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501(c)(3) non-profit

*Focusing on safe technology for the public*

**White Paper on NYC Link5G “Kiosks” / Cell Towers**

**By Wired Broadband, Inc.**

**March 10, 2023**

Community boards are increasingly rising in opposition to the Link5G Cell Towers, and elected officials are hearing increasingly from their constituents that they are opposed to these towers in their neighborhoods.[[1]](#footnote-1) The message has become clear – they do not need them and they do not want them. Community boards’ concerns about these installations range from aesthetic blight, ill placement in historic districts, lack of privacy and security, rat infestations, adverse health impacts and adverse environmental impacts to birds, bees and trees.

The Office of Technology and Innovation (OTI), the lead city agency in charge of these installations, has been providing presentations to community boards, but many of the CBs and residents have complained that OTI has not been transparent in providing complete or accurate information. Indeed, many FOIL requests asking for antenna specifications and FCC compliance reports have gone unanswered with non-stop extensions of time to respond, when that information should be publicly available prior to deployment. This white paper corrects OTI’s assertions of safety, federal oversight, digital equity and privacy and provides a comprehensive analysis of the many adverse implications of the Link5G Cell Towers, e.g., insufficient fall zones, failure to meet the legal threshold to justify imposing these towers in our neighborhoods, and incidents of adverse impacts on first responders.

Constituents are focusing on health and environmental risks of cumulative exposure to different frequencies, including hi-powered 5G frequency, in extreme proximity to people’s windows, homes, businesses and schools. There has been no pre-market safety testing for 5G. Wireless exposure limits set by the Federal Communications Commission (FCC) are a safe harbor for industry to provide immunity from liability for personal injury, rather than being safety limits to protect the public.

NYC officials have been misled to believe that their ”hands are tied,” and must accept 5G deployment as a matter of federal preemption. That is incorrect. A 2022 case in federal district court in New York struck down an FCC rule that strips local authority over the placement of cell towers, and upheld local authority to determine the number and placement of cell towers, and to deny the placement of cell towers. The Link5G deployment has effectively stripped local communities from any meaningful participation in determining whether they need or want them.

**We recommend that community boards either ask for an extension of time, if possible, or vote for disapproval and a moratorium on the planning and construction of Link5G Cell Towers, similar to what MCB8 has done (discussed below; see also Addendum D for MCB8’s resolutions) until questions and concerns are addressed.**

The issues covered in this paper are listed below:

* Link5G Cell Towers, Not “Kiosks”
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and Computer Engineering, Univ of NH, former NH Commissioner

**Link 5G Cell Towers, Not “Kiosks”**

OTI’s branding of 5G public communications structures as “Link5G kiosks” is inaccurate and misleading. The definition of a kiosk is a small structure or cubicle in a public area used for providing newspapers, tickets, displaying ads, having interactive screens, or a British phone booth.[[2]](#footnote-2)

The Link5G structures are not small. They are giant, free-standing, towers about 32’ tall, or 3 stories in height, with housing for multiple 5G antennas being almost 20’ high (see attached Addenda A and B).[[3]](#footnote-3) This is part of a plan to install a minimum of 4000 5G cell towers in the entire city.[[4]](#footnote-4) Therefore, they should be called what they really are – “Link5G Cell Towers.”

OTI claims that these Link5G Cell Towers or “kiosks” are simply replacing the old phone booths, as well as adding new structures.

* **Inadequate Environmental Review**

Why is the issue of size important? Based on a search of the City Environmental Quality Review (CEQR) determinations for mobile telecommunications, it appears that OTI did not conduct an adequate environmental review. Instead, OTI piggybacked on the CEQR done on the smaller, 9’ LinkNYC structures to make a determination of no environmental impact for Link5G.

LinkNYC kiosks were designed to provide public Wi-Fi. Instead, Link5G structures are cell towers designed to house multiple 5G antennas from multiple carriers, in addition to Wi-Fi.[[5]](#footnote-5) OTI also conducted a CEQR environmental assessment on 5G “small” cells in 2020, and concluded no environmental impact.[[6]](#footnote-6) But that assessment was based on 5G structures being much smaller in size (the size of a large backpack) and would be placed on pre-existing structures (co-locations) like streetlights and light poles.

The Link5G assessment was also based on the incorrect assumption of no significant energy consumption, even though the 5G network requires an exorbitant amount of energy.[[7]](#footnote-7) That means there has been no assessment of the Link5G Cell Towers on adverse impacts on energy consumption.

Moreover, because Link5G Cell Towers are huge, free-standing structures (rather than co-locations), whether they rise to the level of federal undertakings otherwise requiring environmental review on the federal level also warrants further examination. Because the telecom carriers are operating under federal licenses, Link5G Cell Towers may require prior review under the National Environmental Policy Act.

The Link5G Cell Towers should also trigger historical preservation review by NYC and by the State Historic Preservation Office prior to placement in historic districts to determine if even appropriate for those districts.

Therefore, a more thorough CEQR analysis would be required for Link5G Cell Towers before its continued deployment.

**Opposition**

* **Community Board Actions in Opposition**

The number of community boards in opposition to the Link5G Cell Towers is rising, and elected officials are hearing increasingly from their constituents that they are opposed to these towers in their neighborhoods (see also opposition to 5G pole-top antennas in Addendum E).[[8]](#footnote-8) Community boards’ concerns about these installations range from aesthetics and out of character with the neighborhood, ill placement in historic districts, lack of privacy and security, rat infestations on current LinkNYC kiosks, and health issues related to exposure to wireless radiation.

Your community board should have received written notice from OTI of proposed installations in their districts, similar to the notice received by Community Board 8 in Manhattan (MCB8)[[9]](#footnote-9) (see attached notice in Addendum C).

Community boards, so far, voting for moratoria and/or disapprovals on Link5G installations are:

* CB2-Manhattan covering Greenwich Village, SoHo, NoHo, Little Italy and Chinatown – moratorium
* CB5-Manhattan covering Times Square and Union Square – moratorium
* CB8-Manhattan covering the Upper East Side – moratorium
* CB9-Manhattan covering Morningside Heights, Harlem and Columbia University – disapproval and moratorium[[10]](#footnote-10)
* CB1-Brooklyn covering Greenpoint and Williamsburg – Committee recommendation of disapproval to the Board
* CB4-Brooklyn covering Bushwick - disapproval and moratorium, including those already installed
* CB10-Brooklyn covering Bay Ridge and Hamilton Heights - disapproval
* CB1-Queens covering Astoria – disapproval (see also 1-25-23 meeting of the Environment/Sanitation Cmte for comments by experts and by a police lieutenant severely injured from a wireless antenna placed outside of his house)[[11]](#footnote-11)
* CB3-Queens covering East Elmhurst, Jackson Heights and North Corona – partial disapproval (4 out of 5 installations rejected because they were close to residences)

**For example, MCB8 sent the city a clear message that they do not need these towers and they do not want them.** MCB8 passed resolutions on Dec. 14, 2023, disapproving the towers and voting on a moratorium on the planning and construction of Link5G Cell Towers in their district (see Addendum D).[[12]](#footnote-12) CB8 was slated to have 18 towers installed, 15 in historic districts. The resolution cited many reasons for disapproval, some of which include:

1. The allowed 10’ distance from buildings is an insufficient distance,
2. “Renowned architecture and iconic streetscapes would be interfered with,”
3. Illuminated advertising on these towers do not comply with certain historic preservation rules prohibiting such advertising (see Addendum B),
4. There are no reported gaps in phone or internet service,
5. “Impacts on sidewalk clearances, and rat infestation,”
6. The desire to have telecommunications infrastructure underground for more service reliability and “to minimize visual impacts,” and
7. “Long-term health impacts on public health or the environment, including young children, seniors, people with medical implant devices, pets, plants and parks.”[[13]](#footnote-13)

For the public hearings at CB8, see the Transportation Committee hearing with over 130 attendees and about 30 commenters in unanimous opposition,[[14]](#footnote-14) the Landmarks Committee hearing[[15]](#footnote-15) and the full Board hearing and vote passing the moratoria.[[16]](#footnote-16)

* **Officials in Opposition**

Manhattan Borough President, Mark Levine, recently issued a letter to OTI to pause its deployment in order to address the concerns of his constituents. [[17]](#footnote-17) Assembly member Seawright and former member of Congress Maloney sent letters to the city opposing the Link5G Cell Towers in their districts and calling for a moratorium.[[18]](#footnote-18) Elected officials sent a joint letter on Jan 23, 2023 to the Landmarks Preservation Commission to pause the review of any Link5G installations proposed for historic districts: Council Members Powers and Menin, Assembly members Seawright and Bores, State Senator Krueger, Congressman Nadler, joined by the Manhattan Borough President.[[19]](#footnote-19)

* **Historic Preservation Societies in Opposition**

Link5G cell towers do not belong in historical districts as they do not comply with the Rules of the NYC Landmarks Preservation Commission. According to the Rules, public communications structures, such as the Link5G cell towers, must have “an exterior dimension no greater than 11” wide x 35” deep x 122.9” high.”[[20]](#footnote-20) At 32 feet high and with a width of 18 inches,[[21]](#footnote-21) the Link5G cell tower exceeds the allowable dimensions.

Many historical preservation societies in NYC have opposed their installation. An online petition by Carnegie Hill Neighbors in CB8-Manhattan has already garnered over 3000 signatures under the banner “Don’t Sell Our Streets to 5G Towers.” [[22]](#footnote-22) Another online petition by Village Preservation in CB2-Manhattan has a letter writing campaign to local representatives under the banner “Stop the Siting of Oversized and Unnecessary 5G Towers in Our Neighborhood!” [[23]](#footnote-23)

Eight historic preservation societies voiced their opposition in a Jan 12, 2023 letter to First Deputy Mayor Sheena Wright and Deputy Mayor Maria Torres-Springer requesting more transparency on the city’s process of choosing and siting locations, particularly in historic districts, and have expressed their dismay at the potential “severe, negative and permanent impacts” if they were to be placed in historic districts. [[24]](#footnote-24) Friends of the Upper East Side, an historical preservation society, issued a December 23, 2022 letter to the Mayor, the Public Design Commission, the Office of Technology and Innovation and the Landmarks Preservation Commission, expressing that the Link5G Cell Towers would conflict with a master plan not to have flash-screen advertising on Madison Avenue, and would contribute to congestion and the uneven clustering, for example, of 5 cell towers on one block.[[25]](#footnote-25)

**OTI and CityBridge**

OTI entered into an agreement with a vendor, CityBridge, LLC, to install 4000 Link5G Cell Towers without first engaging the community for input on the entire project. OTI is now attempting to retrofit communities into an ill-conceived plan. The city has been misled into believing this plan will solve the “digital divide.” It will not, according to the highest federal government auditing agency, the U.S. Government Accountability Office.[[26]](#footnote-26)

If the Link5G deployment can be viewed as a proof of concept, it has failed and should be abandoned.

* **Public Design Commission Requirements for OTI’s Pilot Program**

The Public Design Commission (PDC) reviewed the Link5G proposal. [[27]](#footnote-27) The PDC approved a pilot program of 200 Link5G Cell Towers in order to gauge community reaction, specifically, to “provide details on the community reception of the poles, including the design and provisioning of service.”[[28]](#footnote-28) Instead, OTI is already proposing 346 towers which may be more than what OTI has been authorized to do,[[29]](#footnote-29) although it is not clear whether the 200 limit only applies to residential neighborhoods. Still, OTI is presenting these towers as a fait accompli, rather than actually obtaining “details on the community reception of the poles.”[[30]](#footnote-30) The PDC pointed to OTI’s obligation to gauge the community’s reaction on the design, which has been largely negative.[[31]](#footnote-31)

* **FOIL Requests for Link5G Specifications Outstanding for Over One Year**

There is a lack of transparency on providing the public with information related to the Link5G program. OTI has failed to respond to requests for information under numerous Freedom of Information Law requests (FOILs) dating as far back as October of 2021, with perpetual monthly extensions to respond,[[32]](#footnote-32) and, more recently, from the Environmental Health Trust, a scientific think tank.[[33]](#footnote-33)

OTI has yet to provide: FCC compliance reports, FCC frequency bands of the antennas, antenna model number, antenna gain, power potential, antenna manufacturers, antenna installers, electrical and engineering drawings, correspondence with any other city, state or federal agency, correspondence with City Bridge, the borough-wide plans being provided to the borough presidents, documentation related to the build-out, approvals, impacts on historic districts, visual impact studies, real estate reports, propagation maps, drive-by tests, denial of service reports, FCC compliance reports, detailed pilot proposals submitted by OTI to the Public Design Commission, and more.[[34]](#footnote-34)

* **4G/5G is Already Installed on Existing Structures**

There are already 13,580 reservations by the city’s franchisees for the installation of 4G antennas and 5G “small” cells on existing structures, such as light poles and streetlights, and pole-top installations.[[35]](#footnote-35) Their statuses are either installed, approved or proposed:

* 7,487 already installed,[[36]](#footnote-36)
* 2,992 additional approved,[[37]](#footnote-37) and
* 3,010 proposed.[[38]](#footnote-38)

Since most – 10,379 – have already been installed or approved, the sheer number of these should obviate the need for any Link5G Cell Towers for wireless services.

* **NYC Comptroller’s Negative Report on Existing LinkNYC Kiosks**

The NYC Comptroller conducted an audit of the existing LinkNYC kiosk program by a consortium of providers, including CityBridge, and found little accountability by OTI in terms of the moneys owed to the city and the upkeep of the kiosks. [[39]](#footnote-39) OTI neglected to collect almost $70 million due to the city and neglected in ensuring equitable distribution of broadband to the city’s underserved areas.

The audit also found the consortium’s failure to maintain the kiosks in proper order. The kiosks were to be inspected twice a week to ensure they worked, were free of grime and graffiti, and that “any broken or damaged parts were to be repaired or replaced within 24 hours.” The audit found that 76% sampled had “grimy screens, physical damage, and defective screens, icons, telephones and charging ports.”

This does not instill confidence that CityBridge will now comply with its obligations or that OTI will sufficiently oversee, rather than deflect responsibility for, CityBridge’s operations in connection with the Link5G program.

**Public Safety**

* **Protecting our First Responders**

Ensuring that our first responders are protected and are not adversely affected by cell towers, including Link5G Cell Towers, would be important elements in securing the public’s safety. There are instances of fire fighters and a police lieutenant who were injured from wireless antennas where they work and where they live.

Fire fighters in California were injured after a cell tower was installed on their station house property. They experienced headaches, and memory, sleeping and neurological disorders. SPECT brain scans found abnormalities associated with wireless radiation. Testing results showed delay in reaction time and difficulty in mental focus. [[40]](#footnote-40) During actual fire calls, they had become disoriented and could not find the fire.

“Firefighters have reported getting lost on 911 calls in the same community they grew up in, and one veteran medic forgot where he was in the midst of basic CPR on a cardiac victim and couldn’t recall how to start the procedure over again…Prior to the installation of the tower on his station, this medic had not made a single mistake in 20 years.” [[41]](#footnote-41)

Consequently, the International Association of Fire Fighters published a resolution opposing, and calling for a moratorium, on the placement of cell towers near fire stations.

A police lieutenant living in Queens, NY has suffered injuries by a pole-top antenna installed just feet away from his house. [[42]](#footnote-42) He was otherwise healthy before exposure to radiation from the wireless antenna, which caused him to suffer from heart arrhythmias and sleep deprivation. He underwent invasive medical cardiac procedures where the doctors found his condition could not be replicated in their offices away from the source of radiation. When he realized that his condition improved away from his home, he was compelled to evacuate his own home, along with his sister, while still shouldering the financial burden of a substantial mortgage on a house which has now become toxic and likely unmarketable.

His sister, who had just completed chemotherapy, became very sick after the antenna installation, and was advised by her oncologist that if she stayed, she would have a recurrence of the cancer.

In his own words:

For the first time in my life, I went from being perfectly healthy, to suffering from heart arrhythmias, headaches, and not being able to sleep, out of nowhere … The lack of empathy from city officials, and the lack of resident control – like all of our freedoms are taken away with these towers – is like nothing I’ve ever seen before. It doesn’t make any sense.

I've been a public servant all my life. I was a full paramedic at 19 – the youngest in New York City. A police officer at 20. I worked my way up doing every beat that you can do. I was at ground zero after 9/11 with my partner. We took turns going into the World Trade Center to pull people out. As I would pull a person out to safety, my partner would run back in. We’d switch. It was during one of those switches, as I was pulling a person to safety, my partner ran back in and then the tower collapsed. My partner was later found in the rubble.[[43]](#footnote-43)

Note: OTI executives, Stacey Gardener and Brett Sikoff, were present when the police lieutenant recounted his heart-wrenching story at the Queens CB1 meeting of the Environment & Sanitation Committee on January 25, 2023.[[44]](#footnote-44) They did not respond and offered no assistance in moving the antenna away from his home.

* **Privacy Vulnerabilities**

There was concern at MCB8 that 5G towers would track their children’s locations. 5G uses a beam-forming technology that tracks your cell phone.[[45]](#footnote-45) Will our children’s locations be tracked?

The privacy policy in the City’s franchise agreement with CityBridge states that CityBridge does not support a “do not track” function, [[46]](#footnote-46) therefore, users’ (and children’s) online activities can be tracked. CityBridge also states that, although they “do not collect information about your precise location,” they “can determine your general location” when you are using their services.

OTI had stated that personal information would not be exploited by CityBridge,[[47]](#footnote-47) but the privacy policy states that third party providers would be managing email addresses without a stated obligation that those providers would maintain confidentiality and would also not exploit personal information.[[48]](#footnote-48) In addition, CityBridge states that it “cannot guarantee against access” to personal information by unauthorized third parties, and that “[t]he security of your data transmitted” using their services “is at your own risk.”[[49]](#footnote-49)

CityBridge in its presentation to CB8 Manhattan denied that it had any affiliation with Google. But there was an association with Alphabet (parent of Google with its massive personal data collection[[50]](#footnote-50)), an investor in one of the companies that formed a consortium with CityBridge for the buildout of LinkNYC, the predecessor to Link5G. Although this was a prior association, there is still the concern over the potential tracking and commodification of our locations and our personal data.[[51]](#footnote-51)

* **Security Vulnerabilities**

Security vulnerabilities are inherent in 5G architecture and, while 5G is being deployed, these vulnerabilities have not been resolved. As to 5G’s hackability, “5G networks are much more vulnerable to cyberattacks than their predecessors,” as noted by former FCC Chairman, Tom Wheeler.[[52]](#footnote-52) Whereas the 4G network is a centralized, hardware-based switching network with hardware choke points to quarantine any security breach events, 5G is a distributed, software-based network of digital routers with thousands of nodes and access points that a hacker can exploit; there is no choke point control.[[53]](#footnote-53) If a hacker gains control of the 5G software managing the networks, the hacker can also control the 5G network.[[54]](#footnote-54)

Even NYC’s Chief Technology Officer and Chief Security Officer spotlighted 5G’s security vulnerabilities in a letter to the National Telecommunications and Information Administration (NTIA) in 2020:

Such complex systems [5G] present ***more opportunities for security and privacy breaches***. By moving away from firmware-based technology of 4G telecommunication components to ***software-based 5G telecommunication components that will need to be updated, the opportunity for manipulation exists*** within the supply chain. Furthermore, movement away from centralized network systems to decentralized network systems ***increases the attack surface of a network***. That increased attack surface is ***amplified*** by the anticipated introduction of the increasing number and variety of connected devices (IoT) and big data industries. (top of p.3)

The problem of IoT vulnerabilities will only become ***exacerbated by the increased speeds of 5G*** and other future wireless broadband technologies. (middle of p.3)

IoT protection is historically poor and ***malware distribution is easily scalable***, which suggests that the creation of IoT botnets (“robot networks”) for malicious purposes, including ***large-scale distributed denial of service (DdoS) attacks***, is ***likely to increase*** as well. This poses a ***significant threat*** to vital digital infrastructure and resident services at all levels of government, as well as private sector enterprise. (penultimate paragraph on p.3)[[55]](#footnote-55)

To further amplify the last point, it has been reported that:

“***Botnet and denial of service (DdoS) type attacks can bring down whole portions of the network simply by overloading a single [5G] node.***”[[56]](#footnote-56)

* **Fire Hazards**

Cell towers have been known to catch on fire. Industry commentary admits that 5G runs hot. That means that heat builds up at the cell tower because it is tightly packed with lots of equipment required to do digital to analog conversions, and they are “power-hungry” requiring a large amount of energy consumption.[[57]](#footnote-57) In fact, wireless antennas from various carriers may be tightly packed in the Link5G Cell Towers, with housing for multiple 5G antennas at 5 circular bay stations surrounding the pole being almost 20’ high (see Addendum A).[[58]](#footnote-58)

A side effect of the 5G array of antennas is that the circuits are inefficient and “[t]hey get hot.”[[59]](#footnote-59) A lot of heat needs to be dissipated because of the amount of equipment, conversions and inefficiencies.[[60]](#footnote-60)

Cell towers are, essentially, electrical installations and should require compliance with strict electrical building codes.[[61]](#footnote-61) There were four notable fires in California that were started in whole or in part by failures or overload of telecommunications equipment. The Guejito Fire in San Diego in 2007, [[62]](#footnote-62) the Malibu Canyon Fire in 2007,[[63]](#footnote-63) the Silverado Fire in 2020, and the Woolsey Fire in 2018 being the worst in California history.[[64]](#footnote-64) The Guejito Fire in San Diego in 2007 was started by a Cox Communications

lashing wire. This fire merged into the Witch Creek Fire which became the largest and deadliest in San Diego history, and also forced the largest mass evacuation in California history.[[65]](#footnote-65)

In 2021 in Brooklyn, the cause of fire on an apartment building rooftop was reported to be caused by an “electrical malfunction of a cell tower on the roof of a building.”[[66]](#footnote-66) In Hanover, VA in 2020, a cell tower was engulfed in flames which officials believed to have been caused by electrical/mechanical issues.[[67]](#footnote-67)

Exacerbating the problem is that cell site developers tend to construct monopole cell towers as quickly and as cheaply as possible, meaning that any quality control over their manufacture, construction or maintenance is probably close to non-existent.

* **Insufficient Fall Zone**

At 3 stories high and placed as close as 10.6’ to buildings, Link5G Cell Towers do not have a sufficient fall zone in case the tower collapses. “Fall zone means the area, defined as the furthest distance from the tower base, in which a tower will collapse in the event of a structural failure.”[[68]](#footnote-68) The fall zones would generally be at least 110% of the height of the cell tower.[[69]](#footnote-69)

At 3 stories high, that would mean a clearance would be required with a circumference of more than 3 stories around the tower from any nearby structure, traffic and pedestrian sidewalks. Instead, these Link5G towers can be placed in extreme proximity, as close as 10.6’ to buildings, although it could be closer upon notice to the community board. That means that in the event of their collapse, they could crash into people’s windows and injure people in their homes and on the street. In the case of towers being proposed close to schools or playgrounds, they could crash into the school or onto the playgrounds and injure the children.

**Digital Equity**

* **“Digital Divide” – 5G Unlikely to Remedy**

5G deployment has been touted to bridge the digital divide and provide telecommunications services to unserved or underserved communities – referred to as “digital deserts.”[[70]](#footnote-70) On the contrary, it has been reported by the US Government Accountability Office (GAO) that 5G deployment is likely to exacerbate disparities in accessing telecommunications services.[[71]](#footnote-71) The GAO is the highest audit institution of the federal government.[[72]](#footnote-72) Moreover, the National Digital Inclusion Alliance testified in Congress that 5G service will require 5G capable cell phones, which the underserved, low income households, will likely not be able to afford.[[73]](#footnote-73)

* **Devaluation of Property Values and Digital Equity**

The U.S. Department of Housing and Urban Development (HUD) classifies cell towers under “Hazards and Nuisances,” and requires real estate appraisers report if a property is within the fall zone of the cell tower.[[74]](#footnote-74) HUD prohibits the Federal Housing Administration from underwriting mortgages for homes within the fall zone of a cell tower.[[75]](#footnote-75) Therefore, installing these giant 5G Cell Towers under purported “digital equity” to underserved communities may undermine the ability of these communities to obtain federal mortgage and home ownership assistance.

There are potential buyers who do not want to live near cell towers, and in some areas that have cell towers, property values have gone down by as much as 20%.[[76]](#footnote-76)

Residents in other cities have expressed their concern over the devaluation of their homes in close proximity to cell towers. For example, in the Town of Islip, on Long Island, the zoning board denied the application for the siting of a cell tower based, among other things, on the potential devaluation of their homes, corroborated by experts.”[[77]](#footnote-77)

**FCC Lack of Oversight and Regulatory Gap**

* **FCC Does Not Measure Wireless Emissions**

Although the FCC regulates the limits of allowable wireless emissions, unfortunately, the FCC does not measure wireless emissions to determine if telecom carriers are in compliance with the FCC’s emission limits. The FCC’s own website states in its FAQ section in response to “Does the FCC Routinely Monitor Radiofrequency Radiation from Antennas?”: “The FCC does not have the resources or the personnel to routinely monitor the exposure levels due at all of the thousands of transmitters that are subject to FCC jurisdiction.”[[78]](#footnote-78)

Moreover, the FCC does not track cell towers below 200 feet as it does not require that a cell tower less than 200 feet be registered with the FCC;[[79]](#footnote-79) therefore, at 32’, these Link5G Cell Towers will not be tracked by the FCC for compliance.[[80]](#footnote-80) Indeed, the need for tracking the towers and having a database was underscored by the safety and health director of the Mechanical Workers Association of America representing 270,000 workers requesting such a database of the FCC as far back as 2014.[[81]](#footnote-81)

* **OTI Claims to Measure Wireless Emissions**

The onus is usually on residents and local governments to measure emissions to determine compliance and to pay for those measurements. OTI has said that the telecoms are required to measure their own emissions, and that they have been in compliance.[[82]](#footnote-82) But who is verifying the results? OTI claims that there is an independent entity that measures these emissions, but does that entity work for the telecom carriers or for OTI? The city should be measuring emissions on a random, unannounced basis to verify compliance, otherwise, it is seemingly a case of the fox guarding the henhouse. In fact, it was reported in 2014 that tests performed by independent radio-frequency engineers on 9,000 sites nationwide found that 10% of cell towers exceeded FCC limits.[[83]](#footnote-83)

* **Telecom Carriers’ Propagation Maps are Not Reliable**

Although OTI has stated that these towers are to fill a gap in telecommunications service and that the telecommunications carriers have identified these gaps, when asked, neither OTI nor CityBridge had any reports documenting evidence of any such gaps in service and they confirmed that they had no such reports.[[84]](#footnote-84) OTI is also saying that a gap may not exist now, but that the carriers are anticipating a future gap so they want to add 5G antennas for capacity.[[85]](#footnote-85) The problem is that there are no reports showing how those anticipated gaps were identified. Apparently, OTI used a firm, HR&A Advisors, but no reports have been forthcoming when the Environment Committee of CB1 Queens specifically asked for those reports.[[86]](#footnote-86) OTI responded that they would only provide a “sample report,” which also has not been provided.

Moreover, the telecoms use computer-generated propagation maps that purport to show gaps in phone service, but these are largely inaccurate and of little use. The FCC Enforcement Bureau found their accuracy rates at best 64.3% and at worst 16.2%.[[87]](#footnote-87) FCC field agents had performed drive-by tests to physically determine gaps in phone service across 12 states, driving more than 10,000 miles, and conducting 24,649 tests. They performed an additional 5,916 stationary speed tests at 42 locations in 9 states. As a result, FCC staff has recommended that computer-generated propagation maps no longer be accepted, without actual drive-test data to back them up, and also recommended penalties for inaccurate or false propagation map filings as they would violate federal law.[[88]](#footnote-88)

* **No Gap in Service, No Federal Preemption**

OTI has tried to justify the Link5G program by saying that telecom carriers need to add capacity (5G) to their systems to handle potential future demand. That, however, is not a sufficient justification to impose Link5G Cell Towers on the residents of NYC who do not need them or want them.

NYC officials have been misled to believe that their ”hands are tied,” and must accept 5G deployment as a matter of federal preemption. That is incorrect. In a sweeping decision in NY in 2022, a senior federal district court judge, in ruling against a telecommunications carrier, struck down the FCC rule that strips local authority over the placement of cell towers,[[89]](#footnote-89) and upheld local authority to determine the number and placement of cell towers, and to deny the irresponsible placement of cell towers.[[90]](#footnote-90)

In fact, OTI incorrectly stated at CB3-Queens that the federal government does not allow the city to remove 5G antennas.[[91]](#footnote-91) To be clear, no federal law, rule or regulation, under NY jurisdiction, requires us to give carriers access to our streets to add capacity to their systems. That would include either installing 5G antennas or removing them. The Telecommunications Act of 1996 (TCA) has given local government the explicit authority on the number and the placement of cell towers.[[92]](#footnote-92)

Moreover, the court ruled that cell tower installations that deal with capacity rather than ensuring phone service connection are not federally protected and therefore there is no federal preemption or imprimatur to install them.[[93]](#footnote-93) The court clarified that:

1. The FCC’s 5G Order in trying to strip local government of its control for regulating the placement of towers[[94]](#footnote-94) ***is not binding within the NY jurisdiction,***
2. Wireless carriers have the burden of showing that there is ***a gap in phone service, and that they are using the least intrusive means possible to fill that gap*** *and*
3. “Improved capacity and speed are desirable (and, no doubt, profitable) … ***but they are not protected by the [TCA].***” [[95]](#footnote-95)

***The court ruled that, under the TCA, local governments have authority over the number and placement of wireless facilities, and to deny the irresponsible placement of wireless facilities.*** [[96]](#footnote-96) Therefore, the FCC rule that makes the deployment of 5G automatically preemptible under the TCA[[97]](#footnote-97) is erroneous, does not comply with the TCA and does not apply to NY jurisdictions.

* **FCC, Captured Agency: Safe Harbor for Industry, Not Safety for the Public**

The FCC is an agency influenced and “captured” by the very industry that it is charged by law to regulate. Former FCC attorney, Erica Rosenberg within the FCC’s National Environmental Policy Act (NEPA) department, recently published an article on how the FCC is a captured agency.[[98]](#footnote-98) The Center for Ethics at Harvard also published an article that underscored this issue.[[99]](#footnote-99)

Whenever residents ask OTI if 5G is safe, OTI’s answer is that the telecom industry is contractually required by NYC to comply with the FCC emission limits. But those limits are a **safe harbor for industry** – if the industry is within those limits, **they are immune from liability for personal injury**. **The industry is protected, no matter how many people are injured.**  Therefore, the FCC limits are not safety limits to protect the public.

In fact, the FCC was ordered by a federal appeals court in 2021 to re-evaluate its limits in light of many scientific studies showing harm from radiation, especially for children. [[100]](#footnote-100) To date, the FCC has failed to do so.

**5G is Unsustainable**

* **Wireless is Not Green.**

Energy consumption from “5G” infrastructure “is expected to increase 61x between 2020 to 2030 due to its energy demands.”[[101]](#footnote-101) NYC’s assessment of no environmental impact of 5G “small cells” (a “negative declaration”) was based on the incorrect assumption that 5G would have no significant change on the consumption of energy even though the 5G network requires an exorbitant amount of energy; additionally, it was based on 5G being much smaller in size (“small” cells) and would be placed on pre-existing structures.[[102]](#footnote-102)

A thorough environmental review would need to be done to determine if 5G infrastructure even complies with New York State’s requirements for energy conservation. Therefore, Link5G Cell Towers would require a CEQR and SEQRA environmental assessment to determine compliance with NYC and NYS environmental standards.

Moreover, NYS adopted a constitutional amendment on environmental rights of residents to clean water and air and a healthful environment, also known as the “Green Amendment.” [[103]](#footnote-103) The amendment is enforceable against the government and does not require exhaustion of administrative remedies. In Dec. 2022, a trial court in NY ruled for plaintiffs in upholding their rights to a healthful environment against government action and inaction.[[104]](#footnote-104) Wireless radiation, as an acknowledged pollutant by the telecom and insurance industries and by scientists, would appear to fall under the harms for which the Green Amendment was conceived.

New York State recently passed the most climate protective law in the country, and is focusing on the “decarbonization of New York” with emphasis on fossil fuels.[[105]](#footnote-105) However, New York’s climate change goals cannot occur without also requiring the decarbonization of energy consumption by telecommunications infrastructure, and that means moving away from wireless to fiber optics.

* **Fiber Optics – the Superior and Greener Service**

It’s easy to move away from wireless to fiber optics because 4G and 5G depend on fiber optics. Fiber optics are already running up the pole to supply energy to wireless antennas. The greener alternative would be to extend fiber a few feet or yards to the premises – to homes, businesses, schools, medical facilities, in short, to all locations. Keeping telecommunications infrastructure underground would be without any visual impacts.

Underscoring the importance of fiber over wireless, former FCC Chairman, Tom Wheeler, in his March 2021 Congressional testimony, described fiber as “future proof,” and prioritized a “fiber first” policy for the nation. Wheeler’s statements point to the fact that wireless and fiber are not equivalent broadband media, [[106]](#footnote-106) and that wireless should be used only as a last resort. “Fiber is unmatched in its speed, performance [and] reliability … “[[107]](#footnote-107) far exceeding those of 5G. Fiber’s life span far exceeds that of wireless, at 25-50 years. Wireless equipment has a much shorter life span, and requires continuous periodic maintenance and replacement, and who will pay for its upkeep over time? Fiber has been federally prioritized as the superior choice to implement broadband nationwide, including for bridging the “digital divide.”

OTI has asserted that CityBridge will be building out the fiber optic network for free. However, there is already a fiber optic network built out by Verizon, apparently, to many parts of the City, and CityBridge has been reported trying to connect to Verizon’s already existing fiber.[[108]](#footnote-108) Moreover, Verizon is laying out additional fiber to half a million homes in NYC as part of a recent settlement agreement with the City.[[109]](#footnote-109)

Fiber optics to and through the premises (FTTP) is the preferred and superior method of providing telecommunications connectivity. “Fiber has a minimal ecological impact, reduces waste, consumes very little energy and helps decrease greenhouse gas emissions.”[[110]](#footnote-110) Fiber optics has “[l]ower energy consumption, reduced waste and sustainable architecture, characteristics that make fiber infrastructure an environmentally advantageous choice.”[[111]](#footnote-111)

FTTP provides the best capacity for remote learning for children and students and more reliable access to medical and other services for the elderly and disabled during emergencies or severe weather when wireless service is more likely to be interrupted.

The Fiber Broadband Association (FBA), the largest fiber optics trade association in the U.S., has shown that consumers prefer the higher upload and download symmetrical speeds that fiber provides (which wireless cannot provide) ***[[112]](#footnote-112)***  hence, ***“If it isn’t fiber, it isn’t broadband.”*** [[113]](#footnote-113) The FBA also shows the preference for superior technology of fiber in its white paper, “The Market Has Spoken.”[[114]](#footnote-114)

Fiber can also be an economic boon.[[115]](#footnote-115) For example, Chattanooga, TN used fiber optics to spring into a clean energy economy and create a vibrant workforce, earning it the accolade of “Gig City,” with the fastest broadband network in the U.S. The economic value of its fiber infrastructure over a 10-year period from 2011 to 2020 exceeded $2.69 billion and produced 9,516 jobs.[[116]](#footnote-116)

The National Telecommunications andInformation Administration (“NTIA”) is implementing the federal Infrastructure Investment and Jobs Act by prioritizing fiber optics over wireless in creating a future-proof technology grid.[[117]](#footnote-117) New York City should do the same, or be left behind.

* **Fiber Already Promised to New Yorkers**

City Bridge is being touted by OTI as building out fiber optics networks in NYC for free. However, NYC residents have already paid for fiber to the premises for every home in NYC. Verizon promised it would do so with its surcharges on NYC telephone bills since the 1990s.[[118]](#footnote-118) However, Verizon has not built out the entire network as promised and as paid. NYC does not need free services from CityBridge; it needs Verizon to comply with its obligations.

**Adverse Health and Environmental Impacts**

* **Public Health**

There have been serious concerns for public health and safety, including risk of cancer, as well as other medical conditions, from wireless radiation (also referred to as radio-frequency (RF) radiation):

1. There has been no pre-market testing of 5G for public health or safety, as confirmed by US Sen. Blumenthal (CT) during a hearing of telecom executives. “We’re kind of flying blind here as far as health and safety is concerned.” [[119]](#footnote-119)
2. A [new case report](https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf) published in February 2023[[120]](#footnote-120) found that that two previously healthy men rapidly developed typical “[microwave syndrome](https://pubmed.ncbi.nlm.nih.gov/26556835/)” symptoms[[121]](#footnote-121) shortly after a rooftop 5G cell tower was installed on their office building: headaches, joint pain, tinnitus, abnormal fatigue, sleep disturbances, burning skin, anxiety and trouble concentrating. Those findings are similar to a [case report published in January 2023](https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf)[[122]](#footnote-122) where a previously healthy man and woman developed similar microwave syndrome [symptoms soon after a 5G cell tower was installed](https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/) on top of their apartment.[[123]](#footnote-123)
   1. The significance of these two reports is that [non-ionizing radiation](https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/)[[124]](#footnote-124) from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of [electromagnetic sensitivity](https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/).[[125]](#footnote-125)  Dr. Lennart Hardell, lead author of both reports and a world-renowned scientist on cancer risks from radiation, affirms these reports as “[groundbreaking](https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/)” because they serve as the “first warning of a health hazard.”[[126]](#footnote-126)
3. The WHO’S International Agency for Research on Cancer classified wireless radiation (2G and 3G) as a possible human carcinogen back in 2011,[[127]](#footnote-127) similar to lead, diesel fuel and gasoline engine exhaust. OTI incorrectly presented to CB8 that the WHO said 5G is safe.
4. The National Toxicology Program, commissioned by the Food and Drug Administration to conduct a $30 million study, in 2018 found clear evidence of cancer;[[128]](#footnote-128) NTP is one of the most prestigious institutions in the world in toxicology.
5. A study in 2000 commissioned by one of the major telecom carriers found links to cancer, leukemia, neurological disorders and cognitive impairment, with special caution for children and an acknowledgement of those already disabled from the radiation.[[129]](#footnote-129)
6. One hundred sixty scientists worldwide submitted in 2015 The International Scientists’ Appeal to the United Nations to Protect Humans and Wildlife from the unconstrained proliferation of wireless radiation.[[130]](#footnote-130)
7. Thousands of scientific and medical studies show neurological disorders; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier.[[131]](#footnote-131)
8. New Hampshire Commission that studied the health impacts of wireless radiation found that levels below the FCC emission limits can be harmful (see Addendum F, a letter from Dr. Kent Chamberlin to CB9 Manhattan).[[132]](#footnote-132)
9. The Board of Health of Pittsfield, MA issued an emergency order to turn off a 4G cell tower that injured 17 residents most of whom evacuated their homes.[[133]](#footnote-133) Children were found vomiting in their beds, pets were vomiting and residents were becoming ill.[[134]](#footnote-134)

* **Telecoms Characterize Wireless Emissions as a Pollutant**

The telecom industry characterizes wireless radiation as a pollutant in their device protection plans and disclaims any injuries arising from wireless radiation.[[135]](#footnote-135) Insurance companies such as Lloyd’s of London and Swiss Re will not insure for personal injury from this radiation because of the high risk of claims, which may leave the city exposed for these injuries.[[136]](#footnote-136)

* **FCC Loses Two Cases on Wireless Emissions and Environmental Review**

The FCC which sets the wireless emission limits for the U.S. lost a major case in federal court in 2021 when the court called into question, and remanded, the FCC’s outdated 1996 emission limits because the FCC failed to consider the accounts of personal injuries and 11,000 pages of scientific studies showing harm below those limits.[[137]](#footnote-137)

The same court ruled against the FCC in 2019 for violating the National Environmental Policy Act (NEPA) when the FCC granted a categorical exemption for 5G from environmental review. Unfortunately, 5G continues to be deployed without such review in contravention of the court’s ruling.

Studies have shown that the FCC’s 1996 emission limits are not protective of the public.[[138]](#footnote-138) Several NYC residents have already been injured or disabled from wireless radiation, including a police lieutenant (who spoke about his experience at QCB1),[[139]](#footnote-139) and an 84 year-old elderly woman in subsidized housing. Some have been injured permanently and have had to evacuate the city.

* **Up to 30% of Population Experiencing Symptoms**

There may be adverse implications for the economy and workforce as more NYC residents become affected by exposure to wireless radiation. With each new “generation” of wireless technology, including 5G, people are being further exposed to wireless radiation which they cannot avoid.[[140]](#footnote-140)

The U.S. Access Board (which advises the Justice Department and other state and federal agencies under the Americans with Disabilities Act) notes that a U.S. National Institute of Building Sciences survey of a representative region found that 2-6% of the population are sensitive to electro-magnetic fields, referring to wireless radiation.[[141]](#footnote-141) Based on a population of 8.468 million people in NYC,[[142]](#footnote-142) the numbers would range from 169,360 to 508,080 people.

A 2019 Bevington study[[143]](#footnote-143) analyzed the prevalence of symptoms from radiation sickness within the population. Based on the same number, the results are also high:

|  |  |
| --- | --- |
| **Percentages** | **Projected Number of Affected NYC Residents** |
| Can’t work – 0.65% | 55,042 |
| Severe symptom – 1.5% | 127,020 |
| Moderate symptoms – 5% | 423,400 |
| Mild symptoms – 30% | 3,399,882 |

* **Neurobehavioral Symptoms Near Cell Towers**[[144]](#footnote-144)

The following chart shows a worsening of symptoms when closer to a cell tower but a lessening of symptoms when farther away from a cell tower.

Chart, bar chart, histogram

Description automatically generated

Symptoms experienced by people near cellular phone base stations; RF radiation affects the blood, heart and autonomic nervous system.[[145]](#footnote-145) Source: Santini, et al (France): Pathol Biol. 2002;50:S369-73.

* **Adverse Impacts on Children**

Children are particularly vulnerable and are adversely affected by RF radiation in their environment, homes and schools.[[146]](#footnote-146) A special risk factor has been identified for children “due to their smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation.”[[147]](#footnote-147) The American Academy of Pediatrics has pointed out that children are disproportionately affected by cell phone radiation due to their lower bone density and amount of fluid in the brain allowing for absorption of greater quantities of RF radiation than in adults.[[148]](#footnote-148)

Children absorb more RF radiation than adults, and fetuses are at even greater risk.[[149]](#footnote-149) Children’s “brain tissues are more absorbent, their skulls are thinner and their relative size is smaller.”[[150]](#footnote-150) RF radiation penetrates more deeply into the skulls of children compared to adults,[[151]](#footnote-151) as shown below in cell phone usage.[[152]](#footnote-152)

**[Intentionally left blank]**

Graphical user interface, application

Description automatically generated

Source: Exposure limits: the underestimation of absorbed cell phone radiation, especially in children, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011.[[153]](#footnote-153)

Exposure to RF radiation “can result in degeneration of the protective myelin sheath that surrounds brain neurons” and “[d]igital dementia has been reported in school age children.”[[154]](#footnote-154) It also increases the risk of childhood leukemia.[[155]](#footnote-155)

There are also neurological implications to RF radiation exposure for children.[[156]](#footnote-156) Cell towers near schools and Wi-Fi in schools are potentially hazardous to children.[[157]](#footnote-157)

* Elementary school children who were exposed to high levels of RF radiation generated from mobile phone base stations 200 meters from their schools “had a significantly higher risk of type 2 diabetes mellitus” than those exposed to lower RF radiation.[[158]](#footnote-158)

* Adolescent school children who were exposed to high levels of RF radiation generated from mobile phone base stations within 200 meters from their schools had “delayed fine and gross motor skills, spatial working memory and attention” than those exposed to lower RF radiation.[[159]](#footnote-159)
* A ten-year old child testified of his cardiac condition being caused by exposure to RF radiation in a library where he was being tutored.[[160]](#footnote-160)

RF radiation “… has toxic effects in pregnancy, to the fetus and subsequent offspring … and is tied to developmental problems in later life, including attention deficit and hyperactivity.”[[161]](#footnote-161)

Children born of mothers who used cell phones during pregnancy developed more behavioral problems by school age than those whose mothers did not use cell phones during pregnancy, with the following results: “25% more emotional problems, 35% more hyperactivity 49% more conduct problems and 34% more peer problems.”[[162]](#footnote-162) A study involving 24,499 children found a 23% increase of emotional and behavioral difficulties.[[163]](#footnote-163)

* **“Why Tech Leaders Don’t Let Their Kids Use Tech”**

Technology executives already appear to heed this caution. In an article, “*Why Tech Leaders Don't Let Their Kids Use Tech*,”[[164]](#footnote-164) it’s reported that technology executives restrict or forbid their children’s use of the very technology that they are providing to the public, including “the makers of smartphones and tablets, of social media channels and game boxes.” Reported examples have included technology “titans” such as former Apple’s Steve Jobs and Bill and Melinda Gates have admitted to placing restrictions on their children’s use of technology. Chris Anderson, former Wired magazine editor and CEO of 3D Robotics, said that his kids “accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That’s because we have seen the dangers of technology firsthand. I’ve seen it in myself, I don’t want to see that happen to my kids.”[[165]](#footnote-165)

If these 5G towers are placed anywhere near children or their schools, the hazards of wireless radiation on children and their neurological development should be examined thoroughly. Tech Safe Schools has a wealth of information on the scientific studies showing harm, and how to protect school children from wireless radiation,[[166]](#footnote-166) and delineates schools’ fiduciary responsibilities.[[167]](#footnote-167)

* **Adverse Impacts on Birds, Bees and Trees**

RF radiation has adverse environmental impacts to flora and fauna – birds, bees and trees. [[168]](#footnote-168) There is no federal agency setting safety limits for flora and fauna, nor is there any funded mandate to do so.[[169]](#footnote-169)

RF radiation can affect wildlife’s orientation, migration, food finding, reproduction, nest building, territorial defense, vitality, longevity and survival, [[170]](#footnote-170) and has been associated with dramatic declines in wildlife. Trees next to cell towers have been consistently observed to become damaged and die.

Artificial, man-made RF radiation has been recognized as a form of environmental pollution which can harm wildlife, including bats and birds, such as sparrows. Cell towers located in their habitats would be continuously irradiating 24/7, 365 days a year, without refuge from the cell towers, and wildlife could suffer long-term effects, such as: “reduction of their natural defenses, deterioration of their health, problems in reproduction and reduction of their useful territory through habitat deterioration.”[[171]](#footnote-171)

Toxic effects “have been observed in mammals such as bats, cervids, cetaceans, and pinnipeds among others, and on birds, insects, amphibians, reptiles, microbes and many species of flora.” [[172]](#footnote-172) Different habitats for wildlife, including aquatic environments, “rely on the Earth’s natural geomagnetic fields for critical life-sustaining information,” with which artificial, man-made RF radiation interferes. [[173]](#footnote-173)

A study performed by placing two mobile phones under a beehive showed that when the phones were turned on, within 20-40 minutes, the bees began emitting “piping” calls and squeaks announcing their start of swarming which means they are about to abandon the hive. [[174]](#footnote-174) Another study corroborated this study and found that the bees “stopped producing honey, egg production by the queen bee halved, and the size of the hive dramatically reduced.”[[175]](#footnote-175)

Another study examining how insects, including the Western honeybee, react to RF radiation exposure at frequencies from 2GHz to 120GHz, in simulations found increases in absorbed power of 3-370%.[[176]](#footnote-176) Researchers concluded an urgent need to reduce exposure and that “[a]s 5G will increase radiation exposures and use new higher frequencies shown to be highly absorbed into insects, scientists are calling for a moratorium on 5G.”[[177]](#footnote-177)

In a 2021 landmark report on the effects of RF radiation on wildlife, insects, plants and trees, it was found that RF radiation intensities, even at very low levels, from cell towers have adverse biological effects. Artificial RF radiation can disrupt the Earth’s natural magnetic fields that birds, fish and other wildlife use to navigate and orient themselves.[[178]](#footnote-178) The report is 150 pages with more than 1200 references, uncovering studies otherwise neglected on the subject.[[179]](#footnote-179)

Moreover, with every new network, such as 4G or 5G, the signal structure becomes more complex than the previous network, yet no research has been done on “the biological effects of simultaneous exposure to multiple signals.”[[180]](#footnote-180)

Birds are particularly susceptible to RF radiation. Studies done in 1975 in the ranges of 1-10 KHz[[181]](#footnote-181) and 10-16 GHz[[182]](#footnote-182) showed that bird feathers (the hollow part) were receptors for RF radiation. A study of robins exposed to RF at a low range from 2KHz to 5MHz found that the birds were unable to use their electromagnetic compass for orientation.[[183]](#footnote-183)

Birds are acutely sensitive to RF radiation due to their thin skulls, how their feathers can act as dielectric receptors of microwave radiation and the fact that many bird species use magnetic navigation.[[184]](#footnote-184) For example, the birds’ inability to discern impending storms via the earth’s natural electromagnetic fields is finding a growing number of birds flying into the storms, rather than flying around them.[[185]](#footnote-185) RF radiation is an emerging threat to wildlife orientation.[[186]](#footnote-186)

The U.S. Department of the Interior (DOI) warned the NTIA against categorical exemptions of RF radiation emitted from cell towers on bird species.[[187]](#footnote-187) DOI pointed to “mass mortality events” of impacts of birds with cell towers during peak migration seasons, estimated at 4 to 6.8 million bird deaths per year, and “documented nest and site abandonment, plumage deterioration, locomotion problems, reduced survivorship and death…”[[188]](#footnote-188)

The disappearance of bird and insect species from an old growth rainforest, in New South Wales, Australia, from 2000 to 2015, corresponded with an increasing number of cell tower installations starting with “3G” to “4G” and then “5G.”[[189]](#footnote-189) After the installations, it was reported that 70-90% of the wildlife had disappeared, including 66 bird species and 22 species of migratory, threatened and endangered birds, with 86 bird species exhibiting unnatural behaviors. [[190]](#footnote-190) In sharp contrast, when the towers were shut off for 2 days, there was a “resultant explosion of biology on the mountain.”[[191]](#footnote-191)

It has been shown that trees are damaged by RF radiation from mobile phone base stations, with damage starting on one side and then “extending to the whole tree over time.”[[192]](#footnote-192) Tree damage was found with chronic exposure to RF radiation.[[193]](#footnote-193)

**Conclusion – Recommendation for Disapproval and Moratorium**

In summary, OTI has not provided any evidence of a gap in telecommunications service. There are privacy and security vulnerabilities, particularly the potential tracking of our children’s locations, the devaluation of our property values, the adverse environmental and health impacts from wireless radiation, and even if all of these issues could be mitigated, the Link5G Cell Towers would still be eyesores and an aesthetic blight, out of character with our neighborhoods. Easily accessible to us is a superior alternative of fiber optics for speed, capacity and security.

For the foregoing reasons, we strongly encourage your community board to disapprove the Link5G Cell Towers in your district and vote for a moratorium, similar to what CB8 in Manhattan has done.

Respectfully Submitted,

Odette J. Wilkens

President & General Counsel

Wired Broadband, Inc.

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**ADDENDUM A**

**Photo from OTI’s (formerly DoITT) presentation to**

**NYC’s Public Design Commission, 10-18-22, p. 40**

**A picture containing text, sky, outdoor, street

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**ADDENDUM B**

**Photo from OTI’s (formerly DoITT) presentation to**

**NYC’s Public Design Commission, 10-18-22, p.15**

**A picture containing text

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**ADDENDUM C**

**OTI’s Letter to Community Board 8 Manhattan**



Hon. Manhattan Borough President Mark Levine

1 Centre Street, 19th Floor

New York, NY 10007

Manhattan Community Board District Manager Will Brightbill

505 Park Avenue, Suite 620

New York, NY 10022

Hon. Council Member Keith Powers

211 East 43rd Street, Suite 1205

New York, NY 10017

Hon. Council Member Julie Menin

444 East 75th Street, Unit 1B

New York, NY 10021

Madison Avenue Business Improvement District

29 East 61st Street, 3rd Floor

New York, New York 10065

November 16, 2022

Dear Community and Elected Officials:

We are pleased to share that the Office of Technology and Innovation (OTI, formerly DoITT) and our franchisee, CityBridge, are restarting the deployment of LinkNYC kiosks throughout New York City. As you know, Links are invaluable tools that provide free high-speed Wi-Fi, free nationwide calling, free charging ports for mobile devices, and 911 and 311 access to millions of people each year. We are proposing new sites throughout the five boroughs. This new proposed location is a critical component of the City’s efforts to equitably expand Wi-Fi access across the City.

Below is a new site proposed for Manhattan Community Board 8. Because we want to bring Links to your area within a short timeframe, we ask that you provide any comments on this site as soon as possible and by January 16, 2023. If we do not receive feedback within 60 days, CityBridge will proceed with installation. Although the attached sites have thus far met all of our siting criteria, it is possible that some of them will not be built, even if approved, due to technical factors.

Please see the locations of the sites below and on Open Data:

LinkNYC New Site Permit Applications (Data): [https://data.cityofnewyork.us/SocialS](https://data.cityofnewyork.us/Social-Services/LinkNYC-New-Site-Permit-Applications/xp25-gxux)ervices/LinkNYC-NewSite-Permit-Applications/xp25-gxux

LinkNYC New Site Permit Applications (Map): [https://data.cityofnewyork.us/Social](https://data.cityofnewyork.us/Social-Services/LinkNYC-New-Site-Permit-Applications-Map/tdt4-7qzu)Services/LinkNYC-New-Site-Permit-Applications-Map/tdt4-7qzu

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Site ID** | **Street Address** | **Community**  **District** | **Council**  **District** | **Zone/Category** | **BID** | **Historic District/Landmark** |
| 1 | MN-08-  119916 | 1190 MADISON AVENUE | 8 | 4 | COMMERCIAL |  |  |
| 2 | MN-08-  119917 | 1050 5 AVENUE | 8 | 4 | RESIDENTIAL |  | Expanded Carnegie  Hill Historic District |
| 3 | MN-08-  119918 | 1000 5th AVENUE | 8 | 4 | PARKS |  | Expanded Carnegie  Hill Historic District |
| 4 | MN-08-  119925 | 46 EAST 91 STREET | 8 | 4 | COMMERCIAL |  | Expanded Carnegie  Hill Historic District |
| 5 | MN-08-  119930 | 1040 PARK AVENUE | 8 | 4 | RESIDENTIAL |  | Park Avenue Historic District |
| 6 | MN-08-  119932 | 27 EAST 95th ST | 8 | 4 | COMMERCIAL |  | Individual Landmark Armory |
| 7 | MN-08-  121861 | 24 EAST 63 STREET | 8 | 4 | COMMERCIAL | Madison Ave BID | Upper East Side Historic District |
| 8 | MN-08-  121978 | 688 MADISON AVENUE | 8 | 4 | COMMERCIAL | Madison Ave BID | Upper East Side Historic District |
| 9 | MN-08-  121988 | 30 EAST 64 STREET | 8 | 4 | COMMERCIAL | Madison Ave BID | Upper East Side Historic District |
| 10 | MN-08-  GF0909 | 1105 PARK AVENUE | 8 | 4 | RESIDENTIAL |  | Park Avenue Historic District |
| 11 | MN-08-  GF0910 | 1115 5 AVENUE | 8 | 4 | RESIDENTIAL |  |  |
| 12 | MN-08-  GF0911 | 1175 PARK AVENUE | 8 | 4 | RESIDENTIAL |  | Expanded Carnegie  Hill Historic District |
| 13 | MN-08-  GF0912 | 570 PARK AVENUE | 8 | 4 | RESIDENTIAL |  | Upper East Side Historic District |
| 14 | MN-08-  GF0913 | 807 5 AVENUE | 8 | 4 | RESIDENTIAL |  | Upper East Side  Historic District - Individual landmark  Knickerbocker Club Building |
| 15 | MN-08-  GF0919 | 1095 5 AVENUE | 8 | 4 | RESIDENTIAL |  | Expanded Carnegie  Hill Historic District/  Individual Landmark Carnegie Mansion |
| 16 | MN-08-  GF0925 | 1283 YORK AVENUE | 8 | 5 | RESIDENTIAL |  |  |
| 17 | MN-08-  GF0926 | 510 EAST 71ST STREET | 8 | 5 | RESIDENTIAL |  |  |
| 18 | MN-08-  GF0927 | 510 EAST 70TH STREET | 8 | 5 | COMMERCIAL |  |  |

If you have any questions or comments, please feel free to reach out to me. We look forward to working with you to make this new free service available to all New Yorkers.

Sincerely,

Leslie Brown

External Affairs Associate

New York City Office of Technology and Innovation

**ADDENDUM D MORATORIUM RESOLUTIONS BY COMMUNITY BOARD 8 MANHATTAN**

A picture containing coin

Description automatically generated**Russell Squire 505 Park Avenue, Suite 620**

**Chair New York, N.Y. 10022-1106**

**(212) 758-4340**

**Will Brightbill (212) 758-4616 (Fax)**

**District Manager www.cb8m.com – Website**

**info@cb8m.com – E-Mail**

**The City of New York**

**Community Board 8 Manhattan**

December 21, 2022

Honorable Sarah Carroll, Chair

NYC Landmarks Preservation Commission

Municipal Building

One Center Street, 9th Floor

New York, New York 10007

**RE: 5G Link NYC Kiosks in Historic Districts**

Dear Chair Carroll,

At the Full Board meeting of Community Board 8 Manhattan held on December 15, 2022, the board unanimously approved the following resolution by a vote of 42 in favor, 2 opposed, 0 abstentions, and 0 not voting for cause.

**WHEREAS** New York City, through its Office of Technology and Innovation (OTI), has contracted with CityBridge to install and operate a citywide wireless communications network;

**WHEREAS** the Transportation Committee of Community Board 8 had an extensive hearing with public participation on the benefits and drawbacks of the proposed towers;

**WHEREAS** the Landmarks Committee of Community Board 8 had a subsequent hearing with public participation on the benefits and drawbacks of the proposed 5G towers;

**WHEREAS** the towers are to be placed on sidewalks in historic districts;

**WHEREAS** the towers are 32 feet high and, therefore, out of scale with the buildings in historic districts;

**WHEREAS** the modernist design of the towers is unrelated to the architectural characters of buildings in historic districts;

**WHEREAS** the towers can be placed ten feet from an individual landmark building or a building in a historic district, thereby detracting from the presence of the historic structure;

**WHEREAS** the screens on kiosks or towers conflict with the Special Madison Avenue Preservation District’s design guidelines;

**WHEREAS** 5G transmission cables can be placed fully underground, connect directly to buildings, and have no visual impact on the streetscape;

**WHEREAS** each 5GTower proposed for installation within a historic district must first receive a Certificate of Appropriateness from the Landmarks Preservation Commission

**WHEREAS** 5G towers are not appropriate and contextual in historic districts and should not be approved by the Landmarks Preservation Commission in historic districts;

**WHEREAS** the Landmarks Committee of Community Board 8 has reviewed the resolution prepared by the Transportation Committee of Community board 8;

**WHEREAS** the Landmarks Committee of Community Board 8 supports the resolution prepared by the Transportation Committee;

**THEREFORE, BE IT RESOLVED** that the installation of Link 5G towers in historic districts in Community Board 8 is disapproved;

**BE IT FURTHER RESOLVED**, that a moratorium be placed on construction and planning of Link5G towers and devices in Community District 8 Manhattan.

Sincerely,

Russell Squire David Helpern and Jane Parshall

Russell Squire David Helpern and Jane Parshall

Chair Co-Chairs, Landmarks Committee

cc: Honorable Eric Adams, Mayor of the City of New York

Honorable Carolyn Maloney, 12th Congressional District Representative

Honorable Mark Levine, Manhattan Borough President

Honorable Liz Krueger, NYS Senator, 28th Senatorial District

Honorable José M. Serrano, NYS Senator, 29th Senatorial District

Honorable Dan Quart, NYS Assembly Member, 73rd Assembly District

Honorable Rebecca Seawright, NYS Assembly Member 76th Assembly District

Honorable Julie Menin, NYC Council Member, 5th Council District

Honorable Keith Powers, NYC Council Member, 4th Council District

A picture containing coin

Description automatically generated**Russell Squire 505 Park Avenue, Suite 620**

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**Will Brightbill (212) 758-4616 (Fax)**

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**The City of New York**

**Community Board 8 Manhattan**

December 20, 2022

Edward F. Pincar Matthew C. Fraser

Manhattan Borough Commissioner Chief Technology Officer

Department of Transportation NYC Office of Technology & Innovation

59 Maiden Lane, 37th Floor 2 MetroTech Center, P1

New York, NY 10038 Brooklyn, NY 11201

**RE: Disapproval of new Link5G Kiosks within CB8**

Dear CTO Fraser and Commissioner Pincar,

At the Full Board meeting of Community Board 8 Manhattan held on December 14, 2022, the board approved the following resolution by a vote of 40 in favor, 2 opposed, 0 abstentions and 0 not voting for cause:

**WHEREAS;** New York City, through its Office of Technology and Innovation (OTI), has contracted with CityBridge to install and operate a citywide wireless communications network; and,

**WHEREAS;** CityBridge installed its LinkNYC network as the initial deployment of the citywide wireless communications network intended to replace outdated public pay phones; and

**WHEREAS;** LinkNYC provided free wireless internet connectivity using towers placed on sidewalks throughout NYC, many of which include electronic display screens; and

**WHEREAS;** Community Board 8 and constituents of its district have reported adverse impacts resulting from existing LinkNYC infrastructure, including visual impacts, inappropriate usage, impacts on sidewalk clearances, and rat infestation; and

**WHEREAS;** CityBridge is now in the process of upgrading its LinkNYC network to Link5G to accommodate technological upgrades that have recently become commonplace in cellular communications; and

**WHEREAS;** Link5G infrastructure is a 32’ tall tower that is installed on sidewalks in the public right-of-way; and

**WHEREAS;** Link5G towers in commercial districts include electronic screens similar to those found on LinkNYC kiosks that display advertising and public information; and

**WHEREAS;** the design of the Link5G towers has been approved by the Public Design Commission; and

**WHEREAS;** Link5G must adhere to siting requirements determined by NYC Department of City Planning, and must obtain Landmarks Preservation Commission approval if sited in historic districts; and

**WHEREAS;** CityBridge and OTI have proposed 18 sites across Community District 8;

**WHEREAS;** CityBridge and OTI have stated that the siting of proposed Link5G towers in Community District 8 are based on gaps in coverage and locations where excess demand for the network exists as determined by commercial cellular carriers; and

**WHEREAS;** 15 of the 18 sites proposed are in or near either the Upper East Side Historic District or the Carnegie Hill Historic District, where renowned architecture and iconic streetscapes would be interfered with if Link5G structures were installed; and

**WHEREAS;** locations proposed along Madison Avenue would be in conflict with strict guidelines for illuminated storefronts and signage, and would be in conflict with the Special Madison Avenue Preservation District’s design standards that specifically prohibit illuminated advertising; and

**WHEREAS;** residents of Community District 8 have strongly objected to the design and the visual impacts that Link5G towers would have on streetscapes, both with and without screens; and

**WHEREAS;** there are widespread concerns that 5G towers will be constructed at distances considered too close to adjacent buildings, as has already occurred in front of 520 East 90th Street, and

**WHEREAS;** 10’ of distance from a tower to a residence that is permitted is extremely insufficient and should be revisited as a policy; and

**WHEREAS;** Neither CityBridge nor the cellular network providers that Link5G service is intended to supplement have provided any evidence that dropped calls and limited capacity are present at the proposed Link5G locations;

**WHEREAS;** the proposed sites for Link5G don’t include any locations in areas known to be potential digital deserts within Community District 8; and

**WHEREAS;** OTI and CityBridge have not provided detailed plans regarding the full build-out of

Link5G, both within Community District 8 and in areas north of 96th Street and in the outer Boroughs; and

**WHEREAS;** there is a desire for any telecommunications infrastructure to be buried underground both for reliability purposes and to minimize visual impacts; and

**WHEREAS;** there have been questions raised by some residents as to whether sufficient research has been performed to fully assuage concerns that the radiation emitted by 5G infrastructure won’t have any long-term impacts on public health or the environment, including young children, seniors, people with medical implant devices, pets, plants, and parks;

**WHEREAS;** the community-at-large has expressed their views that Link5G is unnecessary and unwanted in Community District 8 at present and until many of the issues identified have been resolved;

**WHEREAS**; New York City is in control of this process through its contract with the provider;

**THEREFORE BE IT RESOLVED**, that Community Board 8 Manhattan disapproves the proposal as presented to install Link 5G towers in Community District 8; and

**BE IT FURTHER RESOLVED,** that a moratorium be placed on construction and planning of Link5G poles and devices in Community District 8 Manhattan.

Please advise us of any action taken on this matter.

Sincerely,

Russell Squire Craig Lader and Charles Warren

Russell Squire Craig Lader and Charles Warren

Chair Co-Chairs, Transportation Committee

cc: Honorable Eric Adams, Mayor of the City of New York

Honorable Carolyn Maloney, 12th Congressional District Representative

Honorable Mark Levine, Manhattan Borough President

Honorable Liz Krueger, NYS Senator, 28th Senatorial District

Honorable José M. Serrano, NYS Senator, 29th Senatorial District

Honorable Edward Gibbs, NYS Assembly Member, 68th Assembly District

Honorable Dan Quart, NYS Assembly Member, 73rd Assembly District

Honorable Rebecca Seawright, NYS Assembly Member 76th Assembly District

Honorable Keith Powers, NYC Council Member, 4th Council District Honorable Julie Menin, NYC Council Member, 5th Council District

**ADDENDUM E**

## “Take action to remove 5G Antenna from 520 E 90th St. “

|  |
| --- |
| A picture containing window, indoor  Description automatically generated  “Photo taken from living room, APT 3D facing North from E90th ST. The cylinder is less than 10ft from the building…” |

(Citing no “information about the use, range or strength of the signal to make our own health related conclusions,” “quality of life” issue, “invasive to our living space,” and reduction of property value.)

**See @Gracie5GRemoval for full text.**

**ADDENDUM F**

**Letter from Dr. Kent Chamberlin**

**to**

**Community Board 9 Manhattan, January 6, 2023**

**[on next page]**



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January 6, 2023

Manhattan Community Board No. 9

Hon. Barry Weinberg, Chair

Eutha Prince, District Manager

3291/3295 Broadway

New York, New York 10027

Dear Community Board Members:

I am writing you as a former member of the New Hampshire State Commission that was tasked with exploring the Environmental and Health Effects of Evolving Wireless and 5G Technology. This Commission was formed through [bipartisan legislation](https://legiscan.com/NH/bill/HB522/2019) and was supported by the governor.  The Commission was comprised of unbiased experts in fields relating to health and radiation and were highly qualified to evaluate the issue in a fair and in-depth manner. The Commission submitted its [final report](http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf) in November 2020, with a key finding being that exposure to wireless communication radiation is harmful to the health of humans and the environment. Those findings apply to all forms of wireless radiation, which include all generations of cellphone radiation.

My purpose in writing is to alert you to the dangers of siting a cell tower near to where people, particularly young people, live, work or recreate. I provide relevant details about the New Hampshire Commission’s findings on this issue in a [presentation](https://www.youtube.com/watch?v=t85QgvfKNkE) I gave to the Lenox, MA Board of Health. Please know that the International Association of Fire Fighters (IAFF) in 2004 adopted a [position statement](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iaff.org%2Fcell-tower-radiation%2F&data=05%7C01%7CKent.Chamberlin%40unh.edu%7Cd745b76447154fa1fa0b08da2d73c61f%7Cd6241893512d46dc8d2bbe47e25f5666%7C0%7C0%7C637872273993130885%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=HFX8O%2BvAQ7m7zyWUPR2b84%2FO2kWI9xi0tz3W3FLIc5k%3D&reserved=0) still in effect today forbidding wireless communication facilities on or near fire stations as firefighters were being injured by the radiation. Many of the firefighters exposed to the wireless radiation could not remember where they were going during emergencies, nor how to administer CPR. As Dr. Gunnar Heuser indicates at the [EMF Medical Conference](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Femfconference2021.com%2Fspeaker%2Fgunnar-heuser-md-phd%2F&data=05%7C01%7CKent.Chamberlin%40unh.edu%7Cd745b76447154fa1fa0b08da2d73c61f%7Cd6241893512d46dc8d2bbe47e25f5666%7C0%7C0%7C637872273993130885%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=0EAmmBo7UIcVMN635aIopP24tdx2VaSfxKmdkvk%2F0zs%3D&reserved=0), functional MRIs showed damage to the gray matter of their brains from the radiofrequency radiation exposure.

Scientists, physicians, environmental and public health physicians, epidemiologists, pediatricians along with engineers such as myself have been calling for state and local governments to be proactive in protecting your citizens against radiation exposure. I realize that providing such protection may seem challenging. However, initiatives such as the New Hampshire Commission and the [successful lawsuit](https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/) brought about by the Environmental Health Trust and others are exposing the dubious claims by the FCC that wireless radiation is harmless. Given the mounting evidence regarding the clear harm of radiation, it is only a matter of time before meaningful protective regulations are put in place.

While telecom companies currently have the upper hand in that they seem to be able to force communities to accept whatever tower sites they mandate, there are actions that those communities can take to delay or stop installations where people will be excessively exposed. For example, citizens in York, Maine have delayed the installation of antennas positioned close to a neighborhood. The Board of Health in Pittsfield, Massachusetts issued a [cease-and-desist order](https://www.wamc.org/news/2022-02-03/pittsfield-board-of-health-issues-conditional-cease-and-desist-order-to-verizon-over-cell-tower#:~:text=The%20Pittsfield%2C%20Massachusetts%20board%20of%20health%20has%20voted,decrying%20the%20cell%20tower%20at%20877%20South%20Street.) against Version regarding a cell tower that was causing illness in a surrounding neighborhood. There are many other examples where citizens and administrators have worked together to protect people against cell tower radiation. Those examples can be used to strengthen your ordinances to help protect against inappropriate cell tower siting.

I am currently working with my state legislators to pass legislation that would provide protections against excessive radiation exposure. The original legislation called for a 1,640-foot setback for all new cell towers; this setback is one of the recommendations made by the New Hampshire Commission, and the rationale for picking that distance is explained [here](https://youtu.be/DWK74ie7krc). The legislation is currently being revised so that it can be acted on in the next legislative session.

Wireless radiation dangers are real, and they can be significant in their impact on human health and the environment. I encourage you to do whatever is within your power to protect your constituents against it.

Sincerely,

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**Kent Chamberlin, PhD**

**Professor & Chair Emeritus**

**Fulbright Distinguished Chair**

1. Overview of community board actions in New York City, <https://ehtrust.org/5g-in-new-york/>. [↑](#footnote-ref-1)
2. Google Dictionary, <https://www.google.com/search?q=definition+kiosk&oq=definition+kiosk&aqs=chrome..69i57j0i15i22i30j0i22i30l8.3085j1j7&sourceid=chrome&ie=UTF-8>. [↑](#footnote-ref-2)
3. Renditions can be seen in the links for footnote 4 below and at <https://manhattanneighbors.org/jumbo-5g-antennas-nyc/>. [↑](#footnote-ref-3)
4. Link5G ppt presentation to NYC’s Public Design Commission by Dept of Info Technology and Telecommunications (DoITT) now called Office of Technology and Innovation (OTI) 10-18-21 at pp. 54-55. <https://www1.nyc.gov/assets/designcommission/downloads/pdf/10-18-2021-pres-DoITT-p-Link-5G.pdf>; updated presentation, 12-13-21 at  <https://www1.nyc.gov/assets/designcommission/downloads/pdf/12-13-2021-pres-DoITT-p-Link-5G-1.pdf>. [↑](#footnote-ref-4)
5. Technical Memorandum, CEQR No. 15DIT001Y, Citywide Public Communications Structures, undated, <https://a002-ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAxNVwxNURJVDAwMVlcdGVjaF9tZW1vXDE1RElUMDAxWV9UZWNobmljYWxfTWVtb3JhbmR1bV9fMDUyNjIwMjEucGRm0&signature=7bff46e8f4492ec7ca05ec25ebaaf6462822bfde>. [↑](#footnote-ref-5)
6. Technical Memorandum 001, CEQR No. 20DIT001Y, New York City Department of Information Technology and Telecommunications, Mobile Telecommunications Franchises, May 7, 2020,

   <https://a002ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcdGVjaF9tZW1vXDIwRElUMDAxWV9UZWNobmljYWxfTWVtb3JhbmR1bV9fMDUwODIwMjAucGRm0&signature=cb5e38710e4a95b771ea454efb5ce1b45e767a65>; CEQR Environmental Assessment Statement Short Form, Dec 10, 2019, <https://a002-ceqraccess.nyc.gov/Handlers/ProjectFile.ashx?file=MjAyMFwyMERJVDAwMVlcZWFzXDIwRElUMDAxWV9FQVNfMTIxMDIwMTkucGRm0&signature=9efc336372ffb4f803d59f76fe9fd0b815651005>. [↑](#footnote-ref-6)
7. <https://ehtrust.org/report-5g-to-increase-energy-consumption-by-61-times/>. [↑](#footnote-ref-7)
8. Overview of community board actions in New York City, <https://ehtrust.org/5g-in-new-york/>; see also, uproar at Manhattan Community Board 12 in the video embedded in the article, https://patch.com/new-york/washington-heights-inwood/5-more-uptown-5g-tower-sites-revealed-plans-leaving-pol-livid. [↑](#footnote-ref-8)
9. <https://www.cb8m.com/wp-content/uploads/2022/11/Manhattan-CB8-Greenfields-Nov-2022.pdf>. [↑](#footnote-ref-9)
10. Moratorium at 2:21:12, <https://www.facebook.com/watch/live/?ref=watch_permalink&v=1238972740308898>. [↑](#footnote-ref-10)
11. See presentation by a police lieutenant who was injured from exposure to wireless radiation from an antenna placed just feet away from his house and from which he has had to evacuate, starting at about 00:54:00, <https://www.youtube.com/watch?v=OGxADW9tp8E>. [↑](#footnote-ref-11)
12. Resolutions of MCB8’s Transportation Committee and Landmarks Committee, <https://www.cb8m.com/wp-content/uploads/2022/11/1222-Link-5G-Resolution.pdf> (attached Addendum D reformatted into Word). [↑](#footnote-ref-12)
13. Id. [↑](#footnote-ref-13)
14. <https://www.cb8m.com/event/24978/>. [↑](#footnote-ref-14)
15. <https://www.cb8m.com/event/24983/>. [↑](#footnote-ref-15)
16. <https://www.cb8m.com/event/24871/> (starting at about 28:00). [↑](#footnote-ref-16)
17. <https://ehtrust.org/wp-content/uploads/January-16-2023-Letter-on-5G-Poles-from-New-York-Manhattan-Borough-President-to-Matthew-C.-Fraser-Chief-Technology-Officer-Office-of-Technology-Innovation-of-The-NYC-Office-of-Technology-Innovation.pdf>. [↑](#footnote-ref-17)
18. <https://www.carnegiehillneighbors.org/community-board-8-response>. [↑](#footnote-ref-18)
19. Id. [↑](#footnote-ref-19)
20. Rules of the New York City Landmarks Preservation Commission, Title 63, §2-23(c)(2)(iv), <https://www1.nyc.gov/assets/lpc/downloads/pdf/Rules/Rules%20of%20the%20NYC%20Landmarks%20Preservation%20Commission_01.22.2019.pdf>. [↑](#footnote-ref-20)
21. CityBridge presentation to CB6-Queens Executive Committee, 2-15-23. [↑](#footnote-ref-21)
22. Carnegie Hill Neighbors petition, <https://www.carnegiehillneighbors.org/>; see also, <https://www.carnegiehillneighbors.org/5g-opposition>. [↑](#footnote-ref-22)
23. Greenwich Village Society for Historical Preservation petition, <https://p2a.co/cebw5as>. [↑](#footnote-ref-23)
24. <http://friends-ues.org/wp-content/uploads/2023/01/Preservation-Group-Request-to-Deputy-Mayors-on-5G-Towers.pdf?emci=4a0975a4-0698-ed11-994c-00224832eb73&emdi=fa3fe730-0f98-ed11-994c-00224832eb73&ceid=6757961>. [↑](#footnote-ref-24)
25. <http://friends-ues.org/wp-content/uploads/2023/01/FRIENDS-Link5G-towers-letter-122322.pdf?emci=4a0975a4-0698-ed11-994c-00224832eb73&emdi=fa3fe730-0f98-ed11-994c-00224832eb73&ceid=6757961>. [↑](#footnote-ref-25)
26. US Government Accountability Office 2020 Report “FCC Needs Comprehensive Strategic Planning to Guide Its Efforts,” https://www.gao.gov/products/gao-20-468 (p.3). Full report, p. 14, <https://www.gao.gov/assets/gao-20-468.pdf>. [↑](#footnote-ref-26)
27. PDC Meetings and Minutes:

    PDC Meeting 10-18-21 Video (starts at 1:38), <https://www.youtube.com/watch?v=Nr4IWCYATAg>

    PDC Meeting 10-18-21 Minutes (no mention of Link5G), <https://www.nyc.gov/assets/designcommission/downloads/pdf/Meeting%20Minutes%2010-18-21.pdf>

    PDC Meeting 12-13-21 Video (starts at 2:00), <https://www.youtube.com/watch?v=nTBM95YcdF8>

    PDC Meeting 12-13-21 Minutes (see Certificate 27973, p.26), <https://www.nyc.gov/assets/designcommission/downloads/Meeting%20Minutes%2012-13-21.pdf>

    PDC Meeting 8-8-22 Video (starts at 0:24:00), <https://www.youtube.com/watch?v=Bc9U5pLWI2I>

    PDC Meeting 8-8-22 Minutes (see Certificate 28200, p.24), <https://www.nyc.gov/assets/designcommission/downloads/pdf/Meeting-Minutes-8-8-22-REVISED.pdf>

    PDC Meeting 9-12-22 Video (starts at 0:33:25), <https://www.youtube.com/watch?v=K-pUkQAivGI>

    PDC Meeting 9-12-22 Minutes (see Certificate 28229), <https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf> [↑](#footnote-ref-27)
28. PDC Meeting 9-12-22 Minutes (see Certificate 28229), <https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf> [↑](#footnote-ref-28)
29. See, NYC Open Data portal for “Link5G New Site Permit Applications,” <https://data.cityofnewyork.us/Social-Services/LinkNYC-New-Site-Permit-Applications/xp25-gxux>. [↑](#footnote-ref-29)
30. See, e.g., OTI’s presentation to Community Board 3 in Queens on Jan 19, 2023, <https://www.youtube.com/watch?v=N_6c81RaAlM> starting at 1:01:00. [↑](#footnote-ref-30)
31. PDC Meeting 9-12-22 Minutes (see Certificate 28229), <https://www.nyc.gov/assets/designcommission/downloads/pdf/minutes-9-12-22-rev-2.pdf>. [↑](#footnote-ref-31)
32. FOIL #s 2021-858-00282, 283, 285, 287, 308, 331, 332; 2022-858-00004, 008, 107, 2023-858-00001, 002, 003, 004, 005, 006, 007, 012, 024. [↑](#footnote-ref-32)
33. Letter to NYC requesting information regarding Link5G cell towers <https://ehtrust.org/wp-content/uploads/Letter-RF-Reports-New-York-City-Office-of-Technology-and-Innovation-11.pdf>. [↑](#footnote-ref-33)
34. FOIL #s 2021-858-00282, 283, 285, 287, 308, 331, 332; 2022-858-00004, 008, 107, 2023-858-00001, 002, 003, 004, 005, 006, 007, 012, 024. [↑](#footnote-ref-34)
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