

October 5, 2016

To: James Hogue
Long Grove Village Hall

From: Bill Blackburn
1647 Bernay Lane Long Grove
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847.530.4014

Jim,

Here is a hard copy of the PPT slides I had prepared for yesterday's hearing on the cell tower. As we discussed feel free to share these with the Trustees. If they would like me to present these slides, I would be happy to do so. I've also included another copy of my original report, which they may already have, which provides explanation for many of the slides.

Thanks,

Bill

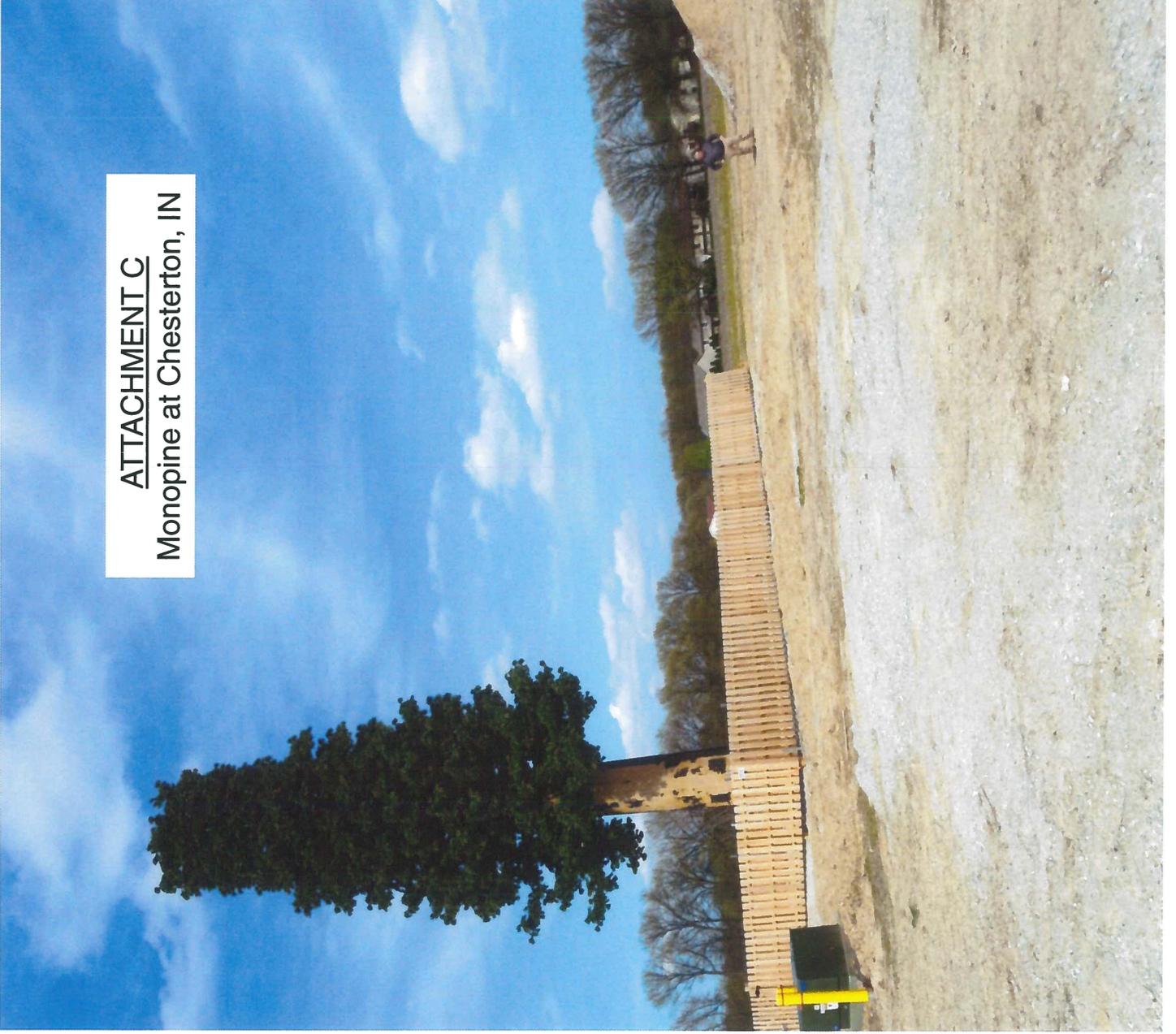
**Citizen Petition in Opposition to
Special Use Permit and Zoning Variances
for
Placement of New T-Mobile Cell Tower
at Temple Chai, 1670 Checker Road**

**Before the
Village of Long Grove, IL
Plan Commission and Zoning Board of Appeals**

**By William R. Blackburn
1647 Bernay Lane
Long Grove, IL
WRB@WBlackburnConsulting.com
Ph. 847.530.4014**

October 4, 2016

ATTACHMENT C
Monopine at Chesterton, IN









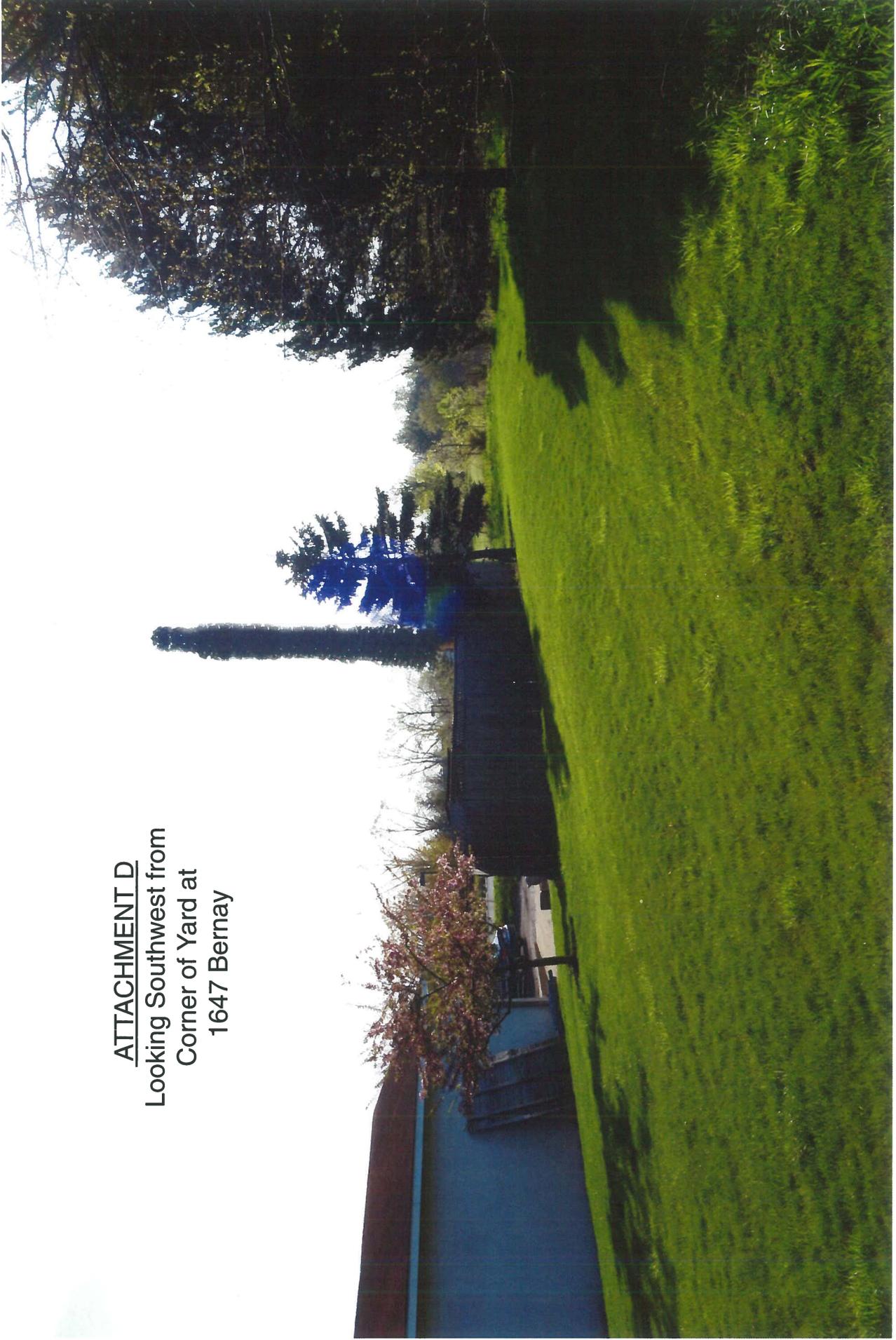
ATTACHMENT C
Monopine at Chesterton, IN
Modified to Approx. 130 Feet



ATTACHMENT D
Looking North from
Synagogue Parking Lot



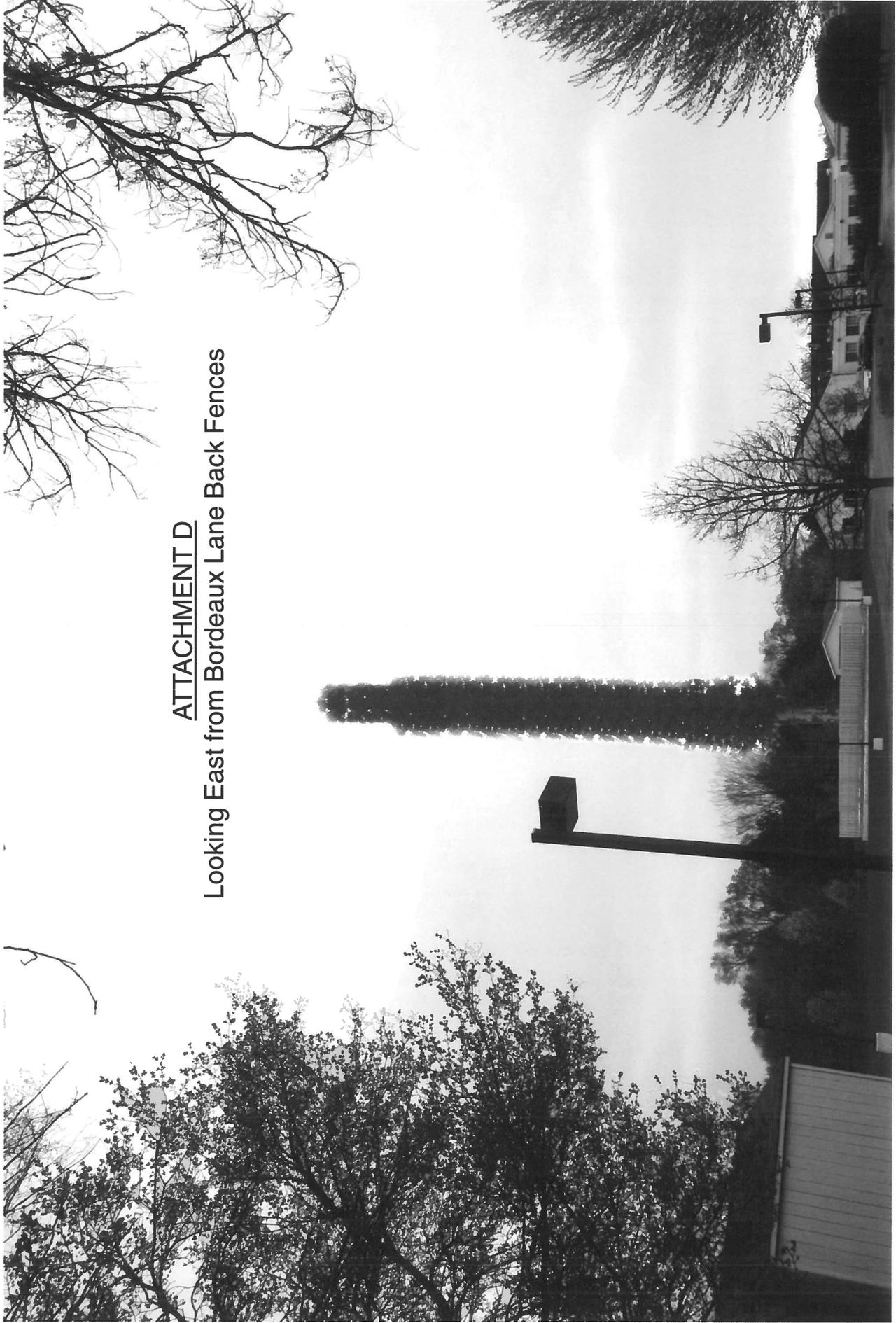
ATTACHMENT D
Looking Southwest from
Corner of Yard at
1647 Bernay



ATTACHMENT D
Looking Southwest from
Public Path/Easement



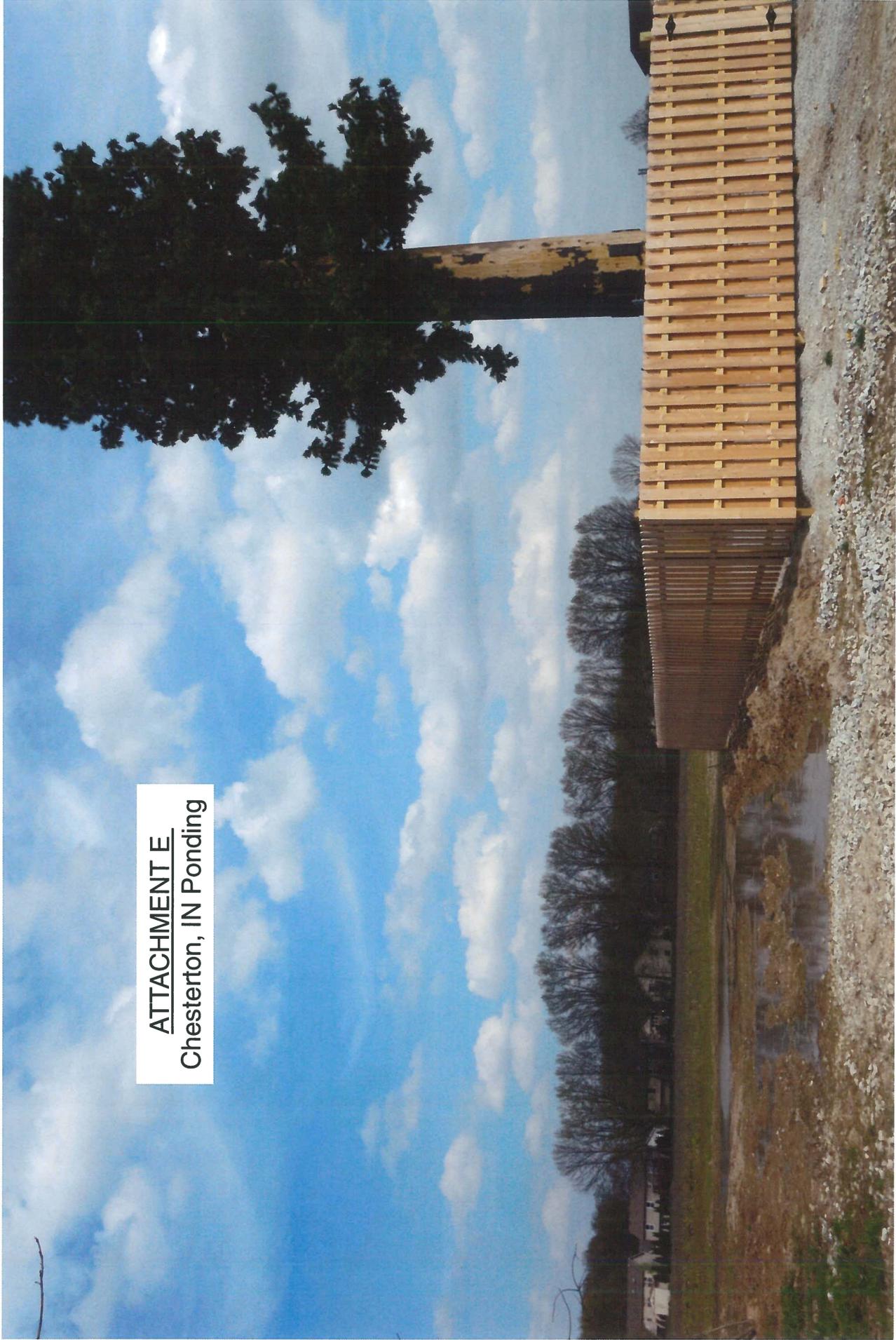
ATTACHMENT D
Looking East from Bordeaux Lane Back Fences



ATTACHMENT D
Looking South from 1650 Bernay Lane



ATTACHMENT E
Chesterton, IN Ponding



Monopine Appearance?

❖ No Commitment

- Applicant: No commitment about manufacturer and model/design because this must be bid out

❖ Trunk?

- Trunk may not be artificial bark used in Indiana but large dark metal pole (“smokestack” -like)



❖ Still a Monstrosity, Adds “Industrial” Clutter

- No matter the look, this is still a 12-story structure in our back yards



Zoning Ordinance Requirements

- ❖ 500-foot setback from homes [Ord.5-9-6(B)1]
 - 3 homes closer (342', 404', 495'); 4 at 500' to 555'
- ❖ 125-foot height [Ord.5-9-6(B)2(a)]
 - 130 to 140 feet with lightning rod
- ❖ Setback (Drop Zone) of 110% of height from nearest building [Ord. 5-9-6(B)5(d)]
 - 110%= 143' to 154'; rest home is 102' away
- ❖ 40% of acreage for building and associated structures in R2 zones
 - Currently at max (40%) without tower and base

Variance Requirements of Village Ordinance 5-11-15(F)2

1. Not impair adequate light or air to adjacent lots
2. Not substantially increase the danger of fire or otherwise endanger public safety
3. Not substantially diminish or impair property values within the neighborhood

130-Foot Tower 102 Feet From Rest Home Building!



2013-14 Only

Fires

Middleton, NJ
Bensalem, PA
(two incidents)
West Salem, OR
Sanford, FL
Brownsville, TX
Los Vegas, NV

Collapses

Middleton, NJ
Bensalem, PA
St Louis, MO
Laredo, TX
Copiah County, MS
San Ramon, CA
Willow, AK
Jefferson County, MO
Alascom, AK
Cheweiah, WA
Charksburg, WV (two towers)
North Adams, MA
Blaine, KS
Hudsonville, MI

Safety of Radio Frequency (RF) Radiation

❖ FCC: Extremely Unlikely Adverse “Thermal” Effects

“It is extremely unlikely that a member of the public could be exposed to RF levels in excess of FCC Guidelines due solely to cellular station antennas on monopoles.” [“Power density on antenna decreases rapidly (with distance).”]

❖ But...

- FCC safety limits are based only on observed “thermal” (microwave-like) effects
- FCC: “A number of reports have appeared in scientific literature describing the observation of a range of biological effects resulting from exposure to low levels of RF energy. However, in most cases, further research has been unable to reproduce these effects.”
- International Agency for Research on Cancer (IARC) of the WHO: “Extremely low frequency electromagnetic fields are possibly carcinogenic to humans.”

❖ Consensus of FCC, FDA, Canadian Health Agency:

- More research needed to address gaps in knowledge.

❖ Conclusion: Use “Precautionary Principle” and respect setback limits.

Effect of Cell Tower on Property Values

❖ Professor Sandy Bond's Landmark Study

- Aesthetics, perception of possible health effects, and stigma from living near tower, affect demand and price for properties.

❖ North Barrington

- Cuba Township Assessor Foersterling lowered assessment of 12 homes an average of 8% (5 to 11%) because of proximity to new cell tower at Village Hall property (upheld on appeal).

❖ Mundelein

- Hampton Reserve subdivision homes next to tower sold for an average of 9% (5 to 17%) less than comparable homes

❖ Waukegan

- Lancaster subdivision homes next to tower sold for an average of 16% (4 to 35%) less

❖ New Jersey

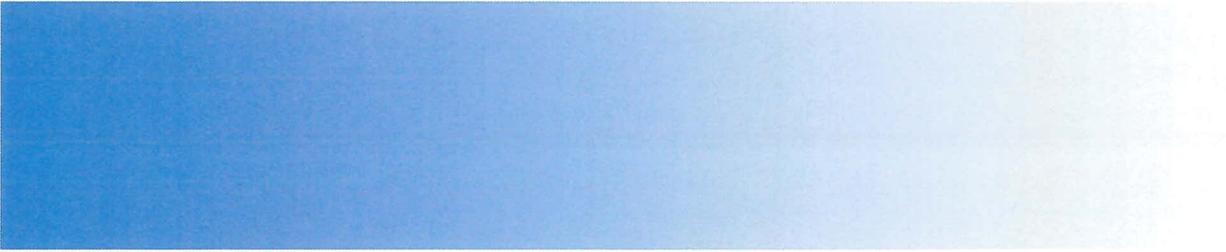
- 11% price penalty for homes near tower

❖ 10 Christchurch, NZ Suburbs (9500 transactions)

- 15% average value reduction for homes near cell towers; 21% in two communities

❖ Bernay and Bordeaux Homes

- **10-20% loss at 12 homes at \$450,000-\$650,000=\$600,000 to \$1.2 million!**



Response of Synagogue Members We Consulted

Questionable Need for Cell Tower at This Location

- ❖ **New Tower A Mile North**
 - Now wants improved signal for one mile of customers on Shaeffer, Checker, and Bordeaux
- ❖ **Jan. Offer to James Keiser, 1847 Shaeffer Rd.**
 - 150 foot monopole, not disguised monopine
 - \$12,000/yr. vs. \$30,000-36,000 market per Forest Preserve and *Chicago Tribune*
 - Yes-No take-it-or-leave-it offer
- ❖ **Dec. Proposal to Buffalo Creek Forest Preserve**
 - At entrance using Preserve's public access road, contrary to their standard terms
 - No follow-up for another location and own access
 - Verizon now has live application before Preserve (Piggyback on Verizon tower if approved?)

Board Precedent for Respecting Our Community

- ❖ Rejected 2008 proposal to add 2nd story to Arlington Living and Rehabilitation Center 100 feet to east of proposed tower
- ❖ Not 2-story, but 12-story structure here
- ❖ Please continue to protect our property values and safety, and the open look and general character of our community!

May 3, 2016

Citizen Petition in Opposition to Proposed Special Use Permit and Zoning Variance for Placement of New T-Mobile Cell Tower at Temple Chai, 1670 Checker Road, Long Grove, IL

Presented by William R. Blackburn, 1647 Bernay Lane, Long Grove
(WRB@WBlackburnConsulting.com)

We, the undersigned citizens, adamantly oppose the Village's issuance of the special use permit and zoning variances being requested by PI Telecom Infrastructure (Applicant) in order to place a new 130-to-140-foot T-Mobile "monopine" cell tower at Temple Chai, 1670 Checker Road in the Village of Long Grove. We object on the basis that the requested permit and variances do not meet the requirements of the Village's Zoning Regulations (Title 5) for these items, and that this towering structure—the height of a 12-story building—with associated electrical equipment is not in keeping with the character and nature of the neighborhood. Our explanation is provided below.

1. Background

From the legal notice we received and from subsequent discussions with the Applicant and the Village Planner, James Hogue, we understand that PI Telecom Infrastructure, acting on behalf of T-Mobile and property owner Temple Chai synagogue, are requesting a special use permit and zoning variances that would relieve it from meeting the following existing requirements that would otherwise apply to the placement of the cell tower at the site:

- 1) 500-foot setback between the tower/ tower support structure and the nearest outside wall of any single family dwelling [Ord. 5-9-6 (B)1]. According to the Applicant, three homes are closer than 500 feet. (Four others are between 500 and 600 feet.)
- 2) Height of not more than 125 feet [Ord. 5-9-6(B)2(a)] The height with lightning rod would be between 130 and 140 feet.
- 3) Separation of 110% of tower height (something in the range of 143-154 feet in this case) between tower support structure and any building on an adjoining lot [Ord. 5-9-6(B)5(d)]. The Avantara rest home and rehabilitation center building would be less than 102 feet away.

We also understand that the proposed structures exceed the 40% building area limit for R2-zoned property.

2. Questionable Need for Cell Tower at This Location; Alternatives Not Seriously Explored

Applicant provided a map showing five towers within several miles of the proposed new site, including a new 120-foot tower at 1190 Old McHenry Road (approximately 1 ½ miles north of the proposed new site). Applicant said this new tower significantly improved coverage, especially to the north and west; however, better coverage was still needed in a small area northwest and southwest of the proposed new site, primarily along the north-

south roads of Shaeffer Road (0.5 mile long) and Bordeaux Lane (0.2 mile long) and along the ½-mile stretch of Checker Road between those two streets. According to Applicant, while the signal could sometimes be strong in this weaker area, it was not consistently so, and although the population was not likely to grow there, use of cellular devices would. To us petitioners, this slight improvement in coverage in this very small area does not justify the significant harm the new tower at Temple Chai would cause the neighboring residents.

Applicant has said that to fill its coverage gap, a new tower was needed in the gap area, which includes not only Checker Road but Shaeffer Road and the Buffalo Creek Nature Preserve just south of Checker and east of Shaeffer. Village Planner, James Hogue, asked Applicant on August 7, 2015, to investigate with the Lake County Forest Preserve about establishing its tower site at the Buffalo Creek Preserve and to contact James Keiser at 1847 Shaeffer Road about placing the tower on his property. On January 29, 2016, Applicant sent a brief letter to Mr. Keiser asking if he was interested in accepting a 150-foot monopole structure on his site for \$12,000 a year, and to check a yes-no box on the letter and send it back. (See Attachment A). Mr. Keiser was not offered an imitation tree “monopine” structure of the type being proposed for Temple Chai; nor was Mr. Keiser permitted to negotiate the price from this low-ball level.¹

Applicant approached the Forest Preserve last October, requesting to install a tower at the main entrance to the Preserve, just south of the synagogue. However the Forest Preserve District’s standard terms for cell towers requires tower operators to install a separate entrance, and for this and other reasons the District said in a December 2015 email that the proposed tower location would not be acceptable. According to the District, the Applicant made no follow up. Moreover, at their April 26 community information meeting, Applicant said they are not interested in “spending a year trying to hammer out an arrangement with the District.” On the other hand, according to Randall Seebach, the Director of Planning and Land Preservation at the Lake County Forest Preserve, Verizon has made a separate formal application to the District for a tower at another location on the Buffalo Creek Preserve, which will be considered at a June 6 meeting (see Attachment B). Newspaper reports last July² and the issuance of the District’s standard terms for cell towers point to a shift in policy by the District about allowing towers on their sites. In fact, district board members directed their executive director Ty Kovach to speak with tower companies, and he has determined that three leases could bring in around \$90,000 per year, which could help the Preservation Foundation fund special projects at the preserves—particularly useful as county budgets tighten.

¹ See, Lisa Black, “Cell Tower Latest Hiding Place: Church Steeples,” *Chicago Tribune Online*, (Feb. 24, 2014), at <http://internetmor76.blogspot.com/2012/02/cell-towers-latest-hiding-place-church.html> : Churches may earn up to \$3000 per month in least agreements from telecommunications companies. See also, Mick Zawislak, “Cell Towers in Lake County Forest Preserves Considered for Revenue Potential,” *Daily Herald*, (July 9, 2015), available at <http://www.dailyherald.com/article/20150709/news/150709037/>: Forest Preserve may earn around \$90,000 for three tower leases.

² See, Mick Zawislak, “Cell Towers in Lake County Forest Preserves Considered for Revenue Potential,” *Daily Herald*, (July 9, 2015), available at <http://www.dailyherald.com/article/20150709/news/150709037/>.

Neither the investigation of the Keiser property nor that at Buffalo Creek were serious efforts at reaching reasonable terms on siting a tower there, and more extensive efforts should be devoted to this. With the small area of coverage at stake here and the recent addition of the new tower at McHenry Road, the addition of a new tower at Temple Chai does not seem time-critical, so Applicant should have plenty of time to give their best efforts to negotiating for these alternative sites. While this may be an “inconvenience” for Applicant, it would not constitute a “hardship” for which relief may be granted under Ordinance 5-11-15(E)2(a). This is most relevant to the consideration of the Special Use Permit for the site, which requires consideration of—

“whether and to what extent the public (service) goals can be met by the location of the proposed use or development at some other site or in some other area that may be more appropriate than the proposed site.” [Ord. 5-11-17(E)3(b)]

And if Verizon’s application is accepted by the Forest Preserve District, Applicant should approach that provider promptly about adding their own antenna to Verizon’s new tower, evaluating the suitability according to the criteria for considering other towers as provided in Village Ordinance 5-9-6(C)8.

3. Set Back and Height Limitations Are Important to Neighborhood

Village Ordinance 5-11-17(E)1 provides:

“No special use permit shall be recommended or granted...unless the owner shall establish:

(b) It is designed, located and proposed to be operated that the public health, safety and welfare will be protected;

(c) It will not cause substantial injury to the value of other lots in the neighborhood in which it is located...”

With regard to Village zoning variances, Ordinance 5-11-15(F)2 says:

“...(T)he board of appeals shall also, in making this determination whether there are practical difficulties or particular hardships (justifying the variance), take into consideration the extent to which the following facts favorable to the owner have been established by the evidence:

(e) That the granting of the variation will not be detrimental to the public welfare or injurious to other lots...in the neighborhood in which the lot is located; or

(f) That the proposed variation will not impair an adequate supply of light and air to adjacent lots or substantially increase the danger of fire or otherwise endanger the public safety, or substantially diminish or impair property values within the neighborhood.”

The proposed special use permit and zoning variances requested by the Applicant do not meet these requirements because, as explained below, they would result in substantially diminished or impaired property values within the neighborhood, would impair the light to and the view from adjacent lots, would be detrimental to public welfare, and could pose additional endangerment to public safety.

1) Harm to Property Values

Evidence from around the globe and as close as North Barrington and Mundelein show that property values are substantially diminished with the addition of a cell tower in the neighborhood, with properties closest to the tower taking the greatest hit on valuation. The National Institute for Science, Law and Public Policy surveyed 1000 people in the U.S. and abroad and found 94% of respondents saying that cell towers and antennas in a neighborhood would affect their interest in a property and the price they would be willing to pay for it. And 79% said under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower.³ Studies by Professor Sandy Bond of the University of North Florida and the New Zealand Property Institute, show that the lower desirability of homes (and lower prices) near a tower are not just due to aesthetics. His landmark survey in New Zealand found 45% of respondents saying close proximity to a tower worried them a lot; the result was 82% when adding in those who were worried about this at least somewhat. The perception of possible harmful health effects (whether or not actually justified) worried 42% of respondents a lot, 80% when including those worried at least somewhat. And the stigma itself from living near a tower worried 34% a lot, 79% including those worried at least somewhat.⁴

In 1999, the Lake County Board of Review upheld the decision of Cuba Township Assessor Fred Foersterling to lower the assessments of 12 homes an average of 8% (range of 5 to 11%) because those values were determined to have been adversely affected by the presence of a new cellular tower on the North Barrington Village Hall property.⁵ Studies of the sales of homes in the Hampton Reserve subdivision of Mundelein, IL in 2005-06 and of homes in the Lancaster subdivision in Waukegan in 2000-04 found that homes next to cell towers sold for considerably less than homes of comparable size and design that were further away in the same subdivision. The price for homes next to the tower in Mundelein sold for an average of 9% less (range of 5 to 17%) and those in Waukegan for an average of 16% less (range of 4 to 35%).⁶ A similar study by a real estate appraiser in Franklin, NJ in

³ "Cell Towers, Antennas Problematic for Buyers," *REALTORMag* (the official magazine of the National Association of Realtors), (July 25, 2014), at <http://realtormag.realtor.org/daily-news/2014/07/25/cell-towers-antennas-problematic-for-buyers>

⁴ Sandy Bond, PhD., and Ku-Kang Wang, "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," *The Appraisal Journal*, (Summer 2005), at <http://electromagnetichealth.org/wp-content/uploads/2014/06/TAJSummer05p256-277.pdf>. See also, Sandy Bond, PhD. (University of Northern Florida), and Larry Squire (University of Florida), "Using GIS to Measure the Impact of Distance to Cell Towers on House Prices in Florida," (Dec. 2006), presented at *Pacific-Rim Real Estate Society Conference*, Jan. 21-24, 2007, available at http://www.prrs.net/Papers/Bond_Squires_Using_GIS_to_Measure.pdf.

⁵ Phil Brozynski, "Tower Opponents Ring up a Victory," *Courier-Review* (Barrington, IL), (Feb. 15, 1999), at p.5.

⁶ Tim Marvin, real estate pricing studies included in presentation to Mundelein Plan and Zoning Commission, April 20, 2016, available at tim.marvin@sbcglobal.net.

2012 found the price penalty for a home near a tower to be approximately 11%.⁷ Other studies by Professor Sandy Bond showed even more pronounced effects. His often-cited study of over 9500 property transactions in 10 suburbs of Christchurch, NZ published in the 2005 *Appraisal Journal* revealed that properties in close proximity to a tower had on average 15% lower prices, and in several communities, home values were diminished 21%. The closer to a tower, the greater the decrease. This was consistent with the views of survey respondents in his study who said they believed proximity to a tower would reduce values 10 to 20 percent.⁸

The current values of the dozen homes on Bernay Lane and Bordeaux Lane, the residential streets closest to the proposed tower site, are in the range of \$450,000 to \$650,000—say \$500,000 average, so a 10-to-20% loss in value would result in a total impact of between \$600,000 and \$1.2 million, not counting the impact on other homes nearby. During their informational meeting, Applicant was asked by us residents if they would compensate nearby property owners if reputable appraisers determined property values in this case were in fact diminished by the addition of the cell tower. Applicant said they would not do this.

2) Aesthetics; Impairment of Light

Applicant provided us residents some Photoshopped pictures of what they said the tower structure would look like from low elevations behind trees during the summer months when leaves were present. Unfortunately, none of these photos represented views from properties to the north of the site, where the proposed setbacks are the shortest, nor from any resident's yard. Applicant also invited us to examine a monopine structure installed in Chesterton, Indiana, which we did. We estimate from the 6-foot fence next to it, that this monopine is approximately half the size of the one proposed for Temple Chai, and have used that fence as a measure to create a Photoshopped version there of 140 feet. (See Attachment C.) (It should be noted that this half-sized monopine in Indiana was set back approximately 500 feet or more from nearby properties.) To obtain a more realistic view of what the proposed installation might look like from the back yards to the north, we took photos from those locations using helium balloons on a 140-foot string fixed to the proposed tower site to establish the proper height of the structure in the photo, then Photoshopped in the monopine from Indiana at that height. Photos of the 140-foot tower at Old McHenry Road taken with the same camera at the same distances were used to double check those heights in the photos. These new photos are provided as Attachment D. The structure would clearly loom over these neighboring properties like a monstrous lawn Christmas decoration, interfere with the horizon views of nearby residents, and be out of character with the rest of the area.

Admittedly, the monopine in Indiana looked better than an uncovered monopole and other fake-tree cell tower designs we have seen on the Internet, which Applicant has accurately referred to as “bottle brush” designs. The limbs in Indiana have more extensive

⁷ Audrey Levine, “Appraiser: Cell Tower Will Affect Property Values,” *Patch.com* (Bridgewater, NJ), (Mar.27, 2012), available at <http://patch.com/new-jersey/bridgewater/appraiser-t-mobile-cell-tower-will-affect-property-values>

⁸ Sandy Bond, et al. cited in footnote 4, above.

artificial needles and the limb density is 3 or 4 per foot of elevation. While Applicant committed to us to bring the limbs down to around 30 feet from the ground, as was done in Indiana, it could not commit to the particular design from the particular manufacturer used in Indiana because they said this would have to be bid out. Moreover, the artificial bark-textured pole, which appears more natural than a steel surface, might be replaced by a dark metal pole—something we fear may be more akin to an industrial smokestack. Also, the missing bark coating and downed limbs on the north side of the Indiana monopine (see Attachment D), was also a concern to us, but Applicant assured us this was due to additional construction of the structure and not failure of it. (They also assured us no standby generator would be installed and, instead, batteries would be used for emergency power, thus eliminating a potential noise concern of ours.)

We understand that the requested zoning variance would also have to authorize exception to a current R2-zone limit of 40% on building area for this 4.3 acre synagogue site. We assume this would be for the addition of the pole base, the 8' x 12' platform with canopy, the 10' x 20' area to be covered with concrete pavers, and/ or the 60' x 60' graveled area. If so, we would oppose such a change on aesthetic and environmental grounds. (We also note that while the board of trustees is authorized to issue a variance of certain listed special-use-permit floor-area limitations under Ord. 5-11-15(E), this situation at Temple Chai isn't one of them.) The site is already filled with the synagogue building. Moreover, with the rest home and rehab center buildings immediately to the east, the new structures would make the area look cluttered and industrial, not in keeping with the more open residential-commercial feel that the Village has tried to maintain over the years. And the feel might be downright claustrophobic for the public using the access path (a recorded easement) from the southwestern corner of 1647 Bernay to the Buffalo Creek preserve, along the northwestern part of the rest home property and southward immediately east of the tower site. The added structures also would deprive subsurface aquifers of some rainwater recharge, and exacerbate stormwater drainage. It should be noted that considerable ponding was observed right next to the tower fencing at the Indiana site (see Attachment E), which does not instill confidence about how well drainage will be handled here.

3) Safety & Health Risks

Cell tower fires and collapses are rare, but they do occur. In 2013 and 2014 fires occurred at towers in at least the following U.S. locations⁹:

- Middleton, NJ
- Bensalem, PA (two incidents)
- West Salem, OR
- Sanford, FL
- Brownsville, TX
- Los Vegas, NV

⁹ Dr. David Stupin, "Cell Tower Fires and Collapsing Towers," *Electronic Silent Spring*, (2015), at <http://www.electronicsilentspring.com/primers/cell-towers-cell-phones/cell-tower-fires-collapsing/>

Fires have resulted from construction errors, overheated equipment, improper cooling, and the typically frequent lightning strikes (especially if there is faulty grounding). The ignition of the vinyl coating on coaxial cables within the tower can bring flames shooting out the top.

The burning towers in Middleton and Bensalem collapsed. Unintended collapses also occurred during those two years at towers at these other U.S. sites¹⁰:

St Louis, MO
Laredo, TX
Copolah County, MS
San Ramon, CA
Willow, AK
Jefferson County, MO
Alascom, AK
Cheweiah, WA
Charksburg, WV (two towers)
North Adams, MA
Blaine, KS
Hudsonville, MI

Besides fire, other causes for collapse included construction errors and ice (about 30% each), special wind (about 20%), and anchor failure and aircraft (approximately 10% each).

Applicant said they knew of no fires or collapses of their own towers and, in any event, their towers are designed to fail in pieces that drop near the tower base, so the likelihood of damage to neighboring property and inhabitants is unlikely. Still, with fire or tower failure in high winds, metal debris and sparks may blow considerable distances, which is why setback requirements in the Village ordinance should be respected in this case. The rest home of elderly people of limited mobility only 100 feet from the tower is a particular concern.

Considerable debate has occurred over the years about the harm that radio frequency (RF) emissions from cell towers and cell phones can cause humans. The Telecommunications Act of 1996 gave the Federal Communications Commission (FCC) the exclusive authority to regulate the placement, construction and modification of cell towers on the basis of the environmental and health effects of RF radiation. The current FCC guidance on RF radiation from cell towers states:

“At a given cell site, the total RF power that could be radiated by the antennas depends on the number of radio channels (transmitters) installed, the power of each transmitter, and the type of antenna. While it is theoretically possible for cell sites to radiate at very high power levels, the maximum power radiated in any direction usually does not exceed 500 watts.

As with all forms of electromagnetic energy, the power density from the antenna decreases rapidly as one moves away from the antenna. Consequently, ground-level

¹⁰ Id.

exposures are much less than exposures if one were at the same height and directly in front of the antenna.

Measurements made near typical cellular installations, especially those with tower-mounted antennas, have shown that ground-level power densities are hundreds to thousands of times less than the FCC's limits for safe exposure. This makes it extremely unlikely that a member of the general public could be exposed to RF levels in excess of FCC guidelines due solely to cellular station antennas located on towers or monopoles.”¹¹

But the FCC safety limits are based on levels of RF radiation that are shown to cause tissue damage due to “thermal” (microwave-like) effects on sensitive parts of the body, like eyes and testes. At relatively low levels of RF radiation exposure below which these thermal effects occur, the evidence for so-called “non-thermal” biological effects is “ambiguous and unproven,” the agency claims. However, the agency goes on to say:

“A number of reports have appeared in scientific literature describing the observation of a range of biological effects resulting from exposure to low levels of RF energy.

However, in most cases, further experimental research has been unable to reproduce these effects... It is generally agreed that further research is needed to determine the generality of such effects and their possible relevance, if any, to human health. In the meantime, standards-setting organizations and government agencies continue to monitor the latest experimental findings to confirm their validity and determine whether changes in safety limits are needed to protect human health.”¹²

On the other hand, the International Agency for Research on Cancer (IARC) within the World Health Organization has classified RF fields and extremely low frequency electromagnetic fields (of power-line frequency) as “possibly carcinogenic to humans.” While authorities at the U.S. Food and Drug Administration said they do not think the weight of scientific evidence shows this causation, the agency (as well as the Canadian Health agency) acknowledged “there is consensus that additional research is warranted to address gaps in knowledge...”¹³

So the FCC, FDA, and Health Canada all see no cause for health alarm about RF radiation from cell towers now, but all agree there are gaps in scientific research that must be investigated. Following the well-established “precautionary principle” for risk management in such cases,¹⁴ and recognizing that the power intensity (and RF radiation exposure) from such

¹¹ Federal Communications Commission, *RF Safety FAQ*, (updated Nov. 25, 2015), available at <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety> .

¹² *Id.*

¹³ U. S. Food and Drug Administration, *Current Research Results (concerning exposure to RF radiation from cell phone use)*, (Oct. 1, 2014), at <http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/ucm116335.htm>. Government of Canada, *Safety of Cell Phones and Cell Phone Towers*, (Mar. 13, 2015), at <http://healthycanadians.gc.ca/security-secure/radiation/devices-dispositifs/consumer-consommateur/cell-eng.php> .

¹⁴ This principle is captured prominently as Principle 15 of the Rio Declaration of the 1992 Earth Summit (U.N. Conference on Environment and Development). It was also mentioned in the European Community Treaty and the U.N. conventions on biodiversity, biosafety, climate change, and marine protection. It is described in concept in a

towers reduces with distance, tower setback limits should be respected. Why take an unnecessary risk with peoples' health while these investigations are still underway? As Sandy Bond's survey cited above shows, these unanswered questions of health risk, or at least the perception of such risk, are a major reason many find it is less desirable to purchase homes next to cell towers, driving prices down.

4. Impact on Temple Chai Synagogue Itself

We petitioners have talked with some members of Temple Chai and they were shocked and embarrassed that no one in leadership there informed them about the proposed tower, nor asked them their views. (We feel this omission constitutes improper notice of the project, but are not emphasizing that procedural defect in due process because we prefer to defeat this proposal on the merits.) The Temple structure itself is filled with members during synagogue activities and is well within several hundred feet of the proposed tower. As with the rest of us, these interviewed members, too, have concerns about safety, health and aesthetics of this 12-story tower, and feel a strong ethical obligation to not harm their neighbors.

5. Village Precedent was Set for Rejecting Tall Structures in this Area

In 2008, the Arlington Living and Rehabilitation Center, then owners of the facility now owned by Avantara some 100 feet to the east of the proposed tower, requested the Village to waive the height requirement on its single-story facility to allow it to add an additional floor. Village officials rejected that request because they felt this change would not be in keeping with the quality and character of the neighborhood they wanted to preserve here. Now, instead of just raising a two-story structure, the Applicant wants to erect something as tall as a 12-story building, something that would loom down upon nearby residents day in, day out. We petitioners believe the thinking behind that 2008 Village decision should carry forward in his case, too. We relied on the Village then to uphold the values and character of our Long Grove community and to protect us from development that would do us harm. The Village protected us once; we now ask it to do so again.

number of U.S. environmental, safety, and medical product laws. While there is no broad consensus on its meaning, one frequently mentioned definition was offered at the 1998 Wingspread Conference of the Science and Environmental Health Network: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically." *The Precautionary Principle*, [Published in *Rachel's Environment & Health Weekly*, No. 586, (February 19, 1998)], at <http://www.psrast.org/precaut.htm>.

ATTACHMENT B
Emails from Lake County Forest Preserve Concerning Contact
with T Mobile/ PI Telecom Infrastructure, LLC

From: Randy Seebach [mailto:rseebach@lcfpd.org]
Sent: Thursday, April 28, 2016 3:12 PM
To: William Blackburn
Subject: RE: URGENT: Synagogue Cell Tower Info Mtg. Questions

Bill,

It was more specific to the location that T-Mobile requested.

Randy
Randall L. Seebach
Director of Planning and Land Preservation
Lake County Forest Preserves
1899 West Winchester Road

From: William Blackburn [mailto:wrb@wblackburnconsulting.com]
Sent: Wednesday, April 27, 2016 4:24 PM
To: Randy Seebach
Subject: RE: URGENT: Synagogue Cell Tower Info Mtg. Questions

Thanks for the update Randy. Will MWRD and IDNR have similar objections to all cell tower applications or was this just unique to the location that T-Mobile requested?

Bill

William R. Blackburn
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F (+1) 847.541.4577
WRB@WBlackburnConsulting.com
www.WBlackburnConsulting.com
www.Linkedin.com/in/WilliamRBlackburn

From: Randy Seebach [mailto:rseebach@lcfpd.org]
Sent: Wednesday, April 27, 2016 1:13 PM
To: William Blackburn (wrb@wblackburnconsulting.com)
Subject: FW: URGENT: Synagogue Cell Tower Info Mtg. Questions

Hi Bill,

After performing a more thorough investigation, it turns out that the Forest Preserve District (District) was contacted by a Mr. Darren Snodgrass, TNG Wireless, this past October 2015 regarding a request to

install a cell tower at Buffalo Creek Forest Preserve near our main entrance and parking lot off of Checker Road. Mr. Snodgrass was representing PI Telecom Infrastructure, LLC and T-Mobile. In December 2015, the District sent an email denying their request for a cell tower in that location citing: 1) concerns for shared use of the existing public entrance, 2) potential conflicts with an Intergovernmental Agreement between the District and the Metropolitan Water Reclamation District regarding the operation and maintenance of the existing stormwater reservoir and 3) potential concerns from the Illinois Department of Natural Resources who has funded a portion of the existing recreational improvements at Buffalo Creek Forest Preserve including the trails and parking lot.

We have not had any further communication from Mr. Snodgrass, PI Telecom Infrastructure or T-Mobile since our December 2015 email. The request that we are currently reviewing from Verizon Wireless for a different location within Buffalo Creek Forest Preserve.

Randy

Randall L. Seebach

Director of Planning and Land Preservation
Lake County Forest Preserves
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Libertyville, Illinois 60048
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