

# Testimony Submitted to the Montgomery County Council Showing Property Value Will Drop from ZTA 22-01

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	<p><b>Research referenced by Montgomery County itself shows loss of property value from wireless antenna facilities in front of homes! Cell antennas 30 feet from homes will impact the property value of homes sitting right in front of the tower!</b></p>
	<p><i>(Content taken from Environmental Health Trust <a href="#">Property Value Devaluation from Cell Antennas</a>)</i></p>
	<p><b>Montgomery County Own Legal filings state property values will drop from small cells.</b></p>
	<p><b>“many deployments of small cells could affect property values, with significant potential effect...”</b> - Legal filing by Montgomery County Maryland and other Cities, <a href="#">4/7/2017, Docket No. 16-421, Reply Comments of Smart Communities Siting Coalition which includes Montgomery County</a></p>
	<p>“Considering that the Smart Communities’ prior filings show that the addition of facilities of this size diminish property values, it is strange for the Commission to assume that approval can be granted in the regulatory blink of an eye....A good example lies in the Commission’s discussion of undergrounding.<sup>62</sup> The Commission at once appears to recognize that communities spend millions of dollars on undergrounding projects, and that <b>allowing poles to go up in areas where poles have been taken down has significant impacts on aesthetics (not to mention property values).</b>”</p> <p>- <a href="#">Ex Parte Submission from lawyers representing Montgomery County, Letter to Ms. Marlene H. Dortch, Secretary Federal Communications Commission September 19, 2018</a></p>
	<p><b>Realtors state property values will drop</b></p> <ul style="list-style-type: none"><li>● <a href="#">Realtor Magazine: Cell Towers, Antennas Problematic for Buyers</a> “An overwhelming 94 percent of home buyers and renters surveyed by the National Institute for Science, Law &amp; Public Policy</li></ul>



(NISLAPP) say they are less interested and would pay less for a property located near a cell tower or antenna. What's more, of the 1,000 survey respondents, 79 percent said that under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antennas, and almost 90 percent said they were concerned about the increasing number of cell towers and antennas in their residential neighborhood.”

- National Association of REALTORS Magazine [“Homeowners Complain About ‘Ugly’ 5G Boxes in Their Yards”](#) January 27, 2021  
“Wireless companies are installing boxes in front of homes as part of their 5G network rollout. But homeowners aren’t pleased, **calling the chest freezer–sized boxes a big eyesore in their front yards.**”
- [A Field Guide to Cell Towers, The National Association of Realtors](#)
  - This field guide lists numerous publications **indicating wildlife effects as well as human health risks and impacts to property values** from the aesthetics and perceived health implications.
- The California Association of Realtors’ Property Sellers Questionnaire **specifically lists “cell towers” on the disclosure form for sellers of real estate.** The seller must note “neighborhood noise, nuisance or other problems from.. ” and includes cell towers and high voltage transmission lines on the long list problems. [Click here to see the California Association of Realtors’ Property Sellers Questionnaire](#) (p. 3-4 under K. Neighborhood)

### **Studies Show Cell Antennas Near Homes Drop Property Values from 7% to 20%**

- [The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods](#) study found that buyers would pay as much as 20 percent less, as determined at that time by an opinion survey in addition to a sales price analysis.
- [The Disamenity Value of Cellular Phone Towers on Home Prices in Savannah, Georgia](#) (The Empirical Economics Letters, Aug. 2019) found proximity to cell phone towers can reduce selling price up to 7.6%.

### **Numerous articles state property value will drop**

- “Cellphone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of the potential



(b) A small cell attached at the top of a streetlight pole (Heilman, 2018).



Fig. 8. Street view on the Blagovest street with area of the mobile phone tower radiation projected on a circle over the top perimeter of the antenna, where resonance reaches the pedestrian at close range.



health risks and the impact on property values. Increasing numbers of people don't want to live near cell towers. In some areas with new towers, **property values have decreased by up to 20%.**"

-National Business Post: [Your new neighbor, a cell tower, may impact the value of your home](#) 2022

- A recent survey by the National Institute for Science, Law & Public Policy (NISLAPP) found **that 94 percent of homebuyers are "less interested and would pay less" for a property located near a cell tower or antenna.**  
-["Do neighborhood cell towers impact property values?"](#)  
Pennsylvania Association of Realtors
- **"Properties that are approximately close to the tower will suffer substantial degradation to their value** based on the nature of the unusual feature in the residential neighborhood." - [Appraiser: Cell Tower Will Affect Property Values](#)
- "While most states do not require disclosure of neighborhood nuisances, such as cell towers or noisy neighbors, a few states do, **and more are likely to in the future.**"- [Real Estate Q&A: Is There an Obligation to Tell Buyers About Nearby Cell Phone Tower?](#) (RISMedia, Apr. 26, 2021)
- "Understanding EMF values of business and residential locations is relatively new for the real estate industry. Cell phone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of potential health risks and the impact on property values. Increasing numbers of people don't want to live near cell towers. **In some areas with new towers, property values have decreased by up to 20%.**"- ["Examining invisible urban pollution and its effect on real estate value in New York City"](#) – by William Gati in New York Real Estate Journal September 2017
- "In 32 years of experience as a Real Estate Appraiser specializing in detrimental conditions, takings, adverse impacts and right-of-way, I have found that aesthetics (or rather the adverse impact on aesthetics) of externalities routinely has the largest impact on property values. As a result, proximity to towers of all types (cell, wind turbine, and electric transmission) has an impact on property values. The same is true with all sorts of surface installations such as pump stations and communication equipment boxes. This would apply to new small cell and DAS equipment,



although again, one would expect that the less intrusive the facility, the less significant the impact. Small cell and DAS installations can be unsightly, bulky, inconsistent, and even noisy.”- [“Impact of Communication Towers and Equipment on Nearby Property Values”](#) prepared by Burgoyne Appraisal Company, March 7, 2017

- “As we expected, the results clearly show that cell phone towers negatively affect adjacent property values, although in a relatively modest way. The negative impact decreases with the distance to the tower **with by far the largest effect occurring within the first 200 m.** Furthermore, the research confirms that all types of towers exert similar impact on property values despite various towers having different visual effects which demonstrate that the residents’ concern is more on health impacts than visual effects.”- [The Impact of Cell Phone Towers on House Prices: Evidence from Brisbane, Australia](#) (Environmental Economics and Policy Studies, Jan. 1, 2018)
- “On average, the potential external cost of a wireless tower is approximately \$4132 per residential property, which corresponds to a negative price effect of 2.65%. **The negative price impact of 9.78% is much more severe for properties within visible range of a tower compared to those not within visible range of a tower.** This negative impact vanishes as radii distances exceed 0.72 km.” [Wireless Towers and Home Values: An Alternative Valuation Approach Using a Spatial Econometric Analysis](#) (Journal of Real Estate Finance & Economics, May 1, 2018)
- [The effect of distance to cell phone towers on house prices](#) S Bond, Appraisal Journal, Fall 2007, Source, Appraisal Journal ([Found on page 22](#))
- [Using GIS to Measure the Impact of Distance to Cell Phone Towers on House Prices in Florida](#)
- [Florida State University Law Review Volume 24 | Issue 1 Article 5 1996 The Power Line Dilemma: Compensation for Diminished Property Value Caused by Fear of Electromagnetic Fields](#)
- [New Zealand Ministry for the Environment. “Appendix 5: The Impact of Cellphone Towers on Property Values”](#) Source: New Zealand Ministry for the Environment website
- [Powers, turbines and transmission lines impacts on property value edited by Sally Bond Sally Sims and Peter Dent. 2014](#)

The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods, was published in The Appraisal Journal of the Appraisal





Institute in 2006. The Appraisal Institute is the largest global professional organization for appraisers with 91 chapters.

The study indicated that:

- Homebuyers would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a cell phone base station.
- The ‘opinion’ survey results were then confirmed by a market sales analysis.
- The results of the sales analysis showed prices of properties were reduced by around 21% after a cell phone base station was built in the neighborhood.”

Jim Turner, Esq., Chairman of the National Institute for Science, Law and Public Policy, says,

“The results of the 2014 NISLAPP survey suggest there is now high awareness about problems from cell towers and antennas, including among people who have never experienced cognitive or physical effects from the radiation. A study of real estate sales prices would be beneficial at this time in the United States to determine what discounts homebuyers are currently placing on properties near cell towers and antennas.”

The Appraisal Journal study added,

“Even buyers who believe that there are no adverse health effects from cell phone base stations, knowing that other potential buyers might think the reverse, will probably seek a price discount for a property located near a cell phone base station.”

James S. Turner, Esq., Chairman of the National Institute for Science, Law & Public Policy and Partner, Swankin & Turner in Washington, D.C., says,

“The recent NISLAPP survey suggests there is now a high level of awareness about potential risks from cell towers and antennas. In addition, the survey indicates respondents believe they have personally experienced cognitive (57%) or physical (63%) effects from radiofrequency radiation from towers, antennas or other radiating devices, such as cell phones, routers, smart meters and other consumer electronics. Almost 90% are concerned about the increasing number of cell towers and antennas generally. A study of real estate sales prices would be beneficial at this time in the United States to determine what discounts homebuyers are currently placing on properties near cell towers and antennas.”



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# Research on 5G and Small Cell Radiation Exposure

American Academy of Pediatrics Website

“Electromagnetic Fields: A Hazard to Your Health?” on Cell Tower Radiation

“In recent years, concern has increased about exposure to radio frequency electromagnetic radiation emitted from cell phones and phone station antennas. An Egyptian study confirmed concerns that living nearby mobile phone base stations increased the risk for developing:

- Headaches
- Memory problems
- Dizziness
- Depression
- Sleep problems

Short-term exposure to these fields in experimental studies have not always shown negative effects, but this does not rule out cumulative damage from these fields, so larger studies over longer periods are needed to help understand who is at risk. In large studies, an association has been observed between symptoms and exposure to these fields in the everyday environment.”

–[American Academy of Pediatrics](#)

## Reviews That Recommend Cell Towers Be Distanced Away From Homes and Schools

- A review paper entitled “[Limiting liability with positioning to minimize negative health effects of cellular phone towers](#)” reviewed the “large and growing body of evidence that human exposure to RFR from cellular phone base stations causes negative health effects.” The authors recommend restricting antennas near home and within 500 meters of schools and hospitals to protect companies from future liability ([Pearce 2020](#)).

- An [analysis](#) of 100 studies published in Environmental Reviews found ~80% showed biological effects near towers. “As a general guideline, cell base stations should not be located less than 1500 ft from the population, and at a height of about 150 ft.” ([Levitt 2010](#))
- A [review](#) published in the International Journal of Occupational and Environmental Health found people living less than 500 m from base station antennas had an increased adverse neuro-behavioral symptoms and cancer in eight of the ten epidemiological studies ([Khurana 2011](#)).
- A [paper](#) by human rights experts documented the accumulating science indicating safety is not assured and considered the issue within a human rights framework to protect vulnerable populations from environmental pollution. “We conclude that, because scientific knowledge is incomplete, a precautionary approach is better suited to State obligations under international human rights law.” ([Roda and Perry 2014](#))
- A review entitled [“Evidence for a health risk by RF on humans living around mobile phone base stations: From radiofrequency sickness to cancer”](#) reviewed the existing scientific literature and found radiofrequency sickness, cancer and changes in biochemical parameters. ([Balmori 2022](#))

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## Cell Towers Radiofrequency Radiation and Cancer

### **World Health Organization International Agency for Research on Cancer**

In 2011, radiofrequency radiation was [classified](#) as a Class 2B possible carcinogen by the World Health Organization’s International Agency for Research on Cancer (WHO/IARC). The WHO/IARC scientists clarified that this determination was for RFR *from any source* be it cell phones, wireless devices or cell towers. Since 2011, the published peer-reviewed scientific evidence associating RFR to cancer and other adverse effects has significantly increased.

In 2019, the WHO/IARC advisory committee [recommended](#) that radiofrequency radiation be re-evaluated as a “high” priority in light of the new research. The date of the re-evaluation has not been set.

Currently, several scientists conclude that the weight of current peer-reviewed evidence supports the conclusion that radiofrequency radiation is a proven human carcinogen ([Hardell and Carlberg 2017](#), [Peleg et al, 2018](#), [Miller et al 2018](#)).

Research Studies to Know

- European Parliament requested a research report [“Health Impact of 5G”](#) which was released in July 2021 and concluded that commonly used RFR frequencies (450 to 6000 MHz) are probably carcinogenic for humans *and* clearly affect male fertility with possible adverse effects on the development of embryos, fetuses and newborns.
- A large-scale [animal study](#) published in Environmental Research found rats exposed to cell tower emission RF levels had elevated cancers, the very same cancers also found in the US National Toxicology Program animal study of cell phone RF. [Falcioni 2018](#)
- A [study](#) published in Electromagnetic Biology and Medicine found changes in blood considered biomarkers predictive of cancer in people living closer to cell antenna arrays ([Zothansiyama 2017](#)).
- A [study](#) published in the International Journal of Environmental Research and Public Health found higher exposure to cell arrays linked to higher mortality from all cancer and specifically lung and breast cancer ([Rodrigues 2021](#)).
- A [study](#) published in Science of the Total Environment 10 year study on cell phone antennas by the local Municipal Health Department and several universities in Brazil found a clearly elevated relative risk of cancer mortality at residential distances of 500 meters or less from cell phone towers ([Dode 2011](#)).
- A [study commissioned](#) by the Government of Styria, Austria found a significant cancer incidence in the area around the transmitter as well as significant exposure-effect relationships between radiofrequency radiation exposure and the incidence of breast cancers and brain tumors ([Oberfeld 2008](#)).
- A [review](#) published in Experimental Oncology found “alarming epidemiological and experimental data on possible carcinogenic effects of long term exposure to low intensity microwave (MW) radiation.” Even a year of operation of a powerful base transmitting station for mobile communication reportedly resulted in a dramatic increase of cancer incidence among the population living nearby ([Yakymenko 2011](#)).

### **A Myriad of Health Effects Reported in People Living Close to Cell Antennas**

Surveys of people living near cell tower antennas in [France](#), [Spain](#), [Iraq](#), [India](#), [Germany](#), [Egypt](#), [Poland](#) have found significantly higher reports of health issues including sleep issues, fatigue and headaches ([Santini et al 2003](#), [López 2021](#), [Alazawi 2011](#), [Pachua and Pachuaua 2016](#), [Eger et al 2004](#), [Abdel-Rassoul et al., 2007](#), [Bortkiewicz et al., 2004](#)).

A [study](#) published in American Journal of Men’s Health linked higher cell tower RFR exposures to delayed fine and gross motor skills, spatial working memory, and attention in school adolescents ([Meo 2018](#)).

A [study](#) published in Environmental Research and Public Health found higher exposures linked to higher risk of type 2 diabetes ([Meo 2015](#)).



A study following people for 6 years linked increased cell phone and cell phone tower antenna exposure to altered levels of hormones including cortisol, thyroid, prolactin and testosterone ([Eskander et al 2021](#)).

A [study](#) that followed people in a German town after a cell tower was erected found stress hormones adrenaline and noradrenaline significantly increased over the first 6 months after the antenna activation and decreased dopamine and PEA levels after 18 months ([Buchner 2011](#)).

### **Research on 4G LTE Health Effects**

Many new “small” cells are 4G Long Term Evolution (LTE) antennas. Industry states that 4G is the backbone for 5G networks and so they are densifying 4G facilities in residential neighborhoods. However, just like 5G, 4G LTE was deployed *without premarket safety testing* for long term exposure.

Studies on 4G exposure to rodents found behavioral changes ([Broom et al., 2019](#)), damage to the testes ([Yu et al., 2019](#)), reduced sperm ([Oh et al 2018](#)), damage to the optic nerve ([Ozdemir et al 2021](#)) and impacts to neuronal activity ([Souffi et al 2022](#)).

Studies on human volunteers have found 4G impacts brain waves ([Vecsei et al., 2018](#), [Yang et al., 2017](#), [Lv et al., 2014](#), [Wei et al., 2018](#)). A study on human cells found continuous exposure decreased human cell proliferation and increased intracellular ROS in human cells ([Choi et al 2020](#)).