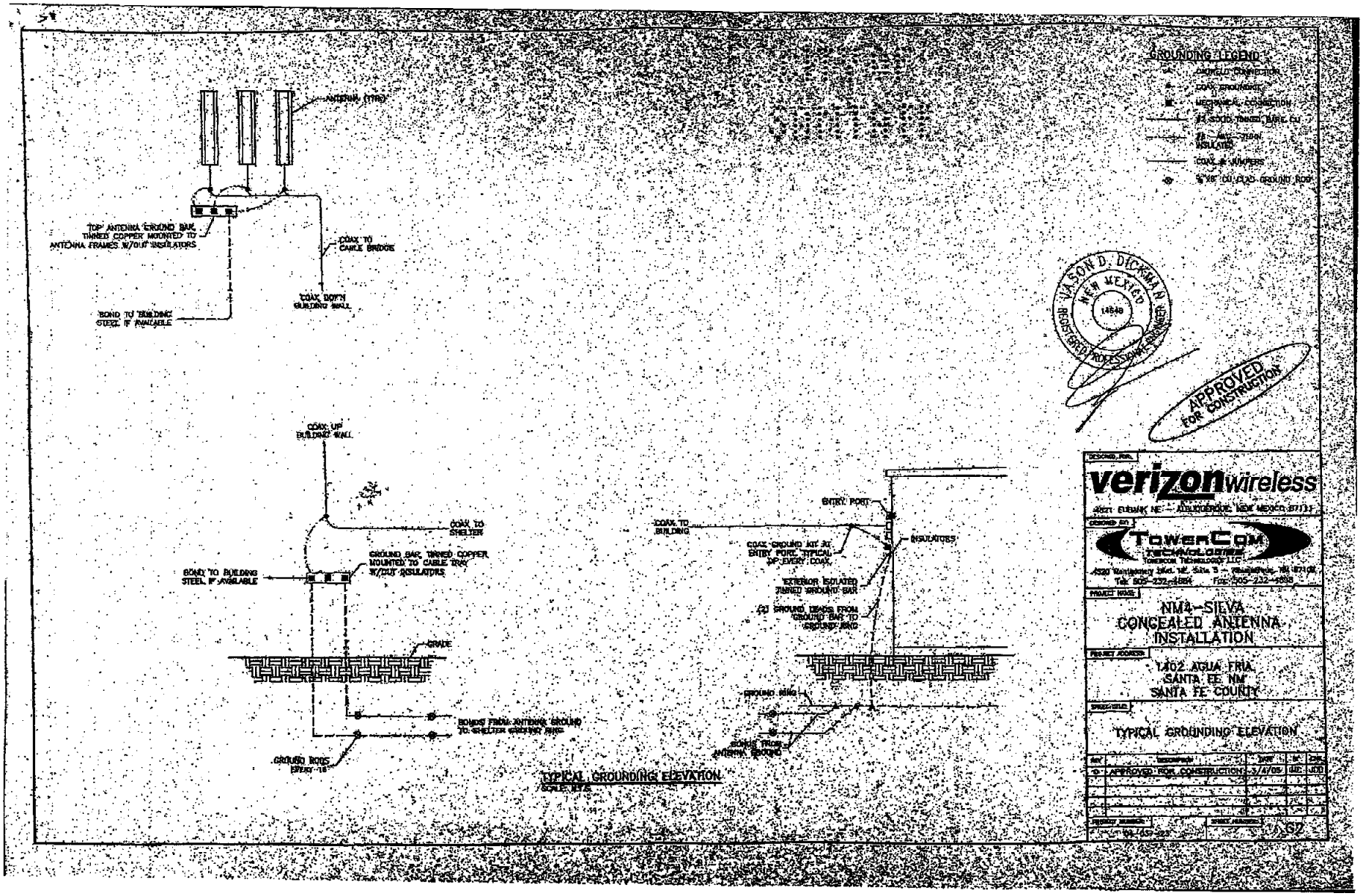
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY

DWG TITLE:
SINGLE LINE DIAGRAM & PANEL SCHEDULE

REV	DESCRIPTION	DATE	DR	CK
0	APPROVED FOR CONSTRUCTION	3/4/05	MC	JSD

PROJECT NUMBER: 04-037-23
SHEET NUMBER: E2


GRADE
CADWELD
#2/0 BARE-TINNED STRANDED CU
COPPER CLAD GROUND ROD, 5/8"ø x 10'-0" LONG
GROUND RING DETAIL
SCALE: 3/8" = 1'-0"
SERVICE GROUND ROD INDEPENDENT OF SHELTER GROUND RING
MGB
BRAIDED GROUND STRAP AT GATE
GROUND RING SEE DETAIL
BRAIDED GROUND STRAP AT GATE
CADWELD SHELTER GROUND WIRE TO GROUND RING (TYP. 6 PLACES) SEE SHELTER DRAWINGS FOR DETAILS
12"x2" TINNED COPPER GROUND BAR
BONDS FROM ANTENNA FRAMES TO SHELTER GROUND RING
16'-0" MAX SPACING BETWEEN GROUND RODS
GROUNDING SITE PLAN
SCALE: 1/8" = 1'-0"
NORTH
GENERAL GROUNDING NOTES:
1. CONTRACTOR TO COMPLY WITH VERIZON WIRELESS CELL SITE GROUNDING & BONDING SPECIFICATIONS. IN THE EVENT THAT DRAWINGS CONFLICT WITH VERIZON WIRELESS SPECIFICATIONS, VERIZON WIRELESS SPECIFICATIONS SHALL PREVAIL.
2. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND MOUNTING MAY VARY DUE TO SITE SPECIFIC CONDITIONS. SITE GROUND, MAY BE REQUIRED.
3. GROUND ROD SHALL BE COPPER CLAD STEEL 5/8", 8' LONG.
4. INSTALL GROUND AND BONDING CONDUCTORS WITH SUFFICIENT SLACK TO AVOID BREAKING DUE TO SETTLEMENT AND MOVEMENT OF CONDUCTORS AT ATTACHED POINTS.
5. RESISTANCE TO GROUND SHALL NOT EXCEED 5 OHMS MEASUREMENT. ADDITIONAL GROUND RODS OR SOT GROUND SHALL BE PROVIDED TO ATTAIN THIS VALUE OR LESS. WHERE MULTIPLE RODS ARE INSTALLED THEY SHALL BE SPACED BETWEEN 8 AND 16 FEET APART.
6. ALL GROUNDING CONDUCTORS SHALL BE U.L. LISTED FOR THEIR PURPOSE.
7. ALL GROUND CONNECTIONS TO GROUND BARS SHALL BE U.L. 467 LISTED, IRREVERSIBLE COMPRESSION TYPE.
8. ALL CONNECTIONS TO GROUND BARS SHALL BE COATED WITH ANTIOXIDANT COMPOUND.
9. PROVIDE ONE TIME HIT 1 lb. HAMMER TEST ON ALL CAD WELDS.
GROUNDING LEGEND
CADWELD CONNECTION
5/8"ø x 8' CU CLAD GROUND ROD
MECHANICAL CONNECTION
#2 BARE-TINNED SOLID CU
INSPECTION WELL
APPROVED FOR CONSTRUCTION
DESIGNED FOR:
verizonwireless
4821 EDRAIN NE – ALBUQUERQUE, NEW MEXICO 87111
DESIGNED BY:
TowerCom Technologies
TOWERCOM TECHNOLOGIES, LLC
4820 Montgomery Blvd. NE, Suite 5 – Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4888
PROJECT NAME:
NM4-SILVA
CONCEALED ANTENNA INSTALLATION
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE NM
SANTA FE COUNTY
SHEET TITLE:
GROUNDING SITE PLAN
REV | DESCRIPTION | DATE | BY | APP
0 | APPROVED FOR CONSTRUCTION | 3/4/05 | MCG | JDD
PROJECT NUMBER: 04-837-028
SHEET NUMBER: G1
JASON D. DICKMAN
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER


GROUNDING LEGEND
ANTENNA (TYP)
TOP ANTENNA GROUND BAR, TINNED COPPER MOUNTED TO ANTENNA FRAMES W/OUT INSULATORS
COAX TO CABLE BRIDGE
COAX DOWN BUILDING WALL
BOND TO BUILDING STEEL IF AVAILABLE
COAX UP BUILDING WALL
COAX TO SHELTER
GROUND BAR, TINNED COPPER MOUNTED TO CABLE TRAY W/OUT INSULATORS
BOND TO BUILDING STEEL IF AVAILABLE
GRADE
BONDS FROM ANTENNA GROUND TO SHELTER GROUND RING
GROUND RODS (TYP)
TYPICAL GROUNDING ELEVATION
SCALE: NTS
COAX TO BUILDING
ENTRY PORT
COAX GROUND KIT AT ENTRY PORT, TYPICAL AT EVERY COAX
INSULATORS
EXTERIOR ISOLATED TINNED GROUND BAR
(2) GROUND LEADS FROM GROUND BAR TO GROUND RING
GROUND RING
BONDS FROM ANTENNA GROUND
APPROVED FOR CONSTRUCTION
JASON D. DICKMAN
NEW MEXICO
14648
REGISTERED PROFESSIONAL ENGINEER
verizon wireless
4021 EUBANK NE - ALBUQUERQUE, NEW MEXICO 87111
TowerCom TECHNOLOGIES
TOWERCOM TECHNOLOGY LLC
4520 Montgomery blvd. NE, Suite 3 - Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4888
NM4-SILVA
CONCEALED ANTENNA INSTALLATION
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY
TYPICAL GROUNDING ELEVATION
0 APPROVED FOR CONSTRUCTION 3/4/05
04-437-221
A-2

GENERAL ANTENNA NOTES:

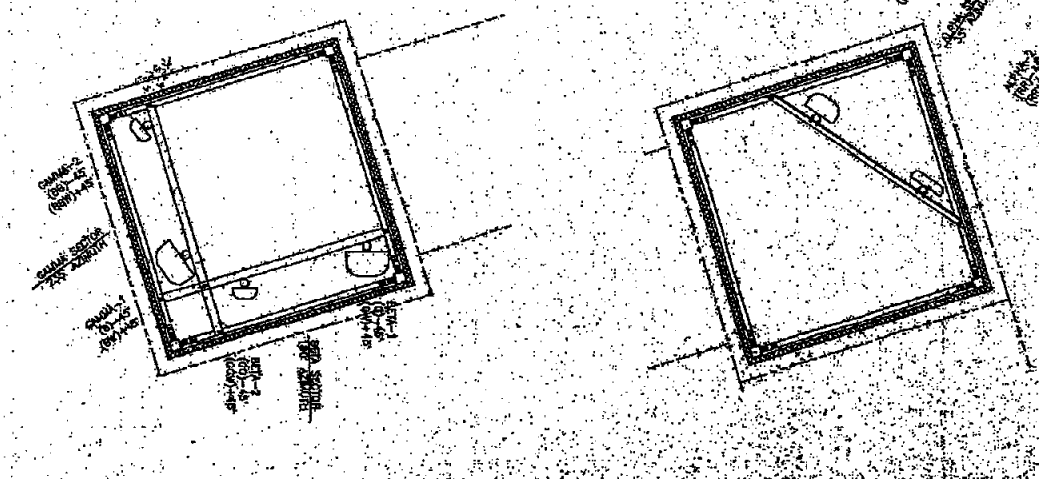
1. DUAL POLAR ANTENNAS REQUIRE TWO RUNS OF COAX PER ANTENNA.
2. LENGTHS GIVEN ON THIS CHART ARE ESTIMATED FROM AVAILABLE INFORMATION.
3. TYPES AND SIZES OF THE ANTENNA CABLES ARE BASED ON THE ESTIMATED LENGTH OF THE CABLES. CONTRACTOR TO VERIFY ALL ACTUAL LENGTHS IN FIELD PRIOR TO INSTALLATION AND NOTIFY THE FIELD ENGINEER FOR VERIFICATION OF SIZES OF CABLES.
4. CONTRACTOR TO PROVIDE AS-BUILTS FOR THE LENGTH OF CABLES UPON COMPLETION OF INSTALLATION.
5. CONTRACTOR TO PROVIDE FINAL CABLE LENGTHS AND RETURN LOSSES FOR ALL CABLES.
6. ALL AZIMUTHS REFERENCE TRUE NORTH. CONSULT REQUIRED QUADRANGLE MAP FOR NECESSARY MECHANICAL DECLINATION.

ANTENNA SCHEDULE

SECTOR	CENTER OF ANTENNA	AZIMUTH	ANTENNA TYPE	MECHANICAL DOWN TILT	NUMBER OF COAX CABLES	COAX CABLE DIAMETER	ESTIMATED COAX CABLE LENGTH	HORIZONTAL SEPARATION
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

COLOR CODE

B =	BLUE
G =	GREEN
R =	RED
W =	WHITE



ANTENNA ORIENTATION & COLOR CODE
SCALE: 1/8" = 1'-0"

NORTH

APPROVED FOR CONSTRUCTION

DESIGNED FOR:
verizon wireless
1021 EUBANK NE – ALBUQUERQUE, NEW MEXICO 87112

DESIGNED BY:
TowerCom
Tower Worldwide
TOWERCOM TECHNOLOGIES LLC
4520 Montgomery Blvd. NE, Suite 3 – Albuquerque, NM 87109
Tel: 505-232-4854 Fax: 505-232-4855

PROJECT NAME:
NM4-SILVA
CONCEALED ANTENNA
INSTALLATION

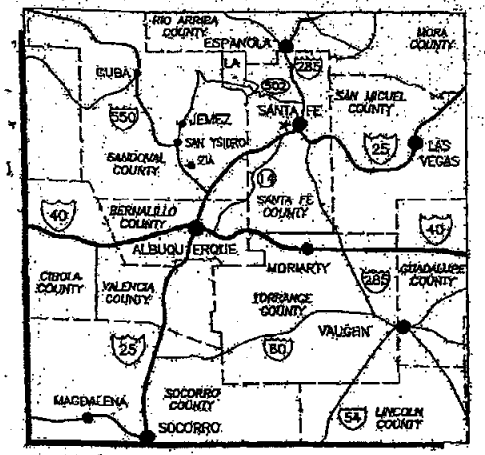
PROJECT ADDRESS:
1402 AGUA FRIA
SANTA FE, NM
SANTA FE COUNTY

SHEET TITLE:
ANTENNA INFORMATION

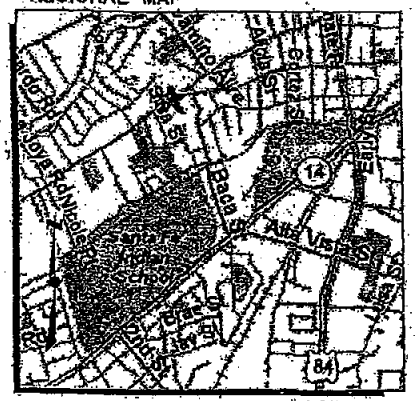
REV	DESCRIPTION	DATE	BY	CHK
0	APPROVED FOR CONSTRUCTION	9/4/08	WC	JDD

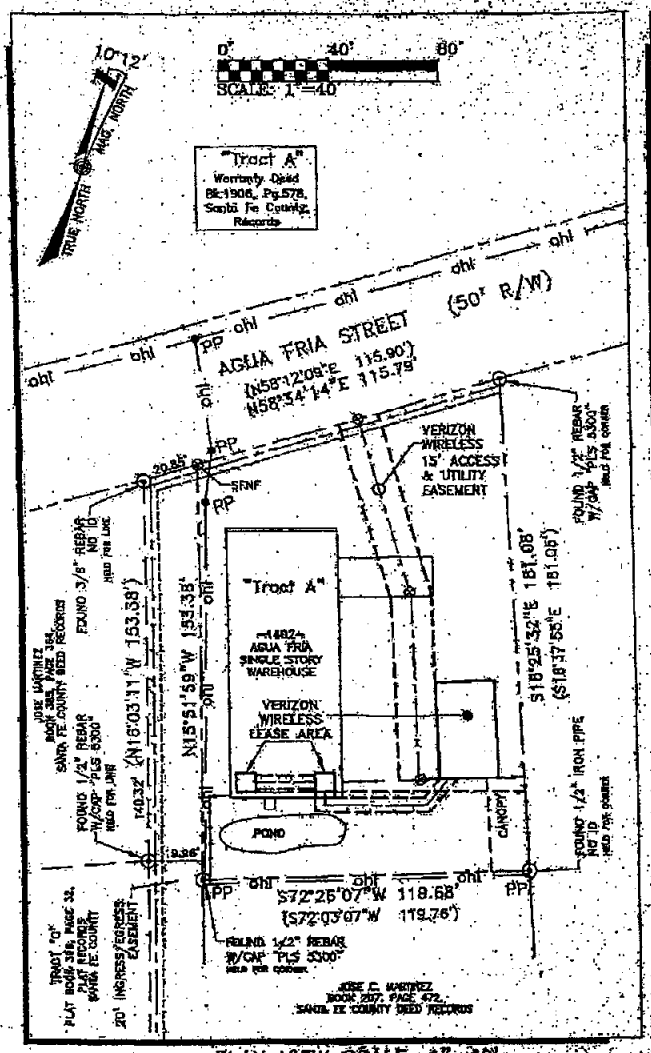
PROJECT NUMBER: 04-337-23
SHEET NUMBER: RF1

JASON D. DICKMAN
NEW MEXICO
14849
REGISTERED PROFESSIONAL ENGINEER

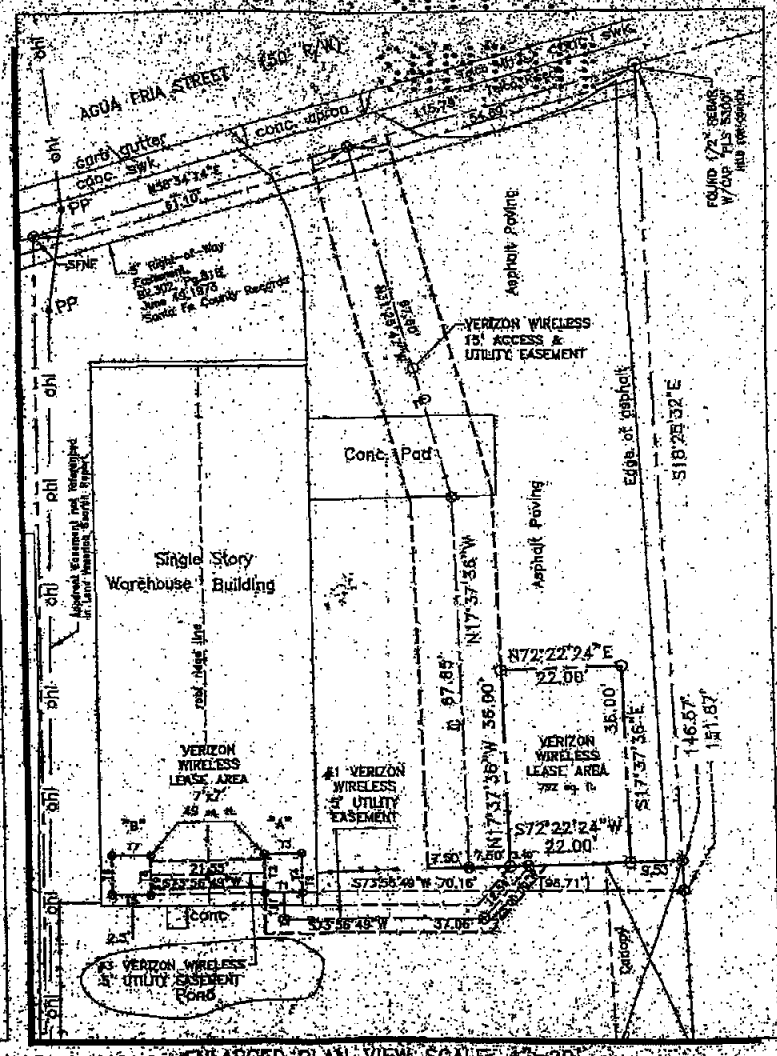


REGIONAL MAP


Rio Grande Blvd
Coors Blvd
Unser Blvd
Paseo del Norte
Ellison Dr
Alameda Blvd
Montano Rd
Rio Bravo Blvd
Bear Canyon Arroyo
Bear Canyon Arroyo
Paseo del Norte
Gibson Blvd
Central Ave
Lomas Blvd
Coors Blvd
Rio Bravo Blvd
Isleta Blvd
Gibson Blvd
Central Ave
Lomas



PLAN VIEW SCALE: 1"=40'



ENLARGED PLAN VIEW SCALE: 1"=20'

LINE TABLE

T1	S73°56'49"W 7.00'
T2	N16°03'11"W 7.00'
T3	N73°56'49"E 7.00'
T4	S16°03'11"E 7.00'
T5	S73°56'49"W 7.00'
T6	N16°03'11"W 7.00'
T7	N73°56'49"E 7.00'
T8	S16°03'11"E 7.00'
T9	N16°03'11"W 3.50'
T10	N72°22'24"E 6.99'
T11	N16°03'11"W 4.95'

DAVID C. CLAUSEN
NEW MEXICO
5547
PROFESSIONAL LAND SURVEYOR

DESIGNED FOR:
verizonwireless
4621 EDWARD NE – ALBUQUERQUE, NEW MEXICO 87113

DESIGNED BY:
TowerCom Technologies
TOWERCOM TECHNOLOGIES LLC
4320 Montgomery Blvd. NE, Suite 3 – Albuquerque, NM 87109
Tel: 505-232-4884 Fax: 505-232-4898

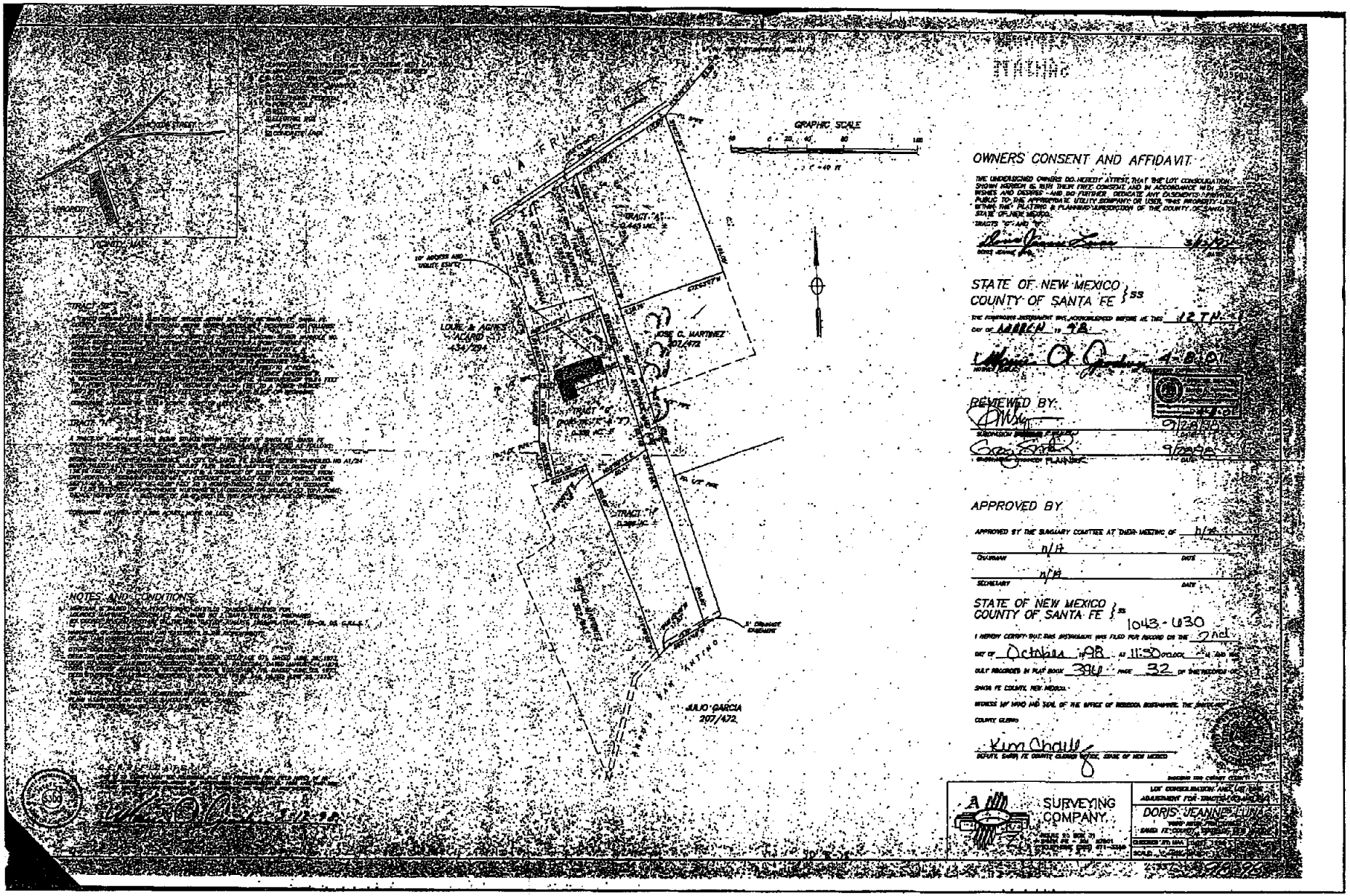
PROJECT NAME:
VERIZON WIRELESS
NM4 SILVA

PROJECT ADDRESS:
1402 AGUA FRIA
CITY OF SANTA FE
SANTA FE COUNTY, NEW MEXICO

SHEET TITLE:
ENLARGED PLAN VIEW

REV.	REVISIONS	DATE	BY:	DES.
A	80% PRELIM. REVIEW ONLY	1/11/05	DMM	DCC
1	FINAL	2/18/05	DMM	DCC
2	Revise Access & Util.Easmt.	3/01/05	DMM	DCC
3	Revise 5' Util. East. from SE corner	3/03/05	DMM	DCC

PROJECT NUMBER:
SHEET NUMBER: SU3


GRAPHIC SCALE
1" = 40 ft
VICINITY MAP
TRACT "A"
0.445 AC. ±
TRACT "B"
0.445 AC. ±
TRACT "C"
0.445 AC. ±
TRACT "D"
0.445 AC. ±
TRACT "E"
0.445 AC. ±
TRACT "F"
0.445 AC. ±
10' ACCESS AND UTILITY ESTATE
LOUIS & AGNES ALARID
434/294
JOSE G. MARTINEZ
207/472
JULIO GARCIA
207/472
5' DRAINAGE EASEMENT
NOTES AND CONDITIONS
OWNERS CONSENT AND AFFIDAVIT
STATE OF NEW MEXICO
COUNTY OF SANTA FE
REVIEWED BY:
APPROVED BY
STATE OF NEW MEXICO
COUNTY OF SANTA FE
1043-030
SURVEYING COMPANY
DORIS JEANNE HUNT

2013 documents

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909

* * * * * * * B U I L D I N G P E R M I T * * * * * * *

Application Number . . . . . 13-00002097 Date 10/30/13
Property Address . . . . . 1402 AGUA FRIA ST
Application type description TELECOMMUNCATION TOWER
Subdivision Name . . . . . DORIS LUNA LOT LINE
Property Zoning . . . . . GENERAL COMMERCIAL
Application valuation 30000

Owner	Contractor
MALONE, JOHN	TSI TOWER SERVICES INC
1402 AGUA FRIA RD.	515 WHEELER AVE SE
SANTA FE NM 87505	ALBUQUERQUE NM 871102
(505) 232-4884	(505) 247-6480

--- Structure Information 000 000 TELE COMMUNICATIONS RR HEADS
Construction Type . . . . . UPDATE
Occupancy Type . . . . . (OLD CODE) UPDATE
Flood Zone . . . . . MIN. FLOODING/OUTSIDE 500
Other struct info . . . . . HEIGHT ROOF MOUNT ANTE

Permit . . . . . BUILDING PERMIT COMMERCIAL
Additional desc . .
Phone Access Code . 1110873
Permit Fee . . . . 482.25 Plan Check Fee . . 331.69
Issue Date . . . . 10/30/13 Valuation 30000
Expiration Date . . 10/28/15

Special Notes and Comments
I, THE OWNER OR AGENT FOR THE OWNER HAVE RECEIVED THE FOLLOWING REVIEW SHEETS. I UNDERSTAND I AM TO COMPLY WITH ALL CONDITIONS INDICATED ON THE REVIEW SHEETS. INITIALS KK

Other Fees . . . . . ARCHEOLOGICAL FEE 10.00

For permits issued AFTER 08/01/2009, you MUST use VIPS for scheduling inspections! Call in by 3:00 PM for a next-day inspection (based on availability) 955-6110
APPROVED BY _____ DATE 10-30-13
APPLICANT _____ DATE 10/30

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within fifteen (15) days of its issuance (the "appeal period") pursuant to 14-3.17 SFCC (1987) and in the event an appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during this appeal period is done at my own risk and without reliance on the issuance of this permit. I also agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, altering, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT. BI00B.indd 02/12

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909

* * * * * * * B U I L D I N G P E R M I T * * * * * * *

Page 2
Application Number . . . . . 13-00002097 Date 10/30/13

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	482.25	482.25	.00	.00
Plan Check Total	331.69	331.69	.00	.00
Other Fee Total	10.00	10.00	.00	.00
Grand Total	823.94	823.94	.00	.00

For permits issued AFTER 08/01/2009, you MUST use VIPS for scheduling inspections! Call in by 3:00 PM for a next-day inspection (based on availability) 955-6110

APPROVED BY _____ DATE 10-30-13

APPLICANT _____ DATE 10/30

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within fifteen (15) days of its issuance (the "appeal period") pursuant to 14-3.17 SFCC (1987) and in the event an appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during this appeal period is done at my own risk and without reliance on the issuance of this permit. I also agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, alterating, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT.

BIC02.Indd 02/13

CITY OF SANTA FE, NEW MEXICO
P.O. BOX 909
SANTA FE, NEW MEXICO 87504-0909

* * * * * * * B U I L D I N G P E R M I T * * * * * * *

Page 3
Date 10/30/13

Application Number 13-00002097
Property Address . . . . . 1402 AGUA FRIA ST
Application description . . . TELECOMMUNCATION TOWER
Subdivision Name . . . . . DORIS LUNA LOT LINE
Property Zoning . . . . . GENERAL COMMERCIAL

Permit . . . . . BUILDING PERMIT COMMERCIAL

Additional desc . .
Phone Access Code . 1110873

Required Inspections

Seq	Phone Insp#	Insp Code	Description	Initials	Date
10	499	EL04	ELECTRICAL, FINAL		/ /
1000	199	C001	BUILDING, FINAL		/ /

By my signature above I hereby agree to abide with all the laws of the City of Santa Fe as well as with all the conditions stated above. I further state that I understand that this is not a permit to construct anything in violation of the codes adopted by the State of New Mexico. Further, I understand that this permit may be appealed within fifteen (15) days of its issuance (the "appeal period") pursuant to 14-3.17 SFCC (1987) and in the event an appeal is upheld this permit may be revoked. I hereby agree that any grading, building, alteration, repairing or any other construction done pursuant to this permit during this appeal period is done at my own risk and without reliance on the issuance of this permit. I also agree that in the event an appeal is upheld and this permit is revoked I may be required to remove any building, grading, altering, repairing or any other construction done during the appeal period. I hereby certify that I have read the foregoing and understand the same and by my signature assent to the terms stated herein.

DISTRIBUTION: COPIES TO ORIGINATING OFFICE and APPLICANT

BIOC6.hdd 02/13

Application Tracking #
13-2097

City of Santa Fe
BUILDING PERMIT APPLICATION

PLEASE USE A BALL POINT PEN (PRESS FIRMLY)

Type: [illegible] Class: [illegible] Accepted by: [illegible] Date Accepted: [illegible]
Amount Paid: Plan Check Fee $: 321.69 Water Budget Fee $: _____ Balance Due Permit Fee $: [illegible]
Land Use Classification: ☐ Environment ☐ Floodplain ☐ Historical
Type of Construction: Occupancy Group: Division:
I II III IV V 1HR 1HR HT N A B E F H I M R S U 1 11 12 2 21 3 4 5 E 2
Zone District: Occupant Load: _____

TO BE COMPLETED BY APPLICANT

SITE ADDRESS 1402 Agua Fria St. Suite or Space # _____
Subdivision Survey for Doris Jeanne Lot _____ Block _____
Lot Square Footage Total _____

PROPOSED WORK: (Check all that apply)

☐ New Construction
☒ Additions
☐ Exterior Alterations/Repairs
☐ Interior Remodel
☐ Walls/Fences
☐ Grading/Utilities/Landscaping
☐ Pools, Sheds
☐ Other
☐ Signs:
☐ Free Standing ☐ Wall Mounted
Existing # _____ sq. ft. _____
Proposed# _____ sq. ft. _____
Total _____ _____

DESCRIPTION OF WORK: i.e. Bathroom addition, new 4 room residential addition, new 8 room residence, new commercial building, etc. (Note: Work listed herein must be depicted on accompanying plans and/or information if consideration of review requested)
Remove (3) existing panel antennas Installing (6) NEW panel antennas, (12) Radios & Hands, (1) main amp

PROPOSED USE: describe what facility is to be used for i.e. new single family residence, new fast food restaurant, new time share residence, new grocery store, etc. Existing Telecommunication Tower

Construction Valuation $ 30,000 —

SQUARE FOOTAGE	Existing	Proposed	Total
Heated			
Garage			
Patio /Porch			
Total Roofed			
Total Square Footage			

Number of Plumbing Fixtures Proposed
Sinks _____ Showers _____ Tubs _____ Toilets _____ Urinals _____ Water Fountains _____ Other _____

Type of Sewage Disposal
☐ Public Sewer ☐ Private System
No. of buildings _____ No. of stories 2
Will the proposed construction result in an increase in the number of residential units?
☐ Yes ☒ No How many? _____
Will the proposed construction result in an increase in water use? ☒ Yes ☐ No

Property Owner John Malone
Mailing Address 1402 Agua Fria Rd
Santa Fe NM 87505
OWNER/BUILDER ☒ CONTRACTOR ☐
Daytime Telephone # (505) 232-4884

Contractor TBD
Mailing Address _____
State License # _____ City License # _____
Daytime Telephone # _____

I hereby certify that I am the duly appointed agent authorized to act on behalf of the property owner. I also certify that the information provided in this application is true and correct and it represents the current and proposed status of the subject property; that the plans submitted with this application are complete and in compliance with the building standards set forth in the Santa Fe City Code; and that the plans illustrate all public and private easements located on the property. I also certify that plans and submittals have been prepared in accordance with the submittal checklist. I further understand that failure to follow submittal checklist will result in the delay or rejection of my application.

Contact Name Sherry Reshtavai Address 4520 Montgomery Blvd NE #5
Daytime Telephone 232-4884 Signature Applicant/Agent [signature] Date 9-30-13

Distribution White - A, Canary - B, Pink - C, Goldenrod - D

B1014A.pmd - REV 9/04

Application Tracking #
13-2097

City of Santa Fe
BUILDING PERMIT APPLICATION

PLEASE USE A BALL POINT PEN (PRESS FIRMLY)

Type: E-1 Class: B Accepted by: [illegible] Date Accepted: [illegible]
Amount Paid: Plan Check Fees: 391.64 Water Budget Fees: Balance Due Permit Fees: [illegible]
Land Use Classification: ☐ Escarpment ☐ Floodplain ☐ Historical
Type of Construction: Occupancy Group: Division:
I II III IV V IIA IIB IIIA IIIB IVA IVB A B E F H I M R S U 1 11 12 2 21 3 4 5 5.1
Zone District: Occupant Load:

TO BE COMPLETED BY APPLICANT

SITE ADDRESS 1402 Agua Fria St. Suite or Space #
Subdivision Survey for Doris Jeanne Lot Block
Lot Square Footage Total

PROPOSED WORK: (Check all that apply)

- ☐ New Construction
- ☑ Additions
- ☐ Exterior Alterations/Repairs
- ☐ Interior Remodel
- ☐ Walls/Fences
- ☐ Grading/Utilities/Landscaping
- ☐ Pools,Sheds
- ☐ Other
- ☐ Signs:
- ☐ Free Standing ☐ Wall Mounted
  - Existing # sq. ft.
  - Proposed # sq. ft.
  - Total

DESCRIPTION OF WORK: i.e. Bathroom addition, new 4 room residential addition, new 8 room residence, new commercial building, etc. (Note: Work listed herein must be depicted on accompanying plans and/or information if consideration of review requested)
Removing (3) existing panel antennas Installing (6) NEW panel antennas, (6) Radios & Hards, (1) main amp

PROPOSED USE: describe what facility is to be used for i.e. new single family residence, new fast food restaurant, new time share residence, new grocery store, etc. Existing Telecommunication Tower

Construction Valuation $ 32,000 —

SQUARE FOOTAGE	Existing	Proposed	Total
Heated			
Garage			
Patio /Porch			
Total Roofed			
Total Square Footage			

Number of Plumbing Fixtures Proposed
Sinks ____ Showers ____ Tubs ____ Toilets ____ Urinals ____ Water Fountains ____ Other ____

Type of Sewage Disposal
☐ Public Sewer ☐ Private System
No. of buildings ____ No. of stories 2
Will the proposed construction result in an increase in the number of residential units?
☐ Yes ☑ No How many? ____
Will the proposed construction result in an increase in water use? ☑ Yes ☐ No

Property Owner John Malone
Mailing Address 1402 Agua Fria Rd
Santa Fe NM 87505
OWNER/BUILDER ☑ CONTRACTOR ☐
Daytime Telephone # (505) 232-4884

Contractor TBD
Mailing Address
State License # City License #
Daytime Telephone #

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Contact Name Sherry Reshlakai Address 4570 Montgomery Blvd NE #5
Daytime Telephone 232-4884 Signature Applicant/Agent [signature] Date 9-30-13

Distribution: White - A, Canary - B, Pink - C, Goldenrod - D

BI014A.pmd - REV 9/04

September 9, 2013

Verizon Wireless
Jeff DeWalt
Construction Engineer
4821 Eubank NE
Albuquerque, New Mexico 87111

RE: Structural Analysis Results for the NM4 Silva Antenna Mount Assemblies - AWS Project

Dear Jeff:

TowerCom Technologies is pleased to present the following Structural Analysis report for the NM4 Silva existing antenna mount assemblies located in Santa Fe, New Mexico. It was a pleasure assisting you with this project and we look forward to providing you with our Structural Engineering Services in the future.

If you have any questions concerning the content of this report please do not hesitate to call me at (208) 286-0266.

Thank you,

TowerCom Technologies, LLC

HARRY S.W. WANG
NEW MEXICO
21764
PROFESSIONAL ENGINEER

Francis Q. Dong, E.I.T.
Structural Engineer In-Training

September 9, 2013

Verizon Wireless
Jeff DeWalt
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HARRY S.W. WANG
NEW MEXICO
21764
PROFESSIONAL ENGINEER

Francis Q. Dong, E.I.T.
Structural Engineer In-Training

Jerry Bemis

From:	Debbie Connors <dconnors@tsitowers.com>
Sent:	Tuesday, October 29, 2013 1:25 PM
To:	jbemis@bacom-inc.com
Cc:	ctrout@tsitowers.com
Subject:	Permit Information
Attachments:	Image003.jpg

What's up Jerry! Here is the information that you need.

Company Address: 7201 Broadway Blvd SE, Albuquerque NM 87105
Phone Number: (505) 247-6480
NM State License #: 371368
License Classification: EE98, GF07
NM State Tax#: 03-225236-00-8
Abq Business Reg#: EA-0103859

Let me know if you need anything else!

13-2098

Debbie Connors
Office Manager

TSI TOWER SERVICES, INC.

TSI Tower Services, Inc.
Office (505) 247-6480
Fax (505) 247-6485
www.tsitowers.com

CITY OF ALBUQUERQUE

ONLY ORIGINAL WILL BE ACCEPTED

City of Albuquerque
Planning Department
Building & Safety Division

Date: 07-20-2011

Expires: December 31, 2011

Building Permits Section:

Please allow this letter to serve as authorization for the following individuals to serve on our behalf, as a duly authorized Agent for (company name) BROKEN ARROW COMMUNICATIONS. And as such, the following individuals may obtain building permits and conduct business on our behalf, including issuance of corporate checks, representation in matters regarding construction and building permits, and business associated with various Departments associated with the Permit Process. If additional space needed, please attach sheet (on company letterhead). Please contact us if you have any questions or comments.

1. BOB KEENEY
2. KYLE KEENEY
3. ROBERT DENTON
4. AARON DUNN
5. TOM O'NEIL
6. RANDY PRIEST
7. ROSA FUENTES
8. JASON BOYER
9. JEREDY BEMIS
10.

PO Box 1293

Albuquerque

NM 87103

OFFICIAL SEAL
MARK A. CORDOVA
NOTARY PUBLIC - STATE OF NEW MEXICO
My commission expires: _____

www.cabq.gov

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

Subscribed and Sworn to before me on this 20th day of July, 2011.

Notary Public

My commission expires: 11/12/2012

Contractor License Holder/Qualifying Party

ROBERT N DENTON
Print Full Name

Signature

Address 8316 CORONA LOOP NE
ALBUQUERQUE, NM 87113
Phone 505-877-2100
NM State License # 90812
License Classification EE98 + GB98
NM State Tax # 030016714 0000
Abq. Business Reg. # FA 0055407

Albuquerque - Making History 1706-2006

Exp. 8/31/13

Attach to
A + B

BP250001 City of Santa Fe 10/15/13
Application Tracking Step Selection by Revision 16:28:11

Application number . . . . . : 13 00002097
Address . . . . . : 1402 AGUA FRIA ST
UPC Code . . . . . : 1-052-098-515-431- -
Application type . . . . . : TELECOMMUNCATION TOWER
County Assessor Acct Num . :
Tenant name, number . . . . :

Type options, press Enter.
2=Change 4=Delete 5=View 6=Fast log 8=Action log maintenance
9=In/out maint

Opt	Agency description	Rev	Path Step	Req	Key Dates In	Est Cmpl	Review Summary Resulted	Stat	By
	ARCHITECTURAL		A 01	Y	09/30/13	10/03/13	10/15/13	AP	DAE
	ZONING		A 01	Y	09/30/13	10/03/13	10/15/13	AP	DAE
	ELECTRICAL		B 01	Y	10/01/13	10/03/13	10/02/13	AP	TJM
	BUILDING		C 01	Y	10/01/13	10/03/13	10/02/13	AP	JJG

Bottom

F3=Exit F5=Land inquiry F6=Add F7=Revisions F8=Misc info inquiry
F9=Corrections report F10=View 2 F11=Sort by agency F24=More keys

10/15/13

13-2097

City of Santa Fe
200 Lincoln Ave.
Santa Fe, NM 87504
505-955-4333

SunGard Application
1x 0.00 0.00
Appl-Permit Number: 13-2098

PC - Building Permit Commercial
1x 331.69 331.69
Appl-Permit Number: BLDCOO 13-2098

SunGard Application
1x 0.00 0.00
Appl-Permit Number: 13-2097

PC - Building Permit Commercial
1x 331.69 331.69
Appl-Permit Number: BLDCOO 13-2097

Payer Name: TOWERCOM TECH

SubTotal: 663.38
Total: 663.38

Check 663.38
Number : 15501

09/30/2013 16:26 LorrainaL
#0003581 /3/1
********** DUPLICATE #002 **********

09/30/2013 16:35 LorrainaL
" Thank You "

City of Santa Fe
200 Lincoln Ave.
Santa Fe, NM 87504
505-955-4333

SunGard Application
1x 0.00 0.00
Appl-Permit Number: 13-2097

PF - Building Permit Commercial
1x 482.25 482.25
Appl-Permit Number: BLDCOO 13-2097

Archeological Fee
1x 10.00 10.00
Appl-Permit Number: 13-2097

Payer Name: KYLE KEENEY

SubTotal: 492.25
Total: 492.25

CH Master Card 492.25
7000.101551
Number : **********5711
Date : 12/13

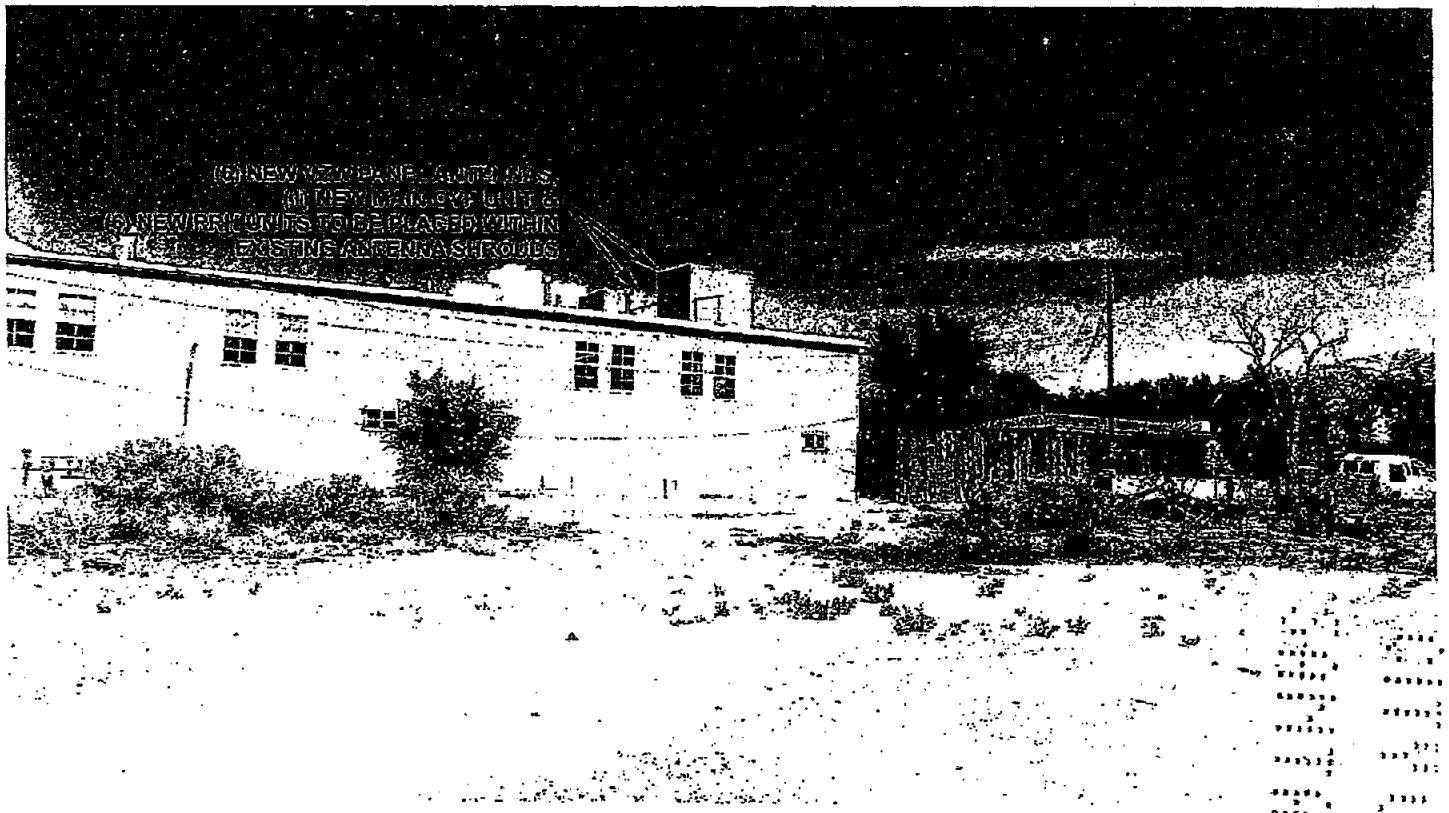
10/30/2013 10:03 LorrainaL
#0013662 /3/1
********** DUPLICATE #001 **********

10/30/2013 10:11 LorrainaL
" Thank You "

verizon wireless

NM4 SILVA
SITE PHOTO
EXISTING WEST ELEVATION
SEPTEMBER 27, 2013

TowerCom TECHNOLOGIES



verizon wireless

NM4 SILVA
SITE PHOTO
WEST ELEVATION SIMULATION
SEPTEMBER 27, 2013

TowerCom TECHNOLOGIES

CITY OF SANTA FE

Verizon wireless

July 23, 2013

Mr. Dan Esquibel
City of Santa Fe Planning Department
200 Lincoln Ave
Santa Fe, NM 87504
505-955-6587

RE: Verizon Wireless/AWS Modification Project

Dear Mr. Esquibel,

Per our previous discussions, please find attached information below on the sites that are requiring modifications within your jurisdiction. Please let us know if these all look ok to proceed with building permit submittal.

Addresses:

- NM4 Majico -2778 Sawmill Road-Self Support Structure
  - We will be adding a remote radio head to each sector to help maintain the power levels at the antennas. The unit is approx. 24"x12"x10" and weighs less than 50 lbs. We will add one to each sector behind on of the antennas so they will be almost completely screened. Please advise if any zoning is needed on this one
- NM4 Cerillos-1684 Paseo De Las Vistas-Self Support Structure
  - Replace two existing antennas (51.4"x34.1"x9.4") (47.5"x23.9"x7.9") per sector (3 sectors) with two new antennas (each are 56.7"x16.2"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM4 Bandalier-2502 Camino Entrada-Rooftop
  - Replace one existing antenna (96.5"x17.5"x8.8") per sector (3 sectors) with a new antenna (103.1"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM4 DT Santa Fe-1120 PASEO DE PERALTA 5TH FLR-Self Support Structure
  - Replace one existing antenna (47.5"x17.5"x8.8") per sector (only 1 sector on this site) with a new antenna (54.9"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM4 KRTC-212 E. Marcy St.-Rooftop
  - Replace one existing antenna (96.5"x17.5"x8.8") per sector (3 sectors) with a new antenna (101.3"x10.6"x5.2") which will allow VZW to broadcast at all of its FCC licensed frequencies.

- NM4 Resalona-1214 Camino Carlos Rey-Rooftop
  - Replace one existing antenna (47.5"x17.5"x8.8") per sector (3 sectors on this site) with a new antenna (54.9"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM Santa Fe-1718 W Alameda-Guyed
  - Replace one existing antenna (47.5"x17.5"x8.8") per sector (3 sectors on this site) with a new antenna (54.9"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM4 Santa Fe South-2100 Yucca Rd.-Stadium Light
  - Replace one existing antenna (96.5"x17.5"x8.8") per sector (3 sectors) with a new antenna (103.1"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.
- NM4 Silva-4675 W. Alameda-Rooftop
  - Replace one existing antenna (72.9"x17.5"x8.8") per sector (3 sectors) with a new antenna (82.5"x12"x7.1") which will allow VZW to broadcast at all of its FCC licensed frequencies.

This letter confirms that these projects will not increase the height of the existing structures. Please sign this letter confirming that these modifications are minor in nature and that we can proceed to permitting. Once you have signed, please fax the signed letter to me at (302) 861-3900. We understand you are busy, but we need to move forward as soon as possible. If we don't hear back within 10 days we will consider these projects approved to move forward with our building permit submittal.

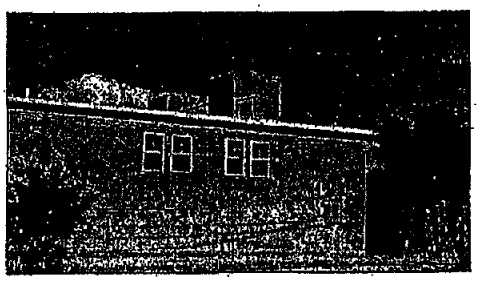
Thank you for your assistance with this issue and if you have any questions please do not hesitate to call me at (602) 579-0612.

Sincerely,

Ms. Tj Fleming
Consultant to Verizon Wireless
3116 South Mill Avenue, Suite 505
Phoenix, Arizona 85282
c. (602) 579-0612
f. (302) 861-3900
tj.fleming@wirelessresources.com

Dan Esquibel Planner Date

verizonwireless



NM4 SILVA

AWS PROJECT

STRUCTURAL ANALYSIS

REVISION 0

ANSI TIA-222-G

V=90 MPH (3-SEC. GUST – IBC 2009)

V=40 MPH (0" RADIAL ICE)

- *STRUCTURE CLASS II*
- *TOPOGRAPHY 1*
- *EXPOSURE C*

25'-8" BUILDING ANTENNA MOUNT ASSEMBLIES

SANTA FE, NM

SANTA FE COUNTY

N35°40'47.1" W105°57'57.0"

HARRY S.W. WANG NEW MEXICO 21764 PROFESSIONAL ENGINEER

SEPTEMBER 9, 2013

ANALYSIS RESULTS

LOAD COMBINATION	RESULTS
Proposed Antenna Modifications	Existing Antenna Mount Assemblies are Adequate

REVISION CHART

REVISION	DATE ISSUED	DESCRIPTION
0	09/09/2013	Initial Report

TowerCom TECHNOLOGIES

TOWERCOM TECHNOLOGIES, LLC

767 N. Star Road Star, ID 83669 (208) 286-0266

Albuquerque, NM • Boise, ID • El Paso, TX • Las Vegas, NV • Denver, CO

September 9, 2013

Verizon Wireless
Jeff DeWalt
Construction Engineer
4821 Eubank NE
Albuquerque, New Mexico 87111

RE: Structural Analysis Results for the NM4 Silva Antenna Mount Assemblies - AWS Project

Dear Jeff:

TowerCom Technologies is pleased to present the following Structural Analysis report for the NM4 Silva existing antenna mount assemblies located in Santa Fe, New Mexico. It was a pleasure assisting you with this project and we look forward to providing you with our Structural Engineering Services in the future.

If you have any questions concerning the content of this report please do not hesitate to call me at (208) 286-0266.

Thank you,

TowerCom Technologies, LLC

Francis Q. Dong, E.I.T.
Structural Engineer In-Training

PURPOSE

At the request of Verizon Wireless, TowerCom Technologies performed a Structural Analysis of the NM4 Silva antenna mount assemblies located in Santa Fe, New Mexico. The analysis was performed to determine the existing antenna mount assemblies' capability of supporting Verizon Wireless's proposed antenna modifications.

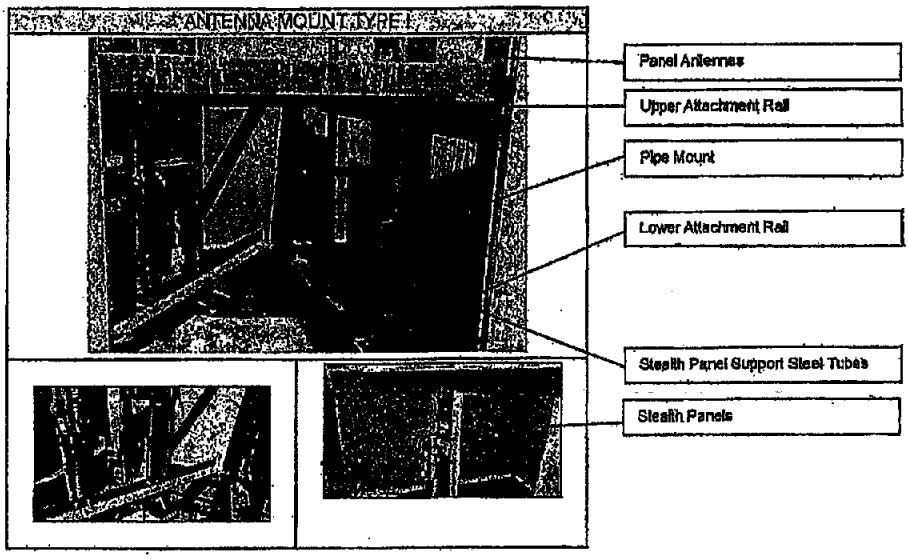
EXECUTIVE SUMMARY

TowerCom Technologies, LLC concludes that the existing antenna mount assemblies are capable of supporting Verizon Wireless's proposed antenna modifications. Please refer to the "Conclusion & Recommendations" portion of this report for further information.

ANTENNA & ANTENNA MOUNT ASSEMBLIES DESCRIPTIONS

- Six (6) existing panel antennas are mounted inside two (2) exterior shrouds. The pipe mounts are attached to angles which are connected to the frame of the shroud.

Please refer to the following photos and attached sketches for further information pertaining to the antenna mount assemblies' locations and geometry.



EXISTING ANTENNAS:

ATTACH LEVEL (COR)	AZIMUTH (deg. MN)	ANTENNA TYPE	ANTENNA QUANTITY	MOUNT TYPE	COAX (QTY) SIZE (Nominal)
22'-10"	35° 45° 180°	Antel BXA-70080/6CF 6' Panel Antenna	3	Type I *(See Above)*	(6) 7/8"
		Antel QXA-806080120-DP 6' Panel Antenna	3	Type I *(See Above)*	(6) 1-5/8"

**** Azimuths stated in chart are approximate and sufficient for analysis purposes.***

VERIZON WIRELESS ANTENNA MODIFICATIONS:

Verizon Wireless proposes the following:

- Remove three (3) existing panel antennas at the 22'-10" level.
- Install six (6) new panel antennas at the 22'-10" level.
- Install three (3) RRH Units at the 22'-10" level.
- Install one (1) new surge suppressor at the 22'-10" level.

This will result in the following final Verizon Wireless antenna configuration at the 22'-10" level:

ATTACH LEVEL (COR)	AZIMUTH (deg. MN)	ANTENNA TYPE	ANTENNA QUANTITY	MOUNT TYPE	COAX (QTY) SIZE (Nominal)
22'-10"	15° 135° 210°	Antel BXA-70080/6CF 6' Panel Antenna	6	Type I *(See Above)*	(6) 7/8"
		Antel QXW-806080120-DP 6' Panel Antenna	3	Type I *(See Above)*	(6) 1-5/8"
	-	**RRH Units**	3	-	-
	-	**Surge Suppressor**	1	-	-

Note: New appurtenances are shown in "BOLD".

STRUCTURAL ANALYSIS

ANTENNA MOUNT ASSEMBLY ANALYSIS:

Our Structural Analysis was performed in accordance with the requirements set forth in the ANSI TIA-222-G – Structural Standard for Antenna Supporting Structures and Antennas. Our analysis results are based on field gathered information obtained during a site visit conducted on August 1, 2013 by Nick Brannock and Daniel Bencomo (both of TowerCom).

The design wind speed used for our analysis was 90 mph without ice (3-second gust) and 40 mph with 0" radial ice implementing *Structure Class II, Topography Category 1* and *Exposure C* design parameters. Our analysis wind speed meets the wind speed requirements set forth in the ANSI TIA-222-G – Structural Standard for Antenna Supporting Structures and Antennas and the IBC 2009.

CITY OF SANTA FE

Analysis Wind Speed Code Reference Chart:

The following chart outlines the applicable wind design codes and sections.

DESIGN STANDARD	REFERENCED SECTION(S)
IBC 2009	§1609
ASCE 7-05	Chapter 6

Antenna Loading Chart:

The following chart outlines the maximum anticipated wind and gravity loads as a result of the associated Load Combination.

LOAD COMBINATION	ANTENNA QTY / MODEL	WIND FORCE WIND AREA	GRAVITY LOAD WEIGHT
Existing Antennas *(1) Total per Antenna Mount Assembly*	(3) Antel BXA-70080/6CF	N/A (Inside Shroud)	65 lbs
	(3) Antel QXA-808080120DP	N/A (Inside Shroud)	288 lbs
	TOTAL (2):	*N/A*	*353 lbs*
Proposed Antennas *(1) Total per Antenna Mount Assembly*	(6) Antel BXA-70080/6CF	N/A (Inside Shroud)	130 lbs
	(3) Antel QXW-808080120DP	N/A (Inside Shroud)	220 lbs
	(3) RRH Unit	N/A (Inside Shroud)	187 lbs
	TOTAL (2):	*N/A*	*537 lbs*

Stress Usage Chart:

The following chart outlines the maximum anticipated antenna mount assemblies stresses (expressed as a percentage of overall capacity) as a result of the associated Load Combination.

LOAD COMBINATION	% USAGE	
	MAXIMUM STRESS	MOUNT MEMBER
Proposed Verizon Wireless Antennas *(Worst Case)*	10%	Pipe Mount Assembly

Stress usage in excess of 105% represents a condition in which the applied loading exceeds the code-allowable loading limits. Stress usage at or below 105% represents a structurally safe and allowable condition.

CITY OF SANTA FE

ANALYSIS ASSUMPTIONS

- All antenna mount assemblies' members, connections and welds in good and reliable structural condition with no damage.
- All antenna mount assemblies attached to building in accordance with original design documents.
- Structural members and materials used for construction in accordance with original design documents.
- All new antennas and coax to be installed according to recommendations (if any).

MATERIAL PROPERTIES:

ITEM	MATERIAL PROPERTIES	SOURCE
Antenna Mount Assembly Steel Grades	• Pipe: F_y = 36 ksi. • Plate: F_y = 36 ksi. • Tube: F_y = 46 ksi • Bolts/Anchors: A325. • Welds: E70XX electrodes.	Assumed for the Purpose of this Structural Analysis

DOCUMENTS PROVIDED:

DOCUMENT	REMARKS	SOURCE
Field Notes & Mapping	Site Visit August 1, 2013	TowerCom
Site Modification Request	Steve Cahn March 06, 2013	Verizon Wireless

CONCLUSION & RECOMMENDATIONS

TowerCom Technologies, LLC concludes that the NM4 Silva existing antenna mount assemblies are capable of supporting Verizon Wireless's proposed antenna modifications.

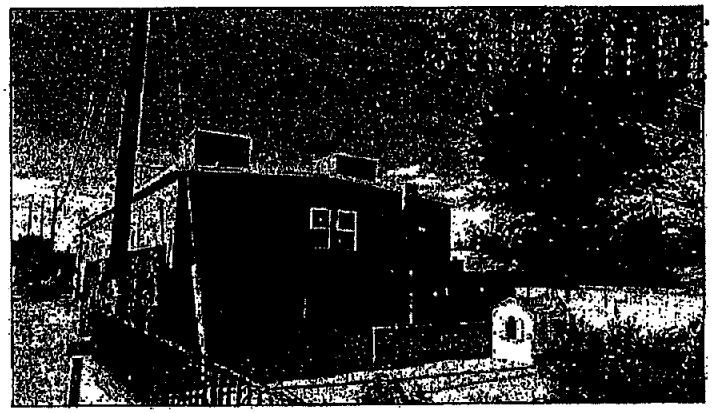


PHOTO DATED 08/01/13

Photo 1 – Overall elevation view of existing building.

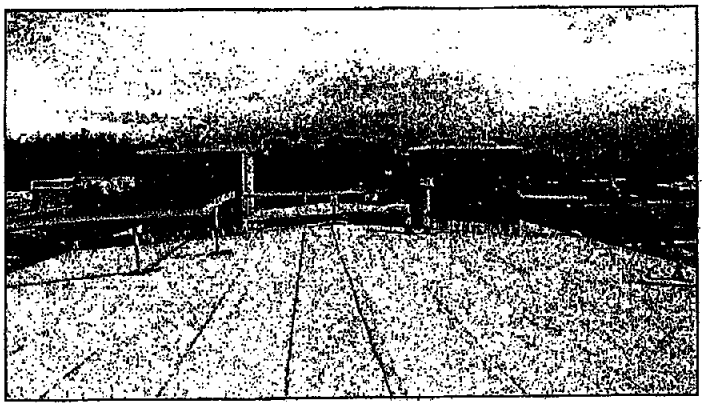


Photo 2 – Overall elevation view of existing building.

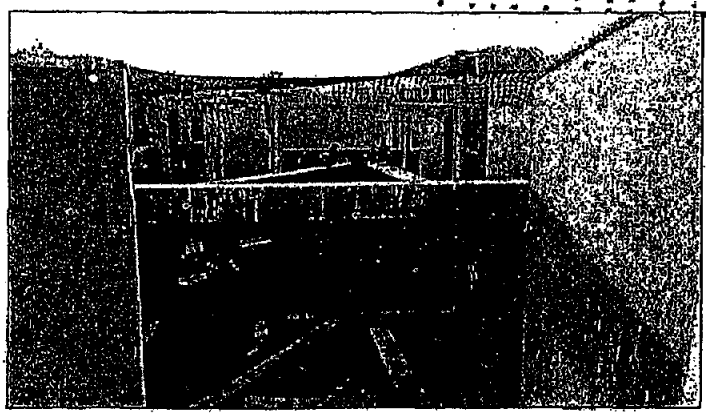


Photo 3 – Existing antenna mount assembly.

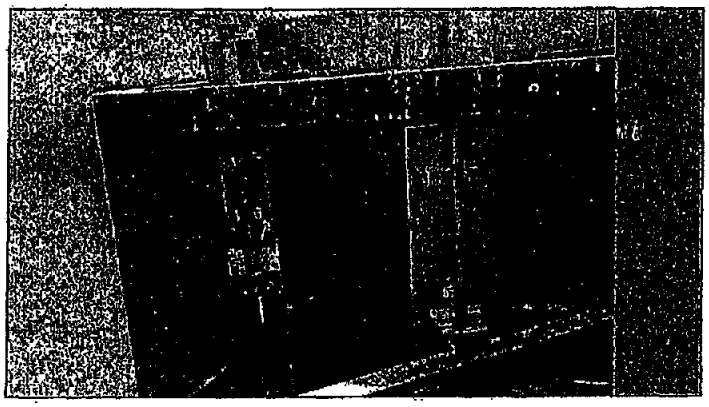


Photo 4 – Existing antenna mount assembly.

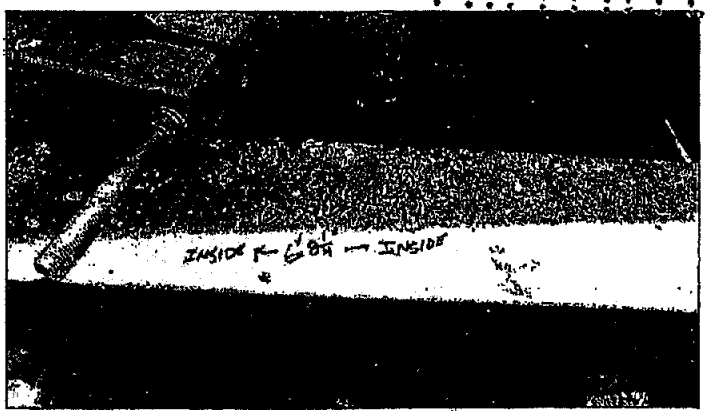


Photo 5 – Typical panel antenna pipe mount.

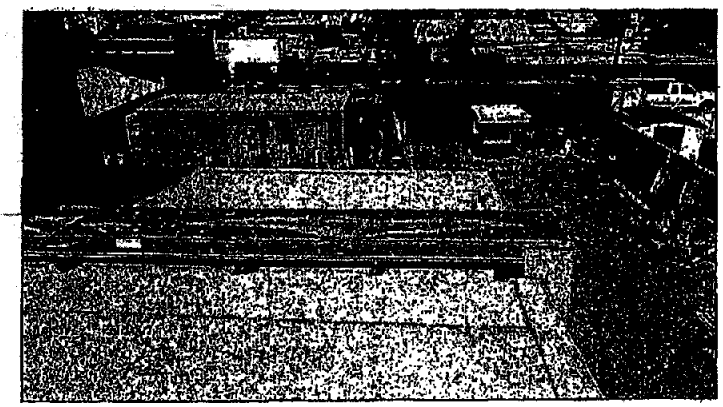
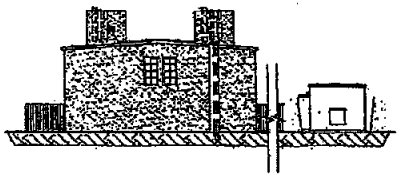


Photo 6 – Roof mounted coax.

verizonwireless

NM4 SILVA

PUBLIC RECORD PARCEL NO. 1-052-098-515-431



1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

APPROVED FOR CONSTRUCTION

SHEET INDEX:

SHEET	TITLE	REV.
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SP1	SPECIFICATION & PHOTO SHEET	0
C1	SITE PLAN	0
C2	ELEVATIONS	0
C3	DETAILS	0
RF1	ANTENNA INFORMATION	0
RF2	ANTENNA CUT SHEET(S)	0

PROJECT INDEX:

APPLICANT:
VERIZON WIRELESS
4821 EUBANK NE
ALBUQUERQUE, NM 87111

CONTACT: JEFF DEFALT
PHONE: 505-320-0004

ENGINEER/DESIGNER:
TOWNCOM TECHNOLOGIES LLC
4520 MONTGOMERY BLVD. NE, SUITE B
ALBUQUERQUE, NM 87109

CONTACT: JEFF MORTAND
PHONE: 505-232-4884

ZONING/SITE AQ:
WIRELESS RESOURCES, INC.

CONTACT: CARL TASKES
PHONE: 480-410-0503

ABBREVIATED LEGAL DESCRIPTION:

BEING A PORTION OF TRACT "A" AS SHOWN OR THAT CERTAIN PLAT ENTITLED "PLAT OF SURVEY FOR DORIS JOANNE LUNA, 1404 AGUA FRIA STREET, SANTA FE COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED IN THE OFFICE OF THE COUNTY CLERK OF SANTA FE COUNTY, NEW MEXICO, ON OCTOBER 2, 1996 AND RECORDED IN PLAT BOOK 385, PAGE 32.

GENERAL PROJECT NOTES:

1. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE NEW PROJECT.
2. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
3. ALL FIELD MODIFICATIONS BEFORE, DURING, OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY A VERIZON WIRELESS REPRESENTATIVE.
4. INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, U.N.O.
5. NOTIFY VERIZON WIRELESS, IN WRITING, OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATIONS FROM A VERIZON WIRELESS REPRESENTATIVE AND ADJUSTING THE JOB ACCORDINGLY.
6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
7. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FINISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF A VERIZON WIRELESS REPRESENTATIVE.
8. THE CONTRACTOR IS RESPONSIBLE FOR RED-LINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS BUILT CONDITION OF THE SITE. FOLLOWING THE FINAL INSPECTION BY VERIZON WIRELESS, THE CONTRACTOR SHALL PROVIDE VERIZON WIRELESS WITH ONE COPY OF ALL RED-LINED DRAWINGS.
9. VERIFY ALL FINAL EQUIPMENT WITH A VERIZON WIRELESS REPRESENTATIVE. ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE, INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY VERIZON WIRELESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH THE WORK AND CLEARANCES REQUIRED BY OTHERS RELATED TO SAID INSTALLATIONS.

PROJECT INFORMATION:

PROPERTY OWNER:	JOHN MALONE 1402 AGUA FRIA ROAD SANTA FE, SANTA FE COUNTY, NEW MEXICO CONTACT: JOHN MALONE PHONE: (505)-490-2822
JURISDICTION:	CITY OF SANTA FE
PUBLIC RECORD PARCEL NO:	1-052-098-515-431

DRIVING DIRECTIONS:

LATITUDE:	35°40'46.336"
LONGITUDE:	105°57'50.293"

FROM THE VERIZON WIRELESS OFFICE LOCATED AT 4821 EUBANK BLVD NE, HEAD NORTH FOR 3.0 MILES TO PASEO DEL NORTE NE, TURN LEFT HEADING WEST FOR 3.9 MILES, TAKE RAMP LEFT FOR I-25 NORTH TOWARD SANTA FE FOR 60.0 MI, AT EXIT 282B-A, TAKE RAMP RIGHT FOR US-84 NORTH / US-285 NORTH TOWARD SANTA FE-PLAZA / TAOS / LOS ALAMOS FOR 4.1 MI, TURN LEFT ONTO NM-599/ AGUA FRIA ST FOR 0.7 MI, SITE IS ON THE LEFT NEXT TO BUILDING.

PROJECT DESCRIPTION:

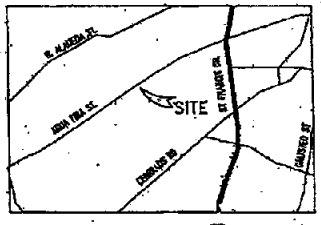
THIS PROJECT CONSISTS OF THE FOLLOWING:

REMOVAL
- THREE (3) EXISTING PANEL ANTENNAS

INSTALLATION
- THREE (3) NEW PANEL ANTENNAS
- SIX (6) NEW RRU UNITS
- TWO (2) NEW MAIN/ DVP UNITS
- ONE (1) NEW SECTOR BOX UNITS
- ONE (1) NEW HYBRIFLEX CABLE

FCC COMPLIANCE:

RADIATION FROM THIS FACILITY WILL NOT INTERFERE WITH OPERATION OF OTHER COMMUNICATION DEVICES.



VICINITY MAP
SCALE: N.T.S.

NORTH

PREPARED FOR:
verizonwireless
4821 EUBANK NE
ALBUQUERQUE, NM 87111

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TownCom TECHNOLOGIES
ALBUQUERQUE, NM / DENVER, CO / EL PASO, TX / LAS VEGAS, NV / RENO, NV / SIOUX FALLS, SD / DENVER, COLORADO

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	08/02/13	RT	-
0	APPROVED FOR CONSTRUCTION	08/20/13	RT	PCG

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
8/20/13

PROJECT NAME:
NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:
1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:
TITLE SHEET

SHEET DATE:
8/20/2013 8:05 AM

SHEET NUMBER:
T1

GENERAL PROJECT NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR ERECTING TEMPORARY BARRICADES AND/OR FENCING TO PROTECT THE SAFETY OF THE PUBLIC DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ALL TEMPORARY BARRIERS AND REPAIR ALL DAMAGE TO PROPERTY ON THE SITE CAUSED BY THIS CONSTRUCTION. THE COST OF REPAIR IS THE CONTRACTOR'S RESPONSIBILITY.
2. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE PRIOR TO ORDERING ANY MATERIALS OR COMMENCING WITH WORK.
4. EXCESS SOIL MATERIAL AND DEBRIS CAUSED BY THIS CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.
5. CONTRACTOR SHALL MAKE ARRANGEMENTS TO GRADING ELEVATIONS ACCESSIBILITY TO ENSURE A SITE FREE OF DAMAGE FROM THE WORK.
6. CONTRACTOR SHALL COORDINATE A CONSTRUCTION ACCESS WITH THE PROPERTY OWNER. CONSTRUCTION ACCESS AREA SHALL BE FENCED IN WITH TEMPORARY (48 DAY) CONSTRUCTION FENCE. THE TEMPORARY FENCE WILL BE CONSTRUCTED OF 6' HIGH GRAY DUK FABRIC AND IS TO BE REMOVED AFTER THE END OF CONSTRUCTION. AREAS WHERE THE IS TO BE RESTORED TO THE ORIGINAL CONDITION AFTER REMOVAL.
7. SURVEY INFORMATION SHOWN WAS CREATED FROM GROUND INFORMATION AND DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY.
8. THESE PLANS DO NOT ADDRESS THE SAFETY AND STABILITY OF THE STRUCTURE DURING ASSEMBLY AND ERECTION. THESE ARE THE RESPONSIBILITY OF THE ERECTION, BASED ON THE MEANS AND METHODS CHOSEN BY THE CONTRACTOR.

GENERAL CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE PROJECT SCOPE OF WORK DEFINED UNDER THE REQUEST FOR PROPOSAL (RFP) FOR THE PROJECT AND ALL ASSOCIATED ATTACHMENTS AND DOCUMENTS PROVIDED.

   THE RFP AND ALL ASSOCIATED DOCUMENTS SHALL DEFINE THE COMPLETE PROJECT SCOPE OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL DOCUMENTS AND IS SOLELY RESPONSIBLE FOR ALL WORK.

   ALL DOCUMENTS INCLUDED WITHIN THE PROJECT REQUEST FOR PROPOSAL ARE REQUIRED FOR THE COMPLETE PROJECT SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK (EQUIPMENT, MATERIALS, INSTALLATION, TESTING, ETC.) REFERRED IN ALL DOCUMENTS. THE RFP, VERIZON WIRELESS INSTALLATION STANDARDS AND PROJECT ATTACHMENTS AND CLARIFICATIONS ARE COMPLIMENTARY TO EACH OTHER. THE FORMAT OF THE SPECIFICATIONS AND DRAWING NUMBERING FOR DOCUMENTS IS NOT INTENDED TO APPLY ESTABLISHMENT SUB CONTRACTORS WORK. CONTRACTOR SHALL VERIFY ALL SUB CONTRACTOR WORK AND VERIZON WIRELESS WILL NOT ACCEPT ANY CHANGE ORDERS FOR INTERNAL CONTRACTOR WORK ASSIGNMENTS.

   CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTING ALL RFP DOCUMENTS TO THEIR SUB CONTRACTORS. ALL RFP DOCUMENTS ARE REQUIRED TO INDICATE THE PROJECT SCOPE OF WORK. INTERNAL SUB CONTRACTOR DOCUMENT PACKAGES ARE HIGHLY DISCOURAGED.

   IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, REFERENCED STANDARDS, VERIZON WIRELESS STANDARDS, THE AGREEMENT TERMS AND CONDITIONS THE ARCHITECT/ ENGINEER SHALL BE CONTACTED FOR FURTHER INTERPRETATION OF THE REQUIREMENTS. THE CONTRACTOR SHALL BE DEEMED TO HAVE PROVIDED THE DETAILED AND EXTENSIVE INTERPRETATION. ANY WORKS INSTALLED IN CONFLICT WITH THE ARCHITECT/ ENGINEER INTERPRETATIONS SHALL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO VERIZON WIRELESS.
2. ALL ANTENNAS MUST BE PRE TESTED WITHIN 48 HOURS OF THEM BEING RECEIVED BY THE INSTALLATION CONTRACTOR. THOSE RESULTS MUST BE SENT BACK TO THE VERIZON WIRELESS CONSTRUCTION MANAGER AND SUPPORT ENGINEER WITHIN THE SAME 48 HOURS. IF YOU MISS THE FORM TIMELINE AND THE ANTENNAS DO NOT PASS UPON INSTALLATION, YOUR COMPANY WILL BE CHARGED FOR THE COST OF THE ANTENNAS AND REPLACEMENT.
3. NO LOADS MAY BE PLACED TEMPORARY TO THE VEHICLE OR PROPERTY. VERIZON WIRELESS WILL PASS ALONG THE COST OF ANY REPAIRS DUE TO DAMAGE OR LOSS WHETHER IT IS MOP ON TOP.

ANTENNA, MOUNTS & HARDWARE INSTALLATION NOTES:

1. CONTRACTOR TO INSTALL ANTENNAS, MOUNTS AND POWER DIVIDERS PER MANUFACTURER RECOMMENDATIONS (OR AS DESIGNED BY THE OWNER/PROPERTY).
2. ALL BOLTS SHALL BE TORQUED PER MFG REQUIREMENTS.
3. ANY GALVANIZED SURFACES THAT ARE DAMAGED BY ABRASIONS, SUPERFICIAL OR FIELD WELDING DURING SHIPPING OR ERECTION SHALL BE TOUCHED UP WITH TWO COATS OF COLD GALVANIZING COMPOUND MEETING THE REQUIREMENTS OF ASTM A780.
4. ANTENNA MOUNTS SHALL NOT BE USED AS A CLIMBING DEVICE. MOUNTS SHALL ALWAYS BE LEFT TO AN APPROVED CLIMBING POINTS.
5. SEE ALSO GENERAL ANTENNA NOTES ON SHEET RFL OF APPLICABLE.

MAIN OVP, SECTOR BOX, RRH, TMA & DIPLEXER INSTALLATION NOTES:

1. CONTRACTOR TO INSTALL MAIN OVP, SECTOR BOXES, REMOTE RADIO HEADS, TOWER MOUNTED AMPLIFIERS AND/OR DIPLEXERS PER MANUFACTURER RECOMMENDATIONS.
2. ALL BOLTS SHALL BE TORQUED PER MFG REQUIREMENTS.
3. ANY GALVANIZED SURFACES THAT ARE DAMAGED BY ABRASIONS, SUPERFICIAL OR FIELD WELDING DURING SHIPPING OR ERECTION SHALL BE TOUCHED UP WITH TWO COATS OF COLD GALVANIZING COMPOUND MEETING THE REQUIREMENTS OF ASTM A780.

COAX PORT NOTES:

1. [illegible] BY CONTRACTOR.
2. [illegible]
3. [illegible]
4. [illegible] FOR FUTURE CHANGES.

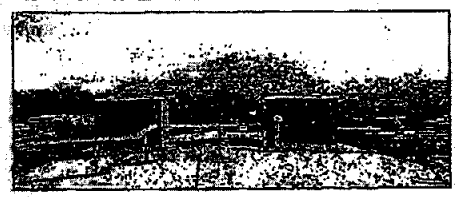
VIEW OF EXISTING ANTENNAS (GAMMA)

VIEW OF EXISTING ANTENNAS (ALPHA & BETA)

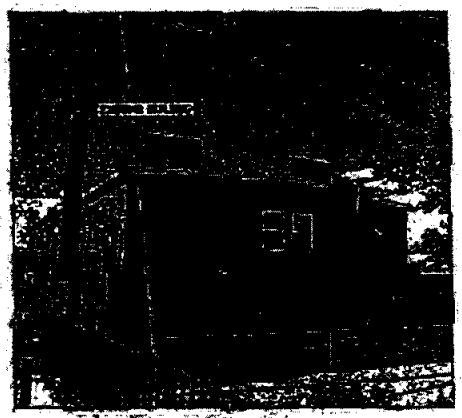
VIEW OF EXISTING GROUND

LEGEND OF SYMBOLS:

- SECTION OR DETAIL — REFERENCE LETTER OR NUMBER; SHEET WHERE DRAWN; SHEET WHERE TAKEN
- SECTION LETTER — SHEET WHERE DRAWN; SHEET WHERE TAKEN
- DETAIL NUMBER — SHEET WHERE DRAWN; SHEET WHERE TAKEN
- ℄ CENTERLINE
- ø PERIMETER
- EQUIPMENT OR FIXTURE NUMBER
- KEYED NOTE
- T.C. 1631.35 / F.L. 1631.00 — SPOT ELEVATION
- TOP OF WALL 1639.00 — CONTROL OR DATUM POINT
- PROPERTY LINE
- 1631 — EXISTING CONTOUR
- 1631 — NEW CONTOUR
- ø ROUND/DIAMETER
- ~ APPROXIMATELY



VIEW OF EXISTING ANTENNAS SHROUDS



VIEW OF EXISTING BUILDING (LOOKING NORTH)

APPROVED FOR CONSTRUCTION

DESIGNED FOR:

verizon wireless

4821 QUEBEC NE
ALBUQUERQUE, NM 87111

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ALBUQUERQUE, NM / EL PASO, TX / LAS VEGAS, NEVADA / DENVER, COLORADO

REV	DATE	DESCRIPTION
D	8/20/13	PRELIMINARY - NOT FOR CONSTRUCTION
E	8/20/13	APPROVED FOR CONSTRUCTION

JASON D. DICKMAN
NEW MEX. CO
14848
PROFESSIONAL ENGINEER
8/20/13

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:

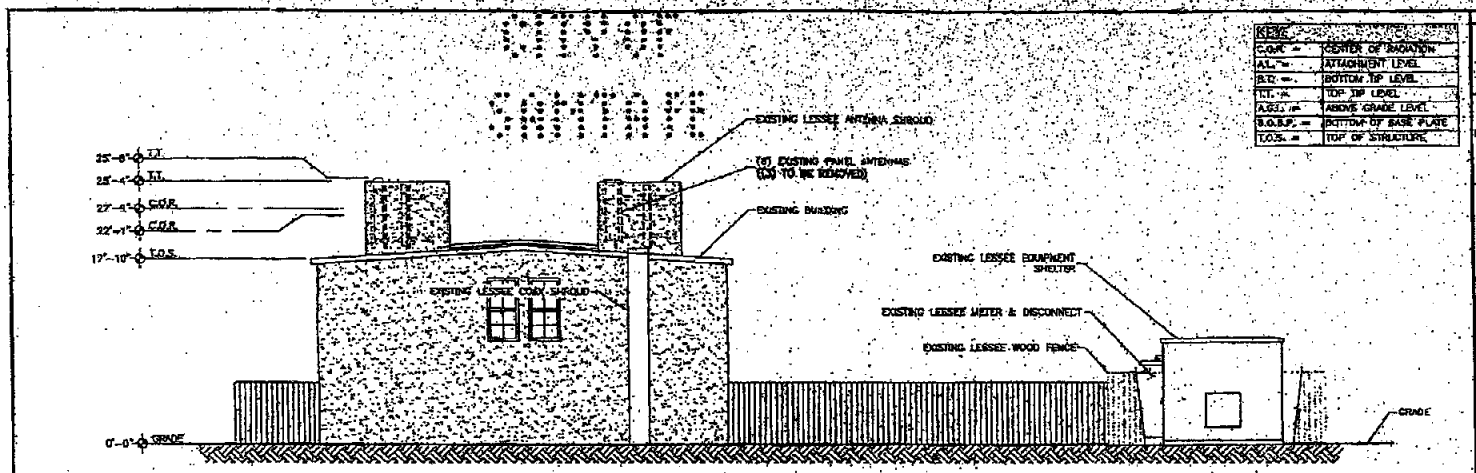
SPECIFICATION & PHOTO SHEET

DATE:

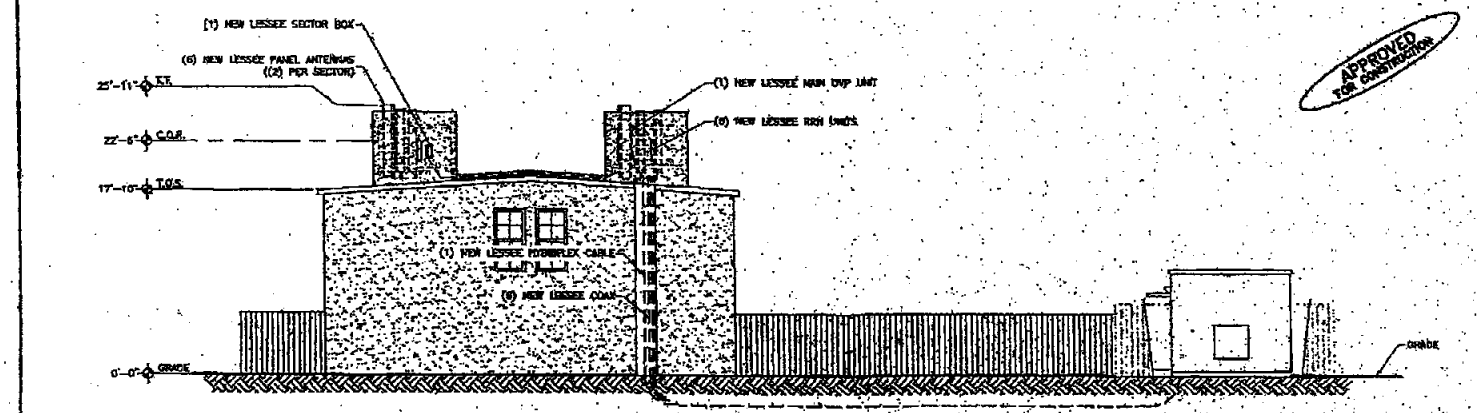
8/20/2013 8:05 AM

SHEET NUMBER:

SP1



EXISTING NORTHWEST ELEVATION
SCALE: N.T.S.



NEW NORTHWEST ELEVATION
SCALE: N.T.S.

KEYS	
C.O.R. =	CENTER OF RADIATION
A.L. =	ATTACHMENT LEVEL
B.T. =	BOTTOM TIP LEVEL
T.T. =	TOP TIP LEVEL
A.G.L. =	ABOVE GRADE LEVEL
B.O.B.P. =	BOTTOM OF BASE PLATE
T.O.S. =	TOP OF STRUCTURE

DESIGNED FOR:

verizon wireless
WEST SUBARK RD
ALBUQUERQUE, NM 87111

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ALBUQUERQUE / EGDE, EL PASO, / LAS VEGAS / DENVER
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REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	08/02/13	RT	TGD
0	APPROVED FOR CONSTRUCTION	08/20/13	RT	

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
8/20/13

APPROVED FOR CONSTRUCTION

PROJECT NAME:
NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:
1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:
ELEVATIONS

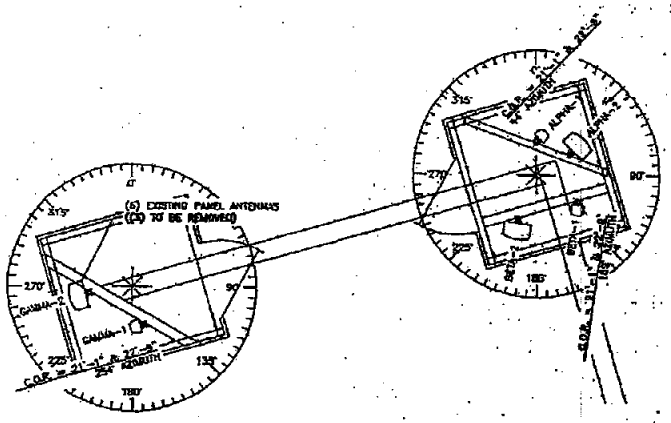
DATE PRINTED:
8/20/2013, 8:03 AM

SHEET NUMBER:
C2

EXISTING LESSEE ANTENNA SCHEDULE:

ATTACH LEVEL (COR)	AZIMUTHS (DEG. TN)	ANTENNA TYPE	ANTENNA QUANTITY	MOUNT TYPE	COAX (QUANTITY) SIZE (NOMINAL)	NOTES
22'-1"	44° 188° 254°	ANTEL BRX-7X080/6CF 6' PANEL ANTENNA	3	PIPE MOUNT	(6) 7/8" + (6) 1-5/8"	(3) TO REMAIN
22'-9"		ANTEL GRX-8060/120E-DIN 6' PANEL ANTENNA	3			(3) TO BE REMOVED

NOTES:
1. ALL EXISTING AZIMUTHS REFERENCE TRUE NORTH.
2. ALL EXISTING AZIMUTHS REFERENCE DATA COLLECTED FROM A RECENT SITE VISIT AND DIFFERS FROM THE INFORMATION PROVIDED IN THE SMC.



EXISTING ANTENNA SECTION @ 22'-1" & 22'-9"
SCALE: N.T.S.

NORTH

NOTICE:

1. CONTRACTOR SHALL NOT SUBMIT BIDS OR PERFORM CONSTRUCTION WORK ON THIS PROJECT WITHOUT ACCESS TO THE CURRENT COMPLETE SET OF DRAWINGS LISTED IN THE TITLE-SHEET INDEX.

GROUNDING NOTES:

1. ALL NEW EQUIPMENT & COAX TO BE GROUNDED PER VERIZON WIRELESS GROUNDING SPECS

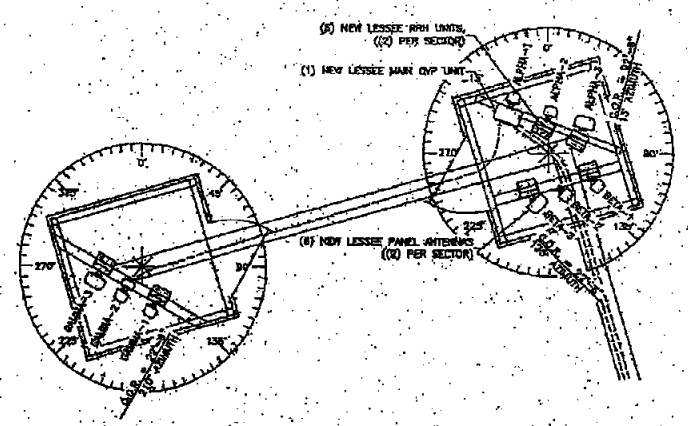
GENERAL ANTENNA NOTES:

1. CONTRACTOR TO VERIFY MECHANICAL DOWNTILT WITH FINAL SMR/RF ENGINEER.
2. DUAL POLAR ANTENNAS REQUIRE TWO RUNS OF COAX PER ANTENNA.
3. CONTRACTOR TO VERIFY ALL ACTUAL LENGTHS IN FIELD PRIOR TO INSTALLATION AND NOTIFY THE FIELD ENGINEER FOR VERIFICATION OF SIZES OF CABLES.
4. CONTRACTOR TO PROVIDE AS BUILT FOR THE LENGTH OF CABLES UPON COMPLETION OF INSTALLATION.
5. CONTRACTOR TO PROVIDE FINAL CABLE LENGTHS AND RETURN LOSSES FOR ALL CABLES.
6. ALL AZIMUTHS REFERENCE TRUE NORTH. CONSULT REQUIRED QUADRANGLE MAP FOR NECESSARY MECHANICAL DECLINATION.

NEW LESSEE ANTENNA SCHEDULE:

ATTACH LEVEL (COR)	AZIMUTHS (DEG. TN)	ANTENNA TYPE	ANTENNA QUANTITY	MOUNT TYPE	COAX (QUANTITY) SIZE (NOMINAL)	ESTIMATED COAX CABLE LENGTH	MECHANICAL DOWN TILT
22'-6"	15° 135° 210°	ANTLE BXA-78080-6 6' PANEL ANTENNA	3 (EXISTING)	PIPE MOUNT (EXISTING) + (3) PIPE MOUNT (NEW)	(6) 7/8" (EXISTING) + (6) 1-5/8" (EXISTING) + (6) 7/8" (NEW) + (1) HYBRIFLEX CABLE (NEW)	-	REFER TO SMR
		ANTLE BXA-70080-6 6' PANEL ANTENNA	3 (NEW)				
		ANTEL GRX-8060/120-EDIN 6' PANEL ANTENNA	3 (NEW)				

NOTES:
1. FOR EXACT ANTENNA INFORMATION REFER TO THE RF DESIGN.
2. ALL NEW COAX SHALL BE INSTALLED ON EXISTING FEEDLINE LADDER.
3. ALL UNUSED COAX SHALL BE REMOVED.
4. CONTRACTOR TO USE EXISTING COAX FOR NEW ANTENNAS.
5. CONTRACTOR TO INSTALL DIPLEXERS IN SHELTER AND ON TOWER AS REQUIRED BY RF DESIGN. (IF APPLICABLE)



NEW ANTENNA SECTION @ 22'-6"
SCALE: N.T.S.

NORTH

APPROVED FOR CONSTRUCTION

DESIGNED FOR:

verizon wireless
14021 EUBANK NE
ALBUQUERQUE, NM 87111

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TOWERCOM TECHNOLOGIES
ALBUQUERQUE, NEW MEXICO / LAS VEGAS, NEVADA / DENVER, COLORADO / EL PASO, TEXAS / HOUSTON, TEXAS

NO	DATE	DESCRIPTION	BY	CHK	APP
0	08/20/13	ISSUED FOR CONSTRUCTION	RF	RC	FDP

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
8/20/13

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:

ANTENNA INFORMATION

DATE:

8/20/2013 8:03 AM

SHEET NUMBER:

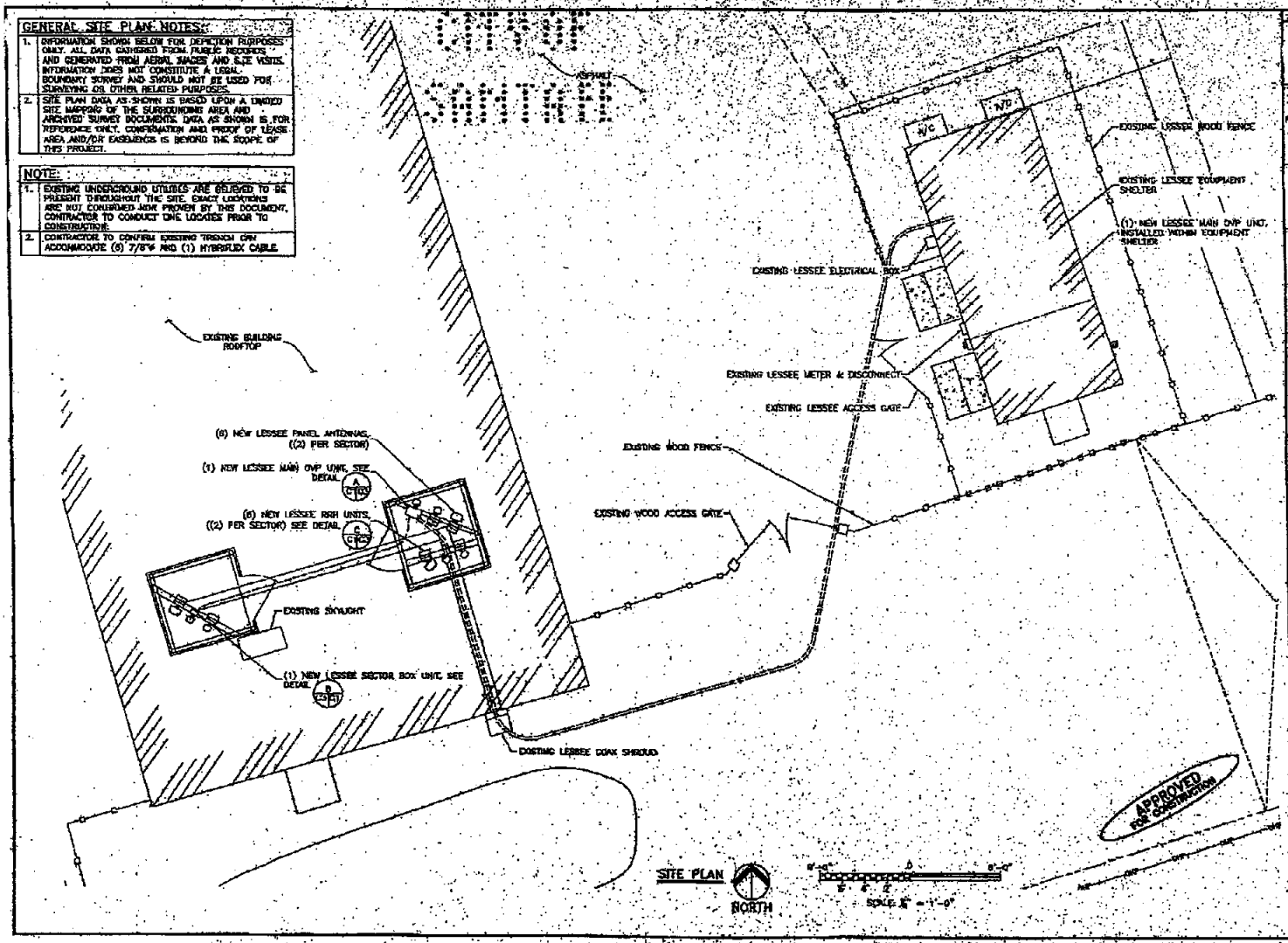
RF1

GENERAL SITE PLAN NOTES:

1. INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND S.I.E VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.
2. SITE PLAN DATA AS SHOWN IS BASED UPON A UNIQUE SITE MAPPING OF THE SURROUNDING AREA AND ARCHIVED SURVEY DOCUMENTS. DATA AS SHOWN IS FOR REFERENCE ONLY. CONFIRMATION AND PROOF OF LEASE AREA AND/OR EASEMENTS IS BEYOND THE SCOPE OF THIS PROJECT.

NOTE:

1. EXISTING UNDERGROUND UTILITIES ARE BELIEVED TO BE PRESENT THROUGHOUT THE SITE. EXACT LOCATIONS ARE NOT CONFIRMED NOR PROVEN BY THIS DOCUMENT. CONTRACTOR TO CONDUCT DIG LOCATES PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO CONFIRM EXISTING TRENCH CAN ACCOMMODATE (6) 7/8"ø AND (1) HYBRIFLEX CABLE.



DESIGNED FOR:

verizon wireless

4021 CORRIDOR 45
ALBUQUERQUE, NM 87121

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TowerCom TECHNOLOGIES

ALBUQUERQUE / PUEBLO / EL PASO / LAS VEGAS / DENVER
NEW MEXICO / IDAHO / TEXAS / NEVADA / COLORADO

REV	DESCRIPTION	DATE	BY	CHK	FLD
4	PRELIMINARY - NOT FOR CONSTRUCTION	08/05/2			
3	APPROVED FOR CONSTRUCTION	08/20/1			

DRAWN BY:

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
8/20/13

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

PLOT TITLE:

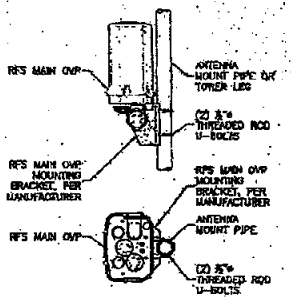
SITE PLAN

PLOT DATE:

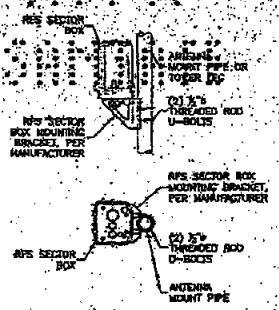
8/20/2013 8:05 AM

SHEET NUMBER:

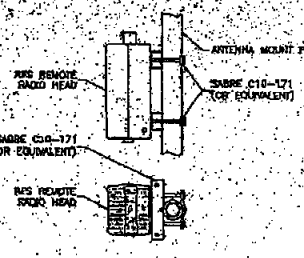
C1



MAIN OVP BOX CONNECTION DETAIL



SECTOR BOX CONNECTION DETAIL



REMOTE RADIO HEAD CONNECTION DETAIL

APPROVED FOR CONSTRUCTION

DESIGNED FOR

verizon wireless

4821 EDRAMS RD
ALBUQUERQUE, NM 87111

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TOWERCO TECHNOLOGIES

ALBUQUERQUE, NEW MEXICO / DENVER, COLORADO / LAS VEGAS, NEVADA

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	08/07/13	MT	FDD
B	APPROVED FOR CONSTRUCTION	08/20/13	DT	FDD

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
8/20/13

PROJECT NAME

NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

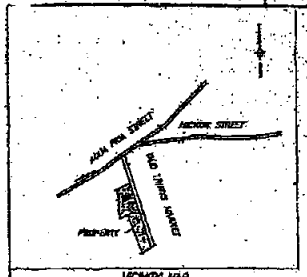
SHEET TITLE

DETAILS

DATE PLOTTED: 8/20/2013 8:05 AM

SHEET NUMBER

C3



VICINITY MAP

PLAT OF SURVEY

LEGEND

- PROPERTY LINE
- EXISTING LOT LINE
- EXISTING EASEMENT
- EXISTING WALL
- EXISTING CONCRETE
- EXISTING WOOD FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING GUY WIRE
- EXISTING TELEPHONE POLE
- EXISTING WATER WELL
- EXISTING SEWER MANHOLE
- EXISTING GAS METER
- EXISTING ELECTRIC METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING WATER METER
- EXISTING WELL
- EXISTING GAS VALVE

896-900 / 1710-2170 MHz

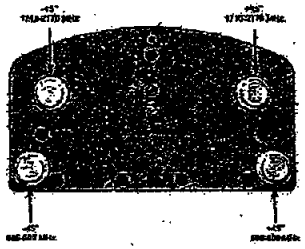
Amphenol

QXW-806X8012XBF-EDIN

10x-Pol | Dual Band FET Panel | 80" / 80" | 15.0 / 18.0 dBi

Electrical Specifications	896-960 MHz		1710-2170 MHz		
Frequency Band, MHz	806-896	870-960	1710-1880	1880-2690	1920-2170
Polarization	±45°		±45°		
Horizontal Beamwidth	65°	65°	90°	90°	70°
Vertical Beamwidth	8°	8°	4.7°	4.8°	4.3°
Gain	15.0 dBi(d) / 14.1 dBi	15.0 dBi(d) / 14.1 dBi	18.0 dBi(d) / 17.0 dBi	18.0 dBi(d) / 17.0 dBi	18.0 dBi(d) / 17.0 dBi
Electrical Downtilt (°)	0, 2, 4, 6, 8, 10		0, 2, 4, 6, 8, 10		
Impedance	50Ω		50Ω		
VSWR	1.5:1		1.5:1		
Isolation between ports	> 28 dB		> 27 dB		
Max power	500 W		300 W		
Lightning protection	DC-to-ground				
Connectors	4 7/16 DIN-F (female / sockets)				
Mechanical Characteristics					
Dimensions (depth x width x length)	3.0 x 8.0x 96.0 inches		3.0 x 12.0 x 72.0 in		
Weight without mounting brackets	17.2 kg		20.5 kg		
Operating wind speed	200 km/hr		225 km/hr		
Wind Area	Front: 0.64 m² Side: 0.32 m²		Front: 0.87 m² Side: 0.4 m²		
Wind Load (Kg-f) at specified wind speed	Front: 200 N Side: 100 N		Front: 120 N Side: 60 N		
Mounting Options	Part Number	Kit Part Description	Weight		
2-7/8" Pole Mounting & Downtilt Bracket Kit	302120001	40-in-lb max 4.52 Nm	4.8 kg 10.3 lbs		

Antenna Patterns in dBm



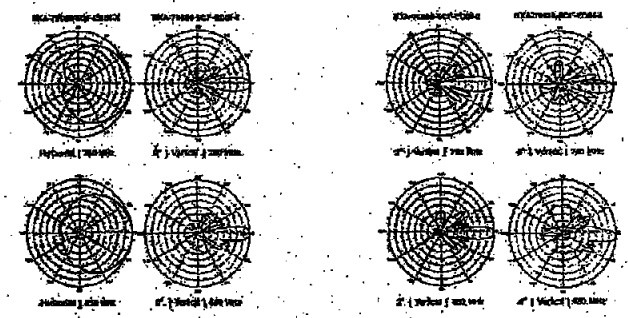
696-960 MHz

Amphenol

QXW-70080-8CF-EDIN-X

8-Pol | FET Panel | 80" | 13.0 dBi

Electrical Specifications	698-960 MHz	
Frequency Band, MHz	698-806 MHz	806-960 MHz
Polarization	±45°	
Horizontal Beamwidth	65°	65°
Vertical Beamwidth	12°	10°
Gain	12.0 dBi (10.0 dBd)	13.0 dBi (11.0 dBd)
Electrical Downtilt (°)	0, 2, 4, 6, 8, 10	
Impedance	50Ω	
VSWR	1.5:1	
Isolation between ports	>28 dB	>24 dB
Front to Back Ratio	>25 dB	>22 dB
Max Power	500 W	
Lightning protection	Direct Ground	
Connectors	8 Ports / 4.3/10 or DIN Female / Socket (Recess)	
Mechanical Characteristics		
Dimensions (depth x width x length)	7.0 x 8.0 x 96.0 in	7.0 x 8.0 x 60.0 in
Weight without mounting brackets	19.0 kg	13.6 kg
Operating wind speed	200 km/hr	> 225 km/hr
Wind Area	Front: 0.87 m² Side: 0.4 m²	Front: 0.64 m² Side: 0.4 m²
Wind Load (Kg-f) at specified wind speed	Front: 150 N Side: 60 N	Front: 110 N Side: 60 N
Mounting Options	Part Number	Kit Part Description	Weight
2-7/8" Pole Mounting & Downtilt Bracket Kit	302120001	40-in-lb max 4.52 Nm	4.8 kg 10.3 lbs
Downtilt Kit	For accessories and configurations, see QXX-70080-CF-EDIN-X FP		



DESIGNED FOR:

verizon wireless

4821 ELIZABETH NE
ALBUQUERQUE, NM 87109

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TOWERCO TECHNOLOGIES

ALBUQUERQUE, NM / EL PASO, TEXAS / LAS VEGAS, NEVADA / DENVER, COLORADO

REV	DESCRIPTION	DATE	DRN	CHK	APP
A	PRELIMINARY - NOT FOR CONSTRUCTION	08/29/13	MT		
B	APPROVED FOR CONSTRUCTION	09/09/13	MT		

APPROVED FOR CONSTRUCTION

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE
AWS INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:

ANTENNA CUT SHEET(S)

SAVE DATE:

8/20/2013 8:05 AM

SHEET NUMBER:

RF2

2014 documents

City of Santa Fe
Application Tracking Step Selection by Revision

6/06/14
14:35:06

Application number . . . . . : 14 00000813
Address . . . . . : 1402 AGUA FRIA ST
UPC Code . . . . . : 1-052-098-515-431- -
Application type . . . . . : TELECOMMUNCATION TOWER
County Assessor Acct Num . :
Tenant name, number . . . . :

Type options, press Enter.
2=Change 4=Delete 5=View 6=Fast log 8=Action log maintenance
9=In/out maint

Opt	Agency description	Rev	Path Step	Req	---- Key Dates --- In	Est Cmpl	- Review Summary - Resulted	Stat	By
	ARCHITECTURAL		A 01	Y	04/25/14	04/30/14	06/05/14	AP	DAE
	ZONING		A 01	Y	04/25/14	04/30/14	06/05/14	AP	DAE
	BUILDING		C 01	Y	04/29/14	05/02/14	04/30/14	AP	CFP
	ELECTRICAL		C 01	Y	04/29/14	05/02/14	04/30/14	AP	CFP

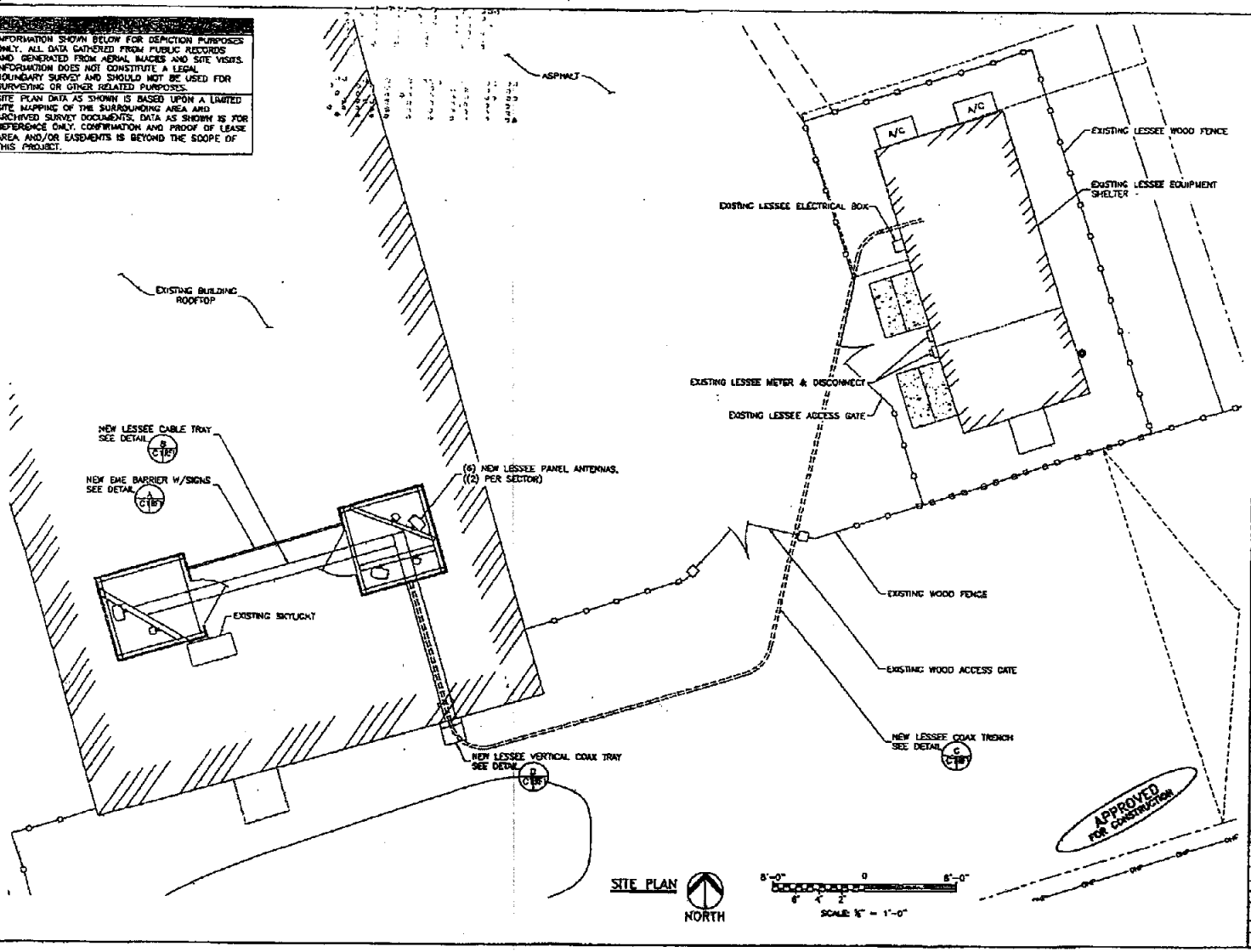
Bottom

F3=Exit F5=Land inquiry F6=Add F7=Revisions F8=Misc info inquiry
F9=Corrections report F10=View 2 F11=Sort by agency F24=More keys

6/9/14

NM SILVA
SITE PHOTO
WEST ELEVATION SIMULATION
APRIL 25, 2014

1. INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND SITE VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.
2. SITE PLAN DATA AS SHOWN IS BASED UPON A LIMITED SITE MAPPING OF THE SURROUNDING AREA AND ARCHIVED SURVEY DOCUMENTS. DATA AS SHOWN IS FOR REFERENCE ONLY. CONFIRMATION AND PROOF OF LEASE AREA AND/OR EASEMENTS IS BEYOND THE SCOPE OF THIS PROJECT.



SITE PLAN

DESIGNED FOR:

verizonwireless

4821 EDGEWOOD NE
ALBUQUERQUE, NM 87111

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DESIGNED BY:

TOWERCOM TECHNOLOGIES

ALBUQUERQUE, /BOISE, /EL PASO, /LAS VEGAS, / DENVER, NEW MEXICO / IDAHO / TEXAS / NEVADA / COLORADO

REV	DESCRIPTION	DATE	BY	CHK
0	APPROVED FOR CONSTRUCTION	04/25/14	CP	JDD

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
4/25/14

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE ANTENNA INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:

SITE PLAN

DATE:

4/25/2014 8:33 AM

SHEET NUMBER:

C1

1. CONTRACTOR IS RESPONSIBLE FOR ERECTING TEMPORARY BARRICADES AND/OR FENCING TO PROTECT THE SAFETY OF THE PUBLIC DURING CONSTRUCTION. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY BARRIERS AND REPAIR ALL DAMAGE TO PROPERTY ON THE SITE CAUSED BY THIS CONSTRUCTION. THE COST OF REPAIR IS THE CONTRACTOR'S RESPONSIBILITY.
2. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE PRIOR TO ORDERING ANY MATERIALS OR CONDUCTING ANY WORK.
4. EXCESS SOIL MATERIAL AND DEBRIS CAUSED BY THIS CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.
5. CONTRACTOR SHALL MAKE ADJUSTMENTS TO GRADING ELEVATIONS AS NECESSARY TO ENSURE A SITE FREE OF DRAINAGE PROBLEMS.
6. CONTRACTOR SHALL COORDINATE A CONSTRUCTION LAYDOWN AREA WITH THE PROPERTY OWNER. CONSTRUCTION LAYDOWN AREA SHALL BE FENCED-IN WITH TEMPORARY (45 DAY) CONSTRUCTION FENCE. THE TEMPORARY FENCE SHALL BE CONSTRUCTED OF 6' HIGH CHAIN LINK FABRIC AND IS TO BE REMOVED AT THE END OF CONSTRUCTION. LAYDOWN AREA IS TO BE RESTORED TO ITS ORIGINAL CONDITION AFTER FENCE REMOVAL.
7. SURVEY INFORMATION SHOWN WAS CREATED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY.
8. THESE PLANS DO NOT ADDRESS THE SAFETY AND STABILITY OF THE STRUCTURE DURING ASSEMBLY AND ERECTION, WHICH ARE THE RESPONSIBILITY OF THE ERECTOR, BASED ON THE MEANS AND METHODS CHOSEN BY THE ERECTOR.

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE PROJECT SCOPE OF WORK DEFINED UNDER THE REQUEST FOR PROPOSAL (RFP) FOR THIS PROJECT AND ALL ASSOCIATED ATTACHMENTS AND DOCUMENTS PROVIDED.

   THE RFP AND ALL ASSOCIATED DOCUMENTS SHALL DEFINE THE COMPLETE PROJECT SCOPE OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL DOCUMENTS AND IS SOLELY RESPONSIBLE FOR ALL WORK.

   ALL DOCUMENTS INCLUDED WITHIN THE PROJECT REQUEST FOR PROPOSAL ARE REQUIRED FOR THE COMPLETE PROJECT SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK (EQUIPMENT, MATERIAL, INSTALLATION, TESTING, ETC.) INDICATED IN ALL DOCUMENTS. THE RFP, VERIZON WIRELESS NETWORK STANDARDS AND PROJECT ADDENDUMS AND CLARIFICATIONS ARE COMPLEMENTARY TO EACH OTHER. THE FORMAT OF THE SPECIFICATIONS AND DRAWING NUMBERING PER DISCIPLINE IS NOT INTENDED TO IMPLY SEGREGATION OF SUB CONTRACTOR WORK. CONTRACTOR SHALL ASSIGN ALL SUB CONTRACTOR WORK AND VERIZON WIRELESS WILL NOT ACCEPT ANY CHANGE ORDERS FOR INTERNAL CONTRACTOR WORK ASSIGNMENTS.

   CONTRACTOR SHALL BE RESPONSIBLE FOR DISTRIBUTING ALL RFP DOCUMENTS TO THEIR SUB CONTRACTORS. ALL RFP DOCUMENTS ARE REQUIRED TO INDICATE THE PROJECT SCOPE OF WORK. PARTIAL SUB CONTRACTOR DOCUMENT PACKAGES ARE HIGHLY DISCOURAGED.

   IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, REFERENCED STANDARDS, VERIZON WIRELESS STANDARDS, OR AGREEMENT TERMS AND CONDITIONS THE ARCHITECT/ ENGINEER SHALL BE CONTACTED FOR FORMAL INTERPRETATION OF THE REQUIREMENTS. THE CONTRACTOR SHALL BE DEEMED TO HAVE PROVIDED THE DETAILED AND EXTENSIVE INTERPRETATION. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECT/ ENGINEER INTERPRETATIONS SHALL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO VERIZON WIRELESS.
2. ALL ANTENNAS MUST BE PIM TESTED WITHIN 48 HOURS OF THEIR BOND RECEIVED BY THE INSTALLATION CONTRACTOR. THOSE RESULTS MUST BE SENT BACK TO THE VERIZON WIRELESS CONSTRUCTION ENGINEER AND EQUIPMENT ENGINEER WITHIN THE SAME 48 HOURS. IF YOU MISS THE 48HR TIMELINE AND THE ANTENNAS DO NOT PASS UPON INSTALLATION, YOUR COMPANY WILL BE CHARGED FOR THE COST OF THE ANTENNAS FOR REPLACEMENT.
3. ALL LOADS MUST BE SECURED PROPERLY TO THE VEHICLE OR TRAILER. VERIZON WIRELESS WILL PASS ALONG THE COST OF ANY REPLACEMENTS DUE TO DAMAGE OR LOSS WHETHER IT IS NEW OR USED.

1. CONTRACTOR TO INSTALL ANTENNAS, MOUNTS AND TOWER HARDWARE PER MANUFACTURER'S RECOMMENDATIONS (OR AS REQUIRED BY THE OWNER/PROVIDER).
2. ALL BOLTS SHALL BE TIGHTENED PER AISC REQUIREMENTS.
3. ANY GALVANIZED SURFACES THAT ARE DAMAGED BY ABRASIONS, CUTS, DRILLING OR FIELD WELDING DURING SHIPPING OR ERECTION SHALL BE TOUCHED-UP WITH TWO COATS OF COLD GALVANIZING COMPOUND MEETING THE REQUIREMENTS OF ASTM A780.
4. ANTENNA MOUNTS SHALL NOT BE USED AS A CLIMBING DEVICE. WORKERS SHALL ALWAYS TIE OFF TO AN APPROVED CLIMBING POINT.
5. SEE ALSO GENERAL ANTENNA NOTES ON SHEET RF1 (IF APPLICABLE).

1. REQUIRED ADDITIONAL COAX PORTS TO BE ADDED AS NEEDED BY CONTRACTOR.
2. ANY ADDITIONAL COAX PORTS TO BE INSTALLED BELOW THE DOSERG, WHERE POSSIBLE.
3. CONTRACTOR TO INVESTIGATE INTERIOR OF SHELTER/EQUIPMENT ROOM FOR CLEAREST PENETRATION POINT.
4. ADDITIONAL CONE PORTS TO BE INSTALLED PER INDUSTRY STANDARDS.

ALL LOADS DERIVED FROM REQUIREMENTS OF INTERNATIONAL BUILDING CODE 2009, ASCE 7-05, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", & ANSI/TIA-222-G "STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS".

BUILDING STRUCTURES:

1. WIND LOADS: IBC 2009 §1609 & ASCE 7-05 §6.4 (SIMPLIFIED METHOD)
   V_{3S} = 90 MPH
   OCCUPANCY CAT. = II; EXPOSURE CAT. = C; IMPORTANCE FACTOR = 1.0
2. SEISMIC LOADS: IBC 2009 §1613 & ASCE 7-05 §12.14 (SIMPLIFIED METHOD)
   OCCUPANCY CAT. = II; SITE CLASS = D
   $V = \frac{S_{DS}W}{R}$
   F = 1.0 (SINGLE-STORY), 1.1 (TWO STORY), 1.2 (THREE STORY)
   S_{DS} = (2/3) S_{MS}
   R = 1.5 (ORDINARY PLAIN CONCRETE SHEARWALLS),
   3.5 (LIGHT-FRAMED WALLS W/ WOOD STRUCTURAL PANELS),
   4.0 (ORDINARY REINFORCED CONCRETE SHEARWALLS)

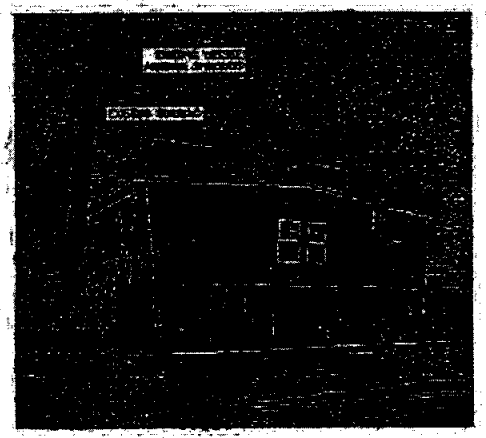
COMMUNICATIONS STRUCTURES:

1. WIND LOADS: IBC 2009 §1609, ASCE 7-05 §6.5.15 & ANSI/TIA-222-G
   V = 90 MPH (3-SEC GUST)
   V = 30 MPH "K" RADIAL ICE
   STRUCTURE CLASS. = II; EXPOSURE CAT. = C; IMPORTANCE FACTOR = 1.0
2. SEISMIC LOADS: IBC 2009 §1613, ASCE 7-05 §15.3.4 & ANSI/TIA-222-G
   "MAY BE IGNORED FOR STRUCTURE CLASS I AND/OR EXPONENTIAL SPECTRAL RESPONSE FOR SHORT PERIOD (S_{DS}) ≤ 1.0
   STRUCT. CLASS. = II; OCC. CAT. = II; SITE CLASS = D; IMPORTANCE FACTOR = 1.0
   $V = \frac{S_{DS}W}{R}$ (EQUIVALENT LATERAL FORCE PROCEDURE (METHOD 1))
   $V = \frac{\Sigma S_{DS}W_i}{R}$ (EQUIVALENT MODAL ANALYSIS PROCEDURE (METHOD 2))

REFERENCE LETTER OR NUMBER — SECTION OR DETAIL
SCALE:
SHEET WHERE DRAWN
SHEET WHERE TAKEN
SECTION LETTER
SHEET WHERE DRAWN
SHEET WHERE TAKEN
DETAIL NUMBER
SHEET WHERE DRAWN
SHEET WHERE TAKEN
EQUIPMENT OR FIXTURE NUMBER
KEYED NOTE
T.C. 1631.33 / F.L. 1631.00 — SPOT ELEVATION
TOP OF WALL 1638.00 — CONTROL OR DATUM POINT
PROPERTY LINE
1631 — EXISTING CONTOUR
1631 — NEW CONTOUR
℄ CENTERLINE
℄ PENNY
ø ROUND/DIAMETER
≈ APPROXIMATELY

VIEW OF EXISTING ANTENNAS SHROUDS

VIEW OF EXISTING COMPOUND



VIEW OF EXISTING BUILDING
(LOOKING NORTH)

APPROVED FOR CONSTRUCTION

DESIGNED FOR:

verizonwireless
4821 EUBANK NE
ALBUQUERQUE, NM 87111

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TOWERCOM TECHNOLOGIES
ALBUQUERQUE, / BOISE, / EL PASO, / LAS VEGAS, / DENVER, TEXAS / IDAHO / NEVADA / COLORADO

REV	DESCRIPTION	DATE	BY	CHK
0	ZD PROVIDED FOR CONSTRUCTION	04/25/14	EP	JDD

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
4/25/14

PROJECT NAME:

NM4 SILVA
EXISTING COMMUNICATIONS SITE
ANTENNA INSTALLATION PROJECT

PROJECT ADDRESS:

1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:

SPECIFICATION & PHOTO SHEET

DATE:

4/25/2014 8:55 AM

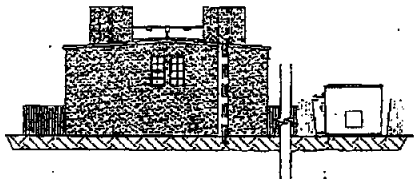
SHEET NUMBER:

SP1

verizon wireless

NM4 SILVA

PUBLIC RECORD PARCEL NO. 1-052-098-515-431



1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

EXISTING COMMUNICATIONS SITE
ANTENNA INSTALLATION PROJECT

APPROVED FOR CONSTRUCTION

SHEET	TITLE	REV.
T1	TITLE SHEET	0
SP1	SPECIFICATION & PHOTO SHEET	0
C1	SITE PLAN	0
C2	ELEVATIONS	0
RF1	ANTENNA INFORMATION AND DETAILS	0
RF2	ANTENNA CUT SHEET(S)	0

APPLICANT:
VERIZON WIRELESS
4821 EUBANK NE
ALBUQUERQUE, NM 87111

CONTACT: JEFF DONAHT
PHONE: 505-250-0004

ENGINEERS/DESIGNERS:
TOWERCOM TECHNOLOGIES LLC
4520 MONTGOMERY BLVD. NE, SUITE 5
ALBUQUERQUE, NM 87109

CONTACT: JEFF MONTANO
PHONE: 505-332-4984

ZONING/SITE AQ:
WIRELESS RESOURCES, INC.

CONTACT: CARL TASKES
PHONE: 480-448-0803

BEING A PORTION OF TRACT "A" AS SHOWN ON THAT CERTAIN PLAT ENTITLED "PLAT OF SURVEY FOR BORIS JEANNE LUNA, 1406 AGUA FRIA STREET, SANTA FE COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED IN THE OFFICE OF THE COUNTY CLERK OF SANTA FE COUNTY, NEW MEXICO, ON OCTOBER 2, 1998, AND RECORDED IN PLAT BOOK 398, PAGE 32.

1. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE NEW PROJECT.
2. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
3. ALL FIELD MODIFICATIONS BEFORE, DURING, OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY A VERIZON WIRELESS REPRESENTATIVE.
4. INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, U.N.O.
5. NOTIFY VERIZON WIRELESS, IN WRITING, OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATIONS FROM A VERIZON WIRELESS REPRESENTATIVE AND ADJUSTING THE BID ACCORDINGLY.
6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
7. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FINISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF A VERIZON WIRELESS REPRESENTATIVE.
8. THE CONTRACTOR IS RESPONSIBLE FOR RED-LINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS BUILT CONDITION OF THE SITE. FOLLOWING THE FINAL INSPECTION BY VERIZON WIRELESS, THE CONTRACTOR SHALL PROVIDE VERIZON WIRELESS WITH ONE COPY OF ALL RED-LINED DRAWINGS.
9. VERIFY ALL FINAL EQUIPMENT WITH A VERIZON WIRELESS REPRESENTATIVE. ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE, INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY VERIZON WIRELESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH THE WORK AND CLEARANCES REQUIRED BY OTHERS RELATED TO SAID INSTALLATIONS.

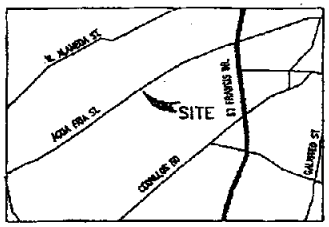
PROPERTY OWNER:	JOHN MALONE 1402 AGUA FRIA ROAD SANTA FE, SANTA FE COUNTY, NEW MEXICO CONTACT: JOHN MALONE PHONE: (505)-480-2922
JURISDICTION:	CITY OF SANTA FE
PUBLIC RECORD PARCEL NO:	1-052-098-515-431

LATITUDE:	35°40'40.336"
LONGITUDE:	105°57'38.085"

FROM THE VERIZON WIRELESS OFFICE: 4821 EUBANK BLVD NE ALBUQUERQUE, NM 87111, HEAD SOUTH ON EUBANK BLVD NE TOWARD GUTIERREZ RD NE 0.3 MI, TURN RIGHT ONTO MONTGOMERY BLVD NE 1.0 MI, TURN RIGHT ONTO WYOMING BLVD NE 2.2 MI, TURN LEFT ONTO SAN ANTONIO DR NE 1.5 MI, TURN RIGHT ONTO PAN AMERICAN FRONTAGE RD N 228 FT, MERGE ONTO I-25 N VIA THE RAMP ON THE LEFT TO SANTA FE 0.2 MI, MERGE ONTO I-25 N 50.9 MI, TAKE EXIT 282A-282B FOR US-84 N/ST FRANCIS DR TOWARD US-285 N/SANTA FE PLAZA 0.9 MI, MERGE ONTO US-285 N/US-84 W/S ST FRANCIS DR 3.2 MI, TURN LEFT ONTO AGUA FRIA ST SITE WILL BE LOCATED ON THE LEFT 0.7 MI.

THIS PROJECT CONSISTS OF THE FOLLOWING:
INSTALLATION
- SIX (6) NEW PANEL ANTENNAS

RADIATION FROM THIS FACILITY WILL NOT INTERFERE WITH OPERATION OF OTHER COMMUNICATION DEVICES.



VICINITY MAP
SCALE: N.T.S.

NORTH

DESIGNED FOR:
verizon wireless
4821 EUBANK NE
ALBUQUERQUE, NM 87111

THESE DRAWINGS AND SURVEYS ARE COPYRIGHT PROTECTED AND THE SOLE PROPERTY OF TOWERCOM TECHNOLOGIES, LLC AND PRODUCED FOR THE USE OF OUR CLIENT. ANY REPRODUCTION OR USE OF THE INFORMATION CONTAINED WITHIN SAID DOCUMENTS IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF TOWERCOM TECHNOLOGIES, LLC.

TOWERCOM TECHNOLOGIES
ALBUQUERQUE, NEW MEXICO / BOISE, EL PASO, IDAHO / LAS VEGAS, TEXAS / DENVER, NEVADA / COLORADO

DESIGNED BY:

REV.	DESCRIPTION	DATE	BY	CHK
0	APPROVED FOR CONSTRUCTION	04/25/14	EP	JDD

JASON D. DICKMAN
NEW MEXICO
14848
PROFESSIONAL ENGINEER
4/25/14

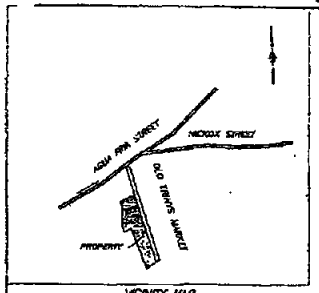
PROJECT NAME:
NM4 SILVA
EXISTING COMMUNICATIONS SITE
ANTENNA INSTALLATION PROJECT

PROJECT ADDRESS:
1402 AGUA FRIA STREET
SANTA FE, NEW MEXICO 87505
SANTA FE COUNTY

SHEET TITLE:
TITLE SHEET

SAVE DATE:
4/25/2014 8:55 AM

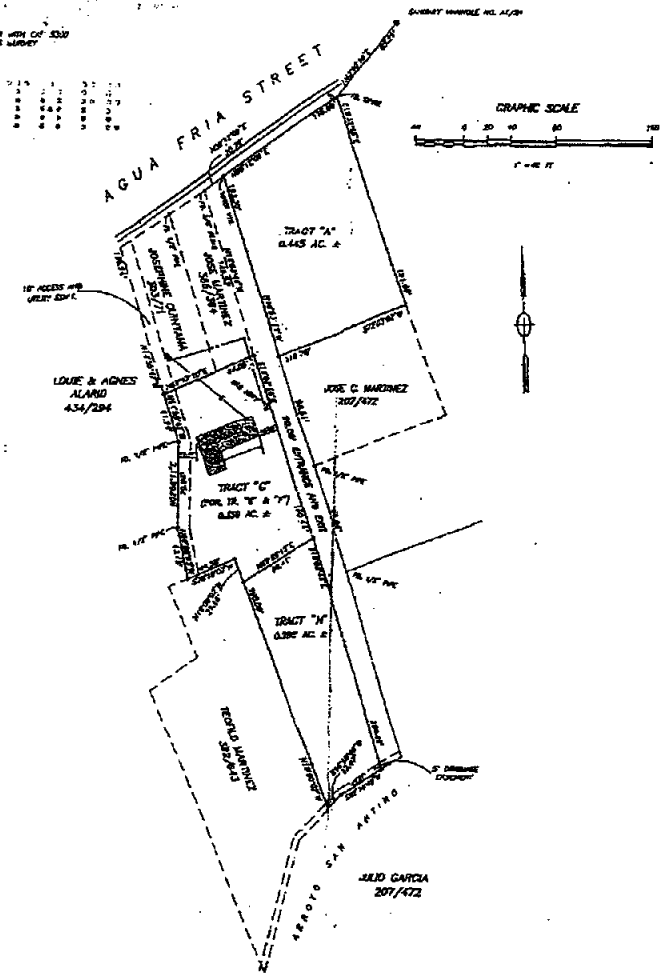
SHEET NUMBER:
T1



VICINITY MAP

LEGEND

- MARKERS SET THE SURVEY 1/2" REBAR WITH CAP 5330
- MARKERS FOUND USED AND NOTED THIS SURVEY
- U.S.G.S. BENCH DAP
- SANITARY SEWER MANHOLE
- GAS METER
- TELEPHONE PEDESTAL
- POWER POLE
- WELL
- ELECTRIC BOX
- FENCE
- CONCRETE ANGLE



TRACT "G"

A TRACT OF LAND LYING AND BEING SITUATE WITHIN THE CITY OF SANTA FE, SANTA FE COUNTY, STATE OF NEW MEXICO AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FROM WHENCE A CITY OF SANTA FE SANITARY SEWER MANHOLE NO. 41/24 BEARS N15°29'00"W, A DISTANCE OF 1-45.23 FEET TO A POINT, THENCE NORTHWESTERLY, A DISTANCE OF 126.99 FEET TO A POINT, THENCE NORTHERLY, A DISTANCE OF 63.29 FEET, THENCE FROM SAID POINT OF BEGINNING SOUTHEASTERLY, A DISTANCE OF 159.44 FEET TO A POINT, THENCE SOUTHERLY, A DISTANCE OF 41.71 FEET TO A POINT, THENCE SOUTHWESTERLY, A DISTANCE OF 10.41 FEET TO A POINT, THENCE SOUTHERLY, A DISTANCE OF 34.24 FEET TO A POINT, THENCE SOUTHWESTERLY, A DISTANCE OF 10.41 FEET TO A POINT, THENCE SOUTHERLY, A DISTANCE OF 20.00 FEET TO A POINT, THENCE NORTHWESTERLY, A DISTANCE OF 34.35 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING AN AREA OF 0.259 ACRES, MORE OR LESS.

TRACT "H"

A TRACT OF LAND LYING AND BEING SITUATE WITHIN THE CITY OF SANTA FE, SANTA FE COUNTY, STATE OF NEW MEXICO AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FROM WHENCE A CITY OF SANTA FE SANITARY SEWER MANHOLE NO 41/24 BEARS N15°29'00"W, A DISTANCE OF 245.00 FEET, THENCE NORTHERLY, A DISTANCE OF 130.99 FEET TO A POINT, THENCE SOUTHEASTERLY, A DISTANCE OF 63.29 FEET, THENCE FROM SAID POINT OF BEGINNING SOUTHERLY, A DISTANCE OF 20.00 FEET TO A POINT, THENCE SOUTHWESTERLY, A DISTANCE OF 42.00 FEET TO A POINT, THENCE S45°27'00"E, A DISTANCE OF 17.00 FEET TO A POINT, THENCE SOUTHERLY, A DISTANCE OF 20.00 FEET TO A POINT, THENCE NORTHWESTERLY, A DISTANCE OF 60.47 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING AN AREA OF 0.392 ACRES, MORE OR LESS.

NOTES AND CONDITIONS

1. HEREIN IS BASED ON PLAT OF SURVEY DIVIDING LANDS SURVEYED FOR LORENZO MARTINEZ CHAMBERS, ET. AL., SITUATED IN S. SANTA FE, N.M.", PREPARED BY GEORGE RYCKA #3 7448, ON THE 9TH. DAY OF AUGUST, 1962, PLAT NO. "28-14, 15, 16 L.S.
2. MAINTENANCE OF PRIVATE ROADS AND EASEMENTS IS THE RESPONSIBILITY OF THE LAND OWNERS/OWNERS.
3. OTHER EASEMENTS USED FOR THIS SURVEY:
   DEED TO JOSEPHINE CONTRAMAN, RECORDED IN BOOK 373/PAGE 107, DATED JUNE 20, 1972.
   DEED TO JOSE C. MARTINEZ, RECORDED IN BOOK 362, PAGE 344, DATED AUGUST 11, 1970.
   DEED TO DORIS JEANNE LUNA, RECORDED IN BOOK 208, PAGE 716, DATED JUNE 22, 1972.
   DEED TO REDFIELD MARTINEZ, RECORDED IN BOOK 362, PAGE 348, DATED JUNE 30, 1972.
4. THIS PROPERTY DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON CITY OF SANTA FE F.I.R.M., PANEL NO. 350006 0008E, DATED JULY 2, 1986.

CERTIFICATE

THIS IS TO CERTIFY THAT THE TOPOGRAPHIC MAP AND ENGINEERING DATA SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THE SURVEY HEREON WAS MADE BY ME OR UNDER MY SUPERVISION AND THAT IT MEETS THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

DORIS A. GARDNER PLS# 3-3-98 DATE

1355832

OWNERS CONSENT AND AFFIDAVIT

THE UNDERSIGNED OWNERS DO HEREBY ATTEST THAT THE LOT CONSOLIDATION SHOWN HEREON IS WITH THEIR FREE CONSENT AND IN ACCORDANCE WITH THEIR WISHES AND DESIRES AND DO FURTHER DEDICATE ANY EASEMENTS PRIVATE/PUBLIC TO THE APPROPRIATE UTILITY COMPANY OR USER. THIS PROPERTY LIES WITHIN THE PLATTING & PLANNING JURISDICTION OF THE COUNTY OF SANTA FE STATE OF NEW MEXICO.

TRACTS "G" AND "H".

Doris Jeanne Luna 3/12/98
OWNER DORIS LUNA DATE

STATE OF NEW MEXICO } SS
COUNTY OF SANTA FE

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 12TH. DAY OF MARCH IN 98

Doris A. Gardner 4-8-01
NOTARY PUBLIC MY COMMISSION EXPIRES

REVIEWED BY:

9/28/98
SUBDIVISION SUPERVISOR (CONSULTANT) DATE

9/28/98
PUBLIC WORKS DIRECTOR (CONSULTANT) DATE

APPROVED BY

APPROVED BY THE SUBDIVISION COMMITTEE AT THEIR MEETING OF n/a

n/a
CHAIRMAN DATE

n/a
SECRETARY DATE

STATE OF NEW MEXICO } SS
COUNTY OF SANTA FE } 1043-030

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD ON THE 2nd DAY OF October IN 98 AT 11:30 O'CLOCK A.M. AND DULY RECORDED IN PLAT BOOK 394D PAGE 32 OF THE RECORDS OF SANTA FE COUNTY, NEW MEXICO.

WITNESS MY HAND AND SEAL OF THE OFFICE OF HERNANDO SUBSTANTIC, THE SANTA FE COUNTY CLERK.

Kim Chavez
DEPUTY, SANTA FE COUNTY CLERK OFFICE, STATE OF NEW MEXICO

SURVEYING COMPANY

LOT CONSOLIDATION AND LOT LINE ADJUSTMENT FOR TRACTS "G" AND "H".
DORIS JEANNE LUNA
1400 AGUA FRIA STREET
SANTA FE COUNTY, STATE OF NEW MEXICO

CHECKED BY/DATE	DATE	SURVEY NO.
SCALE 1"=60'	SHEET 1/2	L-04-425

Mr. Firstenberg's May 11, 2015 letter

Arthur Firstenberg

May 11, 2015

Board of Adjustment
and
Zachary Shandler, Assistant City Attorney (by hand)
City of Santa Fe
P.O. Box 909
Santa Fe, NM 87504-0909

Regarding: Land Use Cases No. 2013-116 and 2014-82
Appeals of Cellular Phone Task Force et al. regarding 1402 Agua Fria

Dear Mr. Shandler and Members of the Board of Adjustment:

This is to put the City on notice that at the May 5, 2015 meeting of the Board of Adjustment, the appellants in the above-referenced cases were denied due process because legal procedure was not followed. Appellants expect required procedures to be followed at the continuation of this hearing on July 7, 2015.

Attached to this letter is a copy of the Appeal Hearing Procedures, adopted by the Governing Body on April 13, 2011 as part of Resolution No. 2011-24. I call your attention to Section VIII(H), "Order of hearing." The Board did not comply with the following procedures that were required to occur before the public testimony:

> "5. The Presiding Officer shall cross examine the Applicant and the Applicant's witnesses on behalf of the parties, or permit direct cross examination."

Cross examination of the Applicant was not permitted.

> "6. The Appellant shall address questions to staff."

The Appellant was not permitted to question staff.

The Board did not comply with the following procedures that were required to occur after the public testimony:

> "11. The Appellant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.
>
> "12. The Applicant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.
>
> "13. The public hearing shall be closed."

Post Office Box 6216 · Santa Fe, NM 87502 · (505) 471-0129 · bearstar@fastmail.fm

The public hearing is closed after the Appellant and the Applicant make their closing arguments. Since no closing arguments were made on May 5, 2015, the public hearing is not closed.

At the July 7, 2015 continuation of this hearing, Verizon has been requested to present a new radio frequency radiation compliance document. As the representative of the appellants, I will have the right to call witnesses and present evidence related to this document. I will have the right to cross examine the representative of Verizon and his or her witnesses, either directly or through the Presiding Officer, on any matter. I will have the right to question staff on any matter. The public will then have the right to give sworn testimony related to the new evidence. There will then be closing arguments.

The record on appeal provided to the Board of Adjustment is grossly deficient. I call your attention to Section VIII(C) of the Appeal Hearing Procedures. The record on appeal is required to contain:

> "6. Any and all materials provided to the LUD Director and/or the Land Use Board, as the case may be, for their consideration in deciding upon the matter.

Since the decisions appealed from are decisions of the LUD Director to issue building permits, all materials provided to the LUD Director in making those decisions are part of the record. This includes Verizon's 2005 application for a single "wireless equipment shelter" at 1402 Agua Fria and all accompanying materials; Verizon's 2013 application for the addition of three antennas to an "existing telecommunications facility" at 1402 Agua Fria and all accompanying materials; and Verizon's 2014 application for a telecommunications facility at 1402 Agua Fria and all accompanying materials. None of these materials were included in the record provided to the Board at the May 5, 2015 hearing, prejudicing the appellants and forcing me to submit a few of these documents into evidence on their behalf on the day of the hearing, which gave the Board no time to read or evaluate them. The entirety of the record should be provided to the Board by the City in advance of the July 7, 2015 hearing.

Sincerely,

Arthur Firstenberg

Arthur Firstenberg
P.O. Box 6216
Santa Fe, NM 87502
(505) 471-0129

cc: Appellants
Rick Sandoval, Esq.

B. An appeal may be withdrawn at any time by an Appellant. If multiple appeals of the same Final Action have been filed, the withdrawal by one Appellant shall not affect the appeals of other Appellants.

C. In the event an appeal is withdrawn by agreement of the parties, such agreement shall not be contingent upon any modification to the Final Action unless and until such modification is accepted and agreed to by the Land Use Board which took the Final Action, the LUD Director or the City Attorney, as required.

VII. Prohibited Communications; Disclosure

A. No person except the City Attorney may communicate with individual members of the Land Use Board hearing an appeal or of the Governing Body concerning the merits or substance of an appeal after the appeal has been filed.

B. Individual members of a Land Use Board hearing an appeal or of the Governing Body may not inspect the property or structure that is the subject of the appeal or conduct an independent investigation or inquiry by other means, including, without limitation, an internet search, with respect to the subject matter of the appeal or to any parties to the appeal or related to such parties or otherwise connected with the subject of the appeal.

C. Individual members of a Land Use Board hearing an appeal or of the Governing Body who have received a prohibited communication, independently inspected the property or structure that is the subject of the appeal or otherwise independently investigated or inquired into the subject matter of the appeal or of parties to the appeal or other persons connected to the subject of the appeal, shall disclose the same and the substance of the communication at the Appeal Hearing and shall recuse themselves from hearing the matter if they cannot be fair and impartial in deciding upon the appeal.

D. Reserved.

VIII. Appeal Hearing Procedures

A. Submittals by parties.

1. The parties shall submit the following information and documents to the LUD Director ***no later than 12 o'clock noon on the tenth (10th) day preceding the Appeal Hearing:***

   a. A list of witnesses expected to testify on the party's behalf, including (i) a short description of the basis of their testimony (project engineer; adjacent property owner; etc.) and (ii) a short summary of the subject matter on which they are expected to testify.

   b. The affidavit of any person who is unable to attend the Appeal Hearing, including a statement of the reason the person cannot attend to testify in person and a clear statement of the facts they would testify to if present. (*Note: Affidavits should be introduced infrequently and only as a last resort, as the affiant is not subject to cross examination. As a result, affidavits may be given only such weight as is deemed reasonable under the circumstances, e.g., an affidavit supported by the live testimony of another person may be given more weight than an affidavit that has no such independent support, or may be disregarded.*)

2. All submittals shall include a table of contents with page numbers and shall clearly identify on the first page the Appellant's name and the subject of the appeal, including, where applicable, the case name and number used by the City to identify the case, or the type of enforcement action appealed from, or the building permit number appealed and the address of the property that is the subject of the appeal. All submittals shall be legibly written or reproduced, with pages numbered consecutively.

3. All submittals shall be served by the submitting party upon the other party at the same time they are submitted to the LUD Director.

B. Submittals by other persons.

People who are not parties to the appeal may submit letters of support on behalf of one of the parties, or such other documents as they deem relevant to the subject matter of the appeal. Such submittals shall be made to the LUD Director ***no later than 12 o'clock noon on the tenth (10th) day preceding the Appeal Hearing***. Such submittals shall be available for inspection by the parties in the office of the LUD Director and shall be included in the record on appeal.

C. The record on appeal.

The following shall constitute the record on appeal (the Record) and shall be provided to the Land Use Board hearing the appeal, or the Governing Body, as the case may be, sufficiently in advance of the Appeal Hearing to permit them time to review the same:

1. A copy of the Verified Appeal Petition, together with any attachments.

2. A copy of any other matter consolidated for appeal.

3. If applicable, a copy of the Findings of Fact and Conclusions of Law adopted by the Land Use Board hearing the matter appealed from.

4. The minutes or transcripts of any prior hearings on the matter.

5. A staff report setting out:

   a. The case name and number or the building permit number.

   b. The names of the Appellant and the Applicant.

   c. The issues raised in the appeal.

   d. The relief being sought.

   e. A short analysis of the parties' claims.

   f A recommendation, based upon the facts available at the time, applicable Code, prior practice, and the interests of the City in consistent policy, procedures and practices.

6. Any and all materials provided to the LUD Director and/or the Land Use Board, as the case may be, for their consideration in deciding upon the matter.

7. The complete submittals of the Appellant, the Applicant, and any other persons.

A copy of the Record shall be made available to the Appellant and the Applicant at the same time it is provided to the Land Use Board or the Governing Body, as the case may be. Copies of the Record on an appeal to a Land Use Board or the Governing Body shall be available for inspection in the office of the LUD Director, in the case of an appeal to a Land Use Board or the City Clerk's office in the case of an appeal to the Governing Body.

D. Testimony at the Appeal Hearing.

1. All witnesses shall be sworn upon oath or affirmation. Attorneys representing the parties shall not be sworn to the extent they are representing their clients and not testifying as to facts. Attorneys testifying as to facts shall be sworn. City staff shall be sworn when testifying as a witness as to facts. The experience, technical competence and specialized knowledge of city staff may be utilized by the hearing body in evaluating the appeal.

2. Any party (or attorney representing a party) may cross-examine any witness as to his or her testimony, including testimony related to any submittals or to documents submitted at the Appeal Hearing. Unless otherwise permitted by the Presiding Officer, such cross-examination shall be through oral questions addressed to the Presiding Officer at the conclusion of all testimony.

3. The Presiding Officer may impose reasonable limitations on the number of witnesses called by a party, the nature and length of the witnesses' testimony, and the nature and length of any cross-examination.

E. Other evidence.

The parties, their attorneys, or their witnesses may introduce documentary evidence at the Appeal Hearing that is not included in the Record, provided that they provide legible copies of each such document to each member of the Land Use Board hearing the appeal or the Governing Body as the case may be, the Recorder at the Appeal Hearing, and at least one (1) copy for City staff.

F. Opening and closing statements.

Each party shall be permitted to make an opening statement and a closing argument at the Appeal Hearing within such time as shall be determined by the Presiding Officer.

G. Public participation.

The Appeal Hearing shall be open to public comment following the closing arguments of the parties. All members of the public commenting on the matter shall first be sworn. The Presiding Officer may impose reasonable limitations on the nature and length of public comment.

H. Order of hearing.

Subject to the reasonable requirements of the Presiding Officer, the Appeal Hearing shall proceed as follows:

1. If requested by the Presiding Officer, City staff shall provide a summary of the staff report included in the Record.

2. The Appellant shall make his or her opening statement, and then introduce his or her evidence through sworn testimony.

3. The Applicant shall make his or her opening statement, and then introduce his or her evidence through sworn testimony.

4. The Presiding Officer shall cross examine the Appellant and the Appellant's witnesses on behalf of the parties, or permit direct cross examination.

5. The Presiding Officer shall cross examine the Applicant and the Applicant's witnesses on behalf of the parties, or permit direct cross examination.

6. The Appellant shall address questions to staff.

7. The Applicant shall address questions to staff.

8. All members of the public wishing to speak shall be sworn and public comment shall be admitted.

9. The members of the Land Use Board hearing the appeal or the Governing Body, as the case may be, may ask such questions of the Appellant and the Appellant's witnesses, of the Applicant and the Applicant's witnesses, or staff or of members of the public who testified at the public hearing, as they choose.

10. If requested by the Presiding Officer, City staff shall respond to the Appellant's and Applicant's evidence and testimony.

11. The Appellant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.

12. The Applicant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.

13. The public hearing shall be closed.

14. The Land Use Board hearing the appeal or the Governing Body, as the case may be, may deliberate upon the matter in executive session in accordance with Section 10-15-1.H(3) NMSA 1978, provided that the decision shall be made in open session immediately following the conclusion of such deliberations.

15. The Land Use Board hearing the appeal or the Governing Body, as the case may be, shall decide upon the matter by roll-call vote.

I. Either party may submit to the City Attorney proposed Findings of Fact and Conclusions of Law, within ten (10) days of the public hearing at which the Land Use Board decides the appeal, for consideration by the City Attorney.

The members of the Land Use Board hearing the appeal or the Governing Body, as the case may be, shall as soon as reasonably practicable after the Appeal Hearing is closed adopt written Findings of Fact and Conclusions of Law setting forth the legal and factual basis for the decision.

J. Decorum

The parties, their representatives and witnesses, members of the public, and all other persons in attendance at the Appeal Hearing shall at all times observe due decorum and shall not act in a disruptive or disorderly manner, nor make any personal, impertinent or slanderous statements. Failure to observe due decorum may result in expulsion from the meeting or such other lesser reasonable penalties as may be imposed by the Presiding Officer.

K. Miscellaneous.

1. All Appeal Hearings shall be recorded and the recordings preserved.

2. The rules of evidence shall not be strictly followed, in order to permit the introduction of as much relevant evidence as possible.

3. The Presiding Officer shall rule on all evidentiary and procedural matters. Irrelevant and immaterial evidence shall be excluded from consideration in deliberations and unduly repetitious evidence shall be precluded to the extent practicable. Objections by a party to any evidence offered shall be noted on the record.

4. The Appeal Hearing may be postponed in order to obtain additional testimony or other evidence, to review any such evidence, or to permit time for a party to respond to any new evidence introduced for the first time at the Appeal Hearing.

5. In the event that the Appellant or the Applicant does not appear and a postponement has not been requested, the Land Use Board hearing the appeal, or the Governing Body, as the case may be, may postpone the matter to a date certain or may decide the matter upon the evidence contained in the Record, the staff report, and testimony or other evidence introduced at the Appeal Hearing. In the event that the Appellant does not appear at the Appeal Hearing, the Land Use Board hearing the Appeal or the Governing Body, as the case may be, may dismiss the appeal with prejudice.

6. In the case of conflict or discrepancy between these Administrative Appeal Procedures and the provisions of the SFCC, the provisions of the SFCC shall govern.

Arthur Firstenberg

May 11, 2015

Lisa Martinez, Land Use Director
Kelley Brennan, City Attorney
Zachary Shandler, Assistant City Attorney
City of Santa Fe
P.O. Box 909
Santa Fe, NM 87504-0909

Regarding: Land Use Cases No. 2013-116 and 2014-82
Appeals of Cellular Phone Task Force et al. regarding 1402 Agua Fria

Dear Ms. Martinez, Ms. Brennan, and Mr. Shandler:

Attached in the above-reference matters is the Affidavit of Samuel Milham, M.D., M.P.H. In accordance with the Procedures for Appeals, Resolution No. 2011-24, Section VIII(A), this document is hereby submitted to the Land Use Director and served upon the other party, Verizon Wireless, before noon on this, the tenth (10th) day preceding the appeal hearing, which will be held July 7, 2015.

Please distribute the affidavit to the members of the Board of Adjustment.

Thank you.

Sincerely,

Arthur Firstenberg

Arthur Firstenberg, President
Cellular Phone Task Force
P.O. Box 6216
Santa Fe, NM 87502
(505) 471-0129

cc: Verizon Wireless
John Malone
Stephen Durkovich, Esq.

BEFORE THE BOARD OF ADJUSTMENT
CITY OF SANTA FE, NEW MEXICO

In the Matter of the Application
of Verizon Wireless for a
Telecommunications Facility at
1402 Agua Fria Street

Land Use Cases No. 2013-116 and 2014-83

AFFIDAVIT OF SAMUEL MILHAM, M.D., M.P.H.

State of Washington)
ss:
County of Thurston)

Samuel Milham, M.D., M.P.H., being duly sworn, deposes and says:

1. I am a physician and an epidemiologist specializing in public health. I graduated from Albany Medical College in 1958, received my Master of Public Health from Johns Hopkins University School of Public Health in 1961, and was a Senior Resident in Epidemiology at the New York State Department of Health from 1961 to 1962. I was a developmental consultant for the New York State Department of Health from 1963 to 1967. While there I developed the first birth record based malformation surveillance system which was able to detect the phocomelia epidemic caused by thalidomide. From 1967 to 1968, I taught epidemiology in the school of public health and the medical school at the University of Hawaii. I was Section Head in the Epidemiology Section of the Washington State Department of Health from 1968 to 1986, and Section Head of the Chronic Disease Epidemiology Section of the Department from 1988 to 1992. I have been a Clinical Associate Professor at the University of Washington School of Public Health since 1968, and Adjunct Professor at Mt. Sinai School of Medicine since 1989. I am a Diplomate of the American Board of Preventive Medicine. I have more than one hundred scientific publications, many dealing with the health effects of electricity, electromagnetic fields

and electromagnetic radiation. In 1997, I was awarded the Ramazzini prize for my pioneering work in describing the occupational cancer risks of electromagnetic fields. I am the author of the book, *Dirty Electricity: Electrification and the Diseases of Civilization.* published in 2010. My curriculum vitae is attached hereto as Exhibit 1.

2. I have reviewed the report, "Radio Frequency Emissions Analysis Report Evaluation of Human Exposure Potential to Non-Ionizing Radiation, MPE Analysis, 1402 Agua Fria St., Santa Fe, NM," dated May 4, 2015, an analysis of radiation levels from a telecommunications facility at that location, submitted by Advanced Testing Services, Inc. ("ATSI"), an independent testing laboratory located in Albuquerque, New Mexico. I was asked by neighbors of 1402 Agua Fria Street for my expert opinion. I make this affidavit based on the ATSI report, on information given to me by these neighbors, and on my own knowledge and experience.

3. Verizon Wireless operates a telecommunications base station ("cell site" or "cell tower"), containing nine antennas mounted on top of a carpeting warehouse at 1402 Agua Fria Street in Santa Fe, New Mexico. Although the small property where it is located is zoned commercial, it is surrounded by houses in a dense residential neighborhood, with the closest residential lot being only 20 feet away.

4. It is not unusual for cell towers to be located in residential neighborhoods. But what is unusual about the situation at 1402 Agua Fria Street is that a major cell site, emitting 360 watts of radio frequency ("RF") power per sector, is located so close to street level *and* so close to so many residences. These antennas sit directly on a one-story rooftop only 19 feet above the ground, and their center of radiation is only 22'6" above ground level.

5. From a public health standpoint, this is a tragic situation. The health effects of cell towers are caused both by high frequency transients, also called dirty electricity, that travel through the ground in the immediate neighborhood of the cell site, and by direct radiation from the antennas. When antennas are mounted on a tall tower, the immediate neighbors are beneath the main beam, and do not get the full brunt of the direct radiation. But the antennas at 1402 Agua Fria Street, being almost at street level, are aimed directly at all the neighbors.

6. The ATSI calculations are alarming because they indicate that peak RF radiation levels are over the limits set by the Federal Communications Commission ("FCC") on the entire rooftop of the carpeting warehouse, which is accessible to and used by maintenance workers, fire personnel, and others, and is also over the FCC's limits on three properies adjacent to the warehouse at 1402 Agua Fria Street. This is particularly alarming because various health effects, including cancer, are known to develop at exposure levels well below the limits set by the FCC. It is not surprising that so many of the neighbors to 1402 Agua Fria Street have developed cancer since the Verizon cell site was installed in 2005.

7. For example, reviews of cancer incidence and mortality in firefighters consistently show that they are at an increased risk of a number of different types of cancer. These include leukemia, multiple myeloma, non-Hodgkin's lymphoma, breast cancer, malignant melanoma, and cancers of the brain, stomach, colon, rectum, prostate, urinary tract, testes, and thyroid. These are the same type of cancers that occur with high rates in other workers exposed to electromagnetic fields and RF radiation. Attached hereto as Exhibit 2 is my study, "Most cancer in firefighters is due to radio-frequency radiation exposure not inhaled carcinogens," *Medical Hypotheses* 73 (2009): 788-789. I concluded that firefighters' increased cancer risk is

due primarily to their high exposure to mobile two-way-radio communication devices, and from radio transmitters mounted on the roofs of firehouses and fire vehicles.

8. Örjan Hallberg and Olle Johansson found similar types of cancers in their study of the risks of exposure to AM radio towers. Their study, "Cancer Trends During the 20th Century," *Journal of the Australasian College of Nutrition and Environmental Medicine*, 21(1):3-8 (2002), is attached hereto as Exhibit 3. They found a direct correlation, throughout the twentieth century in 26 Swedish counties and in 40 countries, between the rates of certain cancers and exposure of the population to AM radio towers. These were malignant melanoma and cancers of the bladder, prostate, colon, breast, and lung. They also found a direct correlation with rates of asthma.

9. I understand that the closest neighbors to 1402 Agua Fria, an elderly couple who live in 1404 Agua Fria, suffer from severe asthma. I understand that within several houses of 1402 Agua Fria are cases of breast cancer, colon cancer, lung cancer, and cancer of the urinary tract.

10. Fire stations have also been a favorite location for the placement of cell towers. A study of California firefighters who had worked for up to five years in fire stations with cell towers showed that they suffered from insomnia, lack of focus, depression, severe headaches, tremors, and slowed reaction time. Because of these studies, and because so many firefighters who worked in stations with cell towers reported symptoms, including headaches, dizziness, extreme fatigue, disorientation, memory loss, attention deficit and slowed reaction time, that began in the first weeks after the cell towers were activated, the International Association of Fire Fighters ("IAFF") passed a resolution in 2004 opposing the placement of cell towers at fire stations. I understand that almost everyone who lives within one block of 1402

Agua Fria Street suffers from insomnia and headaches. IAFF Resolution No. 15, August 2004 is attached hereto as Exhibit 4.

11. I have no doubt that the cancers and other health problems suffered by the immediate neighbors to 1402 Agua Fria Street are directly caused by the cell tower next door to them.

I declare under penalty of perjury under the laws of the State of New Mexico that the foregoing is true and correct.

Samuel Milham MD
Samuel Milham, M.D., M.P.H.

June 24, 2015
date

Sam Milham Cirriculum Vitae

Birth Date: May 12, 1932

Education Union College, Schenectady, New York, September

Experience 1950-June 1954, B.S. Sigma Xi, Fuller Chemistry Prize

New York State Medical Scholarship.

Albany Medical College, September 1954-June 1958, M.D. Alpha Omega Alpha.

Intern, U.S. Public Health Hospital, Boston, Massachusetts, July 1958-July 1959.

U.S. Public Health Service Residency in Public Health. Assigned to Monroe County Health Department, Rochester, New York, July 1959-August 1960.

Johns Hopkins School of Hygiene and Public Health, September 1960-June 1961, M.P.H.

Senior Resident in Epidemiology. Epidemiology Residency Program, New York State Department of Health, June 1961-1962.

Development Consultant. New York State Department of Health, 1963-1967.

Assistant Professor, Department of Pediatrics, Albany Medical College, July 1964-1967.

Diplomate, American Board of Preventive Medicine, June 1966.

Associate Professor, University of Hawaii School of Public Health and Medical School, 1967-1968.

Travel Fellowship, IARC 1971.

Section Head, Epidemiology Section, Washington

State Department of Health, 1968-1986.

Travel Fellowship, International Cancer Research Technology Transfer, 1981.
Washington State Public Health Association Annual Award, 1986.

Chronic Disease Epidemiologist, Washington State Department of Health, 1968-1988.

Clinical Associate Professor, University of Washington School of Public Health, 1968--.

Section Head, Chronic Disease Epidemiology Section, Washington State Department of Health, 1988-May 1992.

Adjunct Professor, Mount Sinai School of Medicine, 1989--.

Robert Carl Strom Foundation Humanitarian Award, 1990.

Member of Bioelectromagnetics Society, 1984--.

Self-employed, June 1992.

Elected to Fellowship, Collegium Ramazzini, October 1994.

Ramazzini Award. 1997

Special Congenital defects, occupational and

Interests: environmental illness, methods in occupational studies, EMF epidemiology.

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L = letter

M = monograph

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Sam Milham
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Contents lists available at ScienceDirect

Medical Hypotheses

journal homepage: www.elsevier.com/locate/mehy

Most cancer in firefighters is due to radio-frequency radiation exposure not inhaled carcinogens

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ARTICLE INFO

Article history:
Received 14 April 2009
Accepted 18 April 2009

SUMMARY

Recent reviews and reports of cancer incidence and mortality in firefighters conclude that they are at an increased risk of a number of cancers. These include leukemia, multiple myeloma, non-Hodgkin's lymphoma, male breast cancer, malignant melanoma, and cancers of the brain, stomach, colon, rectum, prostate, urinary bladder, testes, and thyroid. Firefighters are exposed to a long list of recognized or probable carcinogens in combustion products and the presumed route of exposure to these carcinogens is by inhalation. Curiously, respiratory system cancers and diseases are usually not increased in firefighters as they are in workers exposed to known inhaled carcinogens. The list of cancers with increased risk in firefighters strongly overlaps the list of cancers at increased risk in workers exposed to electromagnetic fields (EMF) and radiofrequency radiation (RFR). Firefighters have increased exposure to RFR in the course of their work, from the mobile two-way radio communications devices which they routinely use while fighting fires, and at times from firehouse and fire vehicle radio transmitters. I suggest that some of the increased cancer risk in firefighters is caused by RFR exposure, and is therefore preventable. The precautionary principle should be applied to reduce the risk of cancer in firefighters, and workman's compensation rules will necessarily need to be modified.

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Background

In the 1970s I set up a system for coding and analyzing the occupational information on the Washington State death record. Three volumes of these analyses have been published by National Institute of Occupational Safety and Health (NIOSH) beginning in 1976. The final NIOSH volume was published in 1997, and now Washington State occupational mortality data since 1950 is available on-line [1] and is updated automatically. The first monograph, Occupational Mortality in Washington State published by NIOSH in 1976 covering deaths in the years 1950–1971 showed that Washington State firefighters had increased mortality due to brain cancer, malignant melanoma, and non-Hodgkin's lymphoma. None of these cancers had an intuitive connection to inhaled carcinogens.

In 2004, I examined a cluster of three male breast cancers in office workers exposed to high levels of EMF [2]. This added to an already impressive body of reports linking male breast cancer to EMF and RFR [3]. This cancer is so rare that its repeated appearance in EMF/RFR exposure situations functions like a sentinel cancer for these exposures. When a Florida firefighters' cohort was reported as having an increased incidence of male breast cancer [4], the hypothesis that RFR causes some firefighters' cancer was born.

Cancers increased in firefighters

Firefighters have been shown to be at increased risk of developing a number of cancers. A recent review of 32 studies and a meta-analysis of cancer risk among firefighters [5] concluded that multiple myeloma, non-Hodgkin's lymphoma, prostate cancer and testicular cancer were probably associated with firefighting, and that leukemia, skin cancer, malignant melanoma, brain cancer, cancer of the rectum, colon, stomach, buccal cavity and pharynx were possibly associated with firefighting. Another review [6] adds urinary bladder cancer to the probable list. A 2005 study links male breast cancer and thyroid cancer with firefighting [4].

Carcinogenic exposures in firefighters

Firefighters are exposed to a long list of carcinogens in combustion products including asbestos [7], polycyclic aromatic hydrocarbons [8], benzene [9], lead [10] and aromatic amines [11]. The major route of exposure to these carcinogens is by inhalation. Inhalation of carcinogens ordinarily leads to development of respiratory cancers. For example, coke oven workers [12] who inhale coal tar pitch volatiles, and copper smelter workers [13] who inhale arsenic trioxide are at increased risk of developing lung cancer. Respiratory cancers, including lung and laryngeal cancers and respiratory diseases like bronchitis and emphysema, are usually not at increased risk in firefighters. The 32 paper review and

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doi:10.1016/j.mehy.2009.04.020

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meta-analysis [5] concludes that lung cancer is unlikely to be associated with firefighting.

EMF/RFR exposure and cancer

In 1982, I was the first to show that workers in jobs with an intuitive exposure to electricity had increased mortality due to leukemia [14]. Since then, non-Hodgkin's lymphoma [15], brain cancer [16], malignant melanoma [17], and male breast cancer [2,3] have been shown to have increased mortality or incidence in electrical workers. The upward turn of malignant melanoma incidence has been ecologically linked to the roll out of television and frequency modulation radio transmission in the 1950s with increased RFR exposure of populations [18]. Malignant melanoma has increased incidence in electronic workers [17] and in office workers exposed to strong EMF fields [19]. High frequency voltage transient exposure (a type of RFR) of teachers in a southern California school has been linked to an increased incidence of malignant melanoma, thyroid and uterine cancer [20]. Amateur radio operators [21] exposed to RFR in their hobby, have increased mortality due to leukemia, multiple myeloma and other lymphatic cancers. Childhood leukemia has increased incidence in populations living near powerful terrestrial antennas which emit RFR [22–24]. A cluster of cancer of the testes has been reported in traffic policemen who held the live radar unit in their laps while on duty [25].

EMF and RFR exposure of firefighters

Firefighters are exposed to RF from transmitters which are at times located in the firehouse. Fire vehicles and trucks area also equipped with two-way radio systems which can expose vehicle occupants to RFR, and personal transceivers expose the firefighters to RFR while communicating at the fire scene. US firefighters' radio systems are described in great detail in a National Institute of Occupational Safety and Health (NIOSH) document [26].

Hypothesis

Many of the cancer types with an increased incidence in firefighters are caused by firefighters' occupational exposure to radio-frequency radiation. Current thinking attributes the cancer increase to inhalation of carcinogenic combustion products. The nature of the inhaled carcinogens has certainly changed over time, since building materials and furnishings have changed increasingly to man-made materials. Yet, the Washington State occupational mortality data set showed that brain cancer and malignant melanoma were already in excess in firefighters' deaths occurring in the period 1950–1971 and continue to be in excess since then. The same data set showed that men with intuitive exposure to EMF's and RFR had increased mortality due to leukemia, brain cancer and non-Hodgkin's lymphoma [1]. An office workers cohort with high EMF exposure showed a cancer increase, with a high risk of malignant melanoma [19]. School teachers exposed to a type of RFR had increased incidence of malignant melanoma and thyroid cancer [20].

Evaluation of this hypothesis

The most difficult part of an evaluation of this hypothesis, as in all occupational cancer studies, is characterizing the past EMF/RFR exposures which caused these cancers, so that cancer latencies can be factored in. If historical RFR exposure can be added to the exposure information available on firefighters, cohort and case-control incidence or mortality studies should be able to test this hypothesis.

Consequences of this hypothesis

One of the most important facets of this hypothesis is that many firefighters' cancers may be preventable. Workman's compensation rules for work-initiated cancers will need revision. Like many other potential occupational carcinogens, it would be wise to exercise the precautionary principle to minimize RFR exposure in firefighters before definitive proof of carcinogenicity is available.

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Reprinted from. *Journal of Australian College of Nutritional & Environmental Medicine* Vol. 21 No. 1; April 2002: pages 3-8

Cancer Trends During the 20th Century

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Abstract

Purpose: To review development trends and possible relations between different cancers in Sweden and in other countries to better understand causing mechanisms.

Materials and methods: We used publicly available databases on cancer incidence and mortality to highlight trends and trend breaks. The data were used for correlation studies between different forms of cancers as reported from different counties within Sweden, and from other countries.

Results: Some cancer forms correlate to malignant melanoma while others, like leukaemia, do not relate to melanoma at all. Asthma is a disease that has a sharp trend break just as these cancers show around 1955.

Conclusions: There is a common environmental stress that accelerates several cancer forms such, as colon cancer, lung cancer, breast cancer, bladder cancer and malignant melanoma. Every effort should be taken to identify and eliminate this stress.

Introduction

There are a number of cancers that still are lacking good explanations as to their cause. The cancer report from *Socialstyrelsen* 1997[1] states that the causing mechanisms behind bladder-, breast-, colon- and prostate cancers still are unknown. Considerable doubt rests also with the popular explanation that sunburn is causing the drastic increased incidence in skin melanoma and death rates since 1955. Another problem that has not been solved is why we see such an explosive increase of asthma and allergies from about the same time.

In this paper, we will take a closer look at the statistics of all these diseases in an attempt to narrow down the range of possible causing mechanisms.

Methods

We used databases on cancer incidence and mortality for Sweden as well as for other countries to derive cancer trends over time.[1-3] We also combined results from a death-cause register and a cancer incidence register in Sweden to investigate if people who died from lung cancer or breast cancer had earlier in life suffered from skin melanoma.[4] Correlation characteristics were calculated between different cancer types, both within Sweden and between different countries.

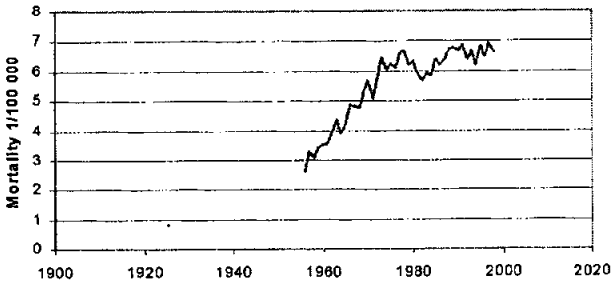

Figure 1. Mortality due to bladder cancer in Sweden since 1956.

Results

Bladder, prostate, melanoma, colon and breast cancers

Figure 1 shows the development of bladder cancer since 1955. In 1979 this disease had a reduction in the numbers dying annually, but since 1982 the rate is increasing again. Due to lack of data we can only see the development from 1955.

Figure 2 gives the drastic increase in Sweden in prostate cancer since 1951. Increasing trends can be noticed in 1955, 1970 and 1982, while a period of decreasing numbers started in 1979, just as for bladder cancer.

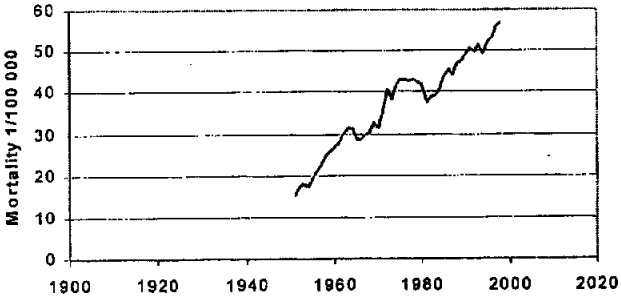

Figure 2. Development of prostate cancer death rates in Sweden since 1951.

Figure 3 shows the mortality for skin melanoma in Sweden. Data before 1955 is not published by the authorities, but was retrieved from a library.[5] The raw data shows that the 'natural' death rate increased from about 30 per year in 1912 to 50 in 1954. This gives an increase of 0.5 more victims per year. From 1955 it increased to 325 in 1996, which gives an increase by almost 7 victims per year, i.e. 14 times more than before 1955.

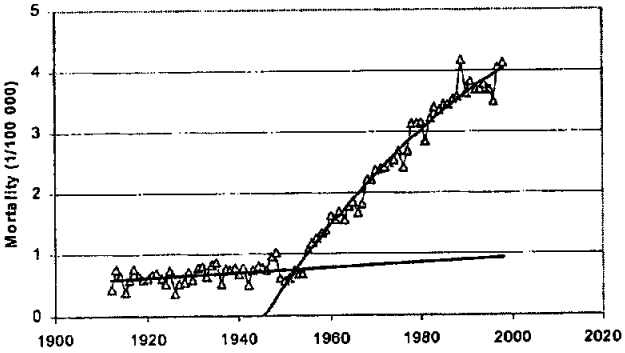

Figure 3. Skin melanoma mortality in Sweden since 1912.

Figure 4 gives the development of lung cancer death rate in Sweden.

Figure 5 gives the development of female breast cancer deaths in Sweden. Breast cancer screening started after 1975 to be gradually introduced in the country, which might explain part of the stabilisation. Better treatment in general is also altering these types of graphs. It should be noticed that breast cancer incidence has not levelled off, but continues to increase. This means that the causing mechanism behind breast cancer has not been properly addressed, but only methods of treatment and early diagnostics.

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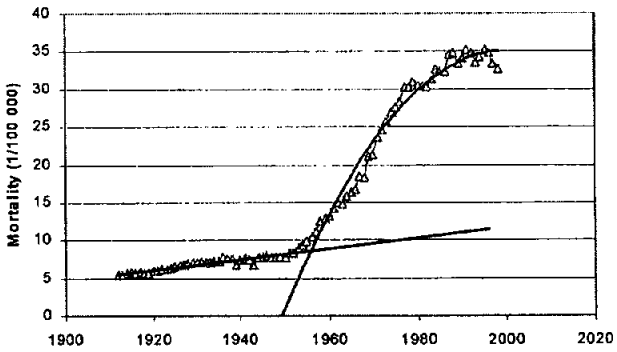

Figure 4. Lung cancer death rates in Sweden.

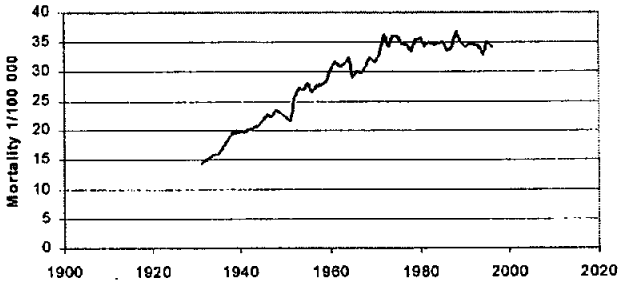

Figure 5. Development of female breast cancer mortality.

Figure 6 gives the development of colon cancer mortality since 1931. The mortality is increasing between 1920-1940 and starts to increase again around 1955 and 1969. A reduction is noticed from 1979.

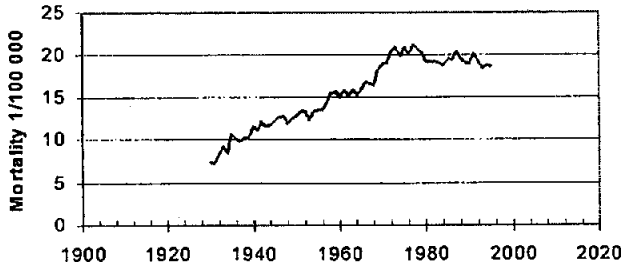

Figure 6. Mortality due to colon cancer in Sweden.

Asthma

Figure 7 shows the prevalence of asthma among 18-year-old males in Sweden.[6] The same graph also gives the percentage of 18-year-old males in Finland who were rejected at the military conscription test due to asthma.[7] These data are only available up to 1989. Before 1960

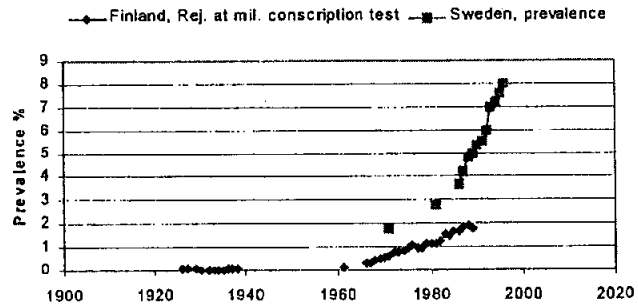

Figure 7. Asthma prevalence among Swedish 18-year-old males and the rejection rate at military conscription test due to asthma in Finland.[6,7]

this level was essentially zero or at a very low level. Again, the graph indicates that a drastic change was made to the environmental conditions around 1960 or before 1960.

Figure 8 gives the general asthma prevalence in the Swedish population according to a number of studies, summarised in ref. 8.

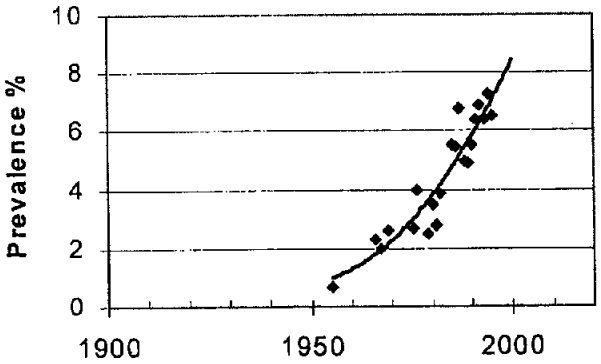

Figure 8. General asthma prevalence in the Swedish population.[8]

International cancer correlations

According to a recent study,[9] breast and prostate cancers are correlated. References 2 and 9 give the incidences from different regions in the world. People who move from low- to high-incidence countries also increase their incidence.[9] Figure 9 is a plot of prostate cancer mortality versus breast cancer mortality in a number of countries (Age standardised rates adjusted).

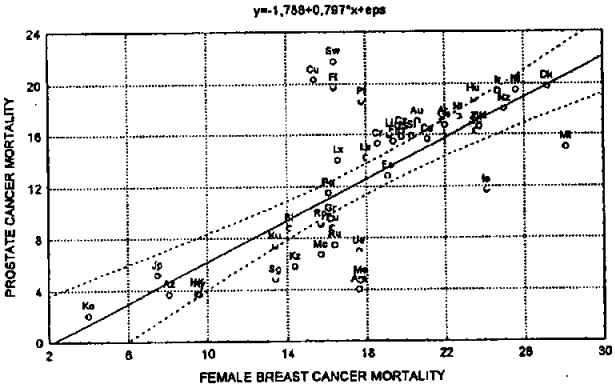

Figure 9. Breast and prostate cancer mortalities correlate. b=0.74; p<0.00001

Since we see a correlation between breast cancer and prostate cancer, it might be of interest to see if other cancers correlate. Figure 10 is a plot of melanoma and breast cancer incidences from 40 countries.[2] Here an association is also evident. Each dot is a specific country. See also Table 1.

Swedish cancer death rates

Figure 11 shows the development of different cancer death rates in Sweden, expressed as a percentage of reported rates in 1996. The graph also includes breast cancer incidence expressed in the same way. It is obvious that the graphs are quite similar, with a major trend break around 1955 and a short period of improvement around 1980. Colon cancer starts to increase already after 1920 and has a very clear reduction around 1980.

From Figure 11 it is clear that these cancer forms have a very similar development, although colon mortality seems to have been triggered already in 1920. The average development for the rest of the cancers

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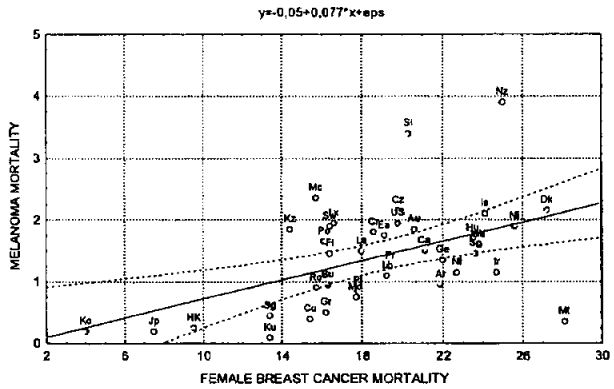

Figure 10 An association is noticed between breast cancer and skin melanoma mortality. b=0.49; p=0.00151

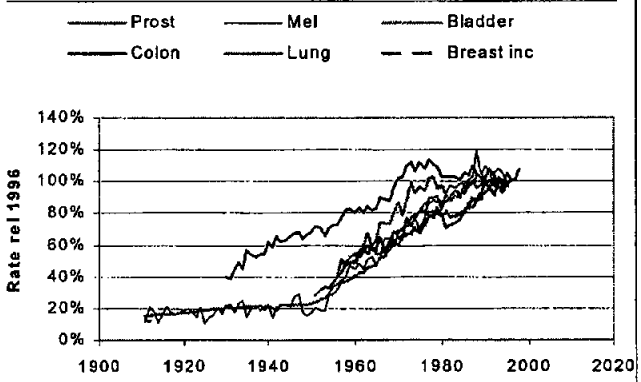

Figure 11. Cancer death rates and breast cancer incidence in Sweden expressed as a percentage of their values in 1996.

11 is given in Figure 12. In the same graph the number of persons per year who have been registered as sick for more than one year is also plotted. Again, 1979 seems to be a magic year of health improvement, while 1997 looks to be another year of disaster. It may predict that the cancer mortality for 1999 and onwards will also increase.

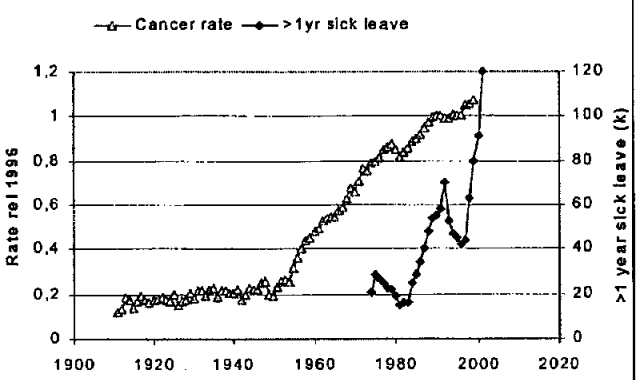

Figure 12. The average cancer rate relative to 1996 for bladder, melanoma, prostate, lung and breast cancers and the number of persons on sick leave for more than one year.

Figure 13 gives a similar graph where the 'illness factor' in Sweden has been plotted since 1955. There is obviously a clear relationship between this factor and cancer mortality.

Discussion

The authorities never publish the drastically increasing cancer mortality as shown in figures 11-13. First of all, data before 1955 has always been locked out from publicly available databases. Secondly,

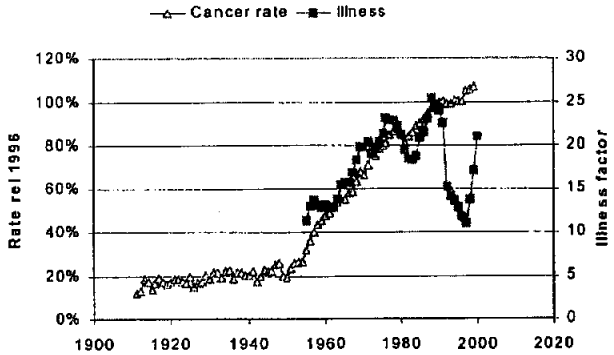

Figure 13. The similarity between the 'illness factor' and cancer mortality for the cancers analysed. Since 1997 the illness factor has increased drastically and continues to do so in 2001.

and even worse, trends for obviously exposure-time-dependent cancers are effectively neutralised by use of age-standardised ratios (ASR). This procedure assumes that the increasing cancer incidence is a natural effect of growing old and thus the age standardised mortality will stay the same although the population gets older. By doing this, the responsible institutions can show to the authorities that the mortality is in control and in effect not increasing at all despite the fact that it is. Furthermore, several cancer mortalities are not published before 1969, which makes it difficult to notice the sharp trend breaks that are present at that year. The responsible authorities do not agree that there is any trend break of interest at all.[13] Nothing speaks for either a trend break in cancer incidence or that a large number of cancers would depend on electromagnetic fields.

Figure 5 shows that breast cancer deaths started to increase long ago, maybe in 1920. This curve has an almost linear increase that flattens out around 1975. But since death rates are influenced by improvements in the medical treatment, it may be better to look at incidence data (rate of people getting ill per year) rather than on death rates.

Figure 14 shows that the incidence rate continues to grow even though the mortality levelled off after 1975. This implies that we have improved the treatment but not at all addressed the cause of this disease. It is interesting to note that breast cancer incidence also shows an improvement in 1979 and a few years onwards, just as the prostate, bladder and colon cancer death-rate graphs do.

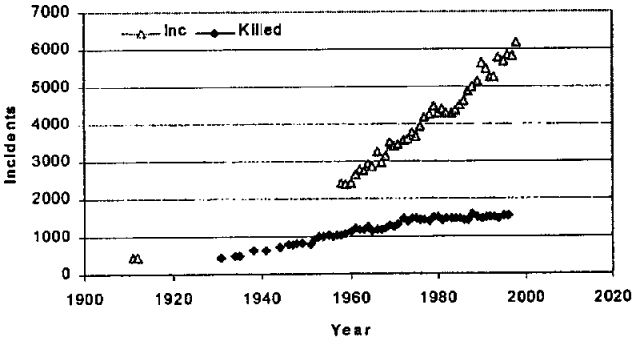

Figure 14. Development of female breast cancer cases in Sweden.

Skin melanoma is a cancer that started to explode in 1955 (see Figure 3). It is interesting to note that a similar steep increase in melanoma mortality was also reported from Queensland, Australia, when comparing 1951-1959 with 1964-1967.[10] This increase was related to the introduction of high power TV broadcasting transmitters. Skin melanoma has also been associated with the expansion of broadcasting networks in Sweden, Norway, Denmark and USA.[11] Lung cancer has an almost identical development, as melanoma has had in Sweden with a scale factor of 10 (see Figures 3 and 4).

Augustsson and Stierner[14, 15] presented statistics on the location of

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moles, melanocytes and melanoma on the human body. Figure 15 is a summary picture of all these moles. Figure 16 gives the dot density for different parts of the body. It is interesting to note the similarity to induced vertical currents in the body due to radio frequent electromagnetic fields (RF) as has been presented in ref. 16 (see Figure 17).

Augustsson and Stierner[14, 15] noticed that the largest mole density

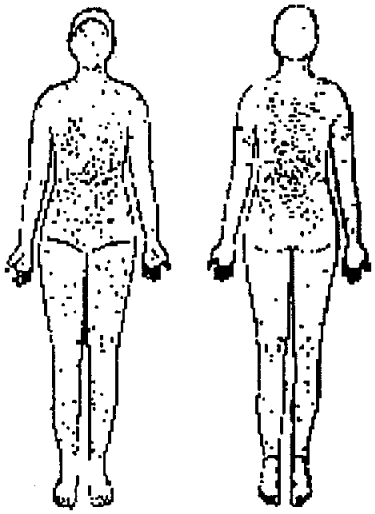

Figure 15. The combined distribution of dysplastic naevi and melanoma ('dots') over the human body.[14-15]

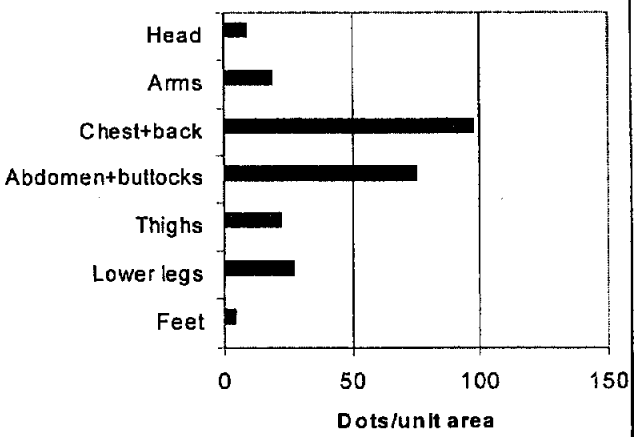

Figure 16. The number of 'dots' per unit skin area according to Figure 15.

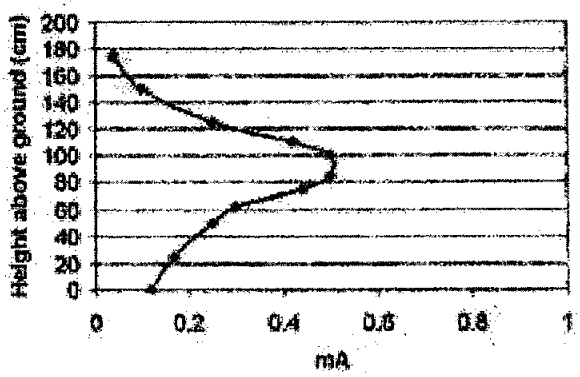

Figure 17. Induced vertical1 current distribution for isolated, shoe-wearing, grounded or ground-topped human model at 27.12 MHz under near-field exposure conditions.[16]

was found in areas that were not normally exposed to sunshine. Thus, they concluded that intermittent or minimal exposure to UV radiation was more dangerous than continuous exposure. We think that the explanation is quite different from that. The induced currents from RF exposure are largest at these parts of the body so the mole density should be expected to follow the same pattern.

Cancers in the Swedish counties

Figure 18 shows the correlation between a number of cancers and melanoma in the 26 different Swedish counties. Table 2 gives the respective beta-values. It is worth noticing that leukaemia does not correlate to these cancer types at all.

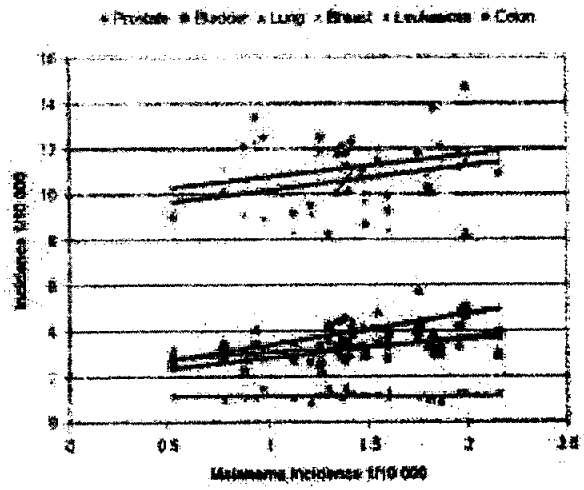

Figure 18. Several cancers correlate with skin melanoma in the 26 different Swedish counties, but leukaemia does not.

A closer look at the lung cancer mortality shows a development very similar to skin melanoma (see Figures 3-4). The average consumption of cigarettes in Sweden has decreased from 1,946 cigarettes per year per capita in 1980 to 1,200 in 1995, although the mortality has continued to increase; however, the increase has been lower than that for skin melanoma.

In Figure 19 we plotted the annual melanoma deaths vs. lung deaths in Sweden for each year from 1912 to 1996 (beta = 0,982).

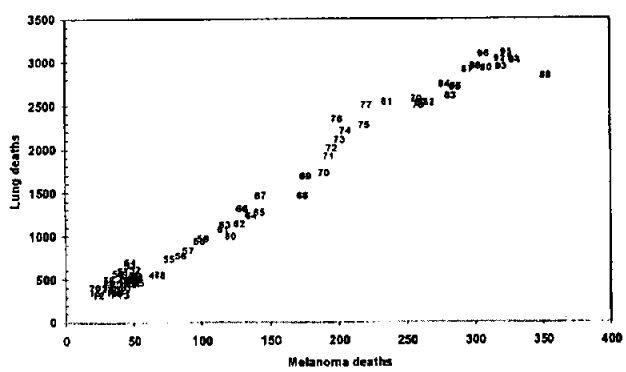

Figure 19. Melanoma and lung cancer deaths for different years.

In order to test by other means if lung cancer and breast cancer are related to skin melanoma, we combined two databases: the Swedish Cancer Register and the Death Cause Register of Sweden.[4] The records of those who died from breast cancer or lung cancer were searched for any treatment for skin melanoma earlier in their lives. As a reference, all other death causes except breast, lung or melanoma cancers were also searched for the same. A specific, non-cancer death

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cause was ischemic heart disease, which also was searched for any melanoma treatment.

The data was collected over the time period 1970-1998. The results show the fraction (%) of the deceased who earlier in life had been treated against skin melanoma:

All death causes: ... 0.21% (>2.5 millions deaths)
Breast cancer: ..... 0.37% (42,610 deaths)
Lung cancer: ..... 0.33% (71,956 deaths)
Heart Disease: ..... 0.24% (821,367 deaths)

We conclude that breast cancer and lung cancer are linked to skin melanoma, since people who died due to breast or lung cancer had an increased melanoma incidence by a factor of 1.67 (0.35/0.21). This was further underscored by the strong geographical relationship between melanoma incidence and lung, breast or colon cancer incidence. The large numbers involved in this analysis exclude the possibility that the results are just a matter of coincidence.

Figures 20 and 21 show that colon cancer relates to skin melanoma and that lung cancer and bladder cancer are strongly correlated. Figures 22 and 23 show that cigarette consumption is not a strong common factor for these cancers. See Table 2, data is from 1989-1993.

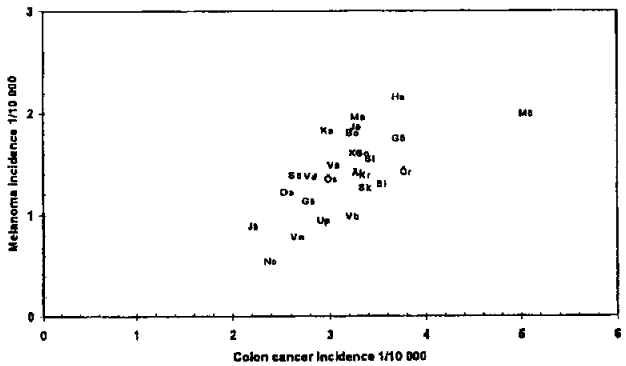

Figure 20. Melanoma incidence versus colon incidence in the 26 counties of Sweden. b=0.655; p=0.000207. R^2=0.43

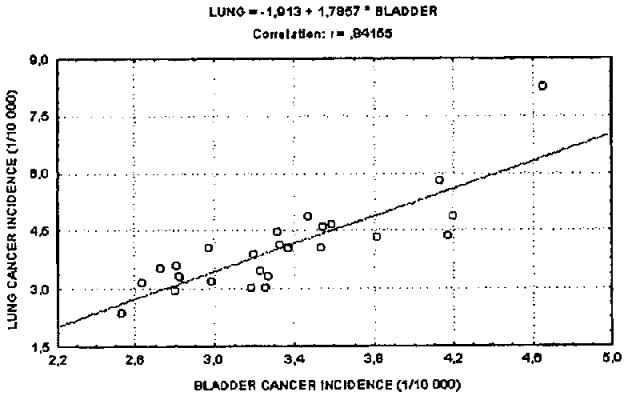

Figure 21. Lung cancer and bladder cancer incidence in the Swedish counties are strongly correlated. b=0.842; p<0.00001. R^2=0.71

A multi-regression analysis of lung cancer mortality in 22 different countries showed a relation to both cigarette consumption and melanoma mortality. Cig-beta=0.679 and Mel-beta=0.528 with p=0.00212.

Finally, we looked at all cancer deaths reported since 1912 and plotted the result in Figure 24. Trend-breaks are quite visible in 1920, 1955, 1970 and in 1979.

In 1920 we got MW radio, in 1955 we got FM radio and TV1, in 1969-70 we got TV2 and colour TV and in 1978 several of the old AM broadcasting transmitters were disrupted, all according to ref. 12.

Improvements in prostate cancer deaths have been reported in

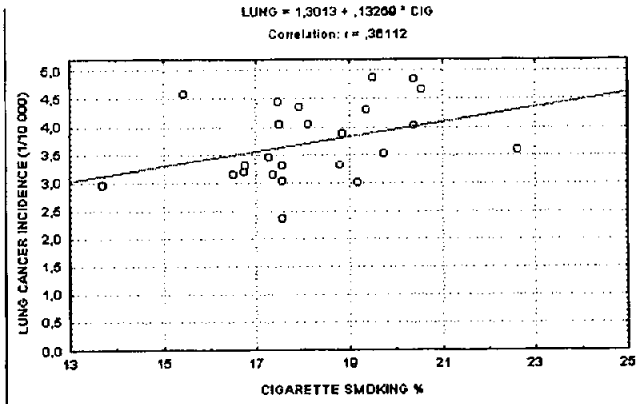

Figure 22. The correlation between lung cancer incidence and cigarette consumption (% of the population that is smoking cigarettes) is weak in the Swedish counties. R^2=0.13.

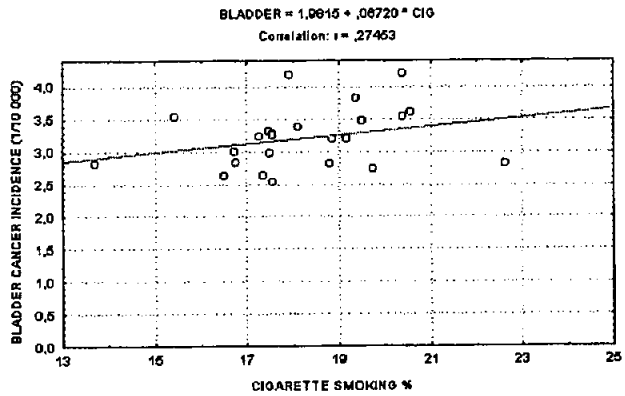

Figure 23. Bladder cancer incidence does not correlate well to cigarette consumption in Sweden. R^2=0.07

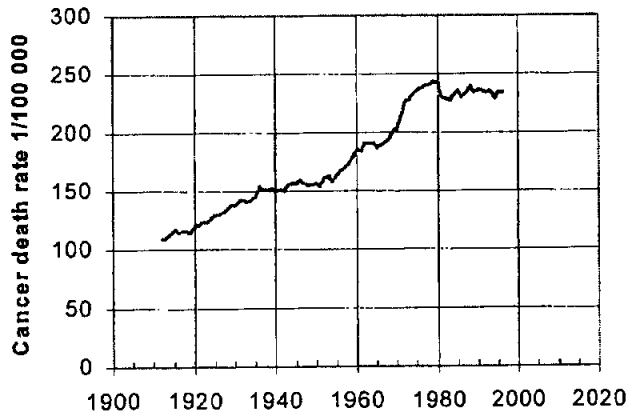

Figure 24. The mortality shows clear trend-breaks in 1920, 1955, 1970 and in 1979.

USA. Figure 25 gives the number of prostate cancer deaths and the number of AM stations still active. Since 1990 the number of active AM stations has been steadily decreasing.

Figure 26 gives the development of cancer mortalities in different countries.

Conclusions

1. Breast, bladder, prostate, lung, colon and cutaneous melanoma cancers are all associated with each other. Figures 15-17 and ref. 11 relate melanoma to radio-frequency EMF.

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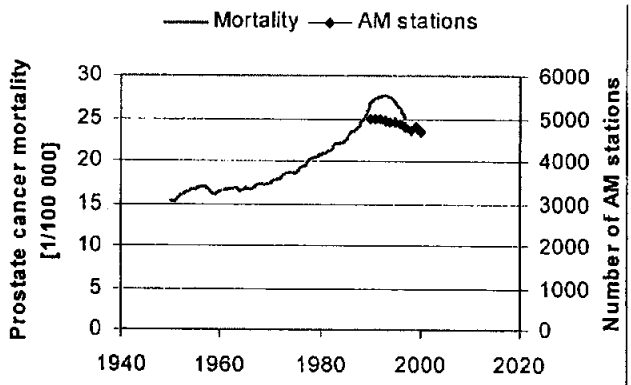

Figure 25. A sharp decline in number of men killed by prostate cancer has been noticed in USA since 1990. At the same time the number of AM stations have started to decline.

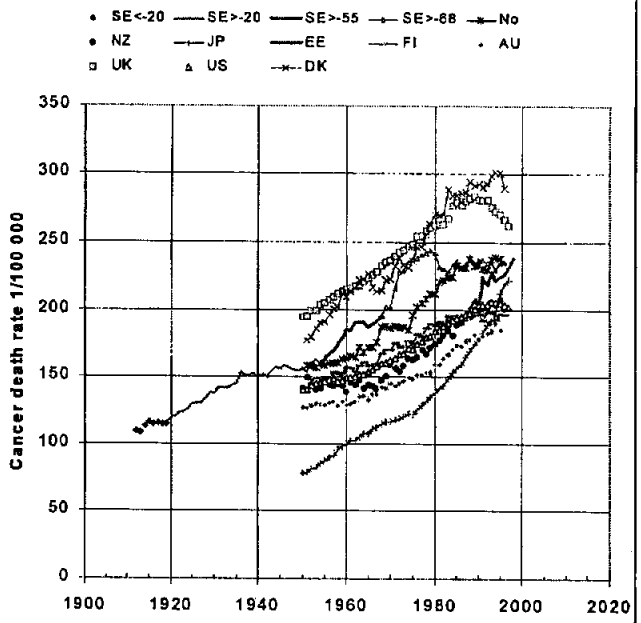

Figure 26. Cancer mortality development in several countries since 1950.

2. Figure 18 indicates that leukaemia has nothing to do with melanoma. Somewhat more unexpected is the strong relation between melanoma and colon cancer and between lung cancer and bladder cancer.
3. Since the cancer mortality trend-breaks coincide with expansion or disruption of public broadcasting in Sweden, studies regarding the influence from electromagnetic fields on cancer and asthma development cannot be further delayed.
4. Lung cancer mortality has a multiple correlation to both cigarette consumption and skin melanoma mortality.
5. Since closing down of public radio transmitters seems to have a strong effect in reducing cancer mortality, public air radio transmission should be avoided.
6. Age-standardised ratios should be used with care when presenting cancer rates that are dependent on exposure times.

Similar trend-breaks as found in Sweden can be noticed for other countries. Figure 26 shows, for example, that Estonia (EE) had a steep increase in the cancer mortality in 1991, the year that the 'western' FM radio-frequencies were allowed and introduced all over the country.

Acknowledgements

This study was financially supported by the Swedish Cancer and Allergy Foundation (Cancer och Allergifonden). We are grateful to Charlotte Björkenstam at the Epidemiological Centre of Sweden, EpC, for support in extracting death and incidence data from the public databases.

We thank Ms Margareta Krook-Brandt at the Karolinska Institute for expert support with the statistical evaluations.

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Correspondence to: *Örjan Hallberg*, e-mail: oerjan.hallberg@swipnet.se

Larger scale reproductions of the figures in this article may be obtained from ACNEM, in grey-scale or colour.

Cancers	Beta	p-level
Breast – Prostate	0.74	<0.00001
Breast – Melanoma	0.49	0.00151
Breast - Colon	0.671	<0.00001
Prostate - Colon	0.66	0.00001
Prostate - Melanoma	0.43	0.0053
Bladder - Melanoma	0.31	0.049
Colon - Melanoma	0.400	0.0105

Table 1. Correlation parameters between different cancer mortalities in the examined countries.

Cancers	Beta	p-value
Melanoma - Colon	0.655	0.000207
Bladder – Lung	0.842	<0.00001
Lung - Colon	0.664	0.000115
Bladder - Breast	0.519	0.00558
Melanoma - Leukaemia	0.016	0.94

Table 2. Correlation coefficients between incidence rates of different cancers in the Swedish communities.

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INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

DIVISION OF OCCUPATIONAL HEALTH, SAFETY AND MEDICINE

Revised and Amended IAFF Resolution No. 15; August 2004

Study of Firefighters Exposed to Radio Frequency (RF) Radiation from Cell Towers/Masts

WHEREAS, fire stations across the United States and Canada are being sought by wireless companies as base stations for the antennas and towers for the conduction of cell phone transmissions; and

WHEREAS, many firefighters who are living with cell towers on or adjacent to their stations are paying a substantial price in terms of physical and mental health. As first responders and protectors of the general public, it is crucial that firefighters are functioning at optimal cognitive and physical capacity at all times; and

WHEREAS, the brain is the first organ to be affected by RF radiation and symptoms manifest in a multitude of neurological conditions including migraine headaches, extreme fatigue, disorientation, slowed reaction time, vertigo, vital memory loss and attention deficit amidst life threatening emergencies; and

WHEREAS, most of the firefighters who are experiencing symptoms can attribute the onset to the first week(s) these towers/antennas were activated; and

WHEREAS, RF radiation is emitted by these cellular antennas and RF radiation can penetrate every living cell, including plants, animals and humans; and

WHEREAS, both the U. S. and Canadian governments established regulatory limits for RF radiation based on thermal (heat) measurements with no regard for the adverse health effects from non-thermal radiation which is proven to harm the human brain and immune system; and

WHEREAS, the U. S. Environmental Protection Agency stated in a July 16, 2002, letter, "Federal health and safety agencies have not yet developed policies concerning possible risk from long-term, non-thermal exposures. The FCC's exposure guideline is considered protective of effects arising from a thermal mechanism (RF radiation from cell towers is non-thermal) but not from all possible mechanisms. Therefore, the generalization by many that the guidelines protecting human beings from harm by any or all mechanisms is not justified"; and

WHEREAS, an Expert Panel Report requested by the Royal Society of Canada prepared for Health Canada (1999) stated that, "Exposure to RF fields at intensities far less than levels required to produce measurable heating can cause effects in cells and tissues. These biological effects include alterations in the activity of the enzyme ornithine decarboxylase, in calcium regulation, and in the permeability of the blood-brain barrier. Some of these biological effects brought about by non-thermal exposure levels of RF could potentially be associated with adverse health effects"; and

WHEREAS, based on concerns over growing scientific evidence of dangers from RF radiation, an international conference was convened in Salzburg, Austria, in the summer of 2000 where renowned scientists declared the upper-most RF radiation exposure limit from a tower-mast should be 1/10th of 1 microwatt (Note that 1/10th of 1 microwatt is 10,000 times lower than the uppermost limit allowed by the U. S. or Canada.); and it should be noted this limit was set because of study results showing brain wave changes at 1/10th of 1 microwatt; and

WHEREAS, in a recently cleared paper by Dr. Richard A. Albanese of the U. S. Air Force, a highly recognized physician in the area of the impact of radiation on the human body, Dr. Albanese states, "I would ask a good faith effort in achieving as low exposure rates as are possible within reasonable financial constraints. Also I would fund targeted studies using animal subjects and human groups living or working in high radiation settings or heavy cellular phone users, emphasizing disease causations. I urge acceptance of the ideal that there should be no unmonitored occupational or environmental exposures whose associated disease rates are unknown." (The opinions expressed herein are those of Dr. Albanese, and do not reflect the policies of the United States Air Force.); and

WHEREAS, recently a study, not affiliated with the wireless industry, was conducted of firefighters exposed to RF radiation from cell towers/antennas affixed to their stations.** The study revealed brain damage that can be differentiated from chemical causation (such as inhalation of toxic smoke) suggesting RF radiation as the cause of the brain damage found on SPECT scans; and

WHEREAS, firefighters are the protectors of people and property and should be protected under the Precautionary Principle of Science and therefore, unless radiation is proven safe and harmless, cellular antennas should not be placed on or near fire stations; therefore be it

RESOLVED, That the IAFF shall seek funding for an initial U. S. and Canadian study with the highest scientific merit and integrity, contrasting firefighters with residence in stations with towers to firefighters without similar exposure; and be it further

RESOLVED, That in accordance with the results of the study, the IAFF will establish protective policy measures with the health and safety of all firefighters as the paramount objective; and be it further

RESOLVED, That the IAFF oppose the use of fire stations as base stations for antennas and towers for the conduction of cell phone transmissions until such installations are proven not to be hazardous to the health of our members.

**Note: A pilot study was conducted in 2004 of six California fire fighters working and sleeping in stations with towers. The study, conducted by Gunnar Heuser, M.D., PhD. of Agoura Hills, CA, focused on neurological symptoms of six fire fighters who had been working for up to five years in stations with cell towers. Those symptoms included slowed reaction time, lack of focus, lack of impulse control, severe headaches, anesthesia-like sleep, sleep deprivation, depression, and tremors. Dr. Heuser used functional brain scans - SPECT scans - to assess any changes in the brains of the six fire fighters as compared to healthy brains of men of the same age. Computerized psychological testing known as TOVA was used to study reaction time, impulse control, and attention span. The SPECT scans revealed a pattern of abnormal change which was concentrated over a wider area than would normally be seen in brains of individuals exposed to toxic inhalation, as might be expected from fighting fires. Dr. Heuser concluded the only plausible explanation at this time would be RF radiation exposure. Additionally, the TOVA testing revealed among the six fire fighters delayed reaction time, lack of impulse control, and difficulty in maintaining mental focus.

Arthur Firstenberg

May 11, 2015

Lisa Martinez, Land Use Director
Kelley Brennan, City Attorney
Zachary Shandler, Assistant City Attorney
City of Santa Fe
P.O. Box 909
Santa Fe, NM 87504-0909

Regarding: Land Use Cases No. 2013-116 and 2014-82
Appeals of Cellular Phone Task Force et al. regarding 1402 Agua Fria

Dear Ms. Martinez, Ms. Brennan, and Mr. Shandler:

Attached, as an additional submission in the above cases, are photographs of the two boxes on top of the roof at 1402 Agua Fria Street, showing the tops of the three 7-foot antennas clearly visible above the tops of the 6-foot boxes. These photos were taken May 23, 2015.

Please distribute these photos to the members of the Board of Adjustment as well.

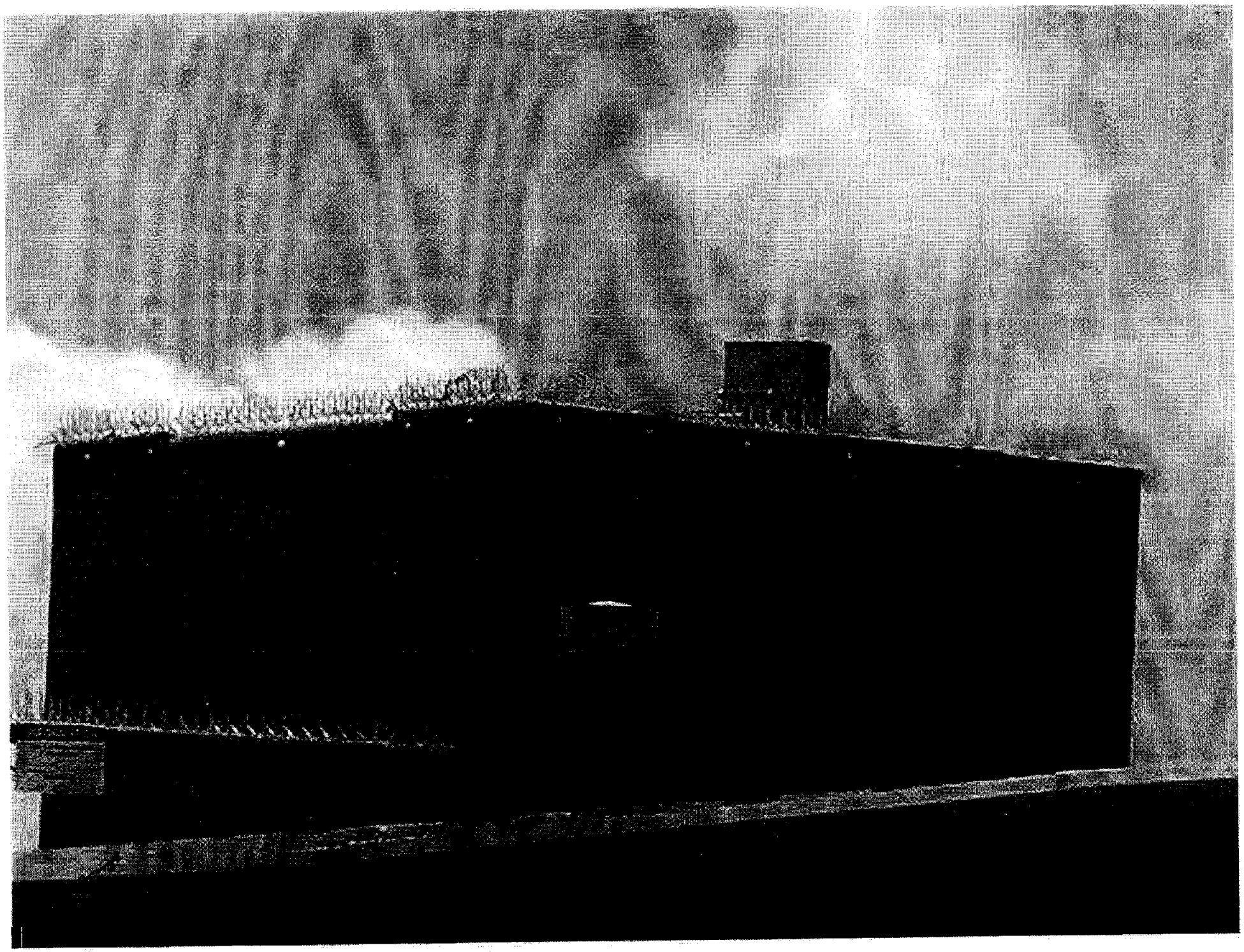
Thank you.

Sincerely,

Arthur Firstenberg

Arthur Firstenberg, President
Cellular Phone Task Force
P.O. Box 6216
Santa Fe, NM 87502
(505) 471-0129

cc: Verizon Wireless
John Malone
Stephen Durkovich, Esq.



SHERMAN&HOWARD

633 Seventeenth Street, Suite 3000, Denver, Colorado 80202-3622
Telephone: 303.297.2900 Fax: 303.298.0940 www.shermanhoward.com

Mark W. Williams
Sherman & Howard L.L.C.
Direct Dial Number: 303.299.8211
E-mail: mwilliams@shermanhoward.com

June 24, 2015

VIA EMAIL (zashandler@santafenm.gov)

Zachary Shandler, Esq.
Assistant City Attorney
City of Santa Fe
200 Lincoln Avenue
Santa Fe, NM 87501

Re: Verizon Wireless Site: NM4 Silva, 1401 Agua Fria Street, Santa Fe, NM 87505

Dear Mr. Shandler:

At the May 5, 2015 Board of Adjustment hearing, the Board requested an updated Radio Frequency Exposure Post-Installation FCC Compliance Assessment. Attached is the updated report.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Mark W. Williams

MWW/dlf
Enclosure

BUS_RE/5684424.1

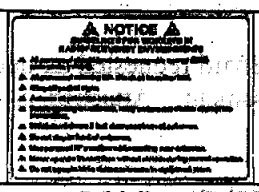
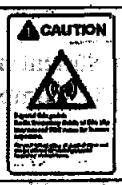
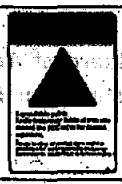
Exhibit "2"

verizonwireless

Radio Frequency Exposure Post-Installation FCC Compliance Assessment

Site Specific Information			
Site Name	NM4-Silva	Categorically Excluded?	No
Street Address	1402 Agua Fria St.	5% Contributor To Areas Requiring Mitigation?	No
City, State, Zip	Santa Fe, NM 87505		
Multi-Licensee Facility	No	Verizon's Max % MPE (Predictive-Occupational)	322%
Structure Type	Rooftop	Verizon's Max % MPE (Measured-Occupational)	70%
Broadcast Equipment	No	Assessment Date	04/07/2015
# of Access Points	0	Assessment Purpose	Site Audit
Compliance Status		In Compliance	

☐	Verizon's Worst-case RF power density levels are BELOW the MPE for General Population/Uncontrolled Environments in accessible areas.
☐	Verizon's Worst-case RF power density levels are ABOVE the MPE for General Population/Uncontrolled Environments but BELOW the MPE for Occupational/Controlled environments.
x	Verizon's Worst-case RF power density levels are ABOVE the MPE for Occupational/Controlled Environments but BELOW 10x the MPE for Occupational/Controlled environments.
☐	Verizon's Worst-case RF power density levels are ABOVE 10x the MPE for Occupational/Controlled environments.

Compliance Requirements						
	Guidelines	Notice	Caution	Warning	NOC Information	Barrier/Marker
Access Points	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐
Alpha	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐
Beta	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐
Gamma	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐ [#]	☐

Additional Compliance Requirements(s):

Barriers have been constructed with signage placed, but administrative controls should be employed to ensure compliance due to the lack of a defined access point. However, controls are not in place. See Conclusion Narrative, page 9. Landlord must ensure that Verizon Wireless antenna access will be restricted to personnel that have been authorized by Verizon Wireless (EME Awareness trained personnel only). This would include all maintenance personnel and contractors accessing the antenna area.

Consultant Legal Name	Global RF Solutions	Phone/Fax	480-814-1393/509-275-0709
Address	1900 W. Chandler Blvd. Ste-15-228, Chandler, AZ 85224		

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1. Executive Summary

Verizon Wireless has contracted with Global RF Solutions, an independent Radio Frequency consulting firm, to conduct a Radio Frequency Exposure (RFE) Compliance **Post-Installation Assessment** of the NM4-Silva cell site. The following report contains a detailed summary of the Radio Frequency environment as it relates to Federal Communications Commission (FCC) and Occupational Safety & Health Administration (OSHA) Rules and Regulations for all individuals.

The **Verizon Wireless antenna data** was provided by:

Name	Christopher J. Sheppard
Title	FCC RF Compliance-Network Regulatory
Date	02/20/2015
Region	Headquarters

This **post-installation** compliance assessment and report has been **prepared** and **reviewed** by:

	Preparer	**Reviewer**
Name	Marvin Wessel	Harry Young
Title	CEO	Field Engineer
Date	05/07/2015	05/07/2015

This report utilizes the following **for predictive modeling of the ambient RF environment:**
MPE Modeling Program: RoofView®, Version 4.15
Required Modeling Assumptions: 100% Duty Cycle and Maximum Total Power Output.

Additional Modeling Assumptions:

The RoofView® model may have been adjusted based on site specific details (such as additional attenuation factors), empirical data, or our specific working knowledge of the RoofView® model. The model has been globally adjusted to account for the attenuation of the antenna screens, thus more closely aligning with the survey measurements.

Azimuth changes made to account for building orientation? Adjusted +15 degrees.

Collocated data assumptions made? N/A

Other: N/A

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2. Site Characteristics

a. Structure

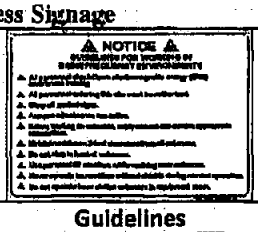
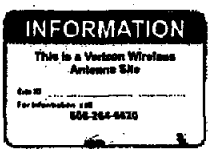
Physical Description	This communications site is located in stealth enclosures on the roof of a single-story commercial building.
Site Latitude (NAD 83)	N 35.67953889
Site Longitude (NAD 83)	W 105.9653806
Site Elevation (AMSL)	N/A
Structure Height (AGL)	17'10''
Overall Structure Height	25'11"

b. Accessibility

Roof access is by extension ladder only, which is on the premises and available upon request made to local personnel in the store. No identification is required. Access is not restricted to EME Awareness trained personnel and an RF Safety plan is not in place.

All access points locked at time of assessment?	No
All access points alarmed at time of assessment?	No

c. Verizon Wireless Signage

Existing Signage						
	Guidelines	**Notice**	**Caution**	**Warning**	**NOC Information**	**Barrier**
Access Points	[#]	[#]	[#]	[#]	[#]	☐
Alpha	x [1]	[#]	x [1]	[#]	[#]	x
Beta	x [1]	[#]	x [1]	[#]	x [1]	x
Gamma	x [1]	[#]	x [1]	☐ [#]	x [1]	x
				Existing Signage Adheres to VZW Signage & Demarcation Policy?		Yes

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d. Antenna Inventory

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWidth Pt Dir
A	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	29.0	19.0	1.0	TX	6.0	13	82;30
a	Verizon	885.00000	20.0	8			0.5		142.8	Antel	BXA-70080/6CF	29.0	19.0	1.0	TX	6.0	13	82;30
B	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	34.0	17.0	1.0	TX	7.0	13	84;30
b	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	34.0	17.0	1.0	TX	7.0	16.5	81;30
C	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	33.0	13.0	1.0	TX	6.0	13	82;150
c	Verizon	885.00000	20.0	8			0.5		142.8	Antel	BXA-70080/6CF	33.0	13.0	1.0	TX	6.0	13	82;150
D	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	28.0	13.0	1.0	TX	7.0	13	84;200
d	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	28.0	13.0	1.0	TX	7.0	15.5	81;200
E	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0	13	82;225
e	Verizon	885.00000	20.0	8			0.5		142.8	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0	13	82;225
F	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	8.0	17.0	1.0	TX	7.0	13	84;225
f	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	8.0	17.0	1.0	TX	7.0	15.5	81;225

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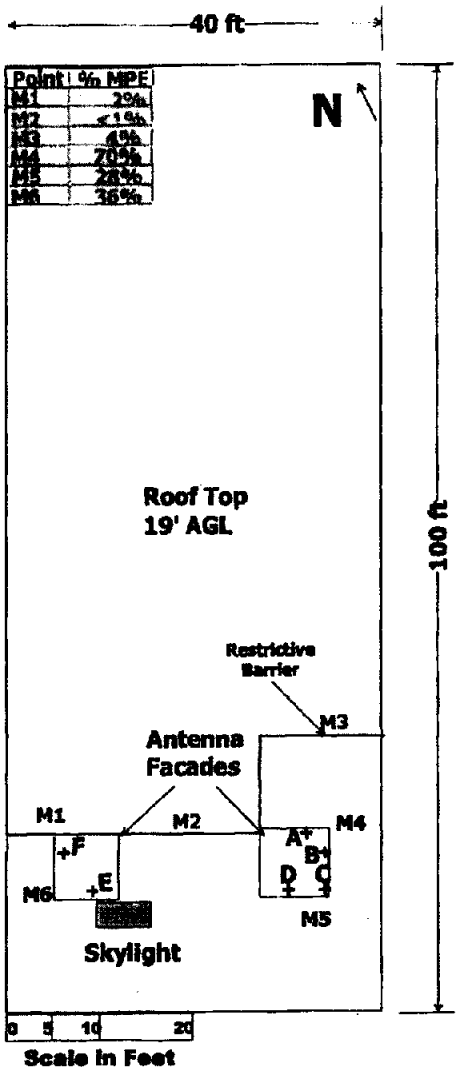
3. **Analysis**

a. **Field Measurements Level:**



Survey Start Time	14:13	Survey End Time	14:21

Spatially-Averaged Power Density Levels (mW/cm^2)	% Occupational MPE
	0 to 20
	20 to 100
Above Occupational MPE	Greater Than 100
	Greater Than 1000

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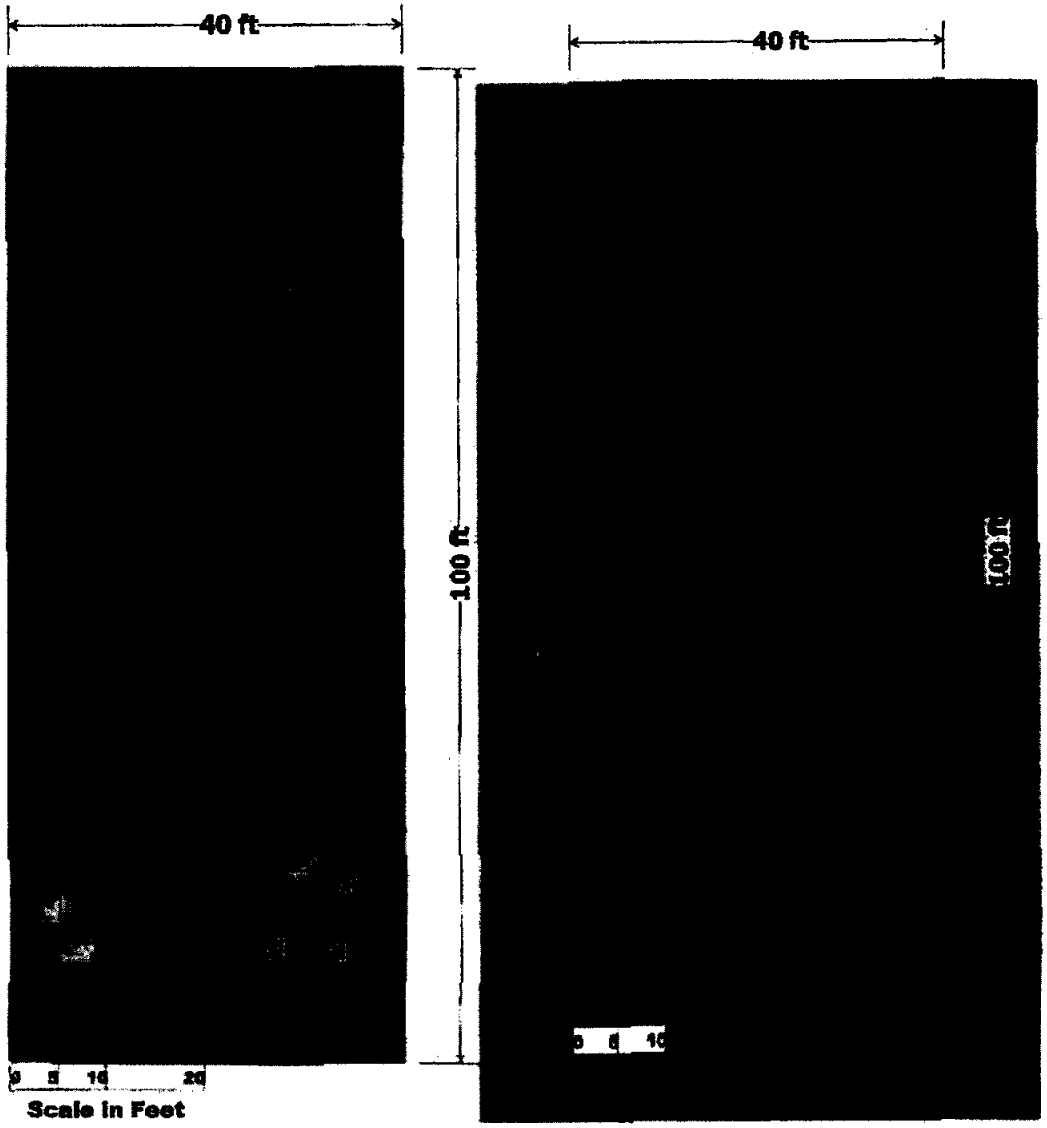
b. **Predictive Model Rooftop and Ground Level: All Transmitters**



Color	% Occupational MPE
	0 to 20
	20 to 100
	Greater Than 100
	Greater Than 1000

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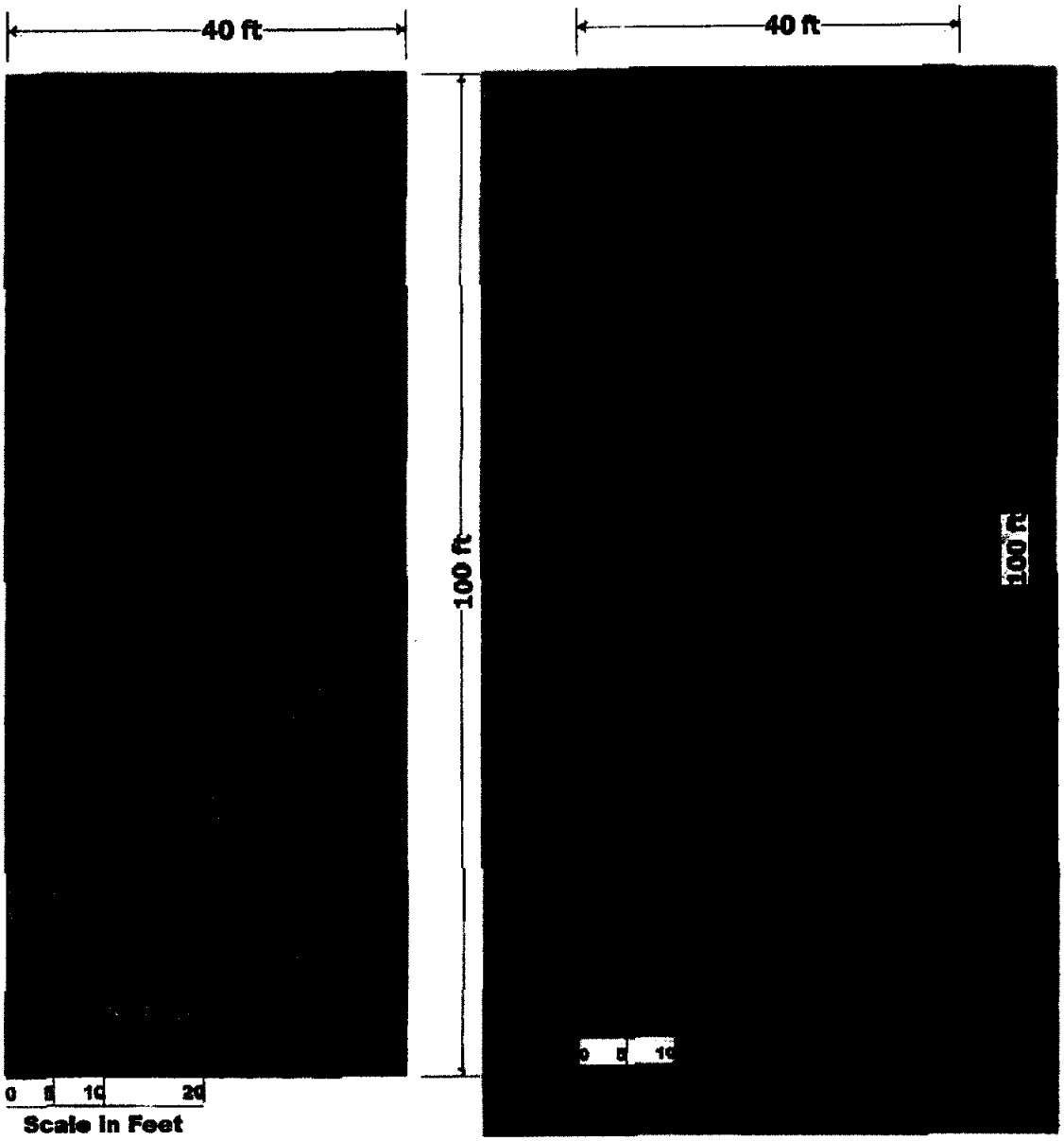
c. **Predictive Model Rooftop and Ground Level: Significant Contribution of Verizon Wireless**



Color	% Occupational MPE
	0 to 1
	> 1%

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4. **Conclusion**
a. **Conclusion Narrative**

Description of MPE-Limit Exceeding Areas:
Verizon Wireless can exceed FCC Public and FCC Occupational standards in accessible areas, i.e. inside the restrictive barriers at this site. Because of the existence of an on premise extension ladder that can be used to allow personnel roof access where signage is not visible, administrative controls need to be employed at this site. This will require informing the landlord of the RF environment on the roof, with the understanding that Verizon Wireless should be contacted prior to allowing access inside the barriers. Verizon Wireless must be prepared to power down the antennas should personnel require access inside the barriers. Note that sign placement is limited to areas not visible from the ground, per landlord request, pursuant to City of Santa Fe signage policies. Note that signs must remain in place with contact information reaching personnel capable of providing safety guidance to those requesting access inside the barriers,

At the time of the site visit, local personnel were unaware of any such administrative controls.

Collocator Significant Contribution Areas:
N/A

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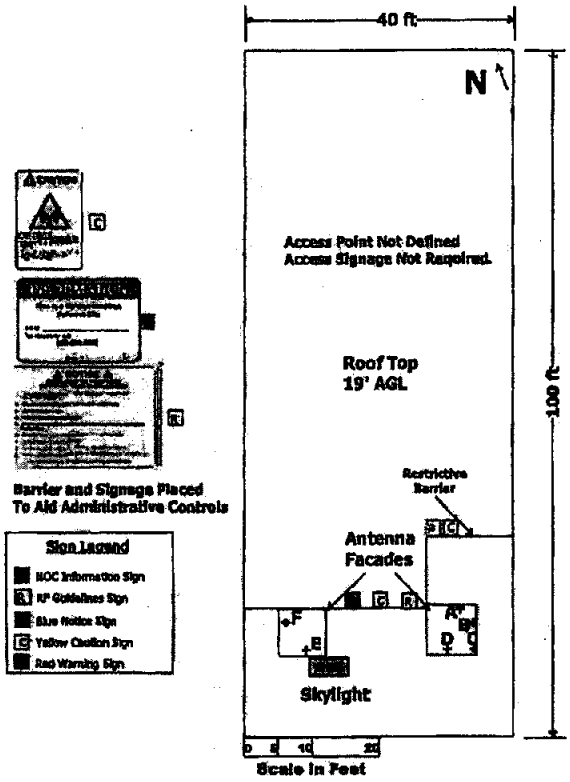
b. Compliance Requirements

Signage/Barrier Diagram



Compliance Requirements	Guidelines	Notice	Caution	Warning	NOC Information	Barrier/Marker
Access Points	[#]	[#]	[#]	[#]	[#]	
Alpha	[#]	[#]	[#]	[#]	[#]	
Beta	[#]	[#]	[#]	[#]	[#]	
Gamma	[#]	[#]	[#]	[#]	[#]	

Signage/Barrier Installation Detail

Barriers have been constructed with signage placed (as shown in the drawing), but administrative controls are not in force to ensure compliance. Note that sign placement is limited to areas not visible from the ground, per landlord request, pursuant to City of Santa Fe signage policies. See Conclusion Narrative, page 9.

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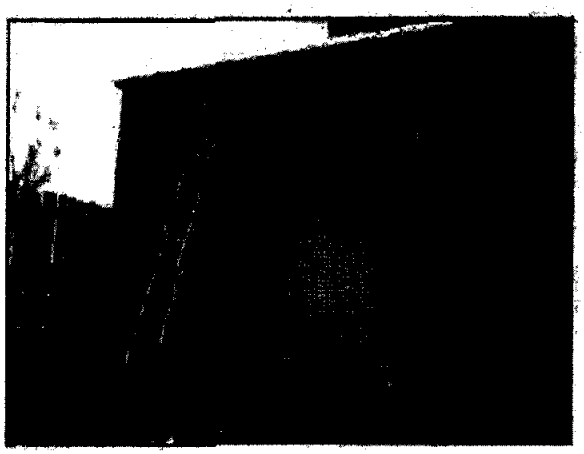
c. **Structure**

d. **Access Point(s)**



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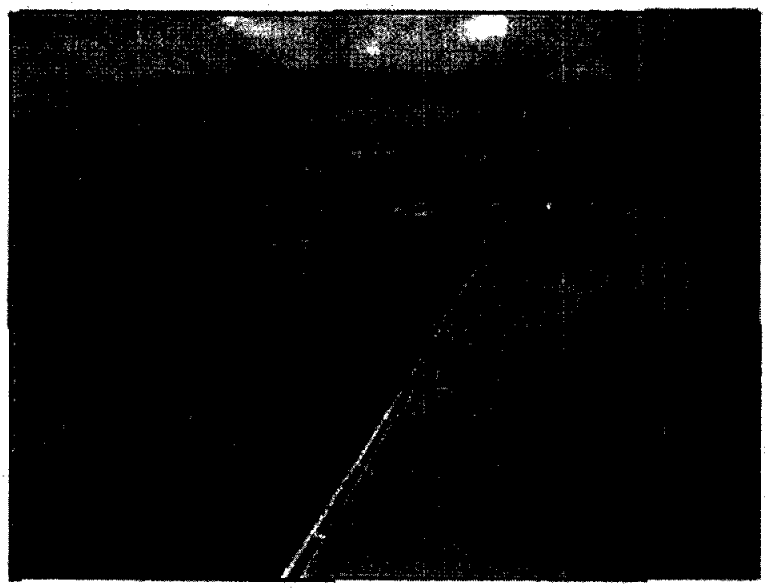
e. **Individual Sectors**

f. **Miscellaneous**



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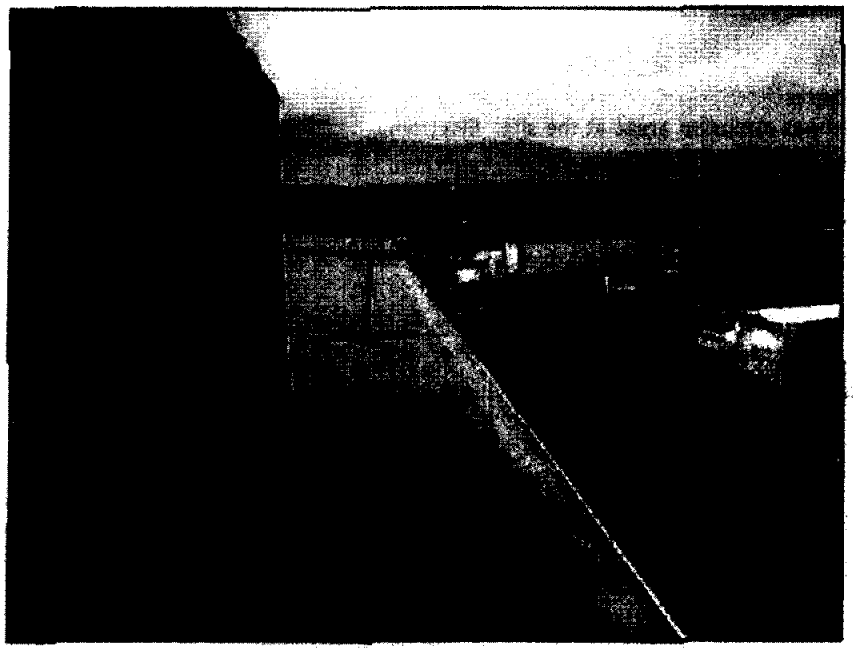

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5. Appendix B: Survey Methodology

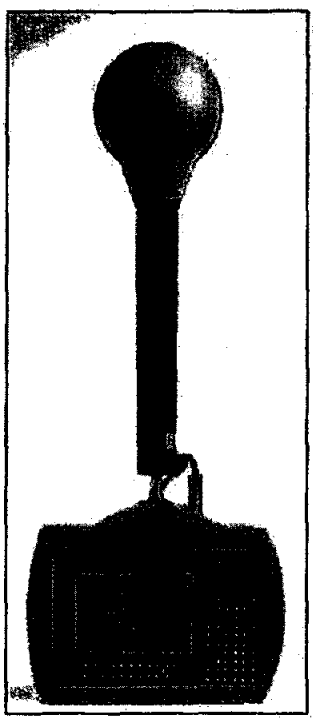
a. Survey Procedures

The field survey defines exclusion areas at the site. Electromagnetic energy (EME) fields were assessed through direct measurement at the transmitter site, using properly calibrated field probes.

An SRM-3000 Selective Measurement Device was used for the measurement phase of this survey. This meter represents the latest generation of equipment designed to measure RF energy by Narda Safety Test Solutions.

This device uses an isotropic antenna that is calibrated to measure Radio Frequency power densities using specific selectable frequencies. Measurements were made for SMR, PCS, Cellular, AWS, paging, land mobile, etc., and commercial broadcast frequencies that includes FM radio and television.

Narda SRM-3000



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b. Survey Equipment Certification

Calibration Certificate

OBJECT

MANUFACTURER

PART NUMBER (P/N)

SERIAL NUMBER (S/N)

CUSTOMER

CALIBRATION DATE

RESULT ASSESSMENT

AMBIENT CONDITIONS

CALIBRATION PROCEDURE

Calibration Certificate

OBJECT

MANUFACTURER

PART NUMBER (P/N)

SERIAL NUMBER (S/N)

CUSTOMER

CALIBRATION DATE

RESULT ASSESSMENT

AMBIENT CONDITIONS

CALIBRATION PROCEDURE

Global RF Solutions performs calibration conformance tests several times a year on every SRM-3000 measurement system to ensure they remain within factory performance specifications.

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6. Appendix C: RF Consultant Certifications

a. Preparer Certification

I, Marvin Wessel, the preparer of this report, am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I am also fully aware of and familiar with the Verizon Wireless Signage & Demarcation Policy. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

b. Reviewer Certification

I, Harry Young, the reviewer, approved of this report, and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I am also fully aware of and familiar with the Verizon Wireless Signage & Demarcation Policy. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

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7. Appendix D: Reference Information

a. FCC Rules & Regulations

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards "incorporate prudent margins of safety." The following represents explanations of the most applicable information:

Two Classifications for Exposure Limits

Occupational – Applies to situations in which persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".	General Population – Applies to situations in which persons 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". Generally speaking, those without significant and documented RF Safety & Awareness training would be in the General Population classification.

Environment Classification

Controlled – Applies to environments that are restricted or "controlled" in order to prevent access from members of the General Population classification.	Uncontrolled – Applies to environments that are unrestricted or "uncontrolled" that allow access from members of the General Population classification.

Limits for Occupational/Controlled Exposure		
Frequency Range (MHz)	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$, or S (minutes)**
300-1500	f/300	6
1500-100,000	5	6
Limits for General Population/Uncontrolled Exposure		
Frequency Range (MHz)	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$, or S (minutes)**
300-1500	f/1500	30
1500-100,000	1	30
f = frequency in MHz		

Significant Contribution to the RF Environment

Any carrier contributing an aggregate MPE percentage of *5* or more (to the applicable RF Environment Classification) is defined as a significant contributor. This means that if any area is determined to be out of compliance with FCC rules, all significant contributors are jointly responsible for correcting any deficiencies.

b. Occupational Safety and Health Administration (OSHA) Requirements

A formal adopter of FCC Standards, OSHA stipulates that those in the Occupational classification must complete training in the following: RF Safety, RF Awareness, and Utilization of Personal Protective Equipment. OSHA also provides options for Hazard Prevention and Control:

Hazard Prevention	Control
• Utilization of good equipment • Enact control of hazard areas • Limit exposures • Employ medical surveillance and accident response	• Employ Lockout/Tag out • Utilize personal alarms & protective clothing • Prevent access to hazardous locations • Develop or operate an administrative control program

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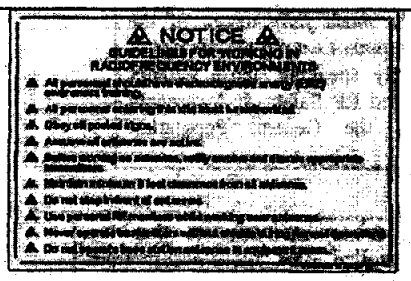
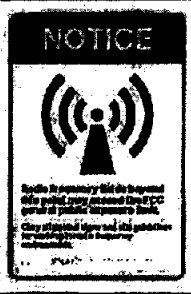
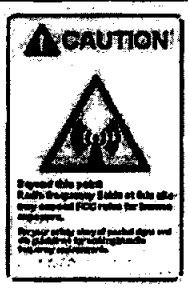
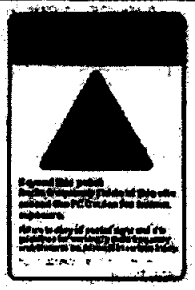
c. **RF Signage**

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines. These areas must be demarcated by conspicuously posted signage that identifies the potential exposure. Signage MUST be viewable regardless of the viewer's position.

GUIDELINES	NOTICE	CAUTION	WARNING
This sign will inform anyone of the basic precautions to follow when entering an area with transmitting radiofrequency equipment.	This sign indicates that RF emissions may exceed the FCC General Population MPE limit.	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit.	This sign indicates that RF emissions may exceed at least 10x the FCC Occupational MPE limit.
			

INFORMATION SIGN	
Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number.	

d. **Physical Barriers**

Physical barriers are control measures that require awareness and participation of personnel. Physical barriers are employed as an additional administration control to complement RF signage and physically demarcate an area in which RF exposure levels may exceed the FCC General Population limit.

e. **Indicative Markers**

Indicative markers are visible control measures that require awareness and participation of personnel, as they cannot physically prevent someone from entering an area of potential concern. Indicative markers are employed as an additional administration control to complement RF signage and visually demarcate an area in which RF exposure levels may exceed the FCC General Population limit.

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Arthur Firstenberg

May 11, 2015

Board of Adjustment
and
Zachary Shandler, Assistant City Attorney
City of Santa Fe
P.O. Box 909
Santa Fe, NM 87504-0909

Regarding: Land Use Cases No. 2013-116 and 2014-82
Appeals of Cellular Phone Task Force et al. regarding 1402 Agua Fria

Dear Mr. Shandler and Members of the Board of Adjustment:

This is to put the City on notice that at the May 5, 2015 meeting of the Board of Adjustment, the appellants in the above-referenced cases were denied due process because legal procedure was not followed. Appellants expect required procedures to be followed at the continuation of this hearing on July 7, 2015.

Attached to this letter is a copy of the Appeal Hearing Procedures, adopted by the Governing Body on April 13, 2011 as part of Resolution No. 2011-24. I call your attention to Section VIII(H), "Order of hearing." The Board did not comply with the following procedures that were required to occur before the public testimony:

> "5. The Presiding Officer shall cross examine the Applicant and the Applicant's witnesses on behalf of the parties, or permit direct cross examination."

Cross examination of the Applicant was not permitted.

> "6. The Appellant shall address questions to staff."

The Appellant was not permitted to question staff.

The Board did not comply with the following procedures that were required to occur after the public testimony:

> "11. The Appellant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.
>
> "12. The Applicant shall make his or her closing argument including any objections to the testimony, witnesses, or procedural matters.
>
> "13. The public hearing shall be closed."

Post Office Box 6216 · Santa Fe, NM 87502 · (505) 471-0129 · bearstar@fastmail.fm

Exhibit "3"

The public hearing is closed after the Appellant and the Applicant make their closing arguments. Since no closing arguments were made on May 5, 2015, the public hearing is not closed.

At the July 7, 2015 continuation of this hearing, Verizon has been requested to present a new radio frequency radiation compliance document. As the representative of the appellants, I will have the right to call witnesses and present evidence related to this document. I will have the right to cross examine the representative of Verizon and his or her witnesses, either directly or through the Presiding Officer, on any matter. I will have the right to question staff on any matter. The public will then have the right to give sworn testimony related to the new evidence. There will then be closing arguments.

The record on appeal provided to the Board of Adjustment is grossly deficient. I call your attention to Section VIII(C) of the Appeal Hearing Procedures. The record on appeal is required to contain:

> "6. Any and all materials provided to the LUD Director and/or the Land Use Board, as the case may be, for their consideration in deciding upon the matter.

Since the decisions appealed from are decisions of the LUD Director to issue building permits, all materials provided to the LUD Director in making those decisions are part of the record. This includes Verizon's 2005 application for a single "wireless equipment shelter" at 1402 Agua Fria and all accompanying materials; Verizon's 2013 application for the addition of three antennas to an "existing telecommunications facility" at 1402 Agua Fria and all accompanying materials; and Verizon's 2014 application for a telecommunications facility at 1402 Agua Fria and all accompanying materials. None of these materials were included in the record provided to the Board at the May 5, 2015 hearing, prejudicing the appellants and forcing me to submit a few of these documents into evidence on their behalf on the day of the hearing, which gave the Board no time to read or evaluate them. The entirety of the record should be provided to the Board by the City in advance of the July 7, 2015 hearing.

Sincerely,

Arthur Firstenberg

Arthur Firstenberg
P.O. Box 6216
Santa Fe, NM 87502
(505) 471-0129

cc: Appellants
Rick Sandoval, Esq.

BEFORE THE BOARD OF ADJUSTMENT
CITY OF SANTA FE, NEW MEXICO

In the Matter of the Application of Verizon Wireless for a Telecommunications Facility at 1402 Agua Fria Street

Land Use Cases No. 2013-116 and 2014-83

AFFIDAVIT OF ARTHUR FIRSTENBERG

State of New Mexico)
ss:
County of Santa Fe)

Arthur Firstenberg, being duly sworn, deposes and says:

1. On May 5, 2015, I presented to the Board of Adjustment the case for the removal of the telecommunications facility, located at 1402 Agua Fria Street, Santa Fe, New Mexico and operated since 2005 without a permit by Verizon Wireless ("Verizon"). I spoke on behalf of sixty-six (66) appellants.

2. Prior to the May 5 hearing, Kelly Schilling and I commissioned Antonio L. Cardenas, the principal engineer at Advanced Testing Services, Inc. ("ATSI"), to calculate radio frequency ("RF") emissions levels from the Verizon facility. ATSI is an independent testing company based in Albuquerque whose staff has provided services to the telecommunications industry since 1992 in the U.S., Canada, Europe, Panama, the Middle East, and Africa. Attached hereto as Exhibit 1 is a page from ATSI's website detailing Mr. Cardenas' qualifications.

2. On May 4, 2015, Mr. Cardenas provided us with his report, titled "Radio Frequency Emissions Analysis Report Evaluation of Human Exposure Potential to Non-Ionizing Radiation, MPE Analysis, 1402 Agua Fria St., Santa Fe, NM," hereinafter referred to as the "ATSI Report." It is based on information provided by Verizon in its 2013 application to the

Exhibit "4"

City of Santa Fe for a building permit. This information included a list of the antenna systems at the site, reproduced on page 3 of the ATSI Report, and a site drawing of the antennas, reproduced on page 8 of the ATSI Report. The ATSI Report was submitted to this Board at its public hearing on May 5, 2015.

3. The ATSI Report concluded that, when in the direct beam or path of the transmitting antennas, the properties immediately to the south-southeast, and south-southwest, adjacent to the Agua Fria Cellular site, are exposed to RF emissions that may exceed the Maximum Permissible Exposure (MPE) limits for the General Public as set forth in the FCC's OET Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." (ATSI Report, p. 13). The ATSI Report also concluded that the entire rooftop of the building at 1402 Agua Fria is exposed to RF emissions that may exceed the MPE limits for the General Public. (ATSI Report, p. 12).

4. As a result of the ATSI Report, this Board adjourned the public hearing until July 7, 2015 and instructed Verizon to produce a compliance report before July 7 certifying that the Verizon facility at 1402 Agua Fria does in fact comply with the FCC's radiation exposure limits.

5. Verizon produced its report on May 7, 2015. However, the appellants were not served with it until late Friday afternoon, June 26, 2015. This has left the appellants insufficient time to get it analyzed by an independent engineer. Mr. Cardenas is presently on a job in Canada, and other engineers are not available on such short notice.

6. I am qualified to analyze that report. I have a bachelor's degree in mathematics and physics from Cornell University and a medical education from the University of California, Irvine School of Medicine. I have been studying all aspects of RF radiation since 1980. Since 1996, I have been president of the Cellular Phone Task Force, a 501(c)(3) nonprofit corporation

with worldwide membership. We provide education, advocacy, and support to hundreds of organizations and thousands of people including doctors, scientists, lawyers, engineers, public officials, and injured individuals. I have helped attorneys in the United States with legal briefs, and testified in the High Court of Ireland in support of injured parties. I have provided consultations regarding RF radiation, including its technical engineering aspects, without charge on a daily basis for twenty years.

7. The following calculations are based on the compliance document submitted by Verizon, dated May 7, 2015, titled "Radio Frequency Exposure Post-Installation FCC Compliance Assessment" ("Verizon Report"). In the following analysis I refer specifically to page 5 of the Verizon Report ("Antenna Inventory") and page 7 ("Predictive Model"). The Antenna Inventory provides all of the antenna specifications necessary to calculate predicted maximum exposure levels at any location.

8. The Predictive Model on page 7 of the Verizon Report purports to indicate compliance with Occupational exposure limits at all points outside the areas colored blue on the Rooftop Level Plot, including the point labeled M3 on page 6. According to my calculations that is not the case. For example, the edge of the blue area near M3 is about 12.22 feet, 10.37 feet, and 11.85 feet, respectively, from the three Alpha antennas. The path to that point from the three antennas is +20°, +5°, and -20° off the main beam, respectively. In other words, that point is well within the main beam of all three antennas. According to the Verizon Report, that point receives maximally less than 100% of the Occupational MPE limit. My calculations for that point are as follows:

Frequency (MHz)	Input Power (W)	Gain	Reflection Coef	Distance (m)	Limits MPE	MPE %
875	35.7	20	2.56	3.75	2.917	35.46%
885	142.6	20	2.56	3.16	2.950	197.25%
752	107.0	20	2.56	3.61	2.507	133.45%
2125	120.0	36	2.56	3.61	5.000	135.07%
				Total MPE Percentages		**501.23%**

These calculations are made according to the standard far-field equations given in the FCC's OET Bulletin 65, which are also reproduced by Mr. Cardenas on page 9 of the ATSI Report.

9. The above calculations are five times higher than Verizon indicates, but even these numbers are too low because the far-field equations are not accurate so close to the antennas. Point A3 is within the transition region of the antennas and is not in the far-field. OET Bulletin 65 explains: "Power density in the transition region decreases inversely with distance from the antenna, while power density in the far-field (Fraunhofer region) of the antenna decreases inversely with the ***square*** of the distance." The far-field begins at a distance that is given by equation 16 in OET Bulletin 65:

$$R_{ff} = 0.6\, D^2/\lambda$$

where: R_{ff} = distance to beginning of far-field
D = antenna diameter
λ = wavelength

For these antennas, the distance to the beginning of the far-field is calculated as follows:

Frequency (MHz)	Antenna diameter (m)	Wavelength (m)	Distance to beginning of far field
885	1.83	0.34	5.91 m (19.39 ft.)
875	1.83	0.34	5.91 m (19.39 ft.)
752	2.13	0.40	6.81 m (22.33 ft.)
2125	2.13	0.14	19.44 m (63.79 ft.)

In other words, at any point closer than about 20 feet from the antennas, the actual exposure levels will be *greater* than the results of the far-field calculations.

10. The numbers provided in Verizon's Antenna Inventory imply that the minimum distance along the roof from the Alpha antennas that complies with the FCC's limits for occupational exposure is about 7.7 meters, or 23.5 feet:

Frequency (MHz)	Input Power (mW)	Gain	Reflection Coef	Distance (m)	Limits MPE	MPE %
875	35.7	20	2.56	7.7	2.917	8.41%
885	142.6	20	2.56	7.7	2.950	33.22%
752	107.0	20	2.56	7.7	2.507	29.33%
2125	120.0	36	2.56	7.7	5.000	29.69%
				Total MPE Percentages		**100.65%**

11. I conclude that the minimum distance that complies with Occupational MPE limits is more than double the distance indicated in the Verizon Report.

12. The signage and barriers presently on the roof, as indicated on page 10 of the Verizon Report, are too close to the antennas and are not adequate to protect personnel who are subject to the Occupational limits.

13. Page 4 of the Verizon Report states that rooftop access "is not restricted to E[lectro]-M[agnetic] E[nergy] Awareness trained personnel and an RF Safety plan is not in place." In other words, the rooftop is accessible not only to trained personnel subject to Occupational MPE limits but to untrained personnel subject to the MPE limits for the General Public. Yet Verizon only predicted compliance with Occupational MPE limits and made no attempt to predict compliance with MPE limits on the roof for the General Public, and there are no signs or barriers on the roof that indicate where RF exposure levels may exceed the limits for the General Public. Indeed, as discussed in the ATSI Report, the entire rooftop may exceed the MPE limits for the General Public. Therefore all workers not trained in Electromagnetic Energy Awareness should be, but are not, excluded from this roof.

14. The Verizon Report also makes no prediction of compliance with MPE levels for the General Public on the neighboring properties. Since the whole purpose of the report was to

respond to the ATSI Report's conclusion that exposure levels are *out of* compliance on three neighboring properties, Verizon has failed to fulfill the mandate of this board in ordering the production of that report.

15. Mr. Cardenas of ATSI has read this affidavit. His letter, stating that my analysis is accurate and that my concerns regarding the Verizon report are justified, is attached hereto as Exhibit 2.

Arthur Firstenberg

Arthur Firstenberg

Subscribed and sworn to before me this 7th day of July, 2015.

Beverly M. Chambers

Notary Public

My Commission Expires: 04-21-2019

OFFICIAL SEAL
BEVERLY M. CHAMBERS
NOTARY PUBLIC-State of New Mexico
My Commission Expires 04-21-2019

ATSI *Advanced Testing Services, Inc.*

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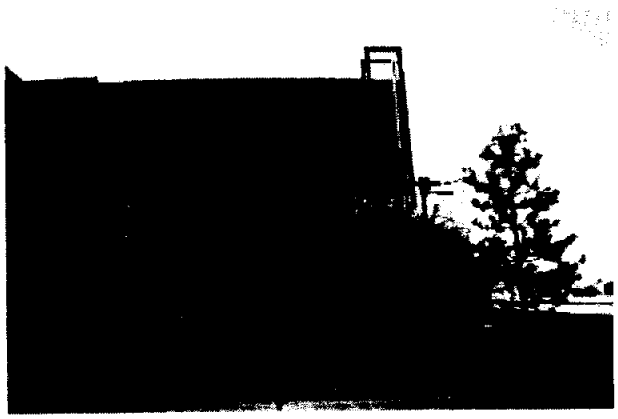
About Us

Advanced Testing Services, Inc. (ATSI) is an independent field testing organization specializing in EMI, EMC, HEMP, RF Shielding Effectiveness and Acoustic testing. ATSI has been the quality control, testing and certifying agency on many shielding projects such as the National Test Facility at Falcon AFB in Colorado, a 350,000 square foot RF shielded building and the LC-40 Launch Complex in Cape Canaveral Florida, which is a 21 story RF shielded complex used to house the TITAN IV missile prior to launch.



ATSI has been performing EMI and EMC measurements for IEC 801.3 chamber verification, MIL STD 188-125-1, MIL STD 461 EMC testing, MIL STD 285, NSA 65-6, NSA 65-5 and NSA 73-2A RF Shield testing since 1992. ATSI has also performed acoustic measurements of SCIF Facilities and other secure type enclosures in the continental US and overseas.

The engineering and technical diversity that ATSI possesses provides customers with accurate solutions to their RF Shielding, Electromagnetic Interference and Compatibility problems, as well as providing testing services for certification of there EMI/EMC test chambers. Our staff has provided services at many locations worldwide; Europe, Canada, Panama, the Middle East, and Africa . ATSIs' field test teams are geared up to respond immediately and travel to any location in the world. The principal at ATSI, Antonio L. Cardenas, is an EMI/EMC Certified Engineer by the National Association of Radio and Telecommunications Engineers (NARTE). With his experience, education and specialized expertise the customer will always get the best testing documentation and professional effort that the industry has to offer.

EXHIBIT 1

ATSI
Advanced Testing Services, Inc.
9420 San Mateo Blvd. NE, Suite C, Albuquerque, NM 87113

July 7, 2015

To:
Board of Adjustment
City of Santa Fe, NM

Ref: Application of Verizon Wireless for a Telecommunications Facility
At 1402 Agua Fria Street, Santa Fe, NM
Subj: Affidavit of Arthur Firstenberg

Board Members,

I, Antonio L. Cardenas, principal engineer of Advanced Testing Services, Inc. have conducted a brief review of the "Verizon Report" dated May 7, 2015, and the affidavit of Arthur Firstenberg, dated July 7, 2015. His affidavit comments on the Wireless cellular communications site located at 1402 Agua Fria Street in Santa Fe, NM, and specifically on the May 7th 2015 report from Verizon titled "Radio Frequency Exposure Post-installation FCC Compliance Assessment".

I provided a report dated May 4, 2015 titled "Radio Frequency Emissions Analysis Report, Evaluation of Human Exposure Potential to Non-ionizing Radiation MPE Analysis", 1402 Agua Fria St. Santa Fe, NM, which was an MPE analysis based on information provided by Verizon in its 2013 application to the city of Santa Fe.

I find that Mr. Firstenberg's analysis of the predicted MPE for this site and the MPE analysis of predicted levels conducted by myself, to correspond with each other, and do not correspond with the predicted levels stated in the Verizon report. The affidavit and analysis provided by Mr. Firstenberg, per my evaluation, is accurate and his concerns regarding the Verizon report are justified.

Sincerely,
Advanced Testing Services, Inc.

Antonio L. Cardenas, Sr.
NARTE Certified Engineer
#E2-00176

EXHIBIT 2

As discussed in Bulletin 65, calculations can be made to predict RF field strength and power density levels around typical RF sources. For example, in the case of a non-directional antenna, a prediction for power density in the far-field of the antenna can be made by use of the general Equations (3) or (4) below [for conversion to electric or magnetic field strength see Equation (1) above]. These equations are generally accurate in the far-field of an antenna but will over-predict power density in the near field, where it could be used for making a "worst case" or conservative prediction.

$$S = \frac{PG}{4\pi R^2} \qquad (3)$$

where: S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator (dBi)
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

or:

$$S = \frac{EIRP}{4\pi R^2} \qquad (4)$$

where: EIRP = equivalent (or effective) isotropically radiated power

Table I and Table II below depict the General Population/Uncontrolled Environment MPE analysis. Table I uses the following formula for surface or ground reflections, such as those on roof tops, for analysis of reflected signals. The EPA model recommended is a more realistic approximation for ground reflection by assuming a maximum 1.6-fold increase in field strength leading to an increase in power density of 2.56 (1.6 X 1.6). This Equation used for Table I:

$$S = \frac{2.56\ EIRP}{4\pi R^2} = \frac{0.64\ EIRP}{\pi R^2} \qquad (7)$$

(Note: This page derived from OET Bulletin 65)

Exhibit "5"

For a truly worst-case prediction of power density at or near a surface, such as at ground-level or on a rooftop, 100% reflection of incoming radiation could be assumed, resulting in a potential doubling of predicted field strength and a four-fold increase in (far-field equivalent) power density. In that case Equations (3) and (4) can be modified as follows to:

$$S = \frac{(2)^2 PG}{4\pi R^2} = \frac{PG}{\pi R^2} = \frac{EIRP}{\pi R^2} \qquad (6)$$

(Note: This page derived from OET Bulletin 65)

Amphenol ANTENNA SOLUTIONS

QXW-806X8012XBF-EDIN

Replace "X" with desired electrical downtilt.

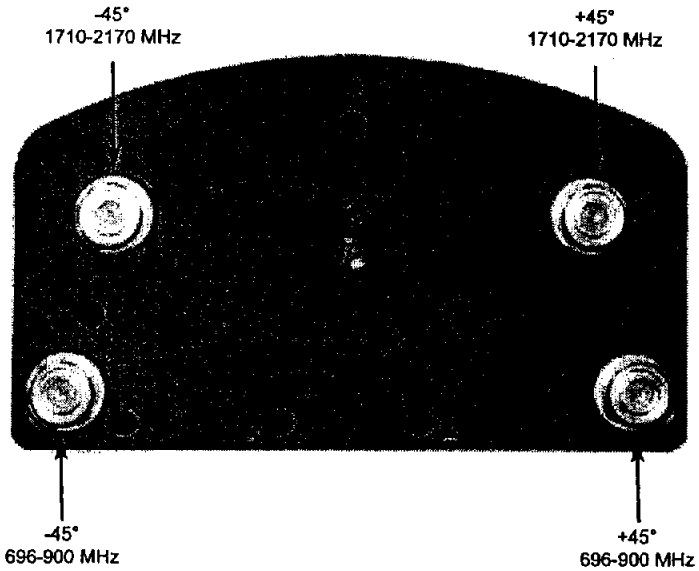
XX-Pol | Dual Band FET Panel | 80° / 80° | 15.6 / 18.0 dBi

Electrical Characteristics	696-900 MHz		1710-2170 MHz		
Frequency bands	696-806	806-900	1710-1880	1850-1990	1900-2170
Polarization	±45°		±45°		
Horizontal beamwidth	85°	80°	83°	80°	78°
Vertical beamwidth	10°	8°	4.7°	4.5°	4.3°
Gain	13.0 dBd/15.1 dBi	13.5 dBd/15.6 dBi	15.1 dBd/17.2 dBi	15.5 dBd/17.6 dBi	15.9 dBd/18.0 dBi
Electrical downtilt (X)	0,2,4,6,8,10		0,2,4,6,8,10		
Impedance	50Ω		50Ω		
VSWR	≤1.4:1		≤1.5:1		
Isolation between ports	> 25 dB		> 25 dB		
Input power	500 W		300 W		
Lightning protection	Direct ground				
Connector(s)	4 / EDIN / Female / Bottom				

Mechanical Characteristics		
Dimensions Length x Width x Depth	2095 x 305 x 180 mm	82.5 x 12.0 x 7.1 in
Weight without mounting brackets	17.2 kg	38.0 lbs
Survival wind speed	201 km/hr	125 mph
Wind area	Front: 0.64 m² Side: 0.38 m²	Front: 6.9 ft² Side: 4.1 ft²
Wind load @ 161 km/hr (100 mph)	Front: 780 N Side: 462 N	Front: 175 lbf Side: 104 lbf

Mounting Options	Part Number	Fits Pipe Diameter		Weight	
3-Point Mounting & Downtilt Bracket Kit	36210008	40-115 mm	1.57-4.5 in	6.9 kg	15.2 lbs

Antenna Bottom View

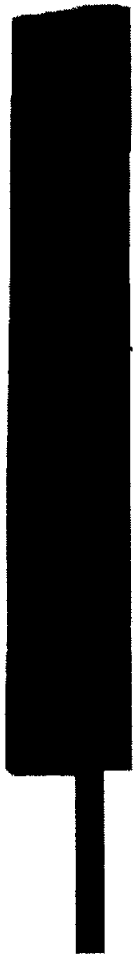


Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

BXA-70080-6CF-EDIN-X

Single Band | Panel Antenna | X-Pol | 80° | 13.5 dBd | Fixed Tilt

- Single band, panel antenna with fixed electrical tilt
- Available with a variety of fixed tilt options



Ordering Options

When ordering, replace the "X" in the model number with the electrical downtilt. Select from the options listed in the Electrical Downtilt section below.

Electrical Characteristics		696-900 MHz	
Frequency Bands		696-806 MHz	806-900 MHz
Polarization		±45°	
Horizontal Beamwidth		82°	80°
Vertical Beamwidth		12°	10°
Gain		13.0 dBd (15.1 dBi)	13.5 dBd (15.6 dBi)
Electrical Downtilt		(X) 0, 2, 4, 6, 8, 10	
Impedance		50Ω	
IM3 (2x20W carrier)		< -153 dBc	
Upper Sidelobe Suppression (0°)		-18.3 dB	-18.6 dB
Front-to-Back Ratio (±30°)		-26.9 dB	-25.6 dB
VSWR		≤ 1.35:1	
Null Fill		5% (-26.02 dB)	
Isolation Between Ports		> 25 dB	
Input Power		500 W	
Total Number of Connectors		Antenna has 2 connectors located on the center (back) of the antenna	
Connectors Per Band	696-900 MHz	2 Connectors, Elongated 7/16-DIN Female (EDIN)	
Lightning Protection		Direct Ground	

Mechanical Characteristics					
Dimensions (Length x Width x Depth)		1804 x 204 x 151	mm	71.0 x 8.0 x 5.9	in
Depth with z-brackets		191	mm	7.5	in
Weight without Mounting Brackets		8.2	kg	18	lbs
Wind Area	Front	0.37	m²	4.0	ft²
	Side	0.27	m²	2.9	ft²
Survival Wind Speed		> 201	km/hr	> 125	mph
Wind Load (161 km/hr or 100 mph)	Front	529	N	119	lbf
	Side	450	N	101	lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

Verizon Transmitter Timeline

Operating with 6 antennas

2005

Equipment Enclosure

Permit

Antennas Enclosure

[No Permit Application]

Santa Fe

- **This permit is for equipment enclosure only**
- **Antennas must be applied for separately**
- **Vz transmits continuously from 2005-2013 without a permit**

Operating with 9 antennas

2013

Vz asks to add 3 more antennas to existing 6 antennas

[Permit Application]

- City issues Permit
- Neighborhood appeals
- No Hearing

2014

- Verizon reapplies for entire facility

6 antennas

2014 Application

- City issues Permit
- Neighborhood appeals

2015

- Neighborhood: Provides ATSI analysis demonstrating Vz not in compliance with FCC maximums
- Bd. Of Adjustment – Vz must demonstrate compliance

Exhibit "7"

2013 FCC Compliance Assessment

d. Antenna Inventory

ID	Name	(MHz) Freq	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir
A	Verizon	875.00000		80.0	Antel	BXA-70080/6CF	32.0	19.0	1.0	TX	6.0		80;45
a	Verizon	752.00000		80.0	Antel	BXA-70080/6CF	32.0	19.0	1.0	TX	6.0		80;45
B	Verizon	885.00000		160.0	Antel	QXA-806080120	34.0	17.0	1.0	TX	6.0		80;45
C	Verizon	875.00000		80.0	Antel	BXA-70080/6CF	34.0	13.0	1.0	TX	6.0		80;190
c	Verizon	752.00000		80.0	Antel	BXA-70080/6CF	34.0	13.0	1.0	TX	6.0		80;190
D	Verizon	885.00000		160.0	Antel	QXA-806080120	30.0	13.0	1.0	TX	6.0		80;190
E	Verizon	875.00000		80.0	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0		80;240
e	Verizon	752.00000		80.0	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0		80;240
F	Verizon	885.00000		160.0	Antel	QXA-806080120	6.0	17.0	2.0	TX	6.0		80;240

Exhibit "8"

2015 FCC Compliance Assessment

d. Antenna Inventory

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir
A	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	29.0	19.0	1.0	TX	6.0	13	82;30
a	Verizon	885.00000	20.0	8			0.5		142.6	Antel	BXA-70080/6CF	29.0	19.0	1.0	TX	6.0	13	82;30
B	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	34.0	17.0	1.0	TX	7.0	13	84;30
b	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	34.0	17.0	1.0	TX	7.0	15.5	81;30
C	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	33.0	13.0	1.0	TX	6.0	13	82;150
c	Verizon	885.00000	20.0	8			0.5		142.6	Antel	BXA-70080/6CF	33.0	13.0	1.0	TX	6.0	13	82;150
D	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	28.0	13.0	1.0	TX	7.0	13	84;200
d	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	28.0	13.0	1.0	TX	7.0	15.5	81;200
E	Verizon	875.00000	20.0	2			0.5		35.7	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0	13	82;225
e	Verizon	885.00000	20.0	8			0.5		142.6	Antel	BXA-70080/6CF	9.0	13.0	1.0	TX	6.0	13	82;225
F	Verizon	752.00000	60.0	2			0.5		107.0	Antel	QXW-806080120BF	6.0	17.0	1.0	TX	7.0	13	84;225
f	Verizon	2125.00000	60.0	2					120.0	Antel	QXW-806080120BF	6.0	17.0	1.0	TX	7.0	15.5	81;225

Verizon
Agua Fria Neighborhood

Vz Post-Installation
<u>Compliance Assessment</u>

- **Access is <u>not</u> restricted to EME trained personnel**
- **RF safety plan <u>not</u> in place**

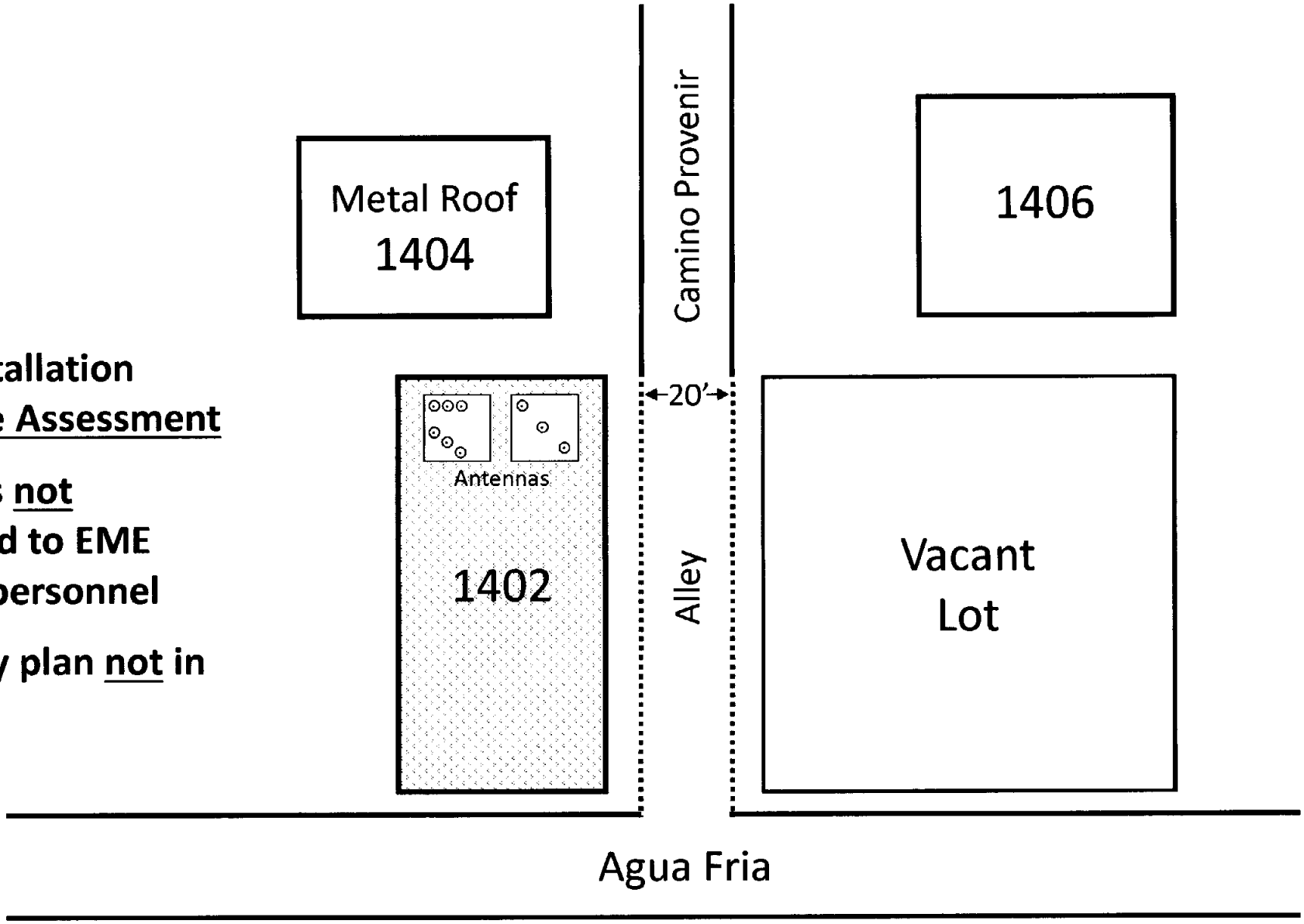
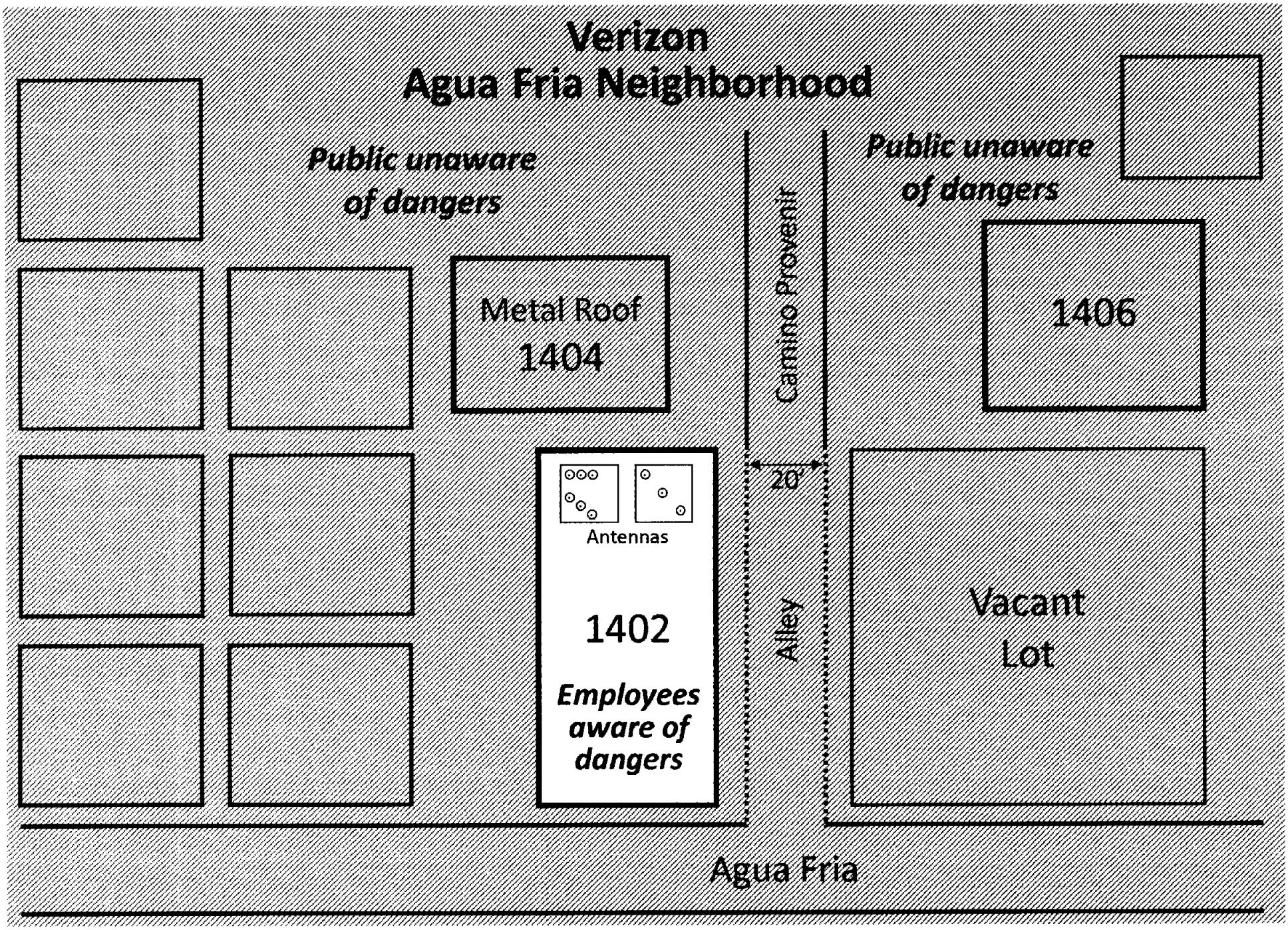


Exhibit "9"


Verizon
Agua Fria Neighborhood
Public unaware of dangers
Public unaware of dangers
Metal Roof
1404
1406
Camino Provenir
20'
Antennas
1402
Employees aware of dangers
Alley
Vacant Lot
Agua Fria

LEGAL REQUIREMENTS

As an initial administrative requirement, permit applicants must prove the facilities are in compliance with FCC radiation exposure limits.

A. Occupational Limits

- Employees aware of exposure
- Employees know location of point source
- Employees know danger
- Employees not in path of emissions for extended times

B. General Public Limits

- 5 times more stringent than occupational limits
  - Subject to exposure from unknown direction
  - Subject to full (continued) exposure
- Persons not aware of exposure

Exhibit "10"

SECTION 704 OF THE TELECOMMUNICATIONS ACT

- Gives City jurisdiction over RF radiation if FCC limits are exceeded.

"No State or local government . . . 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 Commission's regulations concerning such emissions."

Exhibit "1"

POINTS OF APPEAL

1. No application or permit for antennas in 2005
2. No submission of compliance with FCC maximum exposure limits in 2005
3. Not in compliance with FCC max. exposure limits at time of 2014 permit application
4. Not currently in compliance (2015) with FCC max. exposure limits

   A. Verizon Exceeds Max. Occupational Limits
   - Admitted (agrees to rope off non-compliant area)
   - Verizon calculations are for 6 antennas instead of existing 9

ATSI Calculations	Vz Calculations
9 Antennas	6 Antennas

   B. General Public Limits Improperly Assessed
   - No calculations for general public limits on rooftop or neighboring properties
   - No worst-case scenario for 1404 which has metal roof with full reflections on roof
   - Metal roof reflects and re-radiates into house or neighboring properties

Exhibit "12"

C. Verizon's Erroneous Roof Calculation

- On
- Below

D. Procedural Violations

- No cross-examination of witnesses
- Public hearing was closed before closing arguments
- No public comment on new evidence
- See Firstenberg letter of May 11, 2015

City of Santa Fe, New Mexico

memo

DATE: June 30, 2015, 2015 for the July 7, 2015 Meeting

TO: Board of Adjustment

VIA: Lisa Martinez, Director, Land Use Department
Greg Smith, AICP, Director, Current Planning Division

FROM: Noah Berke, CFM, Senior Planner

Case #2015-62. 802 Canyon Road Special Use Permit. Neema Sadeghi, requests approval of a Special Use Permit to use an existing building as an restaurant within the RAC (Residential Arts and Crafts) zoning district. The property is located at 802 Canyon Road. (Noah Berke, Case Manager)

I. RECOMMENDATION

After conducting the public hearing, if the Board determines that the application complies with applicable parking requirements, the Board should **APPROVE** the use permit if applicable findings are made..

II. SUMMARY & ANALYSIS

The application is for a Special Use Permit to use an existing building as a restaurant. The property is zoned RAC (Residential Arts and Crafts – 21 units per acre). The Residential Arts and Crafts allows for a variety of non-residential uses, including a restaurant with a Special Use Permit granted by the Board of Adjustment. The Special Use Permit is required to resume the restaurant use, which was discontinued for more than one year.

Prior to 2007, 802 Canyon Road was used to house restaurants such as Trixie's Café, Sole Café, San Miguel Restaurant and most recently Mateo's Bistro. Then starting in 2010, and continuing until 2014, the space was used as an art gallery for Michael Hennington Fine Art. The City issued Certificates of Occupancy and Business Licenses for those uses.

When the City issues Certificates of Occupancy and Business Licenses, staff checks for the appropriate amount of parking. It is unclear if a Special Use Permit was granted for the previous restaurants, or if there has been an existing non-conformity that was continuously

Exhibit "13"

honored on the property. If a Special Use Permit was granted in the past, it expires when a different use occupies the space for three hundred and sixty-five days or longer, as provided in Article 14-3.6(E)(2). The applicant is requesting a Special Use Permit to use 802 Canyon Road as a restaurant, which will include beer and wine sales.

The existing 6,071 square foot lot is currently developed with a 1,780 square foot building and two patios comprising a total of 880 square feet that would be used for outdoor seating. The proposed restaurant will be used by the Milad Persian Bistro, LLC operated by Neema Sadeghi. No changes are proposed to the existing building other than adding a 48 square foot walk-in cooler in the rear portal and those necessary to comply with all building codes (including Americans with Disability Act (ADA)) associated with commercial structures.

Parking and Loading

Parking for the proposed restaurant will be provided by 8 existing off-street parking spaces located on the southern portion of 802 Canyon Road, which is accessible from Camino Del Monte Sol.

Appendix A of the Land Use Development Code provides two possible parking ratios for restaurant types of use:

- The category of "Restaurants" requires 1 space per 200 square feet of net leasable area, the same rate that applies to art galleries. The net leasable area, as defined in the City's Land Use Development Code is "*Present or potentially habitable space designed for owner or tenant occupancy and exclusive use.*" The net leasable area, including outdoor seating areas, would comprise 2,660 square feet, requiring 14 spaces.
- The category of Eating and drinking establishments" requires one space per each 50 square feet of serving area. Serving area is not specifically defined, but is interpreted to include indoor and outdoor customer seating and standing areas. Using that rate would yield a requirement of approximately 11 spaces for indoor seating areas and 26 spaces for outdoor seating areas, for a total of 37 spaces.

Subsection 14-8.6(B)(3) regulates the parking requirements for changes of use:

> (3) Changes in Use
>
> (a) When the type or *intensity* of use of any *building, structure* or *premises* is increased by any means, including through addition of *dwelling units, gross floor area* or seating capacity, *off-street parking* shall be supplemented to accommodate the intensified use.
>
> (b) For a use that is *legally nonconforming* with regard to the number of parking spaces provided, the number of spaces that are lacking may be subtracted from the number of required *off-street parking* spaces for a new use at the same location so that the degree of nonconformity is maintained but is not increased.

The applicant has provided a signed affidavit that states that the previous occupants of 802 Canyon Road continuously used both patios for showing art, and that they were previously used for restaurant seating. The continued use of the property identifies a non-conformity to

the required parking standards for use as either a restaurant and gallery – the proposed net leasable area would require 14 off-street parking spaces, although the existing lot only provides 8 spaces.

The application proposes the following interpretation of the parking requirements:

1. The appropriate parking requirement for the restaurant is one space per 200 square feet of net leasable floor area.
2. Because the restaurant parking ratio, and the net area occupied by the restaurant, are both the same as the previous gallery use, the conversion back to restaurant use does not increase the parking requirement.
3. The property continues to be legally nonconforming with regard to parking as allowed by Subsection 14-8.6(B)(3).
4. The applicant also notes in support of the application that there is a city-operated parking lot nearby, and that restaurant use occurred at the property for many years prior to 2010.

Although that interpretation can be supported by the language in the code, staff would note the following concerns:

- Staff more often applies the higher parking requirement for restaurant uses, since experience shows that serving area is a more accurate predictor of parking demand than net leasable area in most cases.
- Practically speaking, it seems likely that the restaurant use will increase the actual parking demand compared to the immediately previous gallery use.
- Proximity of the city parking lot is balanced by an overall shortage of parking on Canyon Road.

The Early Neighborhood Notification (ENN) meeting was held on June 11, 2015 at the Downtown Main Library. Two members of the public attended in addition to one person associated with the applicant. The only questions that were raised had to do with live entertainment, to which the applicant assured them that there would not be any live entertainment. No objections specifically related to the proposed use of the restaurant were raised.

SFCC § 14-3.15 allows land use boards the authority to approve minor quantitative deviations from the standards in the Development Code, including standards for the number of required off-street parking spaces. That subsection does not appear to encompass the reduction of 14 required spaces to 8 spaces, however.

III. SPECIAL USE PERMIT APPROVAL CRITERIA

Section 14-3.7(C) Approval Criteria

14-3.6(D) lists the following approval criteria and conditions for Special Use Permits:

(1) Necessary Findings

To grant a Special Use Permit, a land use board shall make the following findings:

(a) That the land use board has the authority under the section of Chapter 14 described in the application to grant a special use permit

(b) That granting the special use permit does not adversely affect the public interest, and

(c) That the use and any associated buildings are compatible with and adaptable to buildings, structures and uses of the abutting property and other properties in the vicinity of the premises under consideration.

Applicant Response to Criterion (b)*: The impact of having the space be used as a restaurant does not adversely affect the public or neighbors. The space has previously been used as a restaurant for numerous businesses. There is adequate off-street parking as well as a large publicly available parking lot across the street. Adequate infrastructure exists for the use. Remodeling work will mostly be on the interior.*

Staff Response to Criterion (b): *The use of the building as a restaurant would not create impacts that would adversely affect the public. As the code does not clearly define the public interest, staff concurs with the applicant's response.*

Applicant Response to Criterion (c)*: The adjacent business, which is housed in the other half of the building, is Santa Fe's oldest restaurant still in operation. There is also a restaurant immediately across the street. This portion of Canyon Road is populated with galleries, shops, and restaurants in virtually every other building.*

Staff Response to Criterion (c)*: The proposed restaurant use is compatible with and adaptable to buildings, structures and uses of the immediate adjacent buildings and properties in the vicinity. 802 Canyon Road provides onsite parking, which many other restaurants, galleries and shops do not, therefore the impact would me minimal at best.*

IV. CONCLUSION

The proposed request is consistent with Chapter 14 for allowed uses in the Residential Arts and Crafts Overlay District. The proposed use is allowed subject to approval granted by The Board of Adjustment. While current parking requirements for this use are much higher than that of what is provided on-site, the applicant maintains that there has been a non-conformity that has been continuously passed on.

Staff has fully reviewed the application and determined that it complies with the necessary findings and recommends approval of the Special Use Permit.

V. ATTACHMENTS:

EXHIBIT A: City Staff Memoranda

1. Traffic Engineering Memorandum, Sandra Kassens
2. Water Division Memorandum, Dee Beingessner
3. Historic Preservation Division Memorandum, David Rasch
4. Waste Water Division Memorandum, Stan Holland, PE

EXHIBIT B: Photos

1. Google Street View Photos
2. Zoning Map Aerial Photo

EXHIBIT C: Applicant Submittals

1. Application Letter
2. Previous Tenant Affidavit
3. Letter from Architect Regarding Parking Requirements
4. Site Plan
5. Architectural Plans

City of Santa Fe, New Mexico

Board of Adjustment

Exhibit A

City Staff Memoranda

GURULE, GERALDINE A.

From: BERKE, NOAH L.
Sent: Tuesday, June 30, 2015 2:25 PM
To: GURULE, GERALDINE A.
Subject: Fwd: Need Comments for this BOA Case 2015-62

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------
From: "KASSENS, SANDRA M." <smkassens@ci.santa-fe.nm.us>
Date: 06/22/2015 1:44 PM (GMT-07:00)
To: "BERKE, NOAH L." <nlberke@ci.santa-fe.nm.us>
Cc: "ROMERO, JOHN J" <jjromero1@ci.santa-fe.nm.us>
Subject: RE: Need Comments for this BOA Case 2015-62

Noah,
RE: case 2015-62

The Traffic Engineering Division has no comments on the Special Use Permit request to allow a restaurant use at 802 Canyon Road. A quick review of trip generation rates for the size (~1600 sf.) indicated in the application demonstrates a negligible difference in traffic generation between a quality sit-down restaurant and an art gallery. The proposed change in use for this building should have minimal impacts on the surrounding roadway network.

Sandy Kassens
505-955-6697

From: BERKE, NOAH L.
Sent: Monday, June 22, 2015 10:47 AM
To: KASSENS, SANDRA M.
Subject: FW: Need Comments for this BOA Case 2015-62

Noah Berke, CFM
Planner Senior
City of Santa Fe
Land Use Department
200 Lincoln Ave.
Santa Fe, NM 87504
Work: (505) 955-6647
Cell: (505) 490-5930
Fax: (505) 955-6829

GURULE, GERALDINE A.

From: BERKE, NOAH L.
Sent: Tuesday, June 30, 2015 2:24 PM
To: GURULE, GERALDINE A.
Subject: Fwd: Need Comments for this BOA Case 2015-62

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------
From: "BEINGESSNER, DEE" <dabeingessner@ci.santa-fe.nm.us>
Date: 06/23/2015 2:08 PM (GMT-07:00)
To: "BERKE, NOAH L." <nlberke@ci.santa-fe.nm.us>
Subject: RE: Need Comments for this BOA Case 2015-62

Noah,

Because this building has an existing service, the Water Division does not have any objections to allowing a restaurant to operate there again.

Dee

From: BERKE, NOAH L.
Sent: Monday, June 22, 2015 10:18 AM
To: RASCH, DAVID A.; BEINGESSNER, DEE; HOLLAND, TOWNSEND S.; GONZALES, REYNALDO D.
Subject: Need Comments for this BOA Case 2015-62

Good Morning,

Sorry for late case, can you please review the attached case. This is for a Special Use Permit at 802 Canyon Road, which has operated multiple times over the past as a restaurant, but its last occupant was a Gallery, therefore they must now go to BOA for a Special Use permit as a restaurant. There are no planned exterior improvements.

Noah Berke, CFM
Planner Senior
City of Santa Fe
Land Use Department
200 Lincoln Ave.
Santa Fe, NM 87504
Work: (505) 955-6647
Cell: (505) 490-5930
Fax: (505) 955-6829

GURULE, GERALDINE A.

From: BERKE, NOAH L.
Sent: Tuesday, June 30, 2015 2:25 PM
To: GURULE, GERALDINE A.
Subject: Fwd: Need Comments for this BOA Case 2015-62

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------
From: "RASCH, DAVID A." <darasch@ci.santa-fe.nm.us>
Date: 06/22/2015 11:37 AM (GMT-07:00)
To: "BERKE, NOAH L." <nlberke@ci.santa-fe.nm.us>
Subject: RE: Need Comments for this BOA Case 2015-62

Noah,

The Historic Preservation Division has no concerns regarding this BOA application. Both restaurant and gallery use are found within this area of Canyon Road.

David Rasch
Historic Preservation Division
City of Santa Fe

City of Santa Fe
New Mexico

MEMO

Wastewater Management Division
DEVELOPMENT REVIEW COMMENTS

E-MAIL DELIVERY

Date: June 22, 2015

To: Noah Berke, Case Manager

From: Stan Holland, P.E.
Wastewater Management Division

Subject: Special use Permit 802 Canyon Road

The subject property is accessible to the City public sewer system.

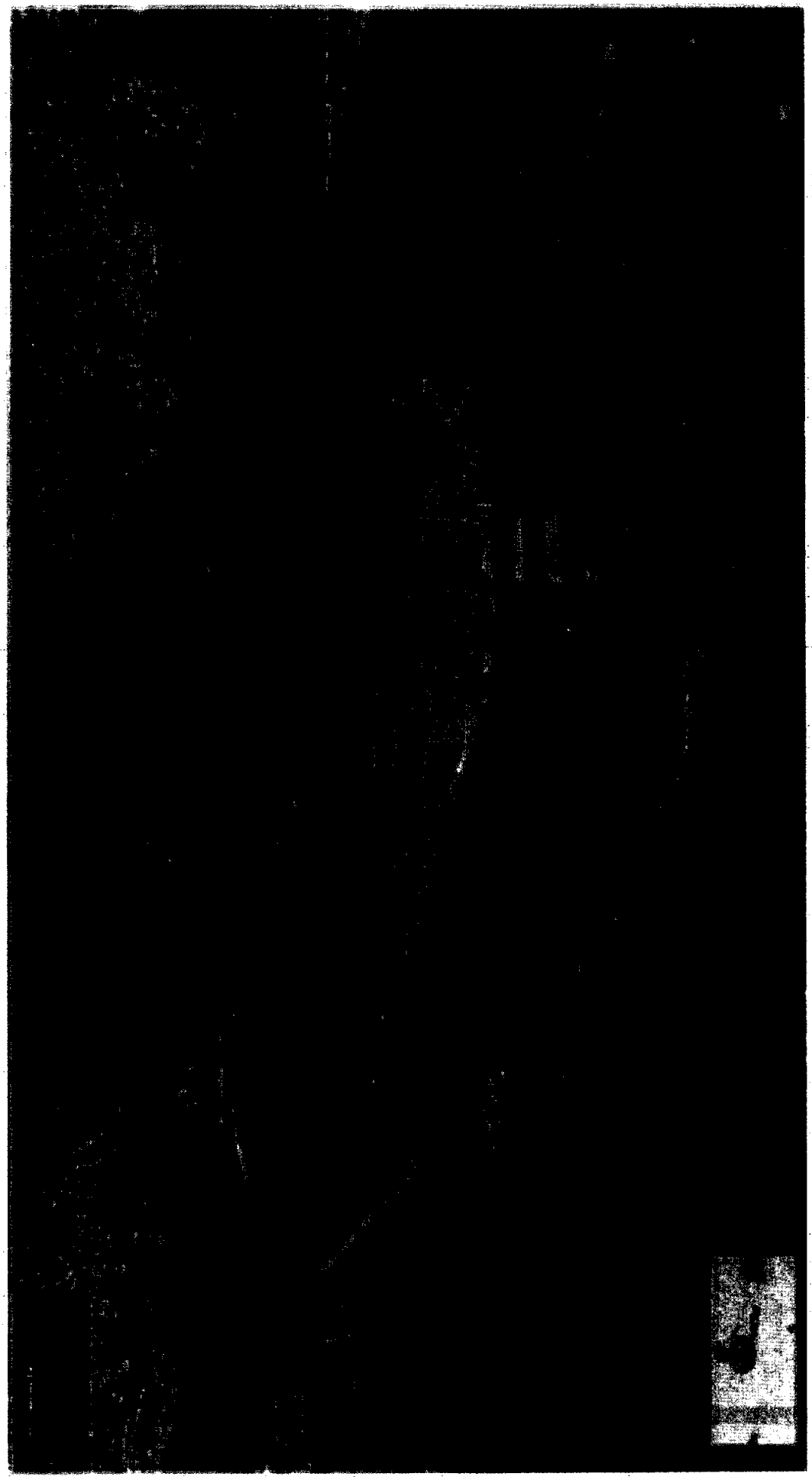
The Wastewater Division has no objection to the granting of a Special Use Permit

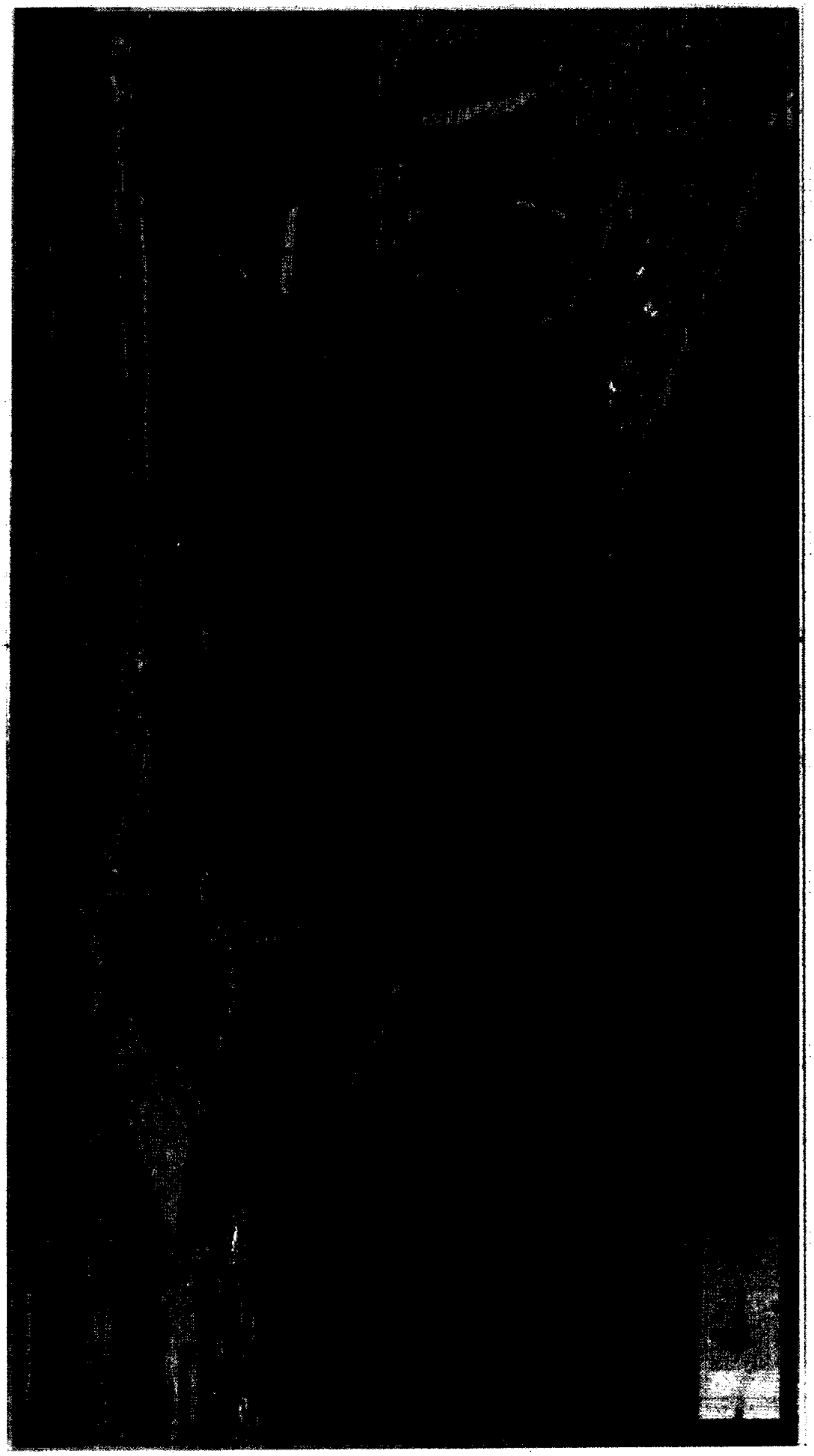
City of Santa Fe, New Mexico

Board of Adjustment

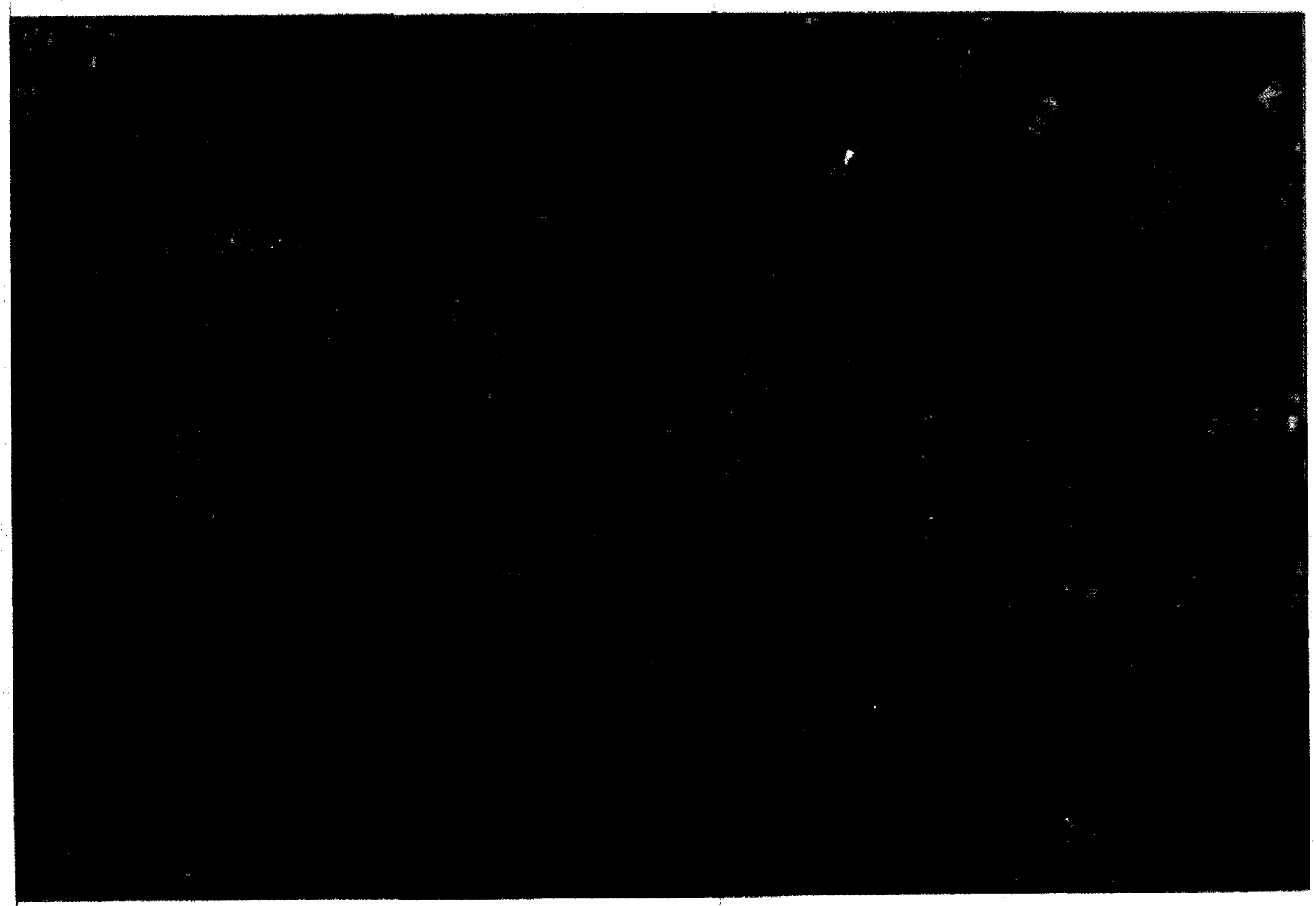
Exhibit B

Photos





802 Canyon Road



City of Santa Fe, New Mexico

Board of Adjustment

Exhibit C

Applicant Submittals

BERKE, NOAH L.

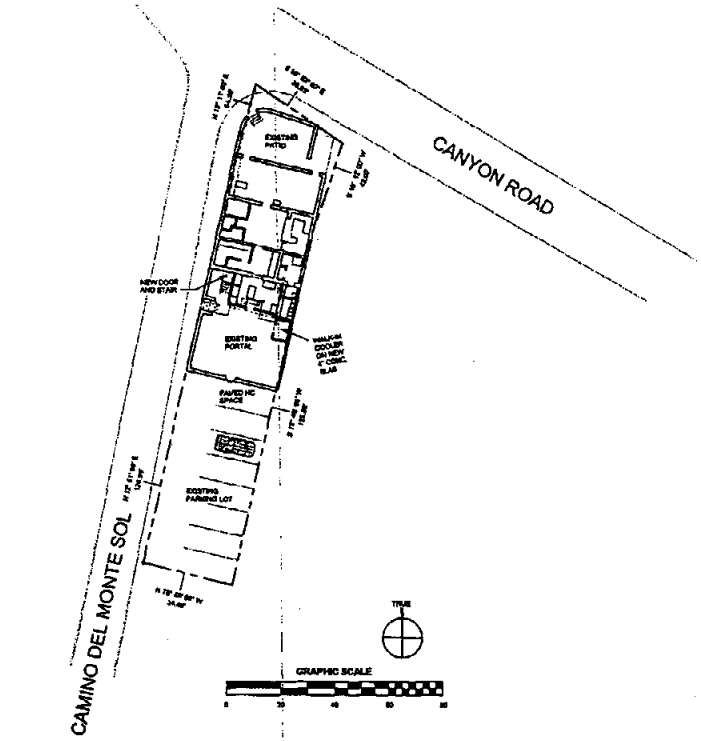
From: Lorn Tryk <lorn@ltryk.com>
Sent: Friday, June 19, 2015 2:15 PM
To: BERKE, NOAH L.; Neema Sadeghi
Subject: 802 Canyon Rd

Hi Noah,
In calculating the net leasable area for 802 Canyon Rd. I measured to the inside of the exterior walls. No interior spaces were excluded from my calculation (bathrooms, halls, etc.).
This is in conformance with BOMA standards for the measurement of net leasable area, the industry standard for computing leasable area.
Note that the space is part of a larger building that includes El Farol Restaurant next door.
I did not include the walk-in cooler because that is a movable piece of equipment parked under the portal, not part of the building.
I am happy to sit down with you at my computer and show you how the CAD program calculates the area; suffice it to say that it is quite accurate.
Thank you very much,
--
Lorn Tryk
Lorn Tryk Architects, PC
206 McKenzie St., Suite F2
Santa Fe, NM 87501
505-982-5340

Tenant Improvements
For Milad Persian Bistro

802 Canyon Road, Santa Fe, N.M.

TRACT 16 BLOCK 10
T17N R10E S30
FILED AT BOOK 607, PAGE 051
UPC # 1055098129458



① Site Plan
1" = 20'-0"

VICINITY MAP --

ZONING ANALYSIS:

ZONING:	RAC
LOT AREA:	6071 s.f. (0.139 ac.)
SETBACKS:	
FRONT:	19'-3" EXISTING
SIDE:	0'-0" EXISTING
REAR:	122'-0" EXISTING
HEIGHT:	EXISTING

AREAS:

LOT:	6071 s.f. (0.139 ac.)
HEATED:	1,780 s.f. EXISTING
GARAGE:	0 s.f.
PORTAL:	880 s.f. EXISTING
TOTAL ROOFED:	2,880 s.f. EXISTING
LOT COVERAGE:	3,981 / 13,380 = 43.8%

DESIGN CRITERIA:

CODES:	2009 IBC
CONSTRUCTION TYPE:	VB
OCCUPANCY:	A3
OCCUPANT LOAD:	
DINING:	822 SF / 15 = 55
KITCHEN AREAS:	607 / 200 = 3
TOTAL:	58

Sheet List	
Sheet Number	Sheet Name
A0	Cover, Site Plan
A2	Floor Plan Existing / Demo
A3	Floor Plan Proposed
A4	First Floor Reflected Ceiling Plan
A5	Enlarged Plans and Interior Elevations
A7	Wall / Stair Sections
P1	Plumbing Plan
E1	First Floor Electrical

LORN TRYK ARCHITECTS
206 McKenzie, Suite F2
Santa Fe, New Mexico 87501
Telephone: 505-983-5340 Fax: 505-983-5393
E-Mail: mail@tryk.com

STATE OF NEW MEXICO LORN C. TRYK NO. 1361 REGISTERED ARCHITECT

Tenant Improvements
For Milad Persian Bistro
802 Canyon Road, Santa Fe, N.M.

Date: 8/10/2015 12:14:39 PM

Cover, Site Plan

Scale 1" = 20'-0"

A0

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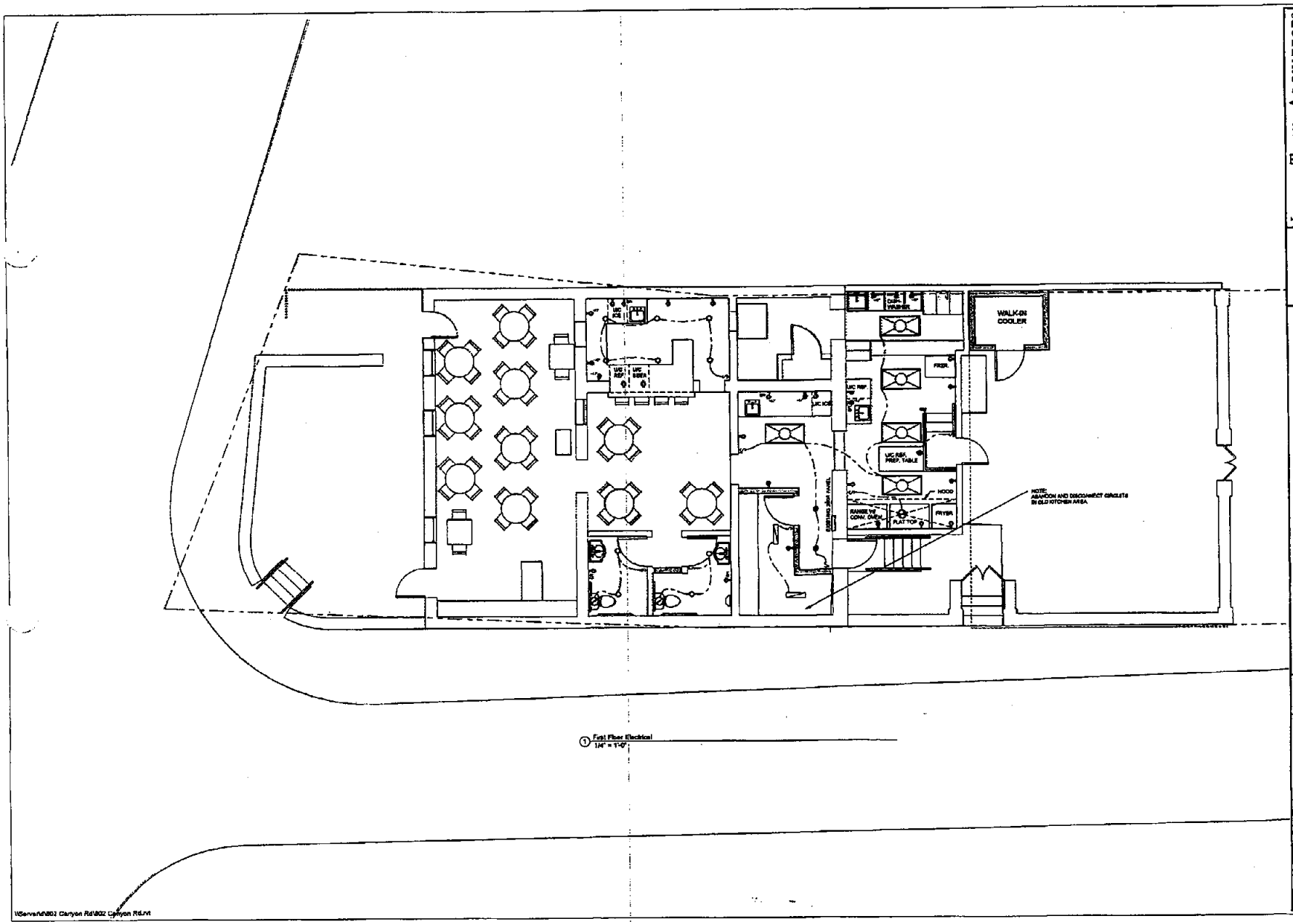

① First Floor Electrical
1/4" = 1'-0"

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Tenant Improvements For Milad Persian Bistro

802 Canyon Road, Santa Fe, N.M.

Date: 8/11/2015 12:19:06 PM

First Floor Electrical

Scale 1/4" = 1'-0"

E1

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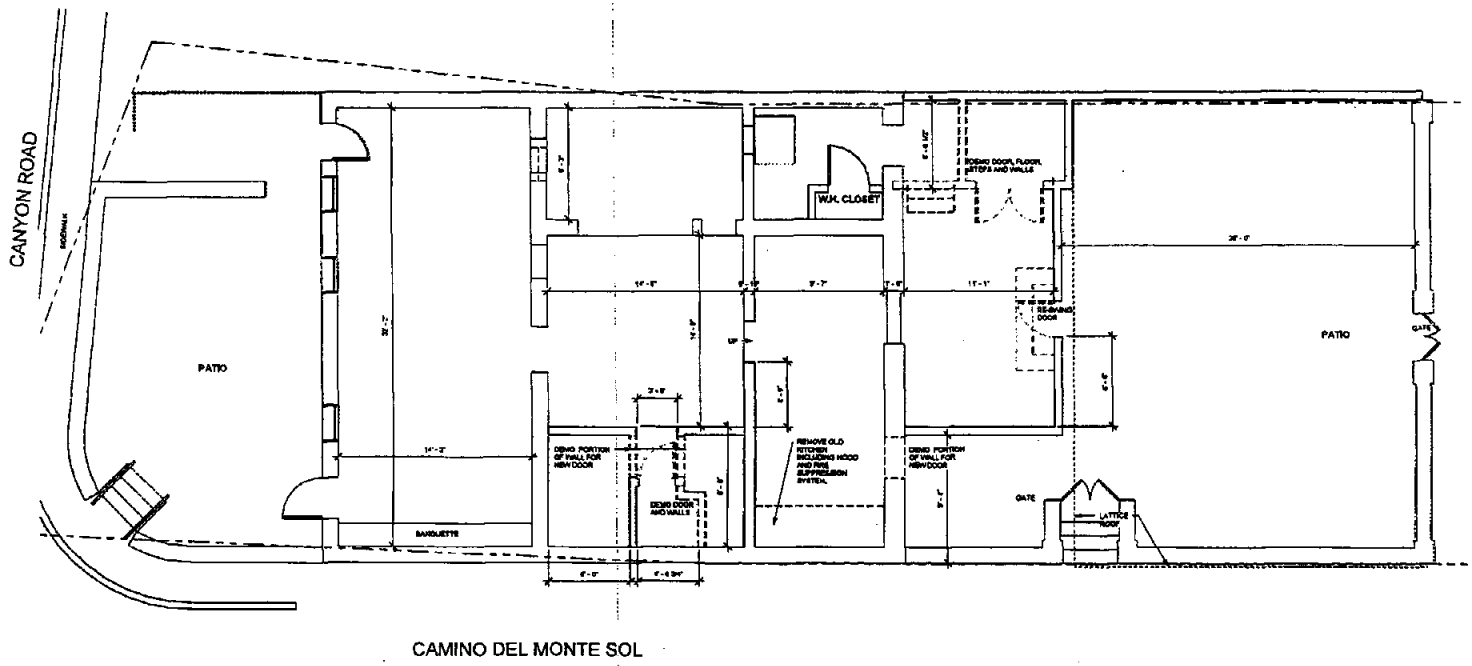

① Floor Plan Existing
1/4" = 1'-0"

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Tenant Improvements For Milad Persian Bistro

802 Canyon Road, Santa Fe, N.M.

Date: 3/11/2016 12:15:31 PM

Floor Plan Existing / Demo

Scale 1/4" = 1'-0"

A2