

CONSOLIDATED ZONING BOARD OF APPEALS
TOWN OF HIGHLANDS, VILLAGE OF HIGHLAND FALLS

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In the Matter of

DEBORAH KOPALD,

Applicant,

KOPALD AFFIDAVIT

For a Decision Pursuant to New York Town Law Article 16 and
Town of Highlands Code Article VII

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1. I, Deborah Kopald, resident of 88 Forest Hill Road, Fort Montgomery, NY, whose property is adjacent to the Sec/Lot Blk 11-1-1.52 of concern (owned by David Tonneson, Deborah Tonneson and Jaidin Paisley-Tonneson (“Tonnesons”) who, on information and belief, have been living for years at 35 Hemlock Street, Fort Montgomery, NY), submit this affidavit in support of my aggrieved neighbor appeal pending before the Zoning Board of Appeals requesting a reversal of the certificate of occupancy issued by the Town’s Building Inspector/Code Enforcement Officer to the Tonnesons on June 15, 2020. The Tonneson home footprint is 282 feet from my house and 173 feet to my lot boundary. My home is 180 feet from nearest part of the Tonneson land clearing. On information and belief, this home has been given the address of 38 Hemlock Street.

2. I reiterate every statement in my July 8th 2020 Affidavit submitted in support of my Aggrieved Neighbor Appeal which I have re-submitted herein in Support of the Instant Appeal of the Certificate of Occupancy (“CO”). I reiterate every argument made in the letter briefs in support of my Aggrieved Neighbor Appeal of the Building Permits granted to the Tonnesons in the herein Appeal of the CO as well.

3. To reiterate, I clearly articulated in my affidavit of June 8th that the gash in the forest made by the Tonnesons, substantiated by the affidavits of Michael W. Finkbeiner with regard to the Subject Property (Exhibit C) and the Timber Trespass Exhibit (Exhibit E) (which proves that

the shadow analysis calculation is accurate) caused ambient noise that I was not subject to previously to manifest. See especially ¶5 of my June 8, 2020 affidavit. There should no legal question that my previous allegations about excess noise since the illegal activity of the Tonnesons are enough to confer standing pursuant to *Sierra Club v. Village of Painted Post*, 26 N.Y.3d 301, 311 (Court of Appeals: 2015)

Thus, [Petitioner's] allegation about train noise caused by the increased train traffic keeping him awake at night, even without any express differentiation between the train noise running along the tracks and the noise from the transloading facility, would be sufficient to confer standing.

This Court recognize[s] . . . that standing rules should not be 'heavy-handed,' and [has] declared that we are 'reluctant to apply [standing] principles in an overly restrictive manner where the result would be to completely shield a particular action from judicial review. * * * That result would effectively insulate the [municipality's] actions from any review and thereby run afoul of our pronouncement that the standing rule should not be so restrictive as to avoid judicial review."

Id. 26 N.Y.3d at 311

See also: *People ex rel. Fordham Manor Reformed Church v. Walsh*, 244 N.Y. 280, 287 (1927):

The statements of the witnesses do not have to comply with the technical requirements applicable to testimony in court. They are not even under oath. It is enough that reasonable men could view them as entitled to probative effect.

There should be no question pursuant to case law quoted in the within brief, which will be quoted in an Article 78 Appeal of the first application that it is common knowledge and that federal government recognizes that trees are a noise buffer as well as an electromagnetic radiation buffer. See: *Kingsbrook Jewish Med. Ctr. v. Allstate Ins. Co.*, 61 A.D.3d 13, 871 N.Y.S.2d 680 (2nd Dep't: 2009)

material derived from official government websites may be the subject of judicial notice *Hunter v. New York, O. & W. Ry. Co. (State Report Title: Hunter)*, 116 N.Y. 615, 23 N.E. 9 (Court of Appeals, Second Division: 1889) states

judicial notice may be taken of facts which are a part of the general knowledge of the country, and which are generally known, and have been duly authenticated in repositories of facts, open to all; and especially so of facts of official, scientific, or historical character.

Id. 23 N.E. at 11.

Matter of Albano v Kirby, 36 NY2d 526, 532 (Court of Appeals: 1975). Pursuant to *Hunter*, supra and *Matter of Albano v Kirby*, 36 NY2d 526, 532 (Court of Appeals: 1975), courts can take notice of facts at any stage of a proceeding. Courts can take notice of public records again at any stage of an Article 78 proceeding including at the Appellate level pursuant to *Mtr. of Persing v. Coughlin*, 214 AD.2d 145 (4th Dep't 1995) and *Amalgamated Warbasse Houses, Inc. v Tweedy*, 33 A.D.3d 794 (2nd Dep't: 2006):

We note that although the resolution is de hors the record, it may be considered on appeal as it is a matter of public record, and its existence and accuracy are not disputed (see *Brandes Meat Corp. v. Cromer*, 146 A.D.2d 666, 667, 537 N.Y.S.2d 177).

Id 33 A.D.3d at 796.

Also allegations that are outside of a hearing, but that necessarily affect its validity (including, but not limited to pre-determination of guilt), can be let in de hors the record pursuant to *Mtr. of O'Neal v. Coughlin*, 162 AD.2d 826 (3rd Dep't 1990). The government record on government websites, which a court can take judicial notice of reflects the general knowledge of the country, that trees are obvious noise barriers as well as privacy and light barriers. Exhibits R, S, T, documents from federal government websites (USDOT, USDA, USEPA) are allowed at any stage of the action pursuant to the aforementioned case law.

4. This issue is particularly relevant because rather than acting like the quasi-judicial body that it is to hear all parties out impartially, from the moment the ZBA members started to talk, they announced that they had decided I was not aggrieved. Mr. McCormick said he didn't "buy" that I was aggrieved that there weren't so many trees cut. I don't know how he explains away

the Finkbeiner affidavits (I certainly noticed the extreme difference in the trees since I have lived my whole life adjacent to the property and have been on it many times and noticed the difference from outside my windows- that the previous tree line is non-existent). I don't know how he explains the photos I provided that show the visual incursion at the end of my yard, most of which were provided initially or the pictures taken of the subject site itself (Exhibit P). The standard isn't what the ZBA members are accustomed to at their property, the standard is how I personally was affected, where the general public was not and need not have been had the law been followed. How do he and other Board members explain the difference between the area on my property which is clearly forested and the sudden transition to a property that looks like a corporate parking lot both from aerial and on the ground photos and opine that he does not think so many trees were cut? (Exhibit O versus Exhibit Q). At the meeting prior to the public hearing, Mr. McCormick took a deed and waved it around in the air that Mrs. Tonneson had sent to the board *ex parte*. He wouldn't provide it to my attorney when he asked for it. He could not have known what the points showed, because we didn't either until they were plotted and showed the gore between Hemlock Street and Poplar. (Before I was represented by counsel, he literally got up in the middle of my legal argument, guffawed, hiked his pants up and walked around the room, but clearly his posture wasn't much different with my attorney.)

5. The inappropriately prejudicial behavior by board members continued with Mr. Devereaux, who announced something along the lines of "let the record show the complainant is disparaging everyone" when I was forced to point out multiple misrepresentations by the Tonnesons' surveyor (falsifying points on a survey, falsifying, falsifying the amount of land cleared in an oral statement, falsifying a right of way for his client on an adjacent property) as well as statements by ZBA members which are belied by the evidence. (The surveyor's statements were further spurious acting as if I were at a much higher elevation than the subject

house when my house is not and claiming expertise on trees when trees growing at a slightly lower elevation in fact had previously reached a height such that they were visible from the windows in my upper floors. The comment could only have been calculated to tell me to sit down and shut up. The problem of course is that false things were stated. He was telling me that my pointing out that the surveyor was serially misrepresenting things was inappropriate when it was absolutely appropriate. Police reports in the within affidavit, Exhibit N demonstrate that Mr. Tonneson misrepresented to the police that he had caused trespass onto an adjacent lot; he waved a deed at the officer, but the deed does not grant him any ownership or easement privileges on that lot. Instead the police report is couched to make it sound as if I created some sort of incident (how dare I report the trespass and theft of trees on the Canterbury Forest lot). Another police report documents that and Orange County District Attorney thwarted attempts to arrest me for proving my case against the Tonnesons via aerial drone photography. Most note-ably, two other reports contradict David Tonneson's claims that there was no leaf blowing going on the property. There was continual leaf blowing that went on for hours on end- I stopped reporting it because it was not deemed construction noise, and hence deemed legal under the code.

6. Even the Chairman, Mr. Jannarone, who while not as glaringly obvious about his bias to the casual observer, purported to claim he stood on Forest Hill Road and claimed he could not see the subject house never once acknowledging the obvious- that my house is at a much lower elevation than Forest Hill Road and he could not have possibly had a view from my deck or yard of the property or from inside my home. The pictures dispute the contentions of the ZBA members's claims including insinuations by one of how he couldn't imagine many trees were cut, which doesn't explain how the forest on my property in Exhibit O suddenly gets turned into a corporate parking lot in Exhibit Q) None of the board members acknowledged the fact that they had long had an affidavit from David Tonneson saying he could see me on my deck come

out of my house. Mr. Jannarone, also failed to fulfill my FOIL request for all communications from the Tonnesons, including attachments and post-hearing submissions which is a violation of NY Penal § 240.65. His response to the FOIL (Exhibit V) refused to provide attachments to Debbie Tonneson's emails and in his sua sponte written narration of the FOILs as if I had sent her personally an email with bad language. I did no such thing. The attachments that I could open from an email sent to me by a third party are emails I sent to the Town Board, not the Zoning Board, in which I stated Facts and asked for the law to stop being disregarded. (See Exhibit V, pages 2 and 3). He proceeded to inject the personal into the proceedings by bringing in my long dead grandfather, Abraham Kopald, into the discussion saying something along the lines of how he could not imagine how he could have put in some type of poison pill in the deed. My grandfather was a lawyer, not a surveyor. The significance of the facts that the parcels conveyed were non-contiguous and that there is a gore in Hemlock Street are for the ZBA to determine, but the facts are the facts, which show among other things that Mr. Feith had sold my family something decades ago that he had already deeded over to the Town, and that the parcels had never been contiguous.

7. Most disturbingly, the FOIL demonstrates repeat *ex parte* communications to all ZBA members from the Tonnesons, who were represented by counsel. Not one board member spoke up to tell them to stop it; conversely months earlier, they had their attorney Alyse Terhune send me an email not to communicate with board members. (Exhibit U) Chairman Jannarone repeatedly told the Town to post emails having nothing to do with the questions of the case (but document the Tonnesons attempts to have me arrested for engaging in legal activity to prove my case against them and the Town and Mr. and Mrs. Tonneson's psychological theories, which are self-serving projections, but most importantly irrelevant to the questions before this board). I find it hard to believe that he could not discern that these emails had no factual or legal relevance

to the case; the only other explanation is that he was attempting to prejudice the proceedings against me. Exhibit W correspondence with Alyse Terhune spoke to this issue before these emails manifested. See also page 32 of the Department of the New York Department of State (“DOS”) Publication, “Exploring Standards of Ethical Conduct for Members of Planning Boards and Zoning Boards of Appeals: Article 18 of the GML & the Common Law: Appearance of Impropriety: Pre-judgment of application Ex Parte Conversations” :

https://www.dos.ny.gov/lg/publications/Ethical_Standards_for_Planning_and_Zoning_Boards.pdf

While Mr. Devereaux was attacking me at the ZBA hearing for pointing out falsities and misrepresentations stated, he was simultaneously entertaining *ex parte* communications from the Tonnesons misrepresenting key facts and attacking me personally.

8. Furthermore, Mr. Jannarone uncritically took Mr. Tonneson’s word that he had somehow magically shielded his house from Wi-Fi emissions and therefore I shouldn’t be concerned. Having been chastised by Mr. Devereaux for “disparaging” everyone, I said nothing, stunned at the absurdity of this claim and Mr. Jannarone’s uncritical questioning of it. The issue as stated was that the EMF emissions had already increased from the forest destruction and the Waletzke affidavit pointed to the government record explaining why; trees block electromagnetic radiation just as they are known to block sound. There are obviously other sources. As stated, there were no spikes of radiation in my house facing the subject property and there was no second-hand Wi-Fi signal prior to the forest destruction- that is the point, not what Tonneson claimed (however bogus) to be doing to shield emissions from the house. Furthermore, these problems occurred after the tree destruction on the subject property but before the tree incursion on 20-2-6 that Chairman Jannarone asked me about that subsequently rendered the McCarthy house visible from my house. The complaints to the police about leaf blowing noise by the subject property also are documented to have taken place before the tree incursion on the neighboring site, which

is significant because I was complaining about ambient noise before anything other than what I assert was illegal tree cutting on the subject property had occurred.

9. Any Court may take judicial notice of law pursuant to NY CPLR § 4511 that case law in New York and other jurisdictions is replete with findings that the removal of a tree barrier created a noise problem and the diminution of the value of a person's home: *Lexjac, LLC v. Inc. Vill. of Muttontown*, No. 07-CV-4614 JS, 2011 WL 1059122 (E.D.N.Y. Mar. 18, 2011) reports a substantially similar complaint to the one I made:

Here, Bonnie O'Connell, president of the Pond's Edge Civic Association from 2002 to December 2006, had made complaints to several Muttontown officials.... The vines, groundcover, and natural trees uprooted by Entel had functioned as a noise and light buffer and promoted privacy

(Emphasis added)

Save Pine Bush, Inc. v. City of Albany, 70 N.Y.2d 193, 512 N.E.2d 526 (Court of Appeals 1987)

footnote 2 cites to the local zoning ordinance (of which any Court can also take Judicial Notice)

which states:

The criteria, contained in section 5 of the new article 7-A of the zoning ordinance, are as follows:...

'8 Type and arrangement of trees, shrubs, fencing and any other improvements proposed as a visual and/or noise buffer between the subject parcel and adjoining lots.

(Emphasis added)

See *Kauffman v. State*, 43 A.D.2d 1004, 353 N.Y.S.2d 61 (1974), aff'd, 36 N.Y.2d 745, 328 N.E.2d 792 (1975):

The removal of the 'buffer zone,' the trees and the shrubs, change claimants' location from one of peace and quiet to one adjacent to a highly traveled highway, in plain view of the traffic with the noise, smell and constant intrusion that speeding vehicles produce each hour of the day and night.

(Emphasis added)

Id. 43 A.D.2d at 1005

See also: *People v. New York Trap Rock Corp.*, 57 N.Y.2d 371, 442 N.E.2d 1222 (Court of Appeals: 1982)

In more recent times, a tract north of the defendant's land was developed into a quarter-acre residential subdivision. Thereafter, to minimize whatever noise is produced in the regular course of the quarrying, as well as to provide a visual block, the corporation, at great expense, separated itself from the residential area by erecting a large sound-absorbing berm in the form of a 3,900 foot earthen wall, whose base ranges from 100 to 150 feet in width and whose 30-foot height is topped by a stand of trees; acting as additional buffers are a 250-foot strip of land and an adjacent area occupied by a power line easement.

(Emphasis added)

Id. 57 N.Y.2d at 374-375

See also: *Valicenti v. State*, 35 A.D.2d 610, 312 N.Y.S.2d 93 (1970) which states:

The Court of Claims found that 'there was consequential damage to the remainder since the noise has increased to a large degree and the privacy has been lessened, and the property has lost the enhancement value of the trees and landscaping.'

Id. 312 N.Y.S. 2d at 94

Also relevant is the Town of Highlands Code 101-12 (c) which reads:

Every day that a violation of any of the provisions of this chapter continues after written notice shall have been served upon the owner or his agent, either personally or by certified mail addressed to such person at his last known address, shall constitute a separate violation.

10. There should also be no question that the house can be seen year-round from my deck and from my property. (Exhibit P, which, other than the first two pictures taken in July, contains photos submitted with my previous application.) I have added two more more with leaves on the trees that demonstrate the house is clearly visible from my property. Make no mistake the house can be seen year round, but even if it could not be, the leaves are off the trees fully and partially more than half the year.

11. The above affidavit points speak to the legal aspects of the refusal to acknowledge my reasonable allegations about impacts of a forest destruction (including visual observation of the subject house) right below my house that I can see from my yard, my deck and my house. I will simply add that I was thrown out of my house largely unable to work or prosecute my case due to the constant noise I was subjected to say nothing of the illegal noise ordinance that the

Tonnesons advocated for that allow them to work until 9 p.m. at night. Some of these sound levels were dangerous; one police report I have provided states as much, and it is something that attorney Michael Sussman explained at the noise ordinance hearing- that he had heard it and it was a nuisance. <https://www.youtube.com/watch?v=4x5J9OFFTYo&t=1s> This has been an illegal taking of my property. While it might be construed that “construction ends” (it had been incessant and may still go on), there was non-construction noise that I complained about, including documented leaf blowing in police reports (as a government document, a court can take notice of it at any time) that would have been mitigated if the Tonnesons had followed the law and been made to follow the law and get proper permits which they needed before beginning construction. The leafblowing complained went on for hours on end forcing me out of my home, where I work (it is also normal nowadays for people to work remotely out of their home (and will be more common during the Pandemic era), but also particularly imperative for me due to environmental sensitivities to wireless radiation that makes it impossible to access most office buildings). As oft-stated, the impacts could have mitigated- they would not have been allowed to level a forest (if the Planning Board had allowed it, I would have been in Court over that), the Planning Board would have even had the right to have them move their house pursuant to local code (101-10(R)) (again, this has nothing to do with site plan approval under Town Law 274-a- I have never asserted they needed that type of approval).

12. The worst thing is this is not just visual blight or relegated to when the Tonnesons are making nuisance or other noise on their property (a couple Saturdays ago I was again subjected to C-scale low-frequency noise from motors from David driving a backhoe around the property and digging notwithstanding having misrepresented to the Appellate Court that he was no longer doing construction). As I had already stated, there was almost no anthropomorphic noise at my house. It had been a sanctuary and one I not only enjoyed for decades but have needed now

more than ever since Wi-Fi, smart meters, etc. have become ubiquitous in the last 10 or so years. The harm is ongoing. I am constantly tortured by noise that I was never even heard before this illegal tree cutting. Besides the train and traffic noise, there is a barking yapping dog, there are other C-scale machines- leafblowers from neighbors down the hill that I could not hear before. I wrote a diary of what occurred recently during a day when Tonneson was not working. Here is what I emailed myself (Exhibit X):

8:43- garbage truck tonneson

9:35"weedwacker" genrally down the hill- I heard it as some type of power tool

9:48 swound of heavy machinery

10:50 back from errands- saw earth movers and something mulching tress on 9w at the base of corbine hill

woul not otherwise have heard that- did not hear traffic noise in the house.

11:35 traffic, not construvtion noise

11:44- traffic noise

12:41 traffic noise

1:40 p.m.whiny noise like faraway machine- leafblwoer/wheedwacker type noise

1:51 chainsaw

I left for the rest of the afternoon. There was more noxious noise around 5 to 6 p.m. Again these are things I never heard before; these are consequences of all of these laws being broken by the Tonnesons. I knew that 8:43 was a garbage truck going by the Tonnesons (being Friday it might have been recycling). I had someone watching simultaneously sitting on 20-2-6 and they reported that they saw it pull up to the Tonnesons pre-existing house at 35 Hemlock. That's something that I never heard before; their house is pretty far away and the forest previously prevented me from hearing that noise. I can also hear the cars starting up at the subject house, something that is obnoxious in the morning and would have been mitigated if laws had been followed. Again, the standard is whether I am aggrieved; it's not what ZBA members are used to at their homes; it's not subject to nuisance law; it's not what they think I should put up with; it's the harm that has occurred to me that did not occur before the illegalities and it is harm that

the public does not generally experience because the hole in the forest is not directly below their house and because they general public is not subjected to the eyesore from their yard that I am.

A failure to acknowledge the obvious is what *Sierra Club v. Painted Post*, supra is directly speaking to:

This Court recognize[s] . . . that standing rules should not be ‘heavy-handed,’ and [has] declared that we are ‘reluctant to apply [standing] principles in an overly restrictive manner where the result would be to completely shield a particular action from judicial review. * * * That result would effectively insulate the [municipality’s] actions from any review and thereby run afoul of our pronouncement that the standing rule should not be so restrictive as to avoid judicial review.’”

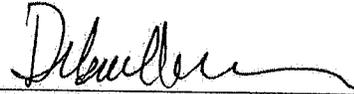
The Town appears to be acting in a self-interested manner to insulate its actions from any review.

13. Even as I finalize this affidavit this morning, I am being subjected to continual C-scale noise that is coming from below the subject property, but again something I assert I would not have heard before and never heard before this illegal forest destruction.

14. By this Board’s reversal of the wrongfully issued certificate of occupancy to the Tonnesons will be required to (i) proceed to the Planning Board to obtain a soil erosion permit (Town Code Chapter 101), and have reviewed and approved a stormwater pollution prevention plan for this land development (Town Code chapter 164), (ii) proceed to this Board for a Town Law § 280-a variance, and (iii) construct a driveway in accordance with State Fire Code and septic in accordance with State Septic Code. These reviews and approvals will ensure, as is intended by these Code provisions and statute, that the Tonneson development will have mitigated its impacts, which necessarily will obviate the present impacts to me that have occurred because of the lack of such required reviews.

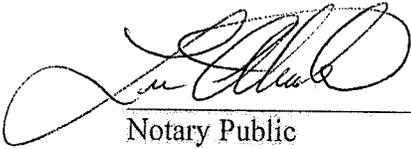
1. Exhibit “J” Petition of January 29th, 2020
2. Exhibit “K” Written Notice to the Tonnesons
3. Exhibit “L” Certificate of Occupancy
4. Exhibit “M” Plans

5. Exhibit "N" Police Reports on Leaf Blowers
6. Exhibit "O" Photos of D. Kopald Property in Forest
7. Exhibit "P" Photos from D. Kopald Property of Subject Tonneson Property: July 2020 photos of back of Tonneson Property (2) , Photos previously provided from September 2019 from D.Kopald yard before subject house erected (2), Photos previously provided from October 2019 of Subject house under construction (2), April 12th 2020 photo previously provided, Aerial photo previously provided from September 30, 2019, orthophotos previously provided from Finkbeiner affidavit
8. Exhibit "Q" July 2020 photos of subject house on subject property
9. Exhibit "R" The U.S. Department of Transportation Federal Highway Administration, "The Audible Landscape: A Manual for Highway Noise and Land Use", Paragraph 5 of section 4, "Physical Techniques to Reduce Noise Impacts"
https://www.fhwa.dot.gov/ENVIRONMENT/noise/noise_compatible_planning/federal_approach/audible_landscape/al04.cfm
10. Exhibit "S" the United States Department of Agriculture issued Guidelines 6.4 Buffers for Noise Control:
https://www.fs.usda.gov/nac/buffers/guidelines/6_aesthetics/4.html
11. Exhibit "T" The United States Environmental Protection Agency has a Section on its Website, "Using Trees and Vegetation to Reduce Heat Islands <https://www.epa.gov/heat-islands/using-trees-and-vegetation-reduce-heat-islands>
12. Exhibit "U" Alyse Terhune 1/14/20 email asking me not to email ZBA members
13. Exhibit "V" Some, but not all of the Ex parte email content sent from Debbie Tonneson to the ZBA
14. Exhibit "W" Alyse Terhune 6/17/20 email correspondence with R. Golden
15. Exhibit "X" July 24, 2019 Noise Diary
16. Exhibit "Y" Bianca Bosker, The Atlantic Monthly, "The End of Silence"
17. Exhibit "Z" Daniel Fink, "Ambient Noise is the New Second-Hand Smoke: Excessive ambient noise causes hearing loss, disrupts sleep, function and communication; and causes nonauditory effects for millions of people", "Post-Hearing Statement, D.C. Council Leafblower Amendment Act".



Deborah Kopald

Sworn to before me this
10th day of July 2020



Notary Public

LISA ALVARADO
Notary Public, State of New York
No. 01AL6101150
Qualified in Orange County
Commission Expires November 3, 2023

Notarization was made pursuant to NY Governor's
Executive Order 202.7, as extended.

EXHIBIT J

SUPREME COURT OF THE STATE OF NEW YORK
ORANGE COUNTY

Index No: _____

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In the Matter of the Application of Deborah Kopald,
Petitioner

For a Judgment pursuant to CPLR Article 78
And for an Action for Damages

PETITION

-against-

The Town of Highlands New York,
David Tonneson, Deborah Tonneson,
Jaidin Paisley-Tonneson,

Respondents

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I, Deborah Kopald, the Petitioner, respectfully alleges to be true upon my own knowledge or upon information and belief as demonstrated by my verification and exhibits submitted with my Order to Show Cause affidavit herewith as follows:

PRELIMINARY STATEMENT

1. I had brought a special proceeding brought in Orange County Supreme Court (Index No. 2019/007757) pursuant to Articles 78 of the Civil Practice Law and Rules (CPLR) upon a petition dated September 30, 2019 to annul, vacate and void the September 5th 2019 Building Permit (to erect a foundation) issued by the Town of Highlands (“ToH”) Building Inspector (“BI”) and any subsequent Building Permits that have been issued since. In that petition, I sought remediation of the land, sought to stay and rescind the permit as well as all other permits subsequently issued for the property, asked for the Building Inspector to be stopped from permitting work and issuing new permits on the Respondent Tonnesons and Paisley-Tonneson’s property on 11-1-1.52, for Respondents to be stopped from permitting work on the property including bringing in a modular home on the premises and asked for the tear-down of any man-made structure for which a permit was improperly issued.

2. Since that time, I learned that the Town had issued an amended permit on September 30th (the day I went to court and gave them notice of same) to include a house as well as a foundation. I put in a Zoning Board of Appeals (“ZBA”) application in November to review both permits¹ (The permits are Exhibit 1). This proceeding is ongoing, and I note for the record that my ZBA attorney, Richard B. Golden, Esq. and I believe as pursuant to NY Town Law § 267-b that the ZBA must step into the shoes of the Building Inspector to see if he should have done something else:

Orders, requirements, decisions, interpretations, determinations. The board of appeals may reverse or affirm, wholly or partly, or may modify the order, requirement, decision, interpretation or determination appealed from *and shall make such order, requirement, decision, interpretation or determination as in its opinion ought to have been made in the matter by the administrative official charged with the enforcement of such ordinance or local law and to that end shall have all the powers of the administrative official from whose order, requirement, decision, interpretation or determination the appeal is taken.*

In other words, the ZBA stands in the shoes of the Building Inspector, and we assert things that he ought to have done include making the Respondents get erosion control, stormwater and septic permits prior to issuing a building permit. Not having done so was a violation of procedure². The alternative is if the ZBA *does not have jurisdiction* over these erosion

¹ I assert the court initially had jurisdiction before the ZBA had ruled pursuant to *Matter of Bennefield v Annucci*, 995 N.Y.S.2d 435 (4th Dep’t 2014) and *Matter of Santiago v Boll*, 14 N.Y.S.3d 568, (3rd Dep’t 2015). There was obvious irreparable harm because I assert the Respondent should have gone to the Planning Board to get permits (which would have allowed me to weigh in) and prevented wanton tree destruction; I had to go to Court before the modular home was quickly put up to preserve my rights and try to stay the destruction. The jurisdiction of the ZBA is appellate only: *See: Brenner v. Sniado*, 156 A.D.2d 559, 549 N.Y.S.2d 68 (2nd Dept. 1989) and cannot stay construction.

² Local code also specifies that the ZBA must adhere to NY Town Law (§ 210-44 B) which asks the ZBA via NY Town Law § 267 B to look at what the Building Inspector ought to have done and to New York State Law (§ 210-44 A). The Building Inspector is not limited to enforcing the zoning code; he is also the Code Enforcement Officer for the Town which means he must enforce the Town’s code.

A.

The Board shall have jurisdiction over those matters properly brought for determination to a Zoning Board of Appeals concerning property within the Town of Highlands and Village of Highland Falls and to make a determination thereof in accordance with their respective zoning codes, *New York State law* and the provisions of the Intermunicipal Cooperation Agreement.

provisions, then the question of whether the Building Inspector should have adhered to them must be put directly to this court. Erosion control provisions are clear that no construction can be done when a permit under §101 is required. The same is true of the stormwater and septic provisions. There are also issues with regard to other laws and issues that the ZBA may not have jurisdiction of, including, but not limited to decisions that are arbitrary and capricious and an abuse of discretion and certain state laws. Regardless, it is appropriate to go to court before exhausting administrative remedies in certain instances- where permanent harm could be done. In this case, the permanent harm includes ongoing erosion control problems from proceeding without erosion control permits which became further manifest from analysis of January 6th 2020 drone footage taken with leaves off the trees, more stripping and putting in a stormwater system that is going to dump water directly on the road used to access the site. I also asked the Town to enforce the penalty provisions of §101 and served notice upon the other Respondents. There is no interest by the Town in enforcing the law and given that every day after notice is a new violation, it is necessary to ask the Court to intervene³.

THE PARTIES

3. I, Deborah Kopald, a taxpayer and resident of Fort Montgomery, N.Y. in the Town of Highlands who lives in, works out of and owns the home on the adjoining lot (20-2-5) which has been my primary residence since 2/20/74 and having challenged the Permit issued on 9/5/19 by the ToH BI to the Poplar Street Respondents, am challenging the amendment to this Permit made

B.

The Consolidated Zoning Board of Appeals shall hear and determine all matters submitted to it in accordance with the law applicable to the property which is the subject of the application, and in particular, *the Town Law of the State of New York* and Village Law of the State of New York, the Village Zoning Code and this chapter.

(Emphasis added)

³ Furthermore, I am making this procedural step because the Principle Court Attorney Michael O'Brien had written to say that I was directed not to file motions, etc. and because of statements made in the transcript by his Honor. (Exhibit 14)

on 9/30/19 and all subsequent permits issued by the ToH BI to the Poplar Street Respondents including but not limited to a certificate of occupancy. I had requested a stay of house construction via a preliminary injunction in my Order to Show Cause of 9/30/19 and that the ToH BI be enjoined from issuing further permits.

4. The first Respondent is the Town of Highlands (“ToH”) whose Building Inspector (“BI”) issued the 9/5/19 permit and issued an amended permit on 9/30/19. The Second Set of Respondents comprise David Tonneson, Deborah Tonneson and Jaidin Paisley-Tonneson (“Poplar Street *proposed* Respondents”) who received the amended permit to bring in a modular home and may be imminently about to receive a certificate of occupancy for the lot on 11-1-1.52.

JURISDICTION

5. The Court has subject matter jurisdiction over this matter and may exercise personal jurisdiction over the respondents. Pursuant to CPLR 506(b), venue is proper because the challenged determinations were made in Orange County, and all parties and properties are located therein. The initial petition was filed to attempt to get a stay of construction; I went immediately as I understood a modular house was about to be trucked in. (See again footnote 1) Stays of construction are not available from Zoning Boards of Appeals. I have since put in a ZBA application to rescind the permits and as stated, the ZBA may decide it does not have jurisdiction over provisions of the code outside local zoning code 210. (Again, my attorney Richard B. Golden and I are asserting that the ZBA has jurisdiction to enforce NY Town Law, which states that they should review what the Building Inspector, who must enforce all local codes “ought to have done”. Even if we are ultimately deemed to be legally incorrect about the ZBA’s authority over erosion control since it lies outside the zoning code, this Court would have jurisdiction over this question.

STATEMENT OF FACTS

6. I live adjacent to the construction going on Poplar Street in Fort Montgomery New York. On information and belief, this parcel is numbered 11-1-1.52. The parcel is owned by David Tonneson, Deborah Tonneson and Jaidin Paisley-Tonneson (“Poplar Street *proposed* Respondents”).

7. Initially, I had not been able to get too close to it during daylight hours from construction noise from heavy machinery which on information and belief emits low frequency sound, and was at any rate highly irritating and extremely debilitating (and in fact forcing me to keep far away from my home) but surmised that too many trees had been cut based on light streaming in and a gap in the tree line and that other violations may have occurred. In addition, on a 13.926 acre parcel, it was odd that construction was occurring within 200 feet of my bedroom and home office and less from my lot line; in fact I later found out that gash at the end of my yard which could also be seen from my driveway was to be the septic field for the home. I commissioned a drone to be flown and later had photography analyzed by an aerial photogrammetrist who is also a surveyor. I also could only surmise what the problems were remotely and in the absence of on the ground discovery had to rely on drone footage and then more drone footage and analysis more recently after the leaves were off the trees. It took a while to analyze the drone footage that I had. More recently, with the leaves off the trees and using a special attachment to the drone, the aerial photogrammetrist was able to assess with specificity, the amount of grading, filling and excavation. In addition, more stripping had taken place.

8. The building site on section/block/lot 11-1-1.52 was formerly covered with trees before construction commenced. Traffic from 9W, which is pretty far away can now be heard at my house since the Poplar Respondents cut a hole in the mountain and needlessly and illegally cut too many large trees over 10 DBH. This also has reduced the value of my home both

objectively and especially to me. The destruction of the forest which violates the Town's Climate Smart Resolution⁴ (See: Exhibit 7), common sense, respect for the code's letter and spirit and respect for nature is an absolute nuisance. I could never hear the traffic before; now the noise is persistent. I can also hear the trains (commuter and commercial on two tracks) go by multiple times a day right down to the rumble on the tracks and never could hear it before in over 40 years other than an occasional faint whistle once in a while- again I have lived on and off in this house for over four decades.)

9. I assert the blight is clearly devaluing my property and home. The houses including mine going up the hill above the site in question are ensconced in trees in a deciduous forest; it is clearly an animal habitat⁵. (There is also a view of Bear Mountain itself from my yard and the neighborhood is in keeping with way houses are nestled among trees in Bear Mountain State Park. Now, right below my house, there is a gash in the mountainside that I assert occurred without proper permits and without review by the Town Planning Board as required by the code. This construction is not in keeping with the landscape of the rest of the mountain. Analysis of drone aerial photography has proven that the Respondents failed to get required erosion control permits for stripping, excavation, sloping, tree cutting, filling, grading and stripping. I also allege that they needed erosion control permits for the fact that the site was within waterlands and within the one hundred year floodplain of any watercourse. By not going before the Planning Board, the Tonnesons (and the Town by not enforcing the regulation), deprived me of weighing in to make sure my rights were protected and that the letter and spirit of the erosion control provisions were followed. Of the Poplar Street *proposed* Respondents, Dave Tonneson is a life-

⁴ It is common knowledge that carbon sinks (which trees are) is the main way to combat global warming.

⁵ I have seen the following animals go through my property: they include, but are not limited to, foxes, coyotes, bears, bobcats, possums, raccoons, owls, black snakes, chipmunks, squirrels, 5-lined skinks, red salamanders, earthworms, frogs, fireflies, hawks, an array of other colorful birds including green headed grackles, cardinals, blue jays.

long resident of the Town of Highlands and has apparently done other work in this town. I am aware that he developed a project on Beattie Pond Road where the houses are more in harmony with the landscape. I assert that Mr. Tonneson is perfectly well aware of the Town's rules and regulations. He is on the record at a Town meeting⁶ from the Monday before I filed the first article 78 petition saying he has been engaged in this type of work for decades and has generated \$16m in revenue in doing so: <https://www.youtube.com/watch?v=IJJWVF-T2J0> (15:30-15.50 time stamps). There were many other local, state and possibly federal laws broken as well.

I. EROSION CONTROL, STORMWATER PERMITS AND SEPTIC PERMITS

10. Section §101-7 subsection A of the Town Code states: Activities requiring a permit:

None of the following activities shall be commenced until a permit has been issued from the Planning Board under the provisions of this chapter:

- (1) Site preparation in the subdivision of land into two or more parcels.
- (2) *Site preparation within waterlands.*
- (3) *Site preparation on slopes which exceed 1 1/2 feet of vertical rise to 10 feet of horizontal distance.*
- (4) *Site preparation within the one-hundred-year floodplain of any watercourse.*

⁶ The subject of discussion was the institution of a noise ordinance of which there was none in the Town of Highlands, which on information and belief is an unusual situation. At least one former town councilperson told me that a noise ordinance had been suggested around 2003 and that the Board decided not to anger Respondent Mr. Tonneson who did not want any noise ordinance to be implemented. Regardless of the fact that this is being reported by me as hearsay and as an impression of a former Councilperson, what this video also shows is that the Respondent was well aware of the lack of a certain rule and wanted to lobby for *de-minimus* rules; I assert this suggests that he makes it his business to keep apprised of rules and regulation affecting a business that he says has generated \$16m in revenue. .

The first version of the ordinance allowed noise at night in a country town that exceeded industrial levels in major cities; later, after a hearing <https://www.youtube.com/watch?v=4x5J9OFFTYo&t=1091s> that featured Mr. Tonneson demanding the right to work at midnight without having the police called on him and various people on his payroll and others demanding I move to Montana, was "unneighborly" for calling the police (both for noise and for harassment by phone by Debbie and David Tonneson) and being obliquely referred to as someone who observes "other Sabbaths", and then having another neighbor, Jack McCarthy, walk up to the Supervisor on camera to demand to know if I was "violent" with the Supervisor then sticking his finger in his mouth), the Town passed an ordinance that would allow Mr. Tonneson to do construction until 9 p.m. at night, something that is not permitted in a noise ordinance in any other jurisdiction. . (When I asked Mr. McCarthy if Mr. Tonneson had told him that, he looked embarrassed and proceeded to niceties like "Hey, we are going to be neighbors!"). Previously, the police were enforcing the building permit recommendations of 6 p.m. so the noise ordinance functions to legally enable harassment whereas construction was not permitted at night before.

- (5) *Excavation which affects more than 200 cubic yards of material within any parcel or any contiguous area.*
- (6) *Stripping which affects more than 20,000 square feet of ground surface within any parcel or any contiguous area.*
- (7) *Grading which affects more than 20,000 square feet of ground surface within any parcel or any contiguous area.*
- (8) *Filling which exceeds a total of 100 cubic yards of material within any parcel or any contiguous area.*
- (9) *Site preparation pursuant to a special exception permit issued by the Town Planning Board or the Town Board.*
- (10) *Site preparation affecting or contiguous to the shoreline of the Hudson River.*
- (11) *On all properties, the removal or destruction of more than three trees 10 inches DBH or over during any period of 12 consecutive months or any one tree 30 DBH inches or over.*

(Emphasis Added)

In Exhibit 2, my aerial photogrammetrist shows that he was able to prove the following:

- With regard to 3 (sloping), more than 75% of site preparation was done on areas in 11-1-1.52 that had a slope greater than 15%, necessitating a permit.
- With regard to 5 (excavation), 2,910 cubic yards were excavated on 11-1-1.52 (maximum allowable without a permit was 200 cubic yards within a parcel or contiguous area).
- With regard to 6 (stripping), with aerial photography after leaves were off the trees, the total area stripped on 11-1-1.52 was revealed to be 52,228 square feet or 1.2 acres (maximum allowable without a permit was 20,000).
- With regard to 7 (grading), 48,412 square feet or 1.11 acres were graded on 11-1-1.52 (maximum allowable without a permit is 20,000 square feet).
- With regard to 8 (filling), 1,625 cubic yards were filled on 11-1-1.52 (maximum allowable without a permit was 100 cubic yards).
- With regard to 11 (removal or destruction of trees), at least 39 trees greater than 10 DBH were cut, (maximum allowable without a permit was 3).

Exhibit 3 is a copy of the certified letter I sent to the Respondents and the Town, having previously emailed the Town to request that they act. In fact, 42 old growth trees in excess of 10 DBH were cut prior to September 30th 2019 and that most were outside of the building envelope. Exhibit 4 is a copy of the Affidavit of Susan Kopald, already before the Court that no trees were cut on the property prior to sale or at any time between the time the 2016 google earth layer used by the Aerial Photogrammetrist as comparison to the current photographs of the destruction wrought by the Tonnesons. Furthermore, the clearing, stripping, grading tree cutting *preceded*

the granting of the initial permit to put in a foundation. This was wrong as the code is clear; again 101-7 (A) states:

None of the following activities shall be commenced until a permit has been issued from the Planning Board under the provisions of this chapter:

Again, there was no permit issued to begin construction on the home; these erosion control provisions of the code governed. Local code §101-5 in fact states

Conflict with Existing Regulations

Where this chapter imposes greater restrictions than are imposed by the provision of any law, ordinance, regulation or private agreement, this chapter shall control. Where greater restrictions are imposed by law, ordinance, regulation or private agreement than are imposed by this chapter, such greater restrictions shall control.

The greater regulation was the need to get erosion control permits FIRST before any construction permits. As stated above, §101-7 states

None of the following activities shall be commenced until a permit has been issued from the Planning Board under the provisions of this chapter.

Subsequently Respondents proceeded to engage in more site clearing after the modular home was erected, even going so far as to direct the cutting of 11 large trees without permission on lot 20-2-6, a lot owned by Canterbury Forest Corporation, which I am permitted to traverse and owned by relatives, and which is not slated for development to protect my property values and privacy. (Exhibit 8) This lot is adjacent to my parcel 20-2-5 and the subject parcel (11-1-1.52)⁷. On information and belief, Respondent Tonneson told Orange and Rockland Utilities, Inc., that he owned the land and/or had a right of way over the land (O&R was about to install poles on 20-2-6) as well as telling this to the police and to this court with an erroneous survey that is not

⁷ On information and belief, Deborah and David Tonneson and Jaidin Paisley-Tonneson will be served soon with a lawsuit from Canterbury Forest Corporation alleging larceny, treble damages, slander and clouding of title, trespass, etc. by disposing of most if not all of these trees via McCarthy tree service. (I was flushed out of my house by the noise and when I heard and saw what was going on, I called the police. Respondent David Tonneson apparently showed Officer Hill a deed, claiming it was his; however, the police did not follow up; I assert it was like the scene in the movie *Training Day*, where Denzel Washington's character knocks on someone's door, waves a Chinese menu masquerading as a warrant, and asserts he had the right to enter, then takes something from the house). The movie version was literally an Oscar-winning performance by Mr. Washington.

backed up by any deed recorded in Orange County that he had the right to enter that lot, cut trees and take them. This rendered the house on the next lot owned by Jack McCarthy visible from my yard, whereas it had not been before and disturbed the overall character of the neighborhood- as when one drives, around the bend, one can see this clearcut by Tonneson and the stripped area. This occurred while motions to protect the site were pending in the previous case (still pending at this writing) and demonstrates what I have been saying that in the absence of Court intervention, laws will continue to be broken by Tonneson and blessed by the Town. After presumably studying the matter, O&R recently emailed the Canterbury Forest Corporation's attorney, Gerald Jacobowitz and myself to say that they would not enter 20-2-6 and would not put up a pole and would not be transmitting electricity to 11-1-.52 via 20-2-6. On information and belief, their legal department appears to have come to the same conclusion as Canterbury Forest Corporation's counsel and my surveyor.

11. Furthermore, even with all of these allegations, including previous affidavits submitted to the Court in the previous Article 78, showing that the tree and stripping and erosion control provisions were clearly violated, the Town has refused to enforce its own code:

§ 101-12 Enforcement; penalties for offenses.

B.

Any person, firm, partnership, corporation or other party who violates any provision of this chapter shall, upon conviction thereof, pay a fine a fine not to exceed \$250 or be imprisoned not to exceed 15 days, or both. The imposition of any such penalty for the violation of this chapter shall not excuse such violation nor permit the continuance thereof. The application of the above penalty or penalties for a violation of the provisions of this chapter shall not be held to prevent the removal of conditions prohibited by this chapter by such legal means as may be proper.

[Amended 3-10-1998 by L.L. No. 1-1998]

C.

Every day that a violation of any of the provisions of this chapter continues after written notice shall have been served upon the owner or his agent, either personally or by certified mail addressed to such person at his last known address, shall constitute a separate violation.

E.

In addition to the penalties set forth in Subsection **B**, any person violating any provision of this chapter pertaining to tree removal or destruction shall be subject to a civil penalty enforceable and collectible by the Town in the amount of \$250 each day the violation continues for every tree until tree replacement has been completed and approved by the authorized official.

[Added 5-22-2006 by L.L. No. 2-2006]

12. I provided written notice (See again: Exhibit 3). The Tonnesons have not sought Erosion control permits to date and the Town has not made them do so. Therefore, I ask the Court to enforce these provisions and make the Town fine the Tonnesons after a hearing to assess how many days the illegal tree removal and failure to replace has occurred (if going from the time the trees were cut, the fines would be well over \$1 million). I also ask the Court to order remediation of the land with an independent third party, since the Town has proven feckless and inept and to have fully grown trees (whether pine or the original type) to be replaced for each tree illegally cut). I also ask the Court to enforce the other provisions that were violated and to order remediation for them as well. Again, the destruction is so extensive, it requires third party competent oversight. Erosion control is supposed to be an ongoing process pursuant to 101-10(c)

C.

The control of erosion and sediment shall be a continuous process undertaken as necessary prior to, during and after site preparation and construction.

The other provisions of 101-10 were ignored because the permits required were not sought⁸; again these issues should be dealt with in the context of getting permits from the Planning Board.

⁸ § 101-10 **Standards.**

In granting a permit under this chapter, the standards and considerations taken into account include but shall not be limited to the following:

A. Excavation, filling, grading and stripping shall be permitted to be undertaken only in such locations and in such a manner as to minimize the potential of erosion and sediment and the threat to the health, safety and welfare of neighboring property owners and the general public.

B. Site preparation and construction shall be fitted to the vegetation, topography and other natural features of the site and shall preserve as many of these features as feasible.

C. The control of erosion and sediment shall be a continuous process undertaken as necessary prior to, during and after site preparation and construction.

13. Fundamentally, Respondents engaged in activities that required erosion control

permits *prior* to putting in an application and receiving permits to construct. This violated 101-

7a. The issue here is that even though there are exceptions for the excavation and footings of

D. The smallest practical area of land shall be exposed by site preparation at any given time.

E. The exposure of areas by site preparation shall be kept to the shortest practical period of time prior to the construction of structures or improvements or the restoration of the exposed areas to an attractive natural condition.

F. Mulching or temporary vegetation suitable to the site shall be used where necessary to protect areas exposed by site preparation and permanent vegetation which is well adapted to the site shall be installed as soon as practical.

G. Where slopes are to be revegetated in areas exposed by site preparation, the slopes shall not be of such steepness that vegetation cannot be readily established or that problems of erosion or sediment may result.

H. Site preparation and construction shall not adversely affect the free flow of water by encroaching on, blocking or restricting watercourses.

I. All fill material shall be of a composition suitable for the ultimate use of the fill, free of rubbish and carefully restricted in its contents of brush, stumps, tree debris, rocks, frozen material and soft or easily compressible material.

J. Fill material shall be compacted sufficiently to prevent problems of erosion and where the material is to support structures, it shall be compacted to a minimum of 90% of standard proctor with proper moisture control.

K. All topsoil which is excavated from a site shall be stockpiled and used for the restoration of the site and such stockpiles where necessary, shall be seeded or otherwise treated to minimize the effects of erosion.

L. Prior to, during and after site preparation and construction, an integrated drainage system shall be provided which at all times minimizes erosion, sediment, hazards of slope instability and adverse effects on neighboring property owners.

M. The natural drainage system shall generally be preserved in preference to modifications of this system, excepting where such modifications are necessary to reduce levels of erosion and sediment and adverse effects on neighboring property owners.

N. All drainage systems shall be designed to handle adequately anticipated flows both within the site and from the entire upstream drainage basin.

O. Sufficient grades and drainage facilities shall be provided to prevent the ponding of water, unless such ponding is proposed within site plans, in which event there shall be sufficient water flow to maintain proposed water levels and to avoid stagnation.

P. There shall be provided where necessary to minimize erosion and sediment such measures as benches, berms, terraces, diversions and sediment, debris and retention of basins.

Q. Drainage systems, plantings and other erosions or sediment control devices shall be maintained as frequently as necessary to provide adequate protection against erosion and sediment and to ensure that the free flow of water is not obstructed by the accumulation of silt, debris or other material or by structural damage.

R. Tree removal or destruction shall be permitted if the presence of trees would cause hardship preventing the reasonable use of the property for approved or permitted purposes, which hardship is not self-created and is unique to the property; or endanger the public or the person or property of the owner or neighbors; or the trees are on property to be occupied by buildings, structures or related improvements and within a distance of 10 feet around the perimeter of such building or structure; or block an important viewshed and the removal of the trees is performed in a selective manner. Other considerations may include the likelihood of the survival of the tree, economical considerations of land use, the general welfare and the overall environment of the area, whether the removal will have significant adverse impact on ecological systems, including erosion potential and wildlife habitat, and whether the removal will have significant adverse impact on other properties or roadways, including impacts on drainage. The Planning Board may require proposed buildings or structures to be relocated on a plan or reduced in size in order to save a tree or trees which the Planning Board determines to be important or whose removal will have significant adverse impact.

[Added 5-22-2006 by L.L. No. 2-2006]

S. During site preparation activities, the property owner or developer shall protect all trees on the approved subdivision plat, site plan and/or permit map, as the case may be, designated to be preserved by the Planning Board.

[Added 5-22-2006 by L.L. No. 2-2006]

homes and septic, the stripping and site preparation on a slope greater than 15% and grading, filling, excavation and tree destruction, was done well in excess of what would be necessary for the excavation and footings of a home. An illegal driveway was constructed (I will get to that in a moment), which resulted in even more stripping. The problem with any argument the Respondents would have that all of this destruction was done for basements and footings and septic of the home is that by their logic, they could have cut every tree down on the 13.926 acre parcel and they could have said this was for the excavation, footings and septic. What was done far exceeded that. The idea is that there is an exception for just for these things, not to clear excess for a future yard or extra parking or to build a road up a hill to lead up to the site. Secondly, they started to prepare a 13.926 acre site on a steep slope before applying for any building permit. They needed erosion control permits before engaging in activity that necessitated permits under section 101. They were engaging in this land disturbance and did most if not all of the tree cutting *before* even applying for a permit. The same issue goes for stormwater prevention and septic; these permits needed to have been obtained first. Again, I re-emphasize that the activity necessitating erosion control permits took place before a permit for construction was sought (on August 30th) and obtained (on September 5th for the foundation with an amended permit on September 30th for the modular home). The construction permit wasn't even applied for until the 30th of August.

14. Other permits that needed to be sought and approved prior to getting any construction permit were stormwater control and septic permits. On information and belief, this did not occur: Section §164-7 has to do with stormwater pollution prevention plans- none were made in regard to the roof of the home or for the fact that a stream runs across the mountain because the Town diverted rainwater across my yard that flows into the area where he Tonnesons have put their septic. There were no provisions made for stormwater on the plans submitted, so the

Building Inspector was at a minimum acting arbitrarily and capriciously by approving plans without them; however as more than an acre has been stripped, it was necessary to require permits for them. Furthermore, recent drone footage demonstrates that the Respondents have engaged in further stripping to put in a catch basin, trenching, and drainage piping in new trenches but the surveyor/aerial photogrammetrist Michael Finkbeiner asserts that it will “dump water onto Hemlock Street without drainage controls including engineered detention, curbing or other improvements made to Hemlock Street”. This further underscores the need to get permits *before* the building permit. The code § 164-7 reads:

A. Stormwater pollution prevention plan requirement. No application for approval of a land development activity shall receive approval until the appropriate board has received a stormwater pollution prevention plan (SWPPP) prepared in accordance with the specifications in this chapter.

Similarly, the septic permit was necessary before a construction permit was issued. I had requested discovery in the first special proceeding because the forester Star Childs indicated that there were watercourses on site. (See: Exhibit 11; this affidavit is already before the court in a discovery motion in 2019/007757) I assert these provisions necessitated planning board approval first:

§ 146-2 Application.

No installation of any septic tank or outside privy nor the construction or erection of any structure intended for human occupancy shall be commenced until an application duly filled out, in triplicate, on forms supplied by the Town Clerk, and drawings showing the intended location of the septic tank proposed to be used in connection with such structure, shall have been filed in the Town Clerk's office and approved in the manner hereinafter prescribed.

§ 146-6 Distances.

No septic tank or outside privy shall be installed unless every part of such installation shall be more than 50 feet from any lake, reservoir, stream or watercourse not protected by rules enacted by the State Commissioner of Health; nor shall any such installation be located on the direct line of drainage to not less than 50 feet in a horizontal direction from any well, spring or any source of water supply. If the minimum distance specified cannot be complied with due to the limits of the property, the Sanitary Inspector may allow an

installation at a distance less than the minimum specified, provided that such installation does not or will not create a dangerous, unhealthful condition.

The plans show that septic was put in the ground before a permit was given for construction. Discovery is still necessary to prove issues related to wetlands and watercourses. I ask the Court to take Judicial Notice of all local code provisions at E-Code. <https://ecode360.com/HI1566> (Last viewed: January 26, 2020).

II. Given all of the violations going on described in this petition, the Building Inspector should have ordered erosion control prior to issuing an amended permit to bring in a modular home.

15. Notwithstanding these provisions, a permit issued on 9/5 which I challenged in the initial petition on the aforementioned basis (being issued in violation of lawful procedure which required other permits to be obtained ahead of time) as well as being inherently unlawful as it was outside the building inspector's authority to issue as it constituted neither a house nor an accessory structure to a house pursuant to local code 210-21:

INSTALL A FOUNDATION SYSTEM ACCORDING TO DRAWINGS BY TALCOTT ENGINEERING DESIGN PLLC

It is not a permit to build a house. The local code reads:

§ 210-21 Building permits; site plan procedure and standards.

No building permit or certificate of occupancy shall be issued for other than a one-family residence, a two-family detached residence or for structures accessory thereto until a site development plan has been approved by the Planning Board in accordance with this section.

The Building Inspector exceeded his authority and proceeded in excess of jurisdiction. § 210-21 does not allow something that is not a one family house or two-family detached residence or accessory structure thereto to ever be erected without Planning Board approval. A permit "to install a Foundation System" is not a permit to build a house and it should have gone before the Planning Board where there should have been SEQRA determination. An accessory structure,

for which the Building Inspector does have the right to issue a permit is not a foundation, which is a structure integral to a home. The amendment should not have been made to the permit since there was already a need for erosion control permits and septic and stormwater permits, and these could only be issued after the proper permits for tree cutting and other erosion control had taken place. Other violations that appear took place before a modular home was trucked in included ongoing improper installation of septic, an oil spill on the property that was not cleaned up, violations of Army Corps of Engineers regulations on wetlands and general violations. As I will explain, there were a number of extant problems before the amended permit was issued, which means the Building Inspector should not have issued it.

16. My property rights were violated; the Respondents needed to get other permits, and still should be made to get other permits (not continue construction, potential evidence destruction and cut more trees without a permit (which is what occurred since the filing of the initial petition). The Town should have stopped them for a number of other reasons:

III. Town Law 280-a claim: ZBA is hearing this claim and may be entertaining jurisdiction over it; however it may not be entertaining jurisdiction over violation of Fire Code issues and driveway

17. § 280-a of the Town Law states the following:

§ 280-a. Permits for buildings not on improved mapped streets

1. No permit for the erection of any building shall be issued unless a street or highway giving access to such proposed structure has been duly placed on the official map or plan, or if there be no official map or plan, unless such street or highway is (a) an existing state, county or town highway, or (b) a street shown upon a plat approved by the planning board as provided in sections two hundred seventy-six and two hundred seventy-seven of this article, as in effect at the time such plat was approved, or (c) a street on a plat duly filed and recorded in the office of the county clerk or register prior to the appointment of such planning board and the grant to such board of the power to approve plats.

2. Before such permit shall be issued such street or highway shall have been suitably improved to the satisfaction of the town board or planning board, if empowered by the town board in accordance with standards and specifications approved by the town board, as adequate in respect to the public health, safety and general welfare for the special circumstances of the particular street or highway.

When I called the Highway Department, the person answering the phone admitted what the 2019 tax map shows that Hemlock was not wholly approved by the Town and is merely a “proposed” street. (Exhibit 5, Affidavit of Finkbeiner) First it should be noted that the parcel is on 4 zones, R1, R4, R5 and no zone; the driveway constructed itself goes through R1, R4, and R5. Since it is cutting through zones that are supposed to be for apartment buildings, it should have been considered for review. Also since the house represents the 5th house being built on the original parcel, subdivision regulations for a road should apply. Also some of these parcels are contained within the conveyance of 11-1-1.52. It appears that no street giving access to such proposed structure has been duly placed on the official map or plan. Poplar is proposed and so I assert are Hemlock and Cherry; they are not public roads in the portions adjacent to Poplar Street. Poplar and I assert the portion of Hemlock reaching to the property was not approved

- by the town,
- by the county or state,
- by the Planning Board, and
- is not on a plat approved by the Planning Board,
- is not on a plat filed and recorded in office of the County Clerk before the Planning Board had the power to approve plats.

So you cannot get a permit to put up a building on an unapproved road according to NY-Town Law § 280-a. The only way to access the parcel is to go through other peoples’ driveways to then exit the property to Poplar Street to eventually get to Hemlock Street. While Respondents contend that Hemlock is public, the fact of the matter is the metes and bounds do not connect Hemlock to Poplar (or Cherry to Poplar) due to a gore or gap (that was ignored by the Tonneson’s surveyor who improperly connected Hemlock to Proper Street – this surveyor improperly drew a right of way through the aforementioned Canterbury Forest Corp. property- (again an issue that on information and belief will be litigated before the Court in the near future) and any so-called offer of extension is a nullity because the second offer was of the portion of the

road that had been previously offered and accepted, not the whole tranche. See Exhibit 6 Affidavit of Finkebeiner). I assert that the entire street has not been maintained in such a manner for the time requisite to become a Town road by implication.

18. Besides the fact that I assert Hemlock is not a public road, McKinney's Commentary on Town Law 280-a authorizes a **town to require a property owner to improve the street or means of access as a prerequisite to issuing a building permit.** This never happened:

Town Law § 280-a authorizes a town to require a property owner to improve the street or means of access off site as a prerequisite to issuance of a building permit. *See Pearson Kent Corp. v. Bear*, 35 A.D.2d 211, 212, 315 N.Y.S.2d 226, 228 (2d Dept. 1970), *rev'd on other grounds*, 28 N.Y.2d 396, 322 N.Y.S.2d 235, 271 N.E.2d 218 (1971); *Peckham Industries v. Ross*, 61 Misc.2d 616, 306 N.Y.S.2d 1006 (Sup. Ct. Orange Co.), *aff'd*, 34 A.D.2d 826, 312 N.Y.S.2d 627 (2d Dept.), *appeal denied*, 27 N.Y.2d 485, 315 N.Y.S.2d 1027, 263 N.E.2d 565 (1970); *Medine v. Burns*, 29 Misc.2d 890, 892, 208 N.Y.S.2d 12, 14 (Sup. Ct. Suffolk Co. 1960).

Town Law 280-a reflects a legislative judgment that the building up of unimproved and undeveloped areas should be accompanied by the provision of roads and streets to meet the basic needs of the new residents of the area. *See Truesdale Lake Property Owners' Ass'n v. Collin*, 22 Misc.2d 27, 28-29, 189 N.Y.S.2d 709, 711 (Sup. Ct. Westchester Co. 1959).

Given evidence of putting in a catch basin system that will dump water on Hemlock street, this underscores the need to improve the road in this previously undeveloped area.

If a street meets the requirements of 280-a the permit may be denied if the road is not suitably improved (driveways coming out of driveways is an overburdening of the easement on the original Deborah and David Tonneson lot to use the McCutcheon driveway):

....even if a street satisfies the requirements of Town Law § 280-a(1) regarding the nature of the road, a permit may be denied, for example, if the road is not "suitably improved," is in a state of disrepair or lacks drainage or other essential facilities. *See Avgush v. Town of Yorktown Building Inspector*, 291 A.D.2d 556, 737 N.Y.S.2d 648 (2d Dept. 2002); *Fink v. Jagger*, 211 N.Y.S.2d 51 (Sup. Ct. Suffolk Co. 1960); *Green Acres Building Corp.*, *supra*. It was determined in *Zimmer v. Town Board of the Town of Locke*, 226 A.D.2d 1117, 642 N.Y.S.2d 130 (4th Dept. 1996), that a building permit properly was denied where the stretch of road where a dwelling was proposed to be located was designated as a seasonal use road. It was inaccessible to emergency vehicles, especially during the winter, narrow and unimproved, had sharp curves and steep grades of up to 22%. However, if a qualifying street is sufficiently improved to permit safe access by

emergency vehicles and by those who depend on such road for ingress and egress, a building permit may not be denied.

If a lot does not front on a public street, a subdivision map must be filed:

Town Law § 280-a sets forth two prerequisites for the issuance of a building permit. First, the street or highway must be of the character specified in Town Law § 280-a(1). Second, it must be suitably improved or such improvements must be bonded. *See* Town Law 280-a(2).

In order to satisfy the first requirement, the street or highway providing access to a proposed structure must have been placed on the town's official map. In the alternative, if no official map has been adopted, the street or highway must be an existing state, county or town highway; or a street shown on a subdivision plat approved by a town's planning board pursuant to Town Law §§ 276 and 277; or a street on a plat filed in the county clerk's office prior to the appointment of a planning board with authorization to review and approve subdivision plats. Satisfaction of any of the foregoing circumstances is sufficient. *The filing of a subdivision map is not necessary to satisfy Town Law § 280-a unless a lot does not front on a public street, or on a street shown or designated on an official map. See Jack Homes, Inc. v. Baldwin, 39 Misc.2d 693, 241 N.Y.S.2d 487 (Sup. Ct. Nassau Co. 1963).*

(Emphasis added)

Planning Board approval for subdivision may be required in any event because there are multiple interior parcels in the lot. Local code 210-20 states that

F. No building permit shall be issued for the construction or alteration of any building upon a lot without access to a street or highway as stipulated in § 280-a of the Town Law. [Added 5-22-2006 by L.L. No. 3-2006]

IV. The Driveway is illegal because it violates the State Fire Regulations which adopted the International Fire Code (IFC)

19. New York State has adopted the 2015 International Fire Code (“IFC”) as well as the 2017 Uniform Code Supplement pursuant to regulations established by the New York Department of State. See esp: 19 NYCRR 1228.17 and 19 NYCRR 1225.1 The driveway exceeds slope requirements, has no turnouts and no existing proper turnaround. See again Exhibit 5, Affidavit of Michael W. Finkbeiner. The sloping requirements of Appendix D Section

D⁹ 103.2 were violated. (Slopes are well in excess of 20% let alone the 10% requirement- as shown in Sub-exhibit 1 of Exhibit 11, the December 4th 2019 Affidavit of Michael W. Finkbeiner.) The driveway and turnout sections in Appendix D Section D as well as Section 511.2 of the Uniform Code Supplement¹⁰ were violated and where the house on this parcel is understood as part of a 5 house subdivision, Section 503¹¹ of the International Fire Code regarding subdivisions was violated as well; they were never adhered to or considered. (Turnouts are supposed to be 20 feet wide and 50 feet long spaced not more than 500 feet from each other and there does not appear to be a turnaround constructed.) The Fire Chief never explains why he is giving blanket exemptions; just that he said the driveway was safe. He doesn't explain how a doubling of slope allowance will allow firetrucks can get through; i.e. is the sloping "gradual"? For this exemption to be taken seriously, he would have needed to say that the fire apparatus that the Fire Department has can navigate the driveway and that the Department is not going to purchase any apparatus in the foreseeable future that cannot get up the road. He did not so state. He never mentions the 2015 International Fire Code. The Fire Chief does not have the right to give exemptions for turnouts and turnarounds. This is enough for the driveway to have been deemed unworkable, for the Fire Department letter to have been disregarded and for building permits not to have been approved. Section 511.2.6 of the 2017 Uniform Code Supplement also has regulations for fire apparatus access roads where 4 buildings use the road; these buildings do not necessarily have to be houses; there are garages on the existing houses using the road. Sheds also count as buildings. The McCutcheons use the road and the Deborah and David Tonneson use the road for their old house. With garages, sheds and

⁹ International Fire Code Appendix D

<https://codes.iccsafe.org/content/IFC2015NY/appendix-d-fire-apparatus-access-roads>

¹⁰ 2017 Uniform Code Supplement, New York Department of State:

<https://www.dos.ny.gov/dcea/pdf/2017%20Uniform%20Code%20Supplement-10-2017.pdf>

¹¹ International Fire Code Section 503:

https://codes.iccsafe.org/content/IFC2015NY/chapter-5-fire-service-features#IFC2015_Pt03_Ch05_Sec503

houses, there are at least four structures using the road. Such a scenario would necessitate following Section 503 of the IFC. In any case, the Tonnesons are open and notorious about subdividing the property which would add even more buildings onto the driveway out of driveway out of Hemlock proposed scenario. While this has been ongoing, Mr. Tonneson approach Justin Rider for a “lot line change” to the parcel which also speaks to an upcoming subdivision. (Exhibit 9) I ask the Court to take Judicial Notice of the International Fire Code and the N.Y. Department of State Uniform Code Supplement.

20. At a minimum it was arbitrary and capricious and an abuse of discretion for the Building Inspector to issue any construction permits by taking the Fire Department Letter without analyzing it critically (why was a waiver given when the slope was over 20% and noticing there were other violations of the International Fire Code that would make the road not legal). It was a violation of lawful procedure to give any permits for construction before the driveway that was needed to do construction was legal.

21. Local code 210-50.1 (A), Additional requirements for building permits was also violated:

A. It is necessary that all permittees of all building permits issued within the Town of Highlands provide to the site of the construction proper and safe access for both construction vehicles and equipment, as well as emergency vehicles. To ensure this condition, the applicant/developer shall maintain access which will, at minimum, consist of a firm and unyielding gravel base to the site of the construction, capable of providing access to such vehicles as referenced herein.

If the driveway fails sloping requirements and the Fire Chief gave no reason for the exception (I note that David Tonneson is a long-standing member of the Department), then it is not safe for construction. The failure to comply with other provisions of the IFC underscores the lack of safety of the road. It also appears that provisions of 210-50.1(B,C,D) were violated as well, compartment with certain street specifications of the Town and escrow.

V. **This Un-Platted Lot Required Approval Before a Road Could be Built on It and Before It could be Developed**

22. Furthermore, the lot is un-platted and designated as rural, not residential (See: Exhibit 10 2019 final tax roll for the parcel) so the Poplar Street *proposed* Respondents at most had authority to have some horse grazing and rural activities of the like there; as an un-platted lot, it was not permissible to develop anything on it. The un-platted, rural parcel on non-residentially approved land in question is also on a 4-zone lot, part of which is un-zoned, part of which is zoned for apartments and part of which is zoned for residential development. Pursuant to Local Code §27-2(B)(1)(2)(3):

B. The Consolidated Planning Board shall hear and determine all matters submitted to it in accordance with the law applicable to the property which is the subject of the application, and in particular, Article 16 of the Town Law of the State of New York.... And in particular as to the following matters:

- (1) To approve or disapprove plats showing lots, blocks or sites, with or without streets or highways and to approve the development of plats already filed in the office of the Orange County Clerk if such plats are entirely or partially undeveloped.
- (2) To approve or disapprove changes in the lines of existing streets, highways or public areas shown on subdivision plats or maps filed in the office of the Orange County Clerk.
- (3) To approve or disapprove the laying out, closing off or abandoning of the streets, highways or public areas shown on subdivision plats or maps filed in the office of the Orange County Clerk.

The plat in question has multiple lots, blocks or sites within its boundaries; the plat shows “lots, blocks or sites with or without streets” pursuant to §27-2(B)(1). None of this was ever done with regard to this section, block and lot. (The site plan doesn’t identify the zone or the fact that the parcel is un-platted or that there is no approved road). The publicly available County Clerk Map File does not list it as a platted lot. In any event, Town Law 280-a requires filing of a subdivision map if the property does not front on a publicly approved road. There were multiple pieces carved out of the parcel, but because it was un-platted, the Planning Board has failed to

oversee orderly subdivision development of the parcel; the absurdity in regard to the driveway out of driveway situation speaks to this, as well as the failure of the Building Inspector to require the property owner to improve access to Hemlock street prior to issuing a Building Permit.

VI. **Other Provisions of the Code That Were Violated Include Portions of the Zoning Code that are in contention as to meaning, and also include provisions of the Code that are outside the Zoning Code.**

23. The Building Inspector acted arbitrarily and capriciously and in an abuse of discretion pursuant to Section § 210-2 (A-L)¹², including and especially promoting orderly growth, protecting character and economic well-being of private (mine) and public (Palisades Park) property, safety from fire, overcrowding of land and buildings, enhance the value of the land, conserve and protect natural scenic beauty of the Town. The Tonnesons and Ms.Paisley-Tonneson have wantonly destroyed a 100-year old forest and failed to get erosion control permits for doing so; they should not have been issued a further permit to put up a house with this condition ongoing and the fact that more area had been stripped than acknowledged in the plans at that point. I believe they interfered with wetlands and watercourses, had an oil spill on the property and then after the house was put up, continued to strip the land towards 20-2-6 for no valid purpose and towards what is called Hemlock Street on what was already an illegal driveway, widening the road and putting in “drainage” that is set to dump water directly onto Hemlock Street.

¹² **A.** To guide and regulate the orderly growth, development and redevelopment of the Town in accordance with a comprehensive plan and with long-term objectives, principles and standards deemed beneficial to the interests and welfare of the people.

B. *To protect the established character and the social and economic well-being of both private and public property.*

C. To promote, in the public interest, the utilization of land for the purposes for which it is most appropriate.

D. To secure safety from fire, panic and other dangers, and to provide adequate light, air and convenience of access.

E. *To prevent overcrowding of land or buildings and to avoid undue concentration of population.*

F. To lessen and, where possible, to prevent traffic congestion on public streets and highways.

G. To eliminate nonconforming uses gradually.

H. *To conserve the value of buildings and to enhance the value of land throughout the Town.*

I. *To conserve and reasonably protect the natural scenic beauty of the Town and its environs.*

(Emphasis Added)

24. The Building Inspector had also been given plans that lacked any meaningful erosion control (and again were presented after the violations were a *fait accompli*. The Plans provided failed to disclose the location of the perc and deep tests (how would one know if they were even taken on the site or in the building envelope? They strangely had the same numbers for the deep tests in disturbed fill that had been cut, graded, etc. (With disturbance, there should be more variation in these numbers). Also, there is supposed to be a 2% pitch from the pipe leaving the house until it gets to the trenches; the existing plans do not specify what elevation exists. The Plans provided showed less of a footprint (stripping, etc.) that was to be made than was actually made by September 28, 2019, which exceeded the 20,000 maximum with 36,698 square feet visible even with leaves still on the trees, obscuring portions of the site; the so-called “borrow” area that Surveyor/Aerial photogrammetrist Finkbeiner refers to on the East side of the Road where drone photography shows that some of the excavation for filling and grading took place were not presented on the plans. No stormwater controls were presented on the plan. Most egregiously, as the Affidavit of Michael W. Finkbeiner clearly demonstrates, no plan was ever signed off by an engineer or architect. Surveyors are not empowered to sign off on site plans. Since the engineer would not, David and Deborah Tonneson and Jaidin Paisley-Tonneson pulled a bait and switch:

Surveyors are not empowered under the Town of Highlands Code to prepare a site development plan; only engineers and architects are. In the State of New York only engineers are authorized to design catch basins, stormwater piping, stormwater detention or retention systems, and erosion and sedimentation control systems. The Engineer’s so-called Plot Plan contained none of these systems. Surveyors cannot practice any aspect of civil engineering in the State of New York.

The surveyor did not provide topographic contours, analysis of pre-development slopes, trees, wetlands, watercourses and installed drainage features in the pre-existing roadways (Poplar St. proposed and Hemlock), all of which are within the purview of what a surveyor should submit. The surveyor's role is to provide the design engineer with a map of existing conditions and site parameters prior to development and design. There was a 2005 filed plan for drainage improvements and easements

(Orange County Map # 2005-333) that was not documented in the survey, which ignored the issue of drainage. Instead, the Engineer called an incomplete engineering plan a “Plot Plan” instead of a “Site Plan”, while the Surveyor called his incomplete survey lacking topography, wetlands, drainage features and slope analysis a “Site Plan” instead of a “Plot Plan.”

Sheet 2 of 2 in the drawing set is called a “Survey Site Plan.” The Surveyor, who ordinarily is supposed to produce an existing conditions topographical survey and a title survey has produced a “site plan” lacking all physical details of the site at 60 scale that incorporates the site design elements from the Engineer's Plot plan at 40 scale. (Septic plans are typically done at 20 scale on an Engineer's Site Plan.)

The existing drives are not shown on the Surveyor's title survey. There are no details for driveway access into the parcel from Hemlock St., being an extension of a curb cut for shared residential drives servicing the houses of McCutcheon on lot 11-1-7 and Tonneson on Lot 11-1-5.2 (as distinguished from 11-1-1.52), which lots are already developed. The Engineer's Plot Plan depicts a proposed drive but he does not delineate what elements are existing versus what are proposed as of the date of the Plot Plan.

Additionally, the Title Survey notes and depicts a 50-foot-wide extension of Hemlock St. from Poplar St. to Forest Hill Rd, crossing through Lot 20-2-6 of Canterbury Forest. No such easement or right-of-way is supported by deed conveyance to Tonneson.

The engineer would not sign off on the plans (it is required under the Erosion Control provisions as well as State Law for an engineer or architect to sign off on plans absent some explained and granted exception. So the surveyor comped for the engineer. Engineers are supposed to submit site plans and surveyors can submit a survey and a plot plan, not the other way around. Again, it was an abuse of discretion and arbitrary and capricious to grant an amended permit given these realities. (The Building Inspector also had granted a permit to drill a well *before* title had changed on the parcel; this was an example of his unwillingness and/or inability to do basic due diligence).

25. Section §210-50 E indicates that the first foundation permit was issued under false pretenses (the scope of work done well exceeded the plans even by September 28, 2009, before the amended petition was issued). Work done since the house was quickly imported in should

not have been allowed as there as a need for erosion control permits that are outside the house building envelope (as well as what I assert was the need to get erosion control permits before applying for a permit to construct anything since what was done far exceeded anything needed for footings, basements and septic and went far outside the proposed building envelope. And again, an erosion control permit was need to slope, grade and build the road to get to the house site. This was never sought prior to work being done. Of particular note is the middle section of 210-50 E which contemplates that other provisions of the Town code are followed:

E. Any building permit issued under false pretenses by the applicant or in violation of the provisions of this chapter shall be subject to a stop-work order or an order to remedy violation issued by the Building Inspector and/or Code Enforcement Officer. Any work undertaken or use which is not in conformity with this chapter shall be unlawful and discontinued until brought into compliance with this section. *Whenever the Building Inspector and/or Code Enforcement Officer otherwise has reasonable grounds to believe that any work is being prosecuted in violation of this chapter, or regulations or other sections of the Town Code, or the New York State Uniform Fire Prevention and Building Code, or in an unsafe and dangerous manner, the Building Inspector and/or Code Enforcement Officer or his designee may issue a stop-work order or order to remedy.* Service of process of a stop-work order or order to remedy violation shall be effective if served personally on the applicant, owner or agent at the work site or if sent to the applicant or owner by certified mail, return receipt requested, as well as by regular mail, or if sent by fax, provided that the fax number is printed on the letterhead of the addressee, applicant or owner in the ordinary course of its business.

(Emphasis added)

The fact that more work took place before the amendment to the permit/ amended permit was issued suggests that the application was made under false pretenses. Certainly the earlier requirement in the sentence before that “any work undertaken or use which is not in conformity with this chapter *shall be unlawful and discontinued until brought into compliance with this section*” meant that an amended permit should not have been issued because the foundation permit was unlawful to begin with, because the building inspector should have been addressing the fact that more work was done than contemplated in the plans, that erosion control permits, septic and stormwater permits were needed first, that erosion control was needed to address fact

that a borrow pit had been created and a road had been and was continuing to be dug- something that is outside the scope of excavation for basements, footings and septic, that the driveway being constructed violated the NYCRR (19 NYCRR 1228.17 and 19 NYCRR 1225.1) and the International Fire Code and hence had to be immediately addressed before further construction. Furthermore 210-48(A)(2) makes it clear that greater restrictions in other laws take precedence over requirements in the article:

Wherever the provisions of any other law or ordinance or regulations impose a greater restriction than this article, the provisions of such other law or ordinance or regulation shall control.

33 CFR 320-332 (Army Corps of Engineers wetland regulations) and NYCRR 10 Ch. II, Subch. I, Pt. 75, App. 75-A) N.Y. Comp. Codes R. & Regs. 10 Ch. II, Subch. I, Pt. 75, App. 75-A, including A.4 should have taken precedence and prevented a building permit from being issued. If something is unlawful, ipso facto, an amended permit should not be issued. At a minimum, it is arbitrary and capricious and an abuse of discretion to issue a permit for MORE work when a reasonable person should conclude that the first permit shouldn't have been issued or that more work was done than put in the plans since the first permit was issued.

26. Army Corps of Engineers Regulations regarding wetlands and streams (there was a stream on site and likely wetlands)- including 33 CFR 320-332 pursuant to "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. I sought discovery in regard to the foundation permit to get onsite proof of same.

27. N.Y. Public Health Law: New York Title 10, Chapter II, Part 75, Appendix 75-A Wastewater Treatment Standards (NYCRR 10 Ch. II, Subch. I, Pt. 75, App. 75-A) N.Y. Comp. Codes R. & Regs. 10 Ch. II, Subch. I, Pt. 75, App. 75-A, including A.4 was violated). The same issues previously stated about the Building Inspector ignoring the evidence on site as well as

deficiencies in plans apply to this provision. The Building Inspector needed to comply with State Code, and the failure to do so meant he acted in violation of lawful procedure and outside his jurisdiction as well as arbitrarily and capriciously and in an abuse of discretion. Again, the plans fail to state location of perc and deep tests; how do we know they were even taken on site? This is a basic requirement of plans. Furthermore, the two deep tests recorded the same measurement which is highly unusual in disturbed fill where you would expect to see different numbers; special tests are required in disturbed fill; it is obvious from Affidavit of Michael W. Finkbeiner- that the fill was taken from the excavated portion- they did not use certified fill¹³.

¹³ https://www.health.ny.gov/environmental/water/drinking/docs/appendix_75a.pdf

75-A.4 Soil and Site Appraisal.

(a) Site Investigation.

(1) Areas lower than the 10 year flood level are unacceptable for on-site systems. Slopes greater than 15% are also unacceptable.

My comment: The slope graphing by Michael W. Finkbeiner, Surveyor and Aerial Photogrammatrist proves that there was over 20% slope and concomitant disturbance which occurred without a permit.

(2) There must be at least four feet of useable soil available above rock, unsuitable soil, and high seasonal groundwater for the installation of a conventional absorption field system (75-A.8(b)).

(3) Soils with very rapid percolation rates (faster than one minute per inch) are not suitable for subsurface absorption systems unless the site is modified by blending with a less permeable soil to reduce the infiltration rate throughout the area to be used.

My comment: The State Code suggests that specific tests should have been used given the highly disturbed nature of the site. The Engineer's "Plot Plan" does not say where these tests were done or how they were used:

(c) Soil Investigation. The highest groundwater level shall be determined and shall include the depth to the seasonal high groundwater level and the type of water table - perched, apparent, or artesian.

(2) If a subsurface treatment unit such as an absorption field is planned, at least four feet of useable soil shall be available over impermeable deposits (i.e., clay or bedrock). Highest groundwater level shall be at least two feet below the proposed trench bottom. Where systems are to be installed above drinking water aquifers, a greater separation distance to bedrock may be required by the local health department having jurisdiction. At least one test hole at least six feet deep shall be dug within or immediately adjacent to the proposed leaching area to insure that uniform soil and site conditions prevail. If observations reveal differing soil profiles, additional holes shall be dug and tested. These additional holes shall be spaced to indicate whether there is a sufficient area of useable soil to install the system. Treatment systems shall be designed to reflect the most severe conditions encountered. If the percolation tests results are inconsistent with field determined soil conditions, additional percolation tests must be conducted and the more restrictive tests must be the factor used for the system design.

(3) Test holes for seepage pits shall extend to at least mid-depth and full depth of the proposed pit bottom. At least three feet of useable soil shall exist between the pit bottom and rock or other impermeable soil layer and the highest groundwater level. This shall be confirmed by extending at least

28. §210-50 (B) was violated:

B. Compliance. No building permit shall be issued for the erection, construction, reconstruction, structural alteration, restoration, repair or moving of any building or structure or part thereof, unless the plans and intended use indicate that such building or structure is designed and intended to conform in all respects to the provisions of this article.

The plans could not conform because by the time the Amendment to the permit was issued, more land was stripped that could have been envisaged. The False pretenses section of 210-50 (E) is triggered, because the work done was already in excess of what was submitted on the plans (Exhibit 12) (stripping that was discernible was already over 36,000 square feet). §210-50 G and I are triggered, because as I have argued this parcel with interior lots which needs to be platted requires subdivision approval. Furthermore, the site plan of the building has to be approved for these reasons and also because stormwater and erosion control permits were necessary ahead of time; the granting of those permits would constitute implicit Planning Board approval for the site plans submitted. Failure to get permits would mean the site plans would need some work.

G.

No building permit shall be issued for a lot in a subdivision requiring approval by the Planning Board unless the subdivision map has been properly filed in the office of the County Clerk.

I.

one deep test hole three feet below the deepest proposed pit.

(4) A local health department may accept or require other soil tests in lieu of the percolation test when such tests are conducted or observed by local health department personnel.

(d) Soil Percolation Test.

(1) At least two percolation tests shall be made at the site of each proposed sewage treatment system.

(2) For seepage pits, one test shall be conducted at the bottom depth, and the other at half the pit depth. If different soil layers are encountered when digging the test pit, a percolation test shall be performed in each layer with the overall percolation rate being the weighted average of each test based upon the depth of each layer. The local health department having jurisdiction may adopt an alternative procedure for determining the permeability of soil for the installation of seepage pits.

(3) A percolation test is only an indicator of soil permeability and must be consistent with the soil classification of the site as determined from the test holes.

No building permit shall be issued for any building where the site plan of such building is subject to approval by the Planning Board, except in conformity with the plans approved by said Board.

[Added 5-22-2006 by L.L. No. 3-2006]

29. § 210-48 (A)(1) should be construed as applying to the whole chapter, not just the article:

§ 210-48 Conflicts Between Legislation

A.

Other laws.

(1) Nothing contained in this article shall be taken to repeal, abrogate, annul or in any way impair or interfere with the New York State Uniform Fire Prevention and Building Code or any rules or regulations adopted or issued thereunder, or any other provisions of law, ordinance or regulations, existing or as may be adopted in the future, when not in conflict with any of the provisions of this article. Nor is it intended by this article to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that *when this article imposes a greater restriction upon the use of buildings, structures, premises, lots or land, or upon the height of buildings or structures, or requires larger lots, yards, courts or other open spaces than imposed or required by such other provisions of law, ordinance or regulations, or by such easements, covenants or agreements, the provisions of this article shall control.*

(2) *Wherever the provisions of any other law or ordinance or regulations impose a greater restriction than this article, the provisions of such other law or ordinance or regulation shall control.*

(Emphasis Added)

Section § 210-48 (A)(1) refers to the converse of A(2), when greater restrictions are imposed by this article, it supercedes other rules. However, the language refers to restrictions such as height of buildings and courts that are not in the *article*, but rather in the *chapter* and it should be assumed that the drafters intended to mean chapter, referring to the entirety of § 210, the zoning code, which means other laws and regulations need to apply before building permits are approved. Both provisions suggest that a Certificate of Occupancy must be stayed.

30. §210-52 (B): No Certificate of Occupancy can be issued because construction, etc. is not in conformity with the article (or the chapter).

Compliance. No certificate of occupancy shall be issued for any building, structure, premises, lot or land unless the erection, construction, reconstruction, structural alteration, restoration, repair or moving of such building or structure, or part thereof,

and the intended use thereof are in conformity in all respects with the provisions of this article.

I have addressed the issues of violations of other statutes and codes. There are ongoing violations and the need to obtain erosion control permits based on what has occurred since the first permit was issued, with the Respondents continuing to expand the area of stripping far outside the building envelope- from 36,698 square feet to 52,228 square feet with as well as the need to get permits before work was started. 210-50 (E) contemplates a cessation of work until violations are remedied. The issuance of an amended permit is not contemplated when there are open and obvious violations of work and for all the aforementioned reasons, it should not have been granted. Exhibit 13 constitutes drone photos. Exhibit 14 constitutes the letter of Court Clerk Michael O'Brien and the court transcript. Exhibit 15 constitutes subdivision regulations.

FIRST CAUSE OF ACTION

1. The ToH BI had proceeded in excess of jurisdiction in violation of CPLR §7803(2) by issuing a permit to lay a foundation when the code only allows him to issue a permit for a house. The request to build a foundation should have been issued to the Planning Board. He has also proceeded in excess of jurisdiction in violation of CPLR §7803(2) because the foundation permit was illegal and he could not amend the permit to put a house atop an illegal foundation; he should have issued a new permit to put in a house which also encompasses a foundation. (The foundation was in place at that point). The amended permit/amendment to a permit should not have been issued when there were clear and obvious legal violations as documented in this petition and in the previous case 2019/007757 including orders to show cause before the Court. He also proceeded in excess of jurisdiction by amending the original permit instead of issuing a new permit; there was a substantial change to the original permit. The permits were also issued under false pretenses; the amount of land contemplated to be cleared in the plans is not what had been cleared and as such the Building Inspector had not jurisdiction to

issue an amended permit when the first one should not have been issued. He had no jurisdiction to proceed when the Respondents needed erosion control, stormwater control and septic permits, a variance under Town Law 280-a as conditions precedent as well as an application to the Army Corps of Engineers and proper compliance with subdivision regulations and State code and regulations including the International Fire Code and Department of State Uniform Supplement and compliance with State regulations on soil disturbance and septic.

SECOND CAUSE OF ACTION

2. The ToH BI's determination to issue an amended permit for construction was made in violation of §7803(3) as it was a violation of lawful procedure, arbitrary and capricious and an abuse of discretion and was affected by an error of law inasmuch as the property owners needed other permits pursuant to Town Law 280-a and the erosion control provisions in §101, the stormwater control provision §164-7 and septic permits under § 146-2 and § 146-6 before construction permits were issued; and also the lot and lots within 11-1-1.52 had to be platted pursuant to §27-2(B)(1)(2)(3), which triggered subdivision regulations; and also, the conflict of laws provisions in §210-48 and §101-5 also suggested other permits needed to be issued as conditions precedent to issuing a building permit; and also the improper site plan was not approved by an architect or engineer pursuant to requirements of §101 (and should not have been accepted by the building inspector even if the building inspector is deemed authorized to ignore 101); and also, work had been done well in excess of what the site plan contemplated before the amended permit was issued which means another permit or an amendment to a permit should not have been issued, and also, the construction of the road should not have been exempted by the Fire Chief before a permit was issued or amended due to failure to comply with the International Fire Code as required by State Regulations and the N.Y. Department of State Uniform Code Supplement; and also, failure to demarcate issues relating to septic (perc and deep tests)

concomitant with work having been done in excess of what was contemplated on the plans means the permit should not have been amended/ a new permit issued , and also, because the property owners did not comply with State regulations on Septic, including soil and did not comply with Army Corps of Engineers federal regulations and did not comply with other provisions of the local code mentioned in this petition, including but not limited to submitting documents to the Building Inspector under false pretenses (doing more work than stated in plans, etc.).

WHEREFORE, I as Petitioner respectfully request that this Court enter judgment against Respondents pursuant to CPLR §§ 7803(2), CPLR §§ 7803(3), CPLR §§ 7805 and CPLR §§ 7806 as follows:

- The Court will Join these claims with the initial petition (2019/007757)
- The Court will order the land to be remediated (including trucking in fully grown pine trees or equivalent trees for each tree illegally cut).
- The Court will order that Local Code 101 will be enforced via the mechanisms in 101-12 including fines and the replacement of trees and proper remediation of the land. Furthermore the Court will order this to be overseen by an independent third party that I agree to.
- The permit issued on 9/5/19 for this property is stayed and rescinded.
- The amended permit issued on 9/30/19 is stayed and rescinded.
- The amendment to the permit made on 9/30/19 is stayed and rescinded
- The amended permit/ amendment to the original permit issued on 9/30/19 shall be deemed a new permit *nunc pro tunc*.
- All other permits subsequently issued for this property are stayed and rescinded (including a certificate of occupancy)
- The Building Inspector is enjoined from permitting and/or otherwise authorizing work on Respondents' property under construction- on information and belief parcel number 11-1-1.52 until proper permits are issued and the Planning Board, Zoning Board and any other applicable board hears the issues described herein that should have been dealt with in the code prior to any construction.
- The Building Inspector is enjoined from issuing any new permits or amendments to permits (including a certificate of occupancy) on Respondents' property under construction - on information and belief, parcel number 11-1-1.52 until the Planning Board or appropriate Board, including the Zoning Board hears the issues described herein that should

have been dealt with in the code prior to any construction and until the Respondents reapply for construction permits

- The Respondents David Tonneson, Deborah Tonneson and Jaidin Paisley-Tonneson are enjoined from allowing any site construction activity, including, but not limited to disturbance of the land until such time as they receive proper permits that they should have applied for prior to engaging in any construction and they receive clearance from the Army Corps of Engineers and until such time as they re-apply and get permits for construction.
- The Building Inspector or a third party at the Town's expense is ordered to visit the site daily to make sure that no construction or site disturbance is taking place until such time as proper permits are issued.
- The court will order the tear-down of any man-made structure for which a permit was improperly issued.
- The Court will order my surveyor/aerial photogrammetrist Michael W. Finkbeiner and his team (or new ones I choose if he becomes incapacitated) and my forester (Starling W. Childs) (or another if I chose if he becomes incapacitated)
- The Court will issue such other relief as is just and proper.

Dated: January 29, 2020

Respectfully submitted,



Deborah Kopald, Petitioner
P.O. Box 998
Fort Montgomery, NY 10922
(845) 446-3768

SUPREME COURT OF THE STATE OF NEW YORK,
ORANGE COUNTY

In the Matter of the Application of Deborah Kopald,
Petitioner

For a Judgment Pursuant to Article 78

- against -

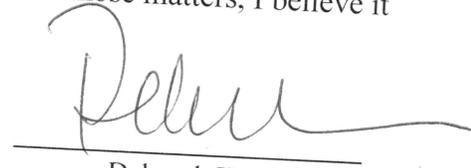
VERIFICATION

The Town of Highlands New York,
David Tonneson, Deborah Tonneson, Jaidin Paisley-
Tonneson,

Respondents

STATE OF NEW YORK)
) SS:
COUNTY OF ORANGE)

I, Deborah Kopald, being duly sworn deposes and states that I am the
Petitioner in this Special Proceeding, and that I drafted, read and signed the foregoing
Petition and the allegations contained therein are true to my knowledge, except as to
matters therein stated to be on information and belief, and as to those matters, I believe it
to be true.



Deborah Kopald
P.O. Box 998
Fort Montgomery, NY 10922
(845) 446-3768

Sworn to before me this 29th day of January, 2020



Notary Public

To: Town of Highlands
Town Clerk
254 Main Street
Highland Falls, NY 10928

David and Deborah Tonneson, Jaidin Paisley Tonneson
vis Stephen Honan, Esq.
96 S. Broadway
South Nyack, NY 10960



EILEEN BRISCHOUX
Notary Public, State Of New York
Qualified In Orange County
Reg. #01BR5043474
Commission Expires May 8, 2023

EXHIBIT K

Deborah Kopald
P.O. Box 998
Fort Montgomery, NY 10922

Stephen Honan, Esq.
Feerick, Nugent and MacCartney
96 S Broadway
South Nyack, NY 10960

January 22, 2020

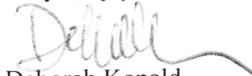
Dear Mr. Honan,

Pursuant to Local Code, 101-12 (b)(c)(e), I am writing to re-assert that your clients, David and Deborah Tonneson and Jaidin Paisley-Tonneson are in violation of Chapter 101 of the Town Code and had and continue to have a legal obligation to get erosion control permits pursuant to 101-7(a) 2,3,4,5,6,7,8,11 with regard to work done on 11-1-1.52.

- With regard to 2 and 4, site preparation within waterlands and site preparation within the one-hundred year floodplain of any watercourse, I assert that the work done on 11-1-1.52 triggered these provisions.
- With regard to 3, more than 75% of site preparation was done on areas in 11-1-1.52 that had a slope greater than 15%, necessitating a permit.
- With regard to 5, excavation, 2,910 cubic yards were excavated on 11-1-1.52 (maximum allowable without a permit was 200 cubic yards within a parcel or contiguous area).
- With regard to 6, stripping, with aerial photography after leaves were off the trees, the total area stripped on 11-1-1.52 was revealed to be 52,228 square feet or 1.2 acres (maximum allowable without a permit was 20,000).
- With regard to 7, grading, 48,412 square feet or 1.11 acres were graded on 11-1-1.52 (maximum allowable without a permit is 20,000 square feet).
- With regard to 8, filling, 1,625 cubic yards were filled on 11-1-1.52 (maximum allowable without a permit was 100 cubic yards).
- With regard to 11, at least 39 trees greater than 10 DBH were cut, (maximum allowable without a permit was 3).

I demand that pursuant to local code 101-12 (b)(c) and (e), your clients get proper permits, effect appropriate remediation and replace every tree improperly cut with a fully grown tree trucked in and securely planted. I demanded enforcement from the town and will demand enforcement and fines in court as your clients have continued to defy the law while the Town has allowed this situation to continue without acting.

Very truly yours,


Deborah Kopald

CC: Justin Rider, Esq. and Michael Matsler, Esq.
Rider, Weiner, Frankel
655 Little Britain Road
New Windsor, NY 12553

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

NYACK, NY 10960

Certified Mail Fee \$3.50
 Extra Services & Fees (check box, add fee as appropriate)
 Return Receipt (hardcopy) \$0.00
 Return Receipt (electronic) \$0.00
 Certified Mail Restricted Delivery \$0.00
 Adult Signature Required \$0.00
 Adult Signature Restricted Delivery \$0.00

Postage \$0.55
 Total Postage and Fees \$6.85

Sent To *Stephen Horn*
 Street and Apt. No., or PO Box No. *965 Broadway*
 City, State, ZIP+4® *South Nyack NY 10960*

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



2229 95EH 1000 06DE 9TDL

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

*STEPHEN HORN
 965 Broadway
 S. Nyack NY
 10960*



9590 9402 3689 7335 1943 12

2. Article Number (Transfer from service label)

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

- A. Signature Agent
 Addressee
- B. Received by (Printed Name) *Stephen Horn* C. Date of Delivery *1/23/2020*
- D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

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 Return Receipt (hardcopy) \$0.00
 Return Receipt (electronic) \$0.00
 Certified Mail Restricted Delivery \$0.00
 Adult Signature Required \$0.00
 Adult Signature Restricted Delivery \$0.00

Postage \$0.55
 Total Postage and Fees \$6.85

Sent To *Mrs. Susan Mahler Piller*
 Street and Apt. No., or PO Box No. *12553*
 City, State, ZIP+4® *NEW YORK NY 12553*

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

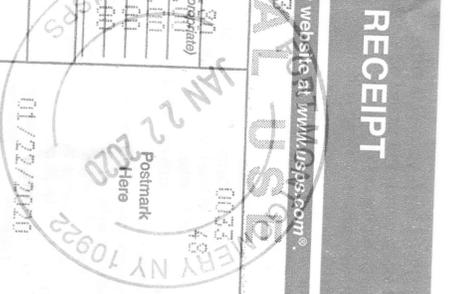


EXHIBIT L

Town of Highlands Building Department
254 Main St. Highland Falls, NY 10928
Phone: 845-446-4280 ext 316 Fax: 845-446-4298

Certificate of Occupancy

Permit No: 2019-107

Permit Date: 09/05/2019

C of O No: 2019-107

C of O Date: 06/15/2020

Tax Map No: 11-1-1.52

Location: 38 Hemlock St. T/O Highlands, NY

Description of Work:

INSTALL A FOUNDATION SYSTEM ACCORDING TO DRAWINGS BY TALCOTT ENGINEERING DESIGN, PLLC

**AMENDED 9/30/2019

CONSTRUCT SINGLE FAMILY HOME

Construction Type: Type 5-B 0 Hour Rating

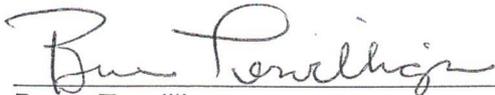
Number of Bedrooms: 3

Occupancy Load: 7

Occupancy Class: Detached single-family

Valid issuance of this Certificate indicates that the work performed at the premises described above, in regards to the Building Permit referenced above, substantially complies with applicable NY State and Local Codes. Legal use and occupancy is permitted on the date of issuance and thereafter, provided that the property continues to be maintained in compliance with the Codes in effect. This Certificate is limited to the type and use specified, and is subject to the special conditions stated. No representations are made as to the condition of the structure or its compliance with State or Local codes after the date of issuance.

This Certificate is issued: David, Deborah, & Jaidin Tonneson, PO Box 183, Fort Montgomery, NY, 10922



Bruce Terwilliger
Code Enforcement Office

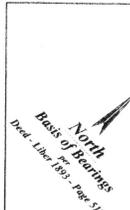
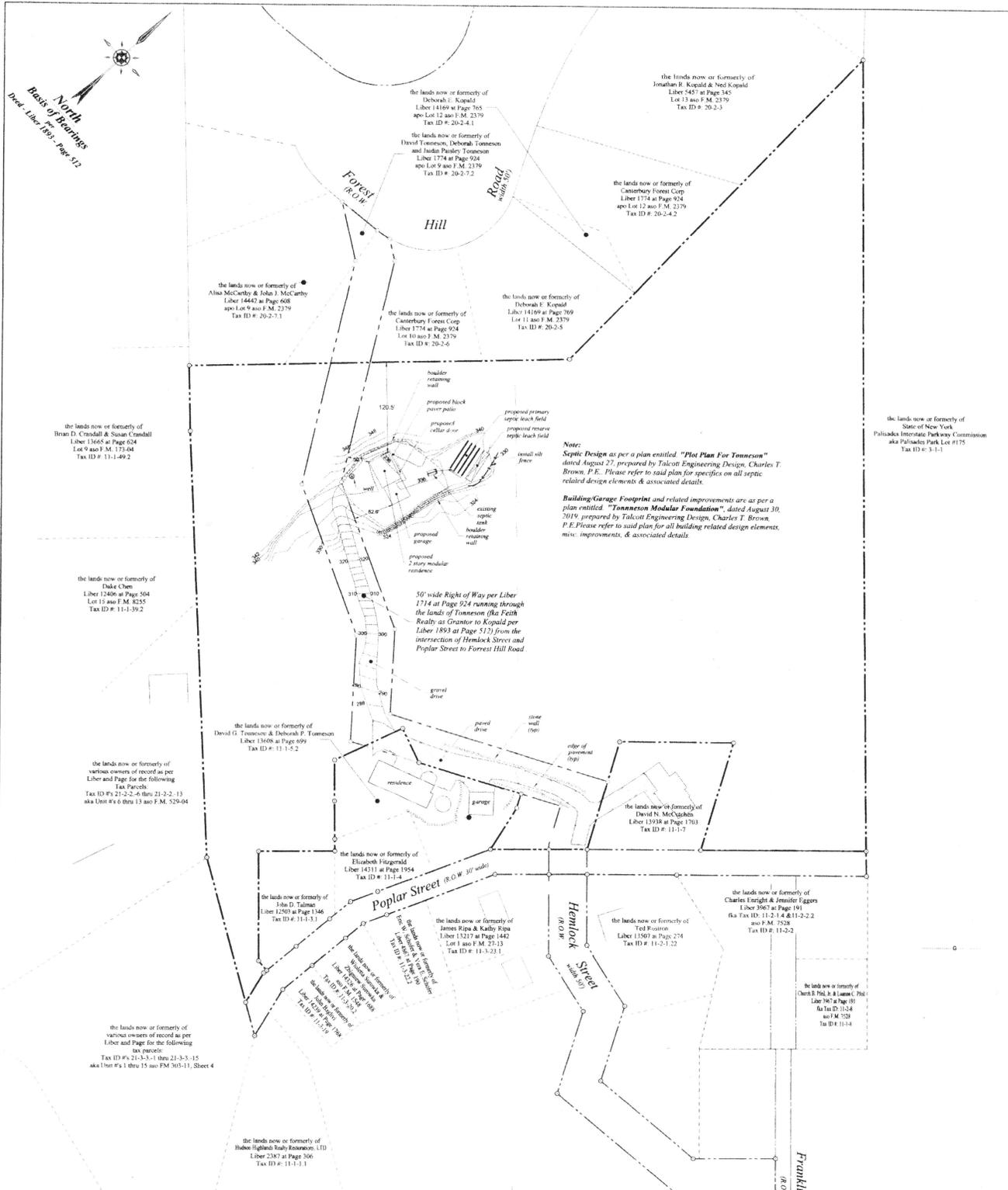
Date: June 15, 2020

HOUR			
8 00			
15			
30	3 Eagle Crest	w/ Jeff RE	POOL 443-632-5983
45			
9 00	124 Fire Fighter	Reinspect for	Loft Suchanyc 917-689-9237
15			
30	38 Hemlock	ClO Final	Townson 914-213-2986
45			
10 00			
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11 00			
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12 00			
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Dorothea Inn Phil out

HOUR			
8 00	✓ 38 Hemlock	w/ Dave	inspected
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9 00			
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45			
10 00			
15			
30			
45			
11 00	3 Eagle Crest	reinspect pool	Jeff 443-632-5983
15			
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12 00			
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45			
1 00	✓ 17 FOSTORIA	FINAL	Porch
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6 00			
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45			
7 00			
NOTES			

EXHIBIT M



the lands now or formerly of
Alma McCarthy & John J. McCarthy
Liber 14442 at Page 408
apc Lot 9 a/c F.M. 2379
Tax ID #: 20-2-7-1

the lands now or formerly of
Brian D. Cradell & Susan Cradell
Liber 13665 at Page 624
Lot 9 a/c F.M. 135-04
Tax ID #: 11-1-49-2

the lands now or formerly of
Duke Chen
Liber 12406 at Page 504
Lot 15 a/c F.M. 8255
Tax ID #: 11-1-39-2

the lands now or formerly of
John D. Taiman
Liber 12983 at Page 1346
Tax ID #: 11-1-3-1

the lands now or formerly of
various owners of record as per
Liber and Page for the following
Tax Parcels
Tax ID #s 21-3-2-1 thru 21-3-3-15
aka Unit #s 6 thru 13 a/c F.M. 529-04

the lands now or formerly of
various owners of record as per
Liber and Page for the following
Tax Parcels
Tax ID #s 21-3-3-1 thru 21-3-3-15
aka Unit #s 1 thru 15 a/c FM 503-11, Street 4

the lands now or formerly of
Huber Highlands Realty, LTD
Liber 2387 at Page 306
Tax ID #: 11-1-1-1

the lands now or formerly of
Deborah J. Koppald
Liber 14169 at Page 765
apc Lot 12 a/c F.M. 2379
Tax ID #: 20-2-4-1

the lands now or formerly of
David Tommeson, Deborah Tommeson
and Jaidin Paisley Tommeson
Liber 1774 at Page 924
apc Lot 1 a/c F.M. 2379
Tax ID #: 20-2-1-2

the lands now or formerly of
Canterbury Forest Corp
Liber 1774 at Page 924
Lot 10 a/c F.M. 2379
Tax ID #: 20-2-3-6

the lands now or formerly of
David G. Tommeson & Deborah F. Tommeson
Liber 13608 at Page 699
Tax ID #: 11-1-5-2

the lands now or formerly of
Elizabeth Fitzgerald
Liber 14311 at Page 1054
Tax ID #: 11-1-8

the lands now or formerly of
James Ripa & Kathy Ripa
Liber 13217 at Page 1442
Lot 1 a/c F.M. 2379
Tax ID #: 11-3-23-1

the lands now or formerly of
Liber 12983 at Page 1346
Tax ID #: 11-1-3-1

the lands now or formerly of
Jonathan R. Koppald & Ned Koppald
Liber 1457 at Page 345
Lot 13 a/c F.M. 2379
Tax ID #: 20-2-3

the lands now or formerly of
Deborah F. Koppald
Liber 14169 at Page 769
Lot 11 a/c F.M. 2379
Tax ID #: 20-2-5

the lands now or formerly of
Deborah F. Koppald
Liber 14169 at Page 769
Lot 11 a/c F.M. 2379
Tax ID #: 20-2-5

the lands now or formerly of
David N. McCughen
Liber 13938 at Page 1703
Tax ID #: 11-1-7

the lands now or formerly of
Ted Roemer
Liber 13907 at Page 274
Tax ID #: 11-3-1-22

the lands now or formerly of
Charles Enright & Jennifer Eggers
Liber 13967 at Page 191
aka Tax ID 11-2-1-4, 81-2-2-2
also F.M. 7528
Tax ID #: 11-2-2

the lands now or formerly of
Cheri B. Post, J. A. Lauer & Phil
Liber 11244 at Page 91
aka Tax ID 11-24
aka F.M. 709
Tax ID #: 11-1-9

Note:
Septic Design as per a plan entitled, "Plot Plan For Tommeson"
dated August 27, prepared by Talcon Engineering Design, Charles T.
Brown, P.E. Please refer to said plan for specifics on all septic
related design elements & associated details.

Building Garage Footprint and related improvements are as per a
plan entitled, "Tommeson Modular Foundation", dated August 30,
2019, prepared by Talcon Engineering Design, Charles T. Brown,
P.E. Please refer to said plan for all building related design elements,
note: improvements, & associated details.

the lands now or formerly of
State of New York
Palisades Interstate Parkway Commission
aka Palisades Park Lot #175
Tax ID #: 3-1-1

Site Plan (see Sheet 1 for Survey Metes)

- REFERENCES:
1. Tax Maps for the Town of Highlands, Orange County, New York
 2. Various Deeds of Record - Liber and Page as shown
 3. A map entitled, "Map of Sunny Side Park", filed in the Orange County Clerk's Office on May 8, 1926 as Filed Map No. 571.
 4. A map entitled, "Property to be Conveyed by Felth Realty Inc.", filed in the Orange County Clerk's Office on September 25, 1953 as Filed Map No. 1548.
 5. A map entitled, "Subdivision Plan Section A" Canterbury Forest, Inc.", filed in the Orange County Clerk's Office on October 21, 1968 as Filed Map No. 2379.
 6. A map entitled, "Survey of Lands Belonging to David McLetzer", filed in the Orange County Clerk's Office on September 28, 1982 as Filed Map No. 8032.
 7. A map entitled, "Survey of Lands Belonging to Lois A. Pinn", filed in the Orange County Clerk's Office on March 18, 1988 as Filed Map No. 7528.
 8. A map entitled, "Subdivision of Corten Hill", filed in the Orange County Clerk's Office on May 4, 1987 as Filed Map No. 8255.
 9. A map entitled, "Survey and Subdivision Map of Lands of James & Kathy Ripa", filed in the Orange County Clerk's Office on February 25, 2013 as Filed Map No. 27-13.
 10. A map entitled, "Plan Showing Approved Lot Line Changes to Lots 9, 10, 11, & 12 on Filed Map No. 118-00 Corten Hill Subdivision", filed in the Orange County Clerk's Office on March 10, 2004 as Filed Map No. 173-04.
 11. A map entitled, "Condominium Plan - The Village at Corten Hill Condominium III", filed in the Orange County Clerk's Office on December 22, 2011 as Filed Map No. 303-11.
 12. A map entitled, "Subdivision Plan - Corten Hill Commercial Project", filed in the Orange County Clerk's Office on April 8, 2009 as Filed Map No. 333-06.
 13. A map entitled, "Condominium 2 Phase The Village at Corten Hill Condominium II", filed in the Orange County Clerk's Office on August 9, 2006 as Filed Map No. 529-04.
 14. A map entitled, "Condominium 1 Phase The Village at Corten Hill Condominium I", filed in the Orange County Clerk's Office on November 5, 2003 as Filed Map No. 581-03.

NOTE:
Vertical Datum is the North American Vertical Datum of 1988 (NAVD88). The project benchmark was established by GPS observation performed on June 6, 2019. Contours were calculated at two foot intervals as depicted hereon.

SURVEYOR'S NOTES:

1. Copyright © 2018, Jonathan N. Millen, L.L.S. All Rights Reserved. Reproduction or copying of this document may be a violation of copyright. Use without permission of the author and/or copyright holders obtained.
2. Unauthorized alteration of an item in any way, or addition to a survey map for any person, unless acting under the direction of a licensed land surveyor, is a violation of Section 2709, subdivision 2, of the New York State Education Law.
3. Only maps bearing the surveyor's alphanumeric overlaid with embossed seal are genuine true and correct copies of the surveyor's original work and opinion. Anything other than correct copies of the surveyor's original work and opinion, and are not to be relied upon. A copy of this document without a proper application of the surveyor's embossed seal should be assumed to be an unauthorized copy.
4. Certifications on this map signify that the map was prepared in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. The certification is limited to persons for whom the map is prepared, to the title company, to the governmental agency, and to the lending institution listed on this map.
5. The certifications herein are not transferable.
6. The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.
7. This survey is subject to the findings of a title report and/or title search.
8. Surveyed as per deeds, prior survey maps, field notes, physical evidence and existing monumentation found at the site.
9. Subject to any conditions, restrictions, covenants and right-of-way/easements of record, if any.

CERTIFIED TO:
I hereby certify to:
Ned Koppald & Jonathan R. Koppald
David Tommeson

CERTIFICATION NOTES:
This certification is made only to named parties for purchase and/or mortgage of herein delineated property by named purchaser. No responsibility or liability is assumed by surveyor for use of survey for any other purpose including, but not limited to, use of survey for survey affidavit, resale of property, or to any other person, not listed in certification, either directly or indirectly, the setting of fences and/or other structures in or near the property lines. Unless indicated otherwise, property corners were not set.

SURVEYOR'S CERTIFICATION:
I hereby certify to the herein listed parties that this map represents the results of an actual on the ground field survey, per record description, of the land shown hereon, located at Poplar Street (Proposed) in the Town of Highlands, County of Orange, State of New York, Completed on: 2/19/20, performed in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. and is to the best of my knowledge, belief and information, accurate and correct. Except as shown herein: there are no encroachments either way across property lines, 100 lines and lines of actual possession are the same."

Jonathan N. Millen, L.L.S.
1229 Route 300 - Bldg 3
Newburgh, NY 12550

Jonathan N. Millen, L.L.S.
PROFESSIONAL LAND SURVEYOR
CERTIFIED TO BE CORRECT AND ACCURATE
N.Y. LIC. NO. 050748

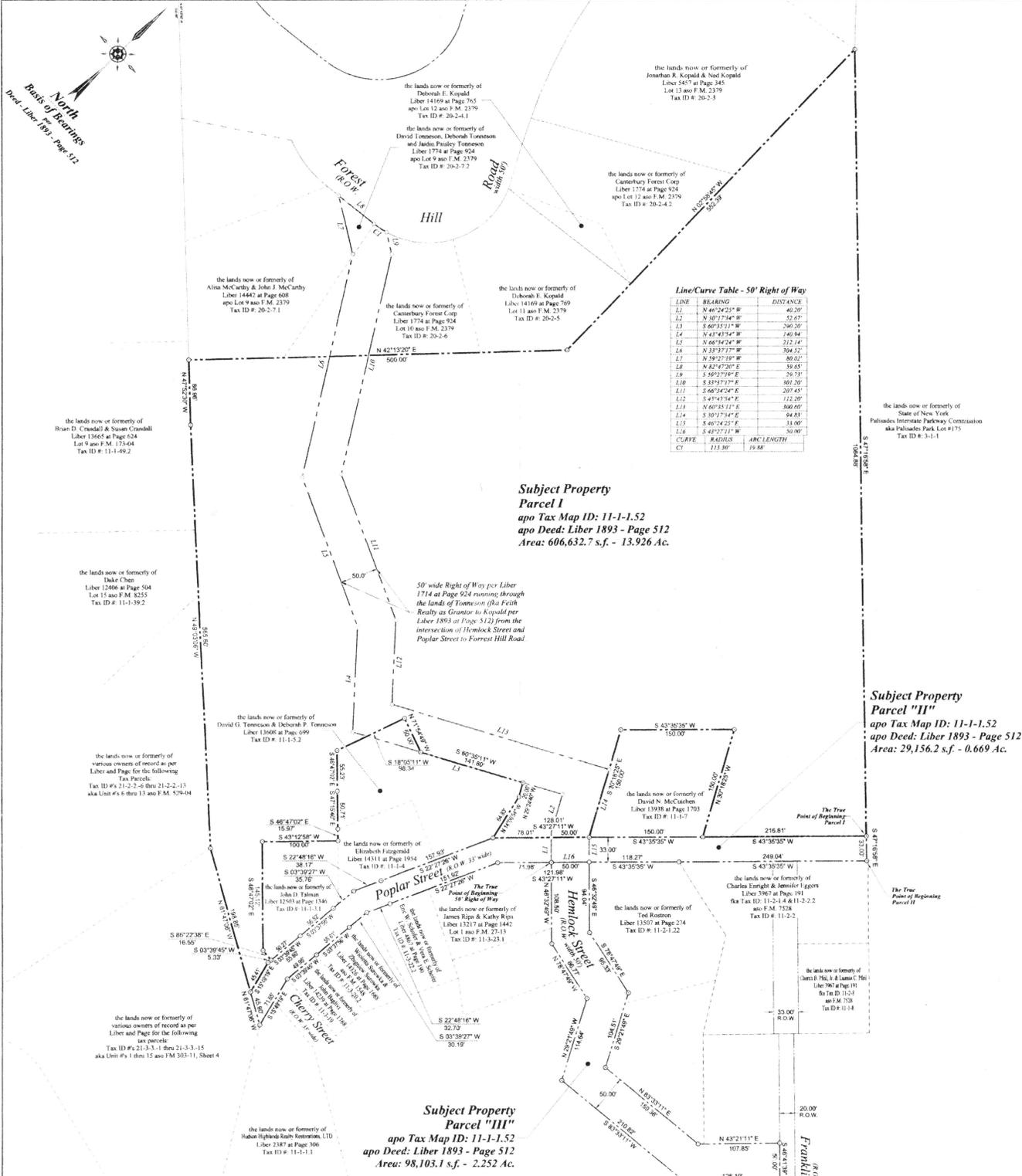
8/30/20

Survey Site Plan
of the lands of
**David Tommeson, Deborah Tommeson,
& Jaidin Paisley Tommeson**

Automated Construction Enhanced Solutions, Inc.
Professional Land Surveying
1229 Route 300 - Suite 3 - Newburgh, NY 12550
Office: 845-845-5198 Field: 914-966-8838 E-Mail: jmillen@acesurveying.com

Prepared For: Tax Map Parcel
11-1-1-5-2
aka Poplar Street (Proposed)
located in the
Town of Highlands
County of Orange, New York 10928

DATE: 06/30/2019 SCALE: 1"=60' JOB NO.: 19026TON DRAWN BY: jpm



Line/Curve Table - 50' Right of Way

LINE	BEARING	DISTANCE
L1	N 66°24'25" W	40.20'
L2	N 30°17'44" W	55.67'
L3	S 60°35'11" W	290.20'
L4	N 43°43'54" W	140.94'
L5	N 66°34'24" W	212.14'
L6	N 33°37'17" W	304.25'
L7	N 59°27'18" W	80.02'
L8	N 82°47'20" E	39.65'
L9	S 85°57'44" E	29.73'
L10	S 33°47'17" E	301.20'
L11	S 60°34'24" E	207.45'
L12	S 47°43'54" E	112.20'
L13	N 60°35'11" E	300.60'
L14	S 30°17'44" E	64.83'
L15	S 46°54'25" E	33.00'
L16	S 43°27'11" W	50.00'

CURVE	RADIUS	ARC LENGTH
C1	113.30'	19.88'

Subject Property Parcel I
 apo Tax Map ID: 11-1-52
 apo Deed: Liber 1893 - Page 512
 Area: 606,632.7 s.f. - 13,926 Ac.

Subject Property Parcel II
 apo Tax Map ID: 11-1-52
 apo Deed: Liber 1893 - Page 512
 Area: 29,156.2 s.f. - 0.669 Ac.

Subject Property Parcel III
 apo Tax Map ID: 11-1-52
 apo Deed: Liber 1893 - Page 512
 Area: 98,103.1 s.f. - 2,252 Ac.

Survey Metes
 (see Sheet 2 for Site Plan)

- REFERENCES:**
1. Tax Maps for the Town of Highlands, Orange County, New York.
 2. Various Deeds of Record - Liber and Page as shown.
 3. A map entitled, "Map of Sunny Side Farm", filed in the Orange County Clerk's Office on May 8, 1930 as Filed Map No. 571.
 4. A map entitled, "Property to be Conveyed by Faith Realty Inc.", filed in the Orange County Clerk's Office on September 25, 1953 as Filed Map No. 1548.
 5. A map entitled, "Subdivision Plan Section 'A' Canterbury Forest, Inc.", filed in the Orange County Clerk's Office on October 21, 1958 as Filed Map No. 2379.
 6. A map entitled, "Survey of Lands Belonging to David McCallister", filed in the Orange County Clerk's Office on September 28, 1982 as Filed Map No. 6032.
 7. A map entitled, "Survey of Lands Belonging to Luke A. Pheil", filed in the Orange County Clerk's Office on March 18, 1986 as Filed Map No. 7528.
 8. A map entitled, "Subdivision of Corbin Hill", filed in the Orange County Clerk's Office on May 4, 1987 as Filed Map No. 8255.
 9. A map entitled, "Survey and Subdivision Map of Lands of James & Kathy Ripa", filed in the Orange County Clerk's Office on February 25, 2013 as Filed Map No. 27-13.
 10. A map entitled, "Plan Showing Approved Lot Line Changes to Lots 9, 10, 11, & 12 on Filed Map No. 118-00 Corbin Hill Subdivision", filed in the Orange County Clerk's Office on March 10, 2004 as Filed Map No. 17304.
 11. A map entitled, "Condominium Plan - The Village at Corbin Hill Condominium III", filed in the Orange County Clerk's Office on December 22, 2011 as Filed Map No. 303-11.
 12. A map entitled, "Subdivision Plan - Corbin Hill Commercial Project", filed in the Orange County Clerk's Office on April 8, 2005 as Filed Map No. 233-05.
 13. A map entitled, "Condominium II Phase The Village at Corbin Hill Condominium II", filed in the Orange County Clerk's Office on August 5, 2004 as Filed Map No. 529-04.
 14. A map entitled, "Condominium I Phase The Village at Corbin Hill Condominium I", filed in the Orange County Clerk's Office on November 5, 2003 as Filed Map No. 551-03.

SURVEYOR'S NOTES:

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6. The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist or are shown, the improvements or encroachments are not covered by this certificate.
7. This survey is subject to the findings of a title report and or title search.
8. Surveyed as per deeds, prior survey maps, field maps, physical evidence and existing documentation found in the file.
9. Subject to any conditions, restrictions, covenants and/or right-of-way easements of record if any.

CERTIFIED TO:
 I hereby certify to:
Ned Kopald & Jonathan R. Kopald
David Tonneson

CERTIFICATION NOTES:
 This certification is made only to named parties for purchase and/or mortgage of herein delineated property by named purchaser. No responsibility or liability is assumed by surveyor for use of survey for any other purpose including, but not limited to, use of survey for survey adjacent, resale of property, or to any other person not listed in certification, either directly or indirectly, the setting of fences and/or other structures in or near the property lines. Unless indicated otherwise, property corners are true sets.

SURVEYOR'S CERTIFICATION:
 I hereby certify that the herein listed parties that this map represents the results of an actual on the ground field survey, per section description, of the land shown herein, located at Poplar Street (Proposed) in the Town of Highlands, County of Orange, State of New York. Completed on August 8, 2018, performed in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. and is to the best of my knowledge, belief and information, accurate and correct. Except as shown hereon, there are no encroachments either way across property lines, line lines and lines of actual possession are the same.

[Signature]
 Jonathan N. Millen, L.L.S.
 1223 Route 300 - Suite 3
 Newburgh, NY 12550

Jonathan N. Millen, L.L.S.
 PROFESSIONAL LAND SURVEYOR
 CERTIFIED TO BE CORRECT AND ACCURATE
 N.Y. Lic. No. 059748

[Signature]

STATE OF NEW YORK
 OFFICE OF PROFESSIONAL LAND SURVEYORS

Title Survey/Site Plan

of the Lands of
**David Tonneson, Deborah Tonneson,
 & Jaidin Paisley Tonneson**

Automated Construction Enhanced Solutions, Inc.
Professional Land Surveying
 1229 Route 300 - Suite 3 - Newburgh, NY 12550
 Office: 845-431-5188 Fax: 914-906-8383 E-Mail: jmillen@acesurveying.com

Prepared For: Tax Map Parcel 11-1-52 aka Poplar Street (Proposed)
 shown in the
 Town of Highlands
 County of Orange, New York 10928

DATE: 08/08/2018 SCALE: 1"=60' JOB NO: 18026TON DRAWN BY: jmm

EXHIBIT N

TOWN OF HIGHLANDS
254 MAIN STREET HIGHLAND FALLS NY 10928

REQUEST FOR INFORMATION
(FOIL)

RECEIVED

NAME: Deborah Kopald

OCT 15 2019

ADDRESS: PO Box 948

TOWN CLERK'S OFFICE

Fort Montgomery ny 10922

PHONE: 845 446 - 9531 / 845 446 3768

E-MAIL: Deborah_Kopald@~~hotmail~~ymail.com.

INFORMATION REQUESTED:

~~INformation~~

Police Reports by me and about me from ~~last~~ last
Two years.

REASON REQUESTED:

COMPARIS

I want to see if what I was told ~~compares~~ with
what is written

DATE OF REQUEST: 10/15/19

Deborah Kopald

Print Name


Signature

PO BOX 197
FORT MONTGOMERY, NY 10922-
(845) 446-1142

Entry/CC#: **TH-003451-19** Date: **11/25/2019** Time: **12:40** Tour: BDesk Officer:

Call Type.....: **NEIGHBOR DISPUTE** Priority...: How Received: **911**
Orig Call Type: **POLICE INFORMATION**

Caller.....:
Bus. Name...:
Address.....: **35 HEMLOCKST**
City/St/Zip: **FORT MONTGOMERY, NY 10922** Call Back #:

Location of Assignment: **35 HEMLOCK ST, FORT MONTGOMERY**
Cross Street.....:
Business Name.....:
Description.....: **INFORMATION NEIGHBOR DISPUTE**
Disposition.....: **COMPLETE**

Post: Dispatched: **Y** Dispatched Date: **11/25/2019** Call Taker:

OFFICERS INVOLVED

Serial #:0042 Rank:OFC Name:WILLIAM C SHERWOOD Type:ASSIGNED OFFICER

UNITS INVOLVED

Unit: 116 Officers: (0042)
Disp. Time: 12:40 | Arv. Time: 12:45 | Comp Time: 13:20
Rcv'd to Comp: 0:40 :: Disp to Comp: 0:40

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....: **TONNESON, DAVE** DOB: **11/23/1944**
Address.....: **35 Hemlock St**
City/State/Zip: **FORT MONTGOMERY, NY 10922**
Phone Number...: **(914)213-2986**
Sex.....: **M** Race: **WHT**
Person Type...: **CALLER**

Name.....: **KOPALD, DEBORAH A** DOB: **02/20/1974**
Address.....: **88 FOREST HILL**
City/State/Zip: **FORT MONTGOMERY, NY 10922-**
Phone Number...: **845-446-9531**
Mobile Number...: **845-446-3768**
Sex.....: **F** Race: **WHT**
Person Type...: **OTHER**

NARRATIVE

Sherwood
On the above date and time I responded to the above listed location and spoke with Ca **TONNESON** who wanted to document an incident with his neighbor Kopald. Ca states that on 11/22/19 Orange and Rockland Utilities were doing work on the new construction site when Kopald did walk over to the crew and attempt to question them in regards to their work. Ca reports that

no one from the utility spoke with Kopald. [REDACTED] wanted the incident documented. wcs156.

PO BOX 197
FORT MONTGOMERY, NY 10922-
(845)446-1142

Entry/CC#: TH-003282-19 Date: 11/05/2019 Time: 16:28 Tour: CDesk Officer:

Call Type.....: TRESPASS Priority...: How Received: 911

Caller.....:

Bus. Name...:

Address....:

City/St/Zip:

Call Back #:

Location of Assignment: 35 HEMLOCK ST PO BOX 183, FORT MONTGOMERY

Cross Street.....:

Business Name.....:

Description.....: PROCESS SERVER AT A RESIDENCE

Disposition.....: COMPLETE

Post:

Dispatched: Y

Dispatched Date: 11/05/2019

Call Taker:

OFFICERS INVOLVED

Serial #:0061 Rank:PO Name:BRANDON R HILL

Type:ASSIGNED OFFICER

UNITS INVOLVED

Unit: 118 Officers: (0061)

Disp. Time: 16:28 | Arv. Time: 16:34 | Comp Time: 17:43

Rcv'd to Comp: 1:15 :: Disp to Comp: 1:15

ASSOCIATED NUMBERS

Case # :TH-00134-19 Incident Type: TRESPASS

PERSONS INVOLVED

Name.....: CONNESON, DEBORAH F DOB:08/19/1959

Address.....: 35 HEMLOCK ST PO BOX 183

City/State/Zip:FORT MONTGOMERY, NY 10922-

Phone Number...:

Sex.....:F Race:

Person Type...:COMPLT./VICTIM

Name.....:KOPALD, DEBORAH A DOB:02/20/1974

Address.....:88 FOREST HILL

City/State/Zip:FORT MONTGOMERY, NY 10922-

Phone Number...:845-446-9531

Mobile Number...:845-446-3768

Sex.....:F Race:WHT

Person Type...:NOT INTERVIEWED

NARRATIVE

On the above date and time PO Hill was dispatched to the above residence for a report of an unknown male on the property. Upon arrival the male had left the scene, the caller stated a man who was a process server attempted to give her court paperwork, but when she refused to take it he left the paperwork on the front porch, then proceeded to look into the window of her front door. The caller stated she has on going legal issues with Deborah

Kopald, and that she feels threatened by her actions. After speaking with the caller further it was determined that Kopald had not committed any crime at this time. The caller stated Kopald was using her drone to take pictures of her home for use in various lawsuits, ADA Tanja Beemer was contacted and advised of the complaint, Beemer stated if the drone was not used to take photographs of the caller while she was nude, then no crime had been committed. Both Chief's notified of the incident, no complaint at this time.

PO BOX 197
FORT MONTGOMERY, NY 10922-
(845) 446-1142

Entry/CC#: TH-003280-19 Date: 11/05/2019 Time: 15:13 Tour: CDesk Officer:

Call Type.....: NEIGHBOR DISPUTE Priority...: How Received: 911

Caller.....: KOPALD, DEBORAH A

Bus. Name...:

Address.....: 88 FOREST HILL

City/St/Zip: FORT MONTGOMERY, NY 10922-

Call Back #: 845-446-9531

Location of Assignment: 88 FOREST HILL, FORT MONTGOMERY

Cross Street.....:

Business Name.....:

Description.....: PROPERTY LINE DISPUTE

Disposition.....: COMPLETE

Post: Dispatched: Y Dispatched Date: 11/05/2019 Call Taker:

OFFICERS INVOLVED

Serial #: 0061 Rank: PO Name: BRANDON R HILL Type: ASSIGNED OFFICER

UNITS INVOLVED

Unit: 118 Officers: (0061)
Disp. Time: 15:13 | Arr. Time: 15:17 | Comp Time: 15:50
Rcv'd to Comp: 0:37 :: Disp to Comp: 0:37

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....: KOPALD, DEBORAH A DOB: 02/20/1974
Address.....: 88 FOREST HILL
City/State/Zip: FORT MONTGOMERY, NY 10922-
Phone Number...: 845-446-9531
Mobile Number...: 845-446-3768
Sex.....: F Race: WHT
Person Type...: CALLER

Name.....: [REDACTED]
Address.....: [REDACTED]
City/State/Zip: HIGHLAND FALLS, NY 10928
Phone Number...: [REDACTED]
Sex.....: M Race:
Person Type...: PERSON INTERVIEWED

Name.....: [REDACTED]
Address.....: [REDACTED]
City/State/Zip: FORT MONTGOMERY, NY 10922
Phone Number...: [REDACTED]
Sex.....: M Race: WHT
Person Type...: PERSON INTERVIEWED

NARRATIVE

On the above date and time PO Hill was dispatched to the above location for a dispute of the property line between 88 Forest Hill Road and 80 Forest Hill Road. Kopald stated she owns the land where the owner of 80 Forest Hill Road [REDACTED] was cutting down trees this afternoon. After interviewing [REDACTED] he stated the land in question was owned by [REDACTED]. [REDACTED] was interviewed and produced a bill of sale and a deed for the land in question. Several attempts via telephone were made to contact Kopald and advise her of the findings, but she did not answer the phone, patrol clear, nothing further.

PO BOX 197
FORT MONTGOMERY, NY 10922-
(845) 446-1142

Entry/CC#: TH-003113-19 Date: 10/21/2019 Time: 16:30 Tour: ' CDesk Officer:

Call Type.....: NOISE COMPLAINT Priority...: How Received: 911

Caller.....: KOPALD, DEBORAH A

Bus. Name...:

Address.....: 88 FOREST HILL

City/St/Zip: FORT MONTGOMERY, NY 10922-

Call Back #: 845-446-9531

Location of Assignment: 88 FOREST HILL, FORT MONTGOMERY

Cross Street.....:

Business Name.....:

Description.....: REPORTED LOUD CONSTRUCTION

Disposition.....: COMPLETE

Post: Dispatched: Y Dispatched Date: 10/21/2019 Call Taker:

OFFICERS INVOLVED

Serial #: 136 Rank: PO Name: ANDREW MARKUNAS Type: ASSIGNED OFFICER

UNITS INVOLVED

Unit: 116 Officers: (136)
Disp. Time: 16:30 | Arr. Time: 16:40 | Comp Time: 16:50
Rcv'd to Comp: 0:20 :: Disp to Comp: 0:20

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....: KOPALD, DEBORAH A DOB: 02/20/1974
Address.....: 88 FOREST HILL
City/State/Zip: FORT MONTGOMERY, NY 10922-
Phone Number...: 845-446-9531
Mobile Number...: 845-446-3768
Sex.....: F Race: WHT
Person Type...: CALLER

NARRATIVE

On the above listed time and date RO was dispatched to 88 Forest Hills Rd for the reported noise complaint "Construction company is harassing her by turing on their equipment " Upon arrival Ms.Kopald did not answer her door. RO contacted her via phone where she further demanded RO to borrow a decibel meter from the village, as she had already called where the "dispatch lady" allowed the Town Police to use it. However Ms.Kopald stated the construction noise was no longer at a "dangerous level" and advised RO of "good meters" to look into and purchase. Patrol clear.

At: 14:27:04

PO BOX 197
FORT MONTGOMERY, NY 10922-
(845) 446-1142

Entry/CC#: TH-003009-19 Date: 10/13/2019 Time: 10:24 Tour: Desk Officer:

Call Type.....: NOISE COMPLAINT Priority..: How Received: 911 CALL

Caller.....: KOPALD, DEBORAH

Bus. Name..:

Address.....: 88 Forest Hill Rd APT# PH

City/St/Zip: FORT MONTGOMERY, NY 10922-

Call Back #: (845) 446-9531

Location of Assignment: Franklin St, FORT MONTGOMERY

Cross Street.....:

Business Name.....:

Description.....:

Disposition.....:

Post: Dispatched: Y Dispatched Date: 10/13/2019 Call Taker:

OFFICERS INVOLVED

Serial #:0085 Rank:PO Name:RAYMONDAN H MAEANG

Serial #:0001 Rank:DET Name:RANDELL R BAILEY

UNITS INVOLVED

Unit: 114 Officers: (0001,0085)

Disp. Time: 10:40 | Arv. Time: 10:42 | Comp Time: 11:35

Rcv'd to Comp: 1:11 :: Disp to Comp: 0:55

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....: [REDACTED]

Address.....: [REDACTED]

City/State/Zip: FORT MONTGOMERY, NY 10922

Phone Number..: [REDACTED]

Sex.....: M Race: WHT

Person Type...: PERSON INTERVIEWED

Name.....: KOPALD, DEBORAH DOB: 02/20/1974

Address.....: 88 Forest Hill Rd APT# PH

City/State/Zip: FORT MONTGOMERY, NY 10922-

Phone Number..: (845) 446-9531

Mobile Number..: 845-446-9531

Sex.....: F Race:

Person Type...: CALLER

NARRATIVE

On the above date and time RO's were dispatched to a noise complaint of construction being done on Franklin St. Area was checked and heard hammering and drilling from the area. Spoke with [REDACTED] and stated that they were getting ready to leave and stopped. Spoke to the complainant Deborah Kopald and advised her of the information stated.

N/F RM104

Entry/CC#: TH-002955-19 Date: 10/06/2019 Time: 13:50 Tour: BDesk Officer:

Call Type.....: FOLLOW-UP Priority...: How Received: OFFICER

Caller.....:

Bus. Name..:

Address.....:

City/St/Zip:

Call Back #:

Location of Assignment: 88 Forest Hill Rd, FORT MONTGOMERY APT PH

Cross Street.....:

Business Name.....:

Description.....: FOLLOW UP TO NOISE COMPLAINT

Disposition.....: COMPLETE

Post: Dispatched: Y Dispatched Date: 10/06/2019 Call Taker: 0001

OFFICERS INVOLVED

Serial #:0001 Rank:DET Name:RANDELL R BAILEY Type:ASSIGNED OFFICER

Serial #:0084 Rank:PO Name:KEVIN C WOOD Type:ASSIGNED OFFICER

UNITS INVOLVED

Unit: 114 Officers: (0001,0084)

Disp. Time: 13:50 | Arv. Time: 13:50 | Comp Time: 14:15

Rcv'd to Comp: 0:25 :: Disp to Comp: 0:25

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....:KOPALD, DEBORAH DOB:02/20/1974

Address.....:88 Forest Hill Rd APT# PH

City/State/Zip:FORT MONTGOMERY, NY 10922-

Phone Number...:(845)446-9531

Mobile Number...:845-446-9531

Sex.....:F Race:

NARRATIVE

After receiving two noise complaints from Debra Kopald earlier in the day, officers went to her house to conduct a follow up. Officers explained to her that, the first time they had arrived to 35 Hemlock Street, there was no construction going on and the residents stated that they were just cleaning. Kopald stated that she heard hammering earlier and it may have ended by the time police arrived. Officers then explained to Kopald that when they arrived the second time she called, they once again found no construction taking place, but instead found [REDACTED] to be leaf blowing. To which Kopald stated that she was unsure of what it was when she had called.

N/F 155.

Entry/CC#: TH-002954-19 Date: 10/06/2019 Time: 13:13 Tour: BDesk Officer:

Call Type.....: NOISE COMPLAINT Priority..: How Received: 911

Caller.....: KOPALD, DEBORAH

Bus. Name...:

Address.....: 88 Forest Hill Rd APT# PH

City/St/Zip: FORT MONTGOMERY, NY 10922-

Call Back #: (845) 446-9531

Location of Assignment: 35 Hemlock St, FORT MONTGOMERY

Cross Street.....:

Business Name.....:

Description.....: CONSTRUCTION NOISE COMPLAINT

Disposition.....: COMPLETE

Post: Dispatched: Y Dispatched Date: 10/06/2019 Call Taker: 0001

OFFICERS INVOLVED

Serial #:0001 Rank:DET Name:RANDELL R BAILEY

Type:ASSIGNED OFFICER

Serial #:0084 Rank:PO Name:KEVIN C WOOD

Type:ASSIGNED OFFICER

UNITS INVOLVED

Unit: 114 Officers: (0001,0084)

Disp. Time: 13:13 | Arv. Time: 13:13 | Comp Time: 13:29

Rcv'd to Comp: 0:16 :: Disp to Comp: 0:16

ASSOCIATED NUMBERS

PERSONS INVOLVED

Name.....:KOPALD, DEBORAH DOB:02/20/1974

Address.....:88 Forest Hill Rd APT# PH

City/State/Zip:FORT MONTGOMERY, NY 10922-

Phone Number...:(845)446-9531

Mobile Number...:845-446-9531

Sex.....:F Race:

Person Type...:CALLER

Name.....: [REDACTED] [REDACTED]

Address.....:1 [REDACTED]

City/State/Zip:HIGHLAND FALLS, NY 10996-

Phone Number...: [REDACTED]

Sex.....:M Race:

Person Type...:PERSON INTERVIEWED

NARRATIVE

On the above date and time, Det. Bailey and PO Wood where dispatched to a second noise complaint at 35 Hemlock Street. Upon arrival, officers where met by and spoke to [REDACTED] who was leaf blowing the driveway. No construction was going on. Officers cleared, no violation of local ordinance was observed.

N/F 155.

EXHIBIT O















EXHIBIT P















04/11/2020 03:25





EXHIBIT Q



07/24/2020 14:23



07/24/2020 14:21



07/24/2020 14:23



07/24/2020 14:22



07/24/2020 14:22



EXHIBIT R

The Audible Landscape: A Manual for Highway Noise and Land Use

4. Physical Techniques to Reduce Noise Impacts

This section describes some of the physical methods which architects, developers and builders can employ to reduce noise impacts. There are four major actions which can be taken to improve noise compatibility for any type of land use or activity. These are site planning, architectural design, construction methods, and barrier construction.

Acoustical site design uses the arrangement of buildings on a tract of land to minimize noise impacts by capitalizing on the site's natural shape and contours. Open space, nonresidential land uses, and barrier buildings can be arranged to shield residential areas or other noise sensitive activities from noise, and residences can be oriented away from noise.

Acoustical architectural design incorporates noise reducing concepts in the details of individual buildings. The areas of architectural concern include building height, room arrangement, window placement, and balcony and courtyard design.

Acoustical construction involves the use of building materials and techniques to reduce noise transmission through walls, windows, doors, ceilings, and floors. This area includes many of the new and traditional "soundproofing" concepts.

Noise barriers can be erected between noise sources and noise-sensitive areas. Barrier types include berms made of sloping mounds of earth, walls and fences constructed of a variety of materials, thick plantings of trees and shrubs, and combinations of these materials.

These physical techniques vary widely in their noise reduction characteristics, their costs, and especially, in their applicability to specific locations and conditions. This section is not designed to provide complete criteria for selecting a solution to particular noise problems and is not intended as a substitute for acoustical design. Rather, its purpose is to illustrate the wide range of possible alternatives which could be considered in the architectural and engineering planning process. Knowledgeable municipal officials can provide valuable assistance to designers, developers, and builders who may not be familiar with sound attenuation techniques that are most applicable locally.

4.1 Acoustical Site Planning

The arrangement of buildings on a site can be used to minimize noise impacts. If incompatible land uses already exist, or if a noise sensitive activity is planned, acoustical site planning often provides a successful technique for noise impact reduction.

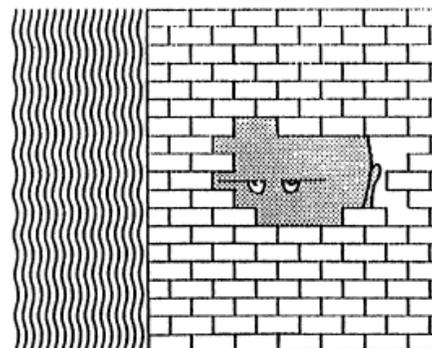
Many site planning techniques can be employed to shield a residential development from noise. These can include:

1. increasing the distance between the noise source and the receiver;
2. placing nonresidential land uses such as parking lots, maintenance facilities, and utility areas between the source and the receiver;
3. locating barrier-type buildings parallel to the noise source or the highway; and
4. orienting the residences away from the noise.

The implementation of many of the above site planning techniques can be combined through the use of cluster and planned unit development techniques.

Distance: Noise can be effectively reduced by increasing the distance between a residential building and a highway. Distance itself reduces sound: doubling the distance from a noise source can reduce its intensity by as much as 6 dBA. In the case of high rise buildings, distance may be the only means, besides acoustical design and construction, of reducing noise impacts. This is because it is nearly impossible to provide physical shielding for the higher stories from adjacent noise. (See Figure 4.1.)

Noise Compatible Land Uses as Buffers: Noise protection can be achieved by locating noise-compatible land uses between the highway and residential units. Whenever possible, compatible uses should be nearest the noise source. Figure 4.2 which follows shows a proposed parking garage along two sides of a development in Boston. Both the Fitzgerald Expressway and the entrance to the Callahan Tunnel which are shown on the site plan are major and noisy traffic routes. In addition to protecting the residential development from the noise and dirt of highway traffic, the parking



garage provides needed facilities for the residents

Figure 4.3 provides another example of locating noise-compatible uses near a highway (West Street) in Springfield, Massachusetts. From the plan, one can see that parking spaces, ends of buildings, and a baseball diamond are near the highway.

Buildings as Noise Shields: Additional noise protection can be achieved by arranging the site plan to use buildings as noise barriers. A long building, or a row of buildings parallel to a highway can shield other more distant structures or open areas from noise. One study shows that a two-story building can reduce noise levels on the side of the building away from the noise source by about 13dBA.¹

If the use of the barrier building is sensitive to highway noise, the building can be soundproofed. This technique was used in a housing project under construction in England where a 3,900 foot long, 18 foot wide and 45-70 foot high wall (depending on the terrain) serves as both residence and a sound shield.²

The wall/building will contain 387 apartments in which the kitchens and bathrooms are placed towards the noise, and the bedrooms and living rooms face away from the highway. The wall facing the highway will be soundproofed and windows, when they exist, are sealed. Substantial noise reductions are expected.

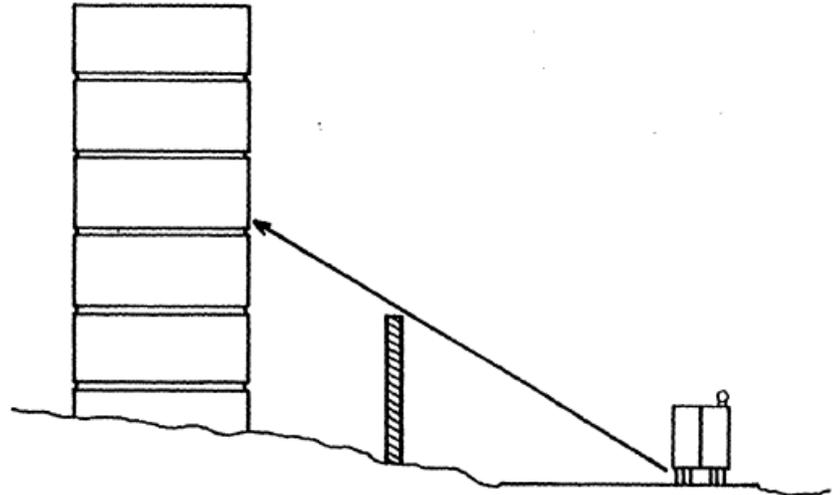
Orientation: The orientation of buildings or activities on a site affects the impact of noise, and the building or activity area may be oriented in such a way as to reduce this impact.

Noise impacts can be severe for rooms facing the roadway since they are closest to the noise source. The noise impact may also be great for rooms perpendicular to the roadway because a) the noise pattern can be more annoying in perpendicular rooms and b) windows on perpendicular walls do not reduce noise as effectively as those on parallel walls because of the angle of the sound. Road noise can be more annoying in perpendicular rooms because it is more extreme when it suddenly comes in and out of earshot as the traffic passes around the side of the building, rather than rising and falling in a continuous sound, as it would if the room were parallel to passing vehicles.

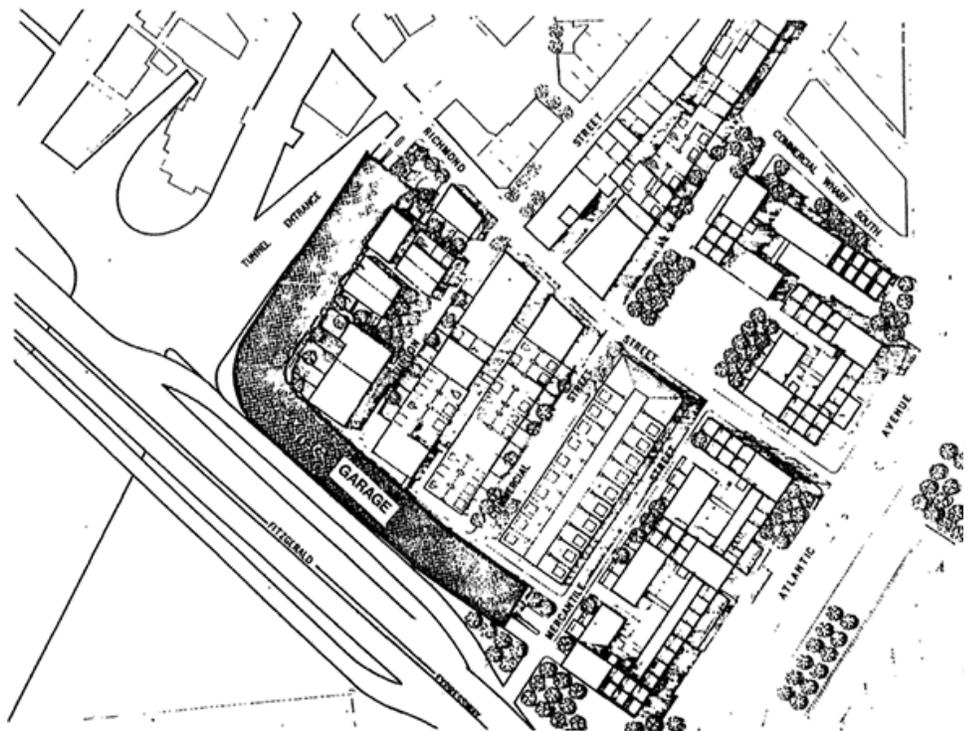
Whether the noise impact is greater on the perpendicular or the parallel wall will depend on the specific individual conditions. Once the most severely impacted wall or walls are determined, noise impacts may be minimized by reducing or eliminating windows from these walls.

Buildings can also be oriented on a site in such a way as to exploit the site's natural features. With reference to noise, natural topography can be exploited and buildings placed in low noise pockets if they exist. If no natural noise pockets exist, it is possible to create them by excavating pockets for buildings and piling up earth mounds between them and the noise. Such a structure would obstruct the sound paths and reduce the noise impacts on the residences.

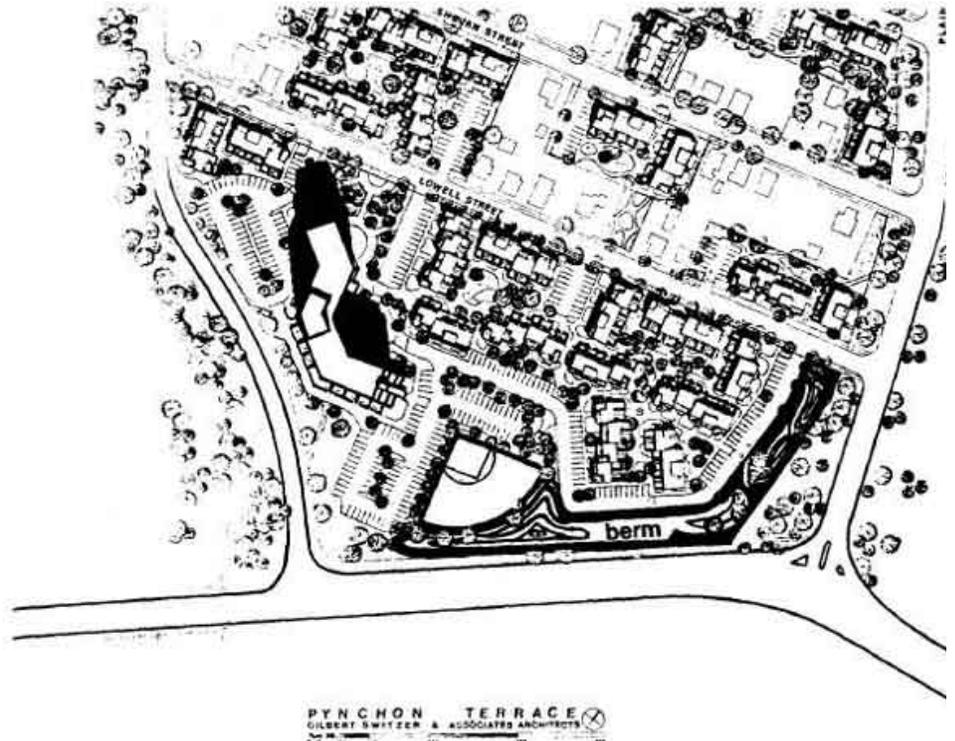
Cluster and Planned Unit Development: A cluster subdivision is one in which the densities prescribed by the zoning ordinance are adhered to but instead of applying to each individual parcel, they are aggregated over the entire site, and the land is developed as a single entity. A planned unit development, or P.U.D., is similar but changes in land use are included, such as apartments and commercial facilities in what would otherwise be a single-family district. Examples of grid, cluster and P.U.D. subdivisions follow in Figures 4.4, 4.5, and 4.6.



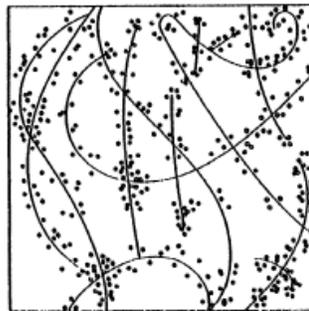
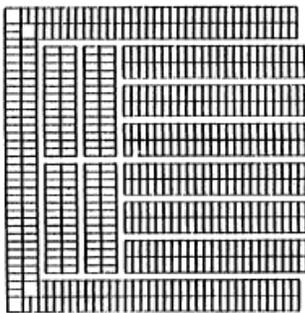
4.1 Noise barriers can shield only the lowest floors of a building.



4.2 Parking Garage to shield residential area.



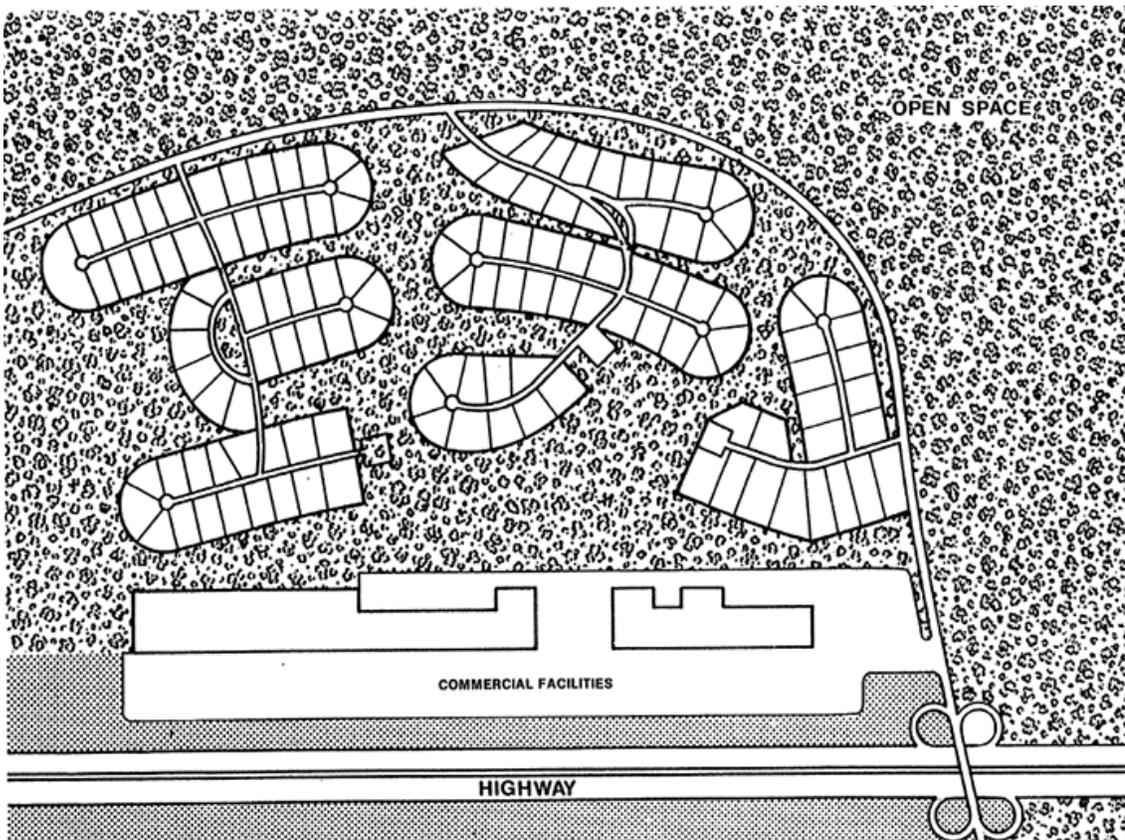
4.3 Parking spaces, end of buildings, and a baseball diamond are placed near the highway. A berm is constructed and trees are planted to shield residences from traffic noise.



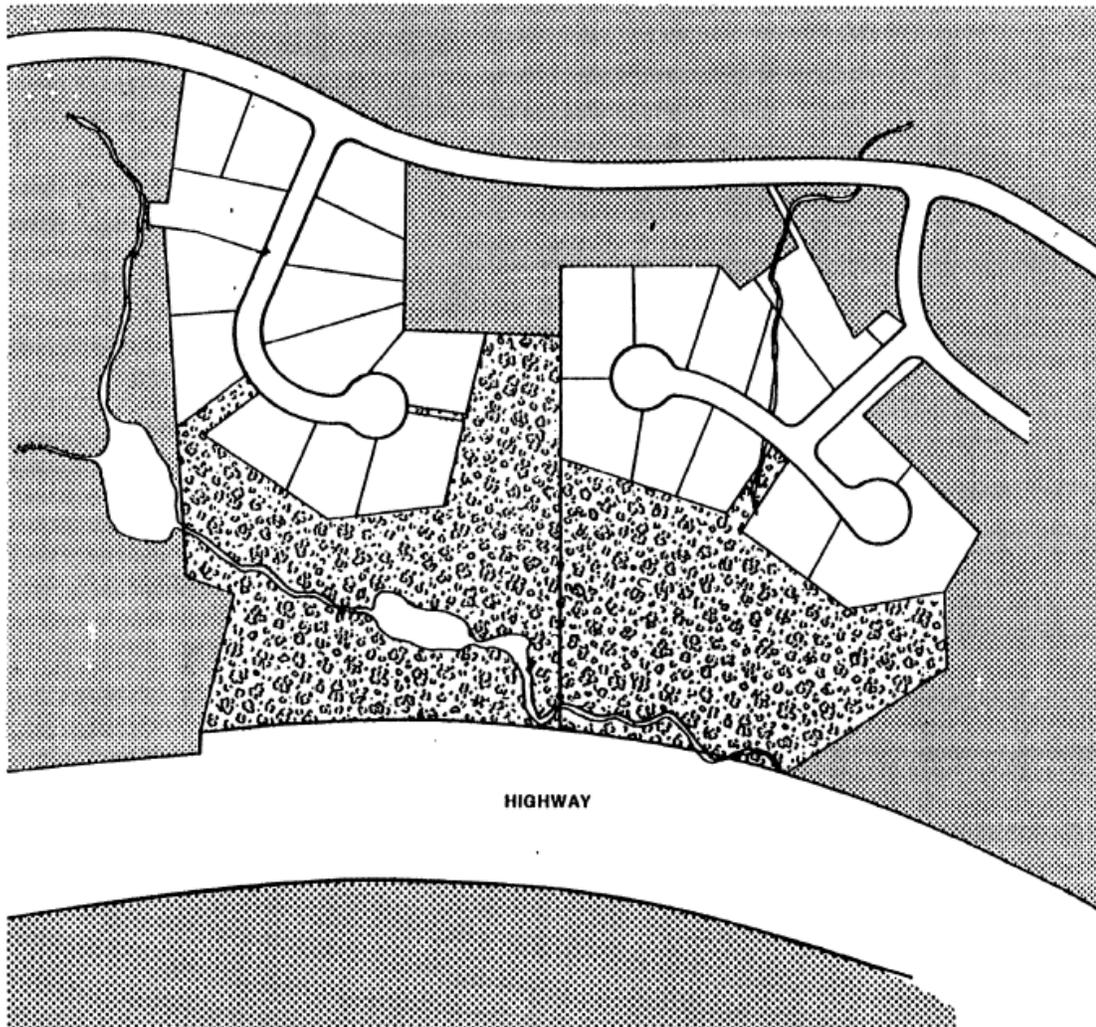
4.4 Conventional Grid Subdivision

4.5 Cluster Subdivision

From Figure 4.4 it can be seen how the conventional grid subdivision affords no noise protection from the adjacent highway. The first row of houses bears the full impact of the noise. In contrast, the cluster and P.U.D. techniques enable commercial uses and open space respectively to serve as noise buffers. Examples of this are shown in Figures 4.6 and 4.7.



4.6 Placement of noise compatible land uses near highway in Planned Unit Development



4.7 In cluster development, open space can be placed near the highway to reduce noise impacts on residences

A word of caution is necessary: in a cluster development, the required open space can be located near the highway to minimize noise to the residences. However, many recreation uses are noise sensitive, and when one takes advantage of the flexibility of cluster development to minimize noise, care must be taken not to use all of the available open space in buffer strips, thus depriving the development of a significant open space area. Where high noise levels exist, a combination of buffer strips and other techniques (such as berms and acoustical sound proofing) can be employed.

The flexibility of the cluster and planned unit development techniques allows many of the above site planning techniques to be realized and effective noise reduction achieved.

4.2 Acoustical Architectural Design

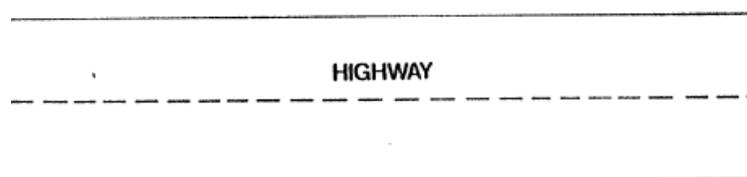
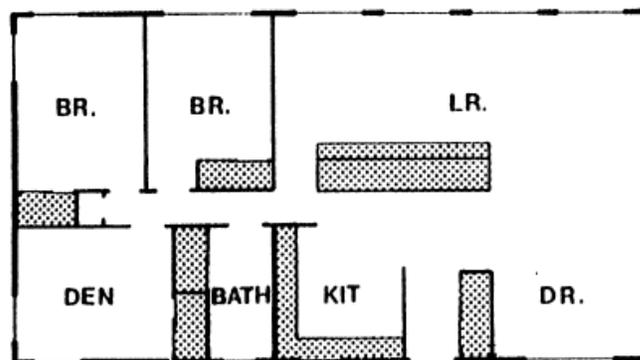
Noise can be controlled in a building with proper architectural design. By giving attention to acoustical considerations in the planning of room arrangement, placement of windows, building height, balconies, and courtyards, the architect may achieve significant noise impact reduction, without the need for costly acoustical construction.

Room Arrangement: Noise impacts can be substantially reduced by separating more noise sensitive rooms from less noise sensitive rooms; and placing the former in the part of the building which is furthest away from the noise source. The less sensitive rooms should then be placed closest to the noise source where they can act as noise buffers for the more sensitive rooms.

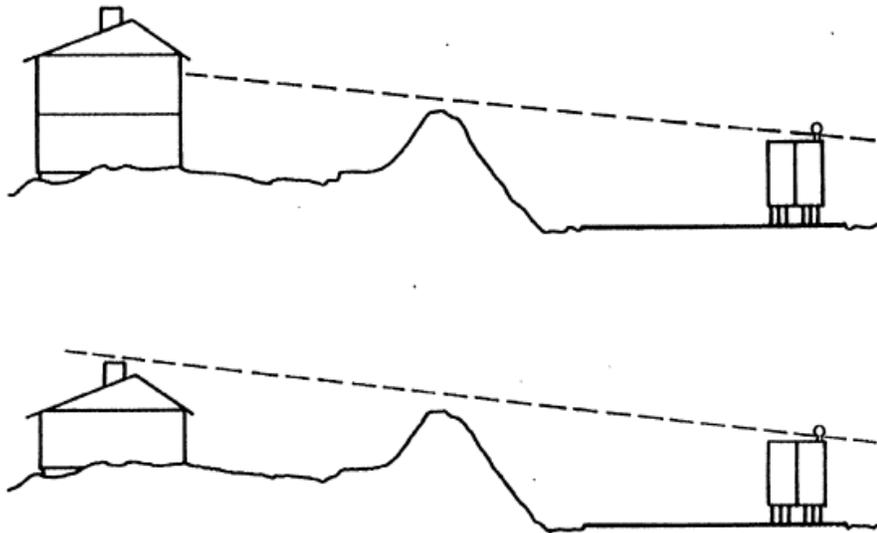
Whether or not a room is noise sensitive depends on its use. Bedrooms, living rooms, and dining rooms are usually noise sensitive, while kitchens, bathrooms, and playrooms are less so. Figure 4.8 shows a layout designed to reduce the impact of highway noise. This technique was used extensively in England in a 100 acre residential development adjacent to a planned expressway.³ Kitchens and bathrooms were placed on the expressway side of the building, and bedrooms and living rooms were placed on the shielded side. In addition, the wall facing the expressway is sound insulated.

Solid Walls: Noise can be reduced by eliminating windows and other openings from the walls of a building close to noise sources. The solid wall can then have the effect of a sound barrier for the rest of the building. As previously discussed in Figure 4.1, walls directly adjacent, and those perpendicular to the noise source can be the most severely impacted. When a solid wall is impractical, illegal, or highly undesirable; the same effect can be achieved by reducing window size and sealing windows airtight. This technique is used in the housing project described above.⁴

One Story Houses: In cases where either the house or the highway is slightly recessed or a barrier has been placed in the sound path, the noise impact may be further reduced if the house has only one story⁵ (See Figure 4.9). If the single-story design is inefficient, the split-level design may be effective. In any case the path of the sound waves should be assessed before the building design is drawn.

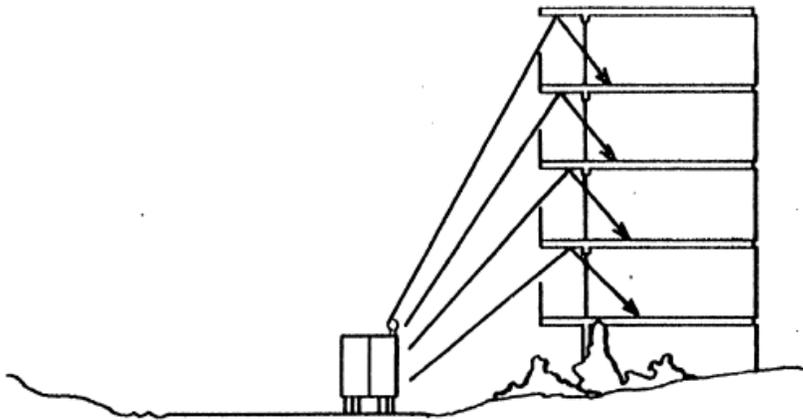


4.8 Use of acoustical architectural design to reduce noise impacts on more noise sensitive living spaces



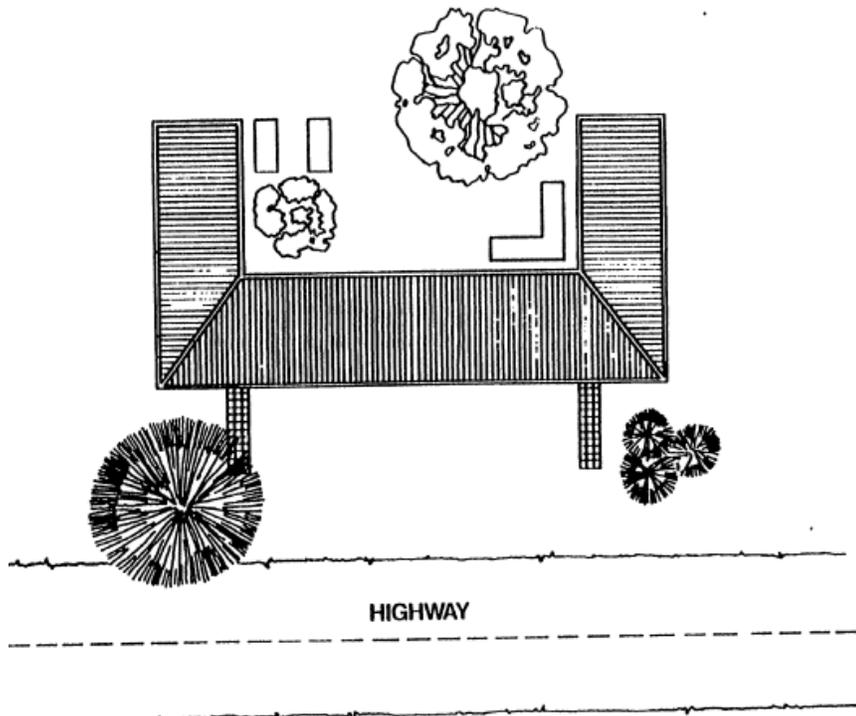
4.9 Noise impacts can be reduced by use of single story houses.

Balconies: If balconies are desired they should be given acoustical consideration. The standard jutting balcony, facing the road, may reflect traffic noise directly into the interior of the building in the manner illustrated in Figure 4.10. In addition to reflecting noise into the building, the balcony may be rendered unusable due to the high noise levels. This problem is particularly applicable to high rise apartment buildings where balconies are common. If balconies are desired, the architect may avoid unpleasant noise impacts by placing them on the shielded side of the buildings.



4.10 The standard jutting balcony facing the road may reflect traffic noise directly into the interior of the building.

Courtyards: Proper architectural design may also provide for noise reduction in an area outside of the building. The courtyard and patio houses can provide outdoor acoustical privacy. (See Figure 4.11). Schools, rest homes, hotels, and multi-family apartment dwellings can also have exterior spaces with reduced noise by means of courtyard yards.



4.11 Use of courtyard house to obtain quite outdoor environment

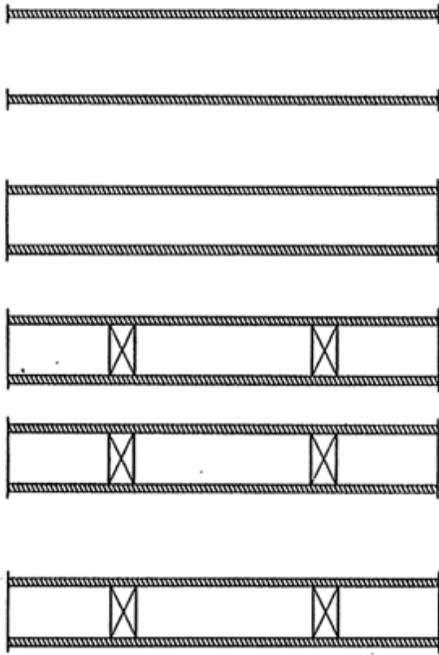
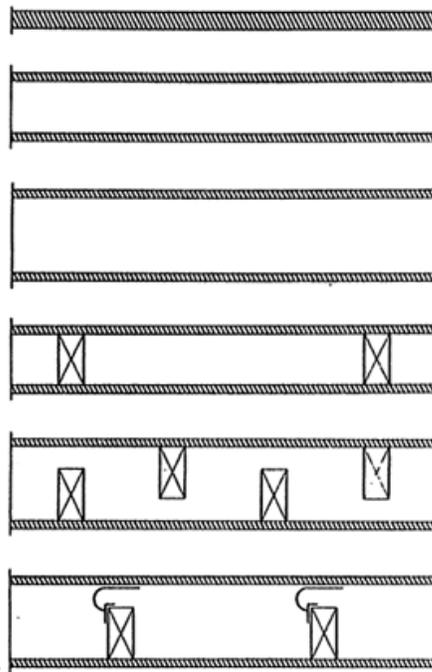
4.3 Acoustical Construction

Noise can be intercepted as it passes through the walls, floors, windows, ceilings, and doors of a building. Examples of noise reducing materials and construction techniques are described in the pages that follow.

To compare the insulation performance of alternative constructions, the Sound Transmission Class (STC) is used as a measure of a material's ability to reduce sound. Sound Transmission Class is equal to the number of decibels a sound is reduced as it passes through a material. Thus, a high STC rating indicates a good insulating material. It takes into account the influence of different frequencies on sound transmission, but essentially it is the difference between the sound levels on the side of the partition where the noise originates and the side where it is received. For example, if the external noise level is 85 dB and the desired internal level is 45 dB, a partition of 40 STC is required. The Sound Transmission Class rating is the official rating endorsed by the American Society of Testing and Measurement. It can be used as a guide in determining what type of construction is needed to reduce noise.

A) Walls

Walls provide building occupants with the most protection from exterior noise. Different wall materials and designs vary greatly in their sound insulating properties. Figure 4.12 provides a visual summary of some ways in which the acoustical properties can be improved:

Lower sound attenuation**Higher sound attenuation**

Increased mass

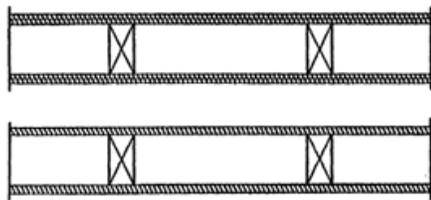
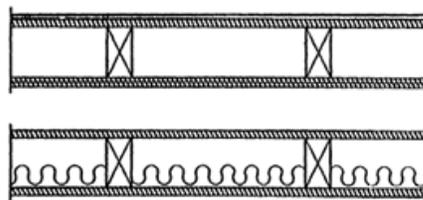
Use of air space

Increased width of
airspaceWide spacing between
studs

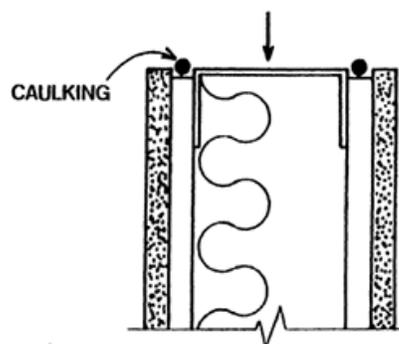
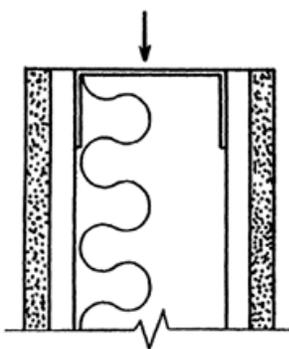
Staggered studs

Use of resilient
attachments

4.12-a Factors which influence sound attenuation of walls

Lower sound attenuation**Higher sound attenuation**

Dissimilar panels

Sound absorbing blanket
in airspaceWell sealed
cracks and edges

4.12-b Factors which influence sound attenuation of walls

- Increase the mass and stiffness of the wall.

In general, the denser the wall material, the more it will reduce noise. Thus, concrete walls are better insulators than wood walls of equal thickness. Increasing the thickness of a wall is another way to increase mass and improve sound insulation. Doubling the thickness of a partition can result in as much as a 6 dB reduction in sound.⁶ However, the costs of construction tend to limit the feasibility of large increases in wall mass.

The relative stiffness of the wall material can influence its sound attenuation value. Care must be taken to avoid wall constructions that can vibrate at audible frequencies and transmit exterior sounds.

- Use cavity partitions.

A cavity wall is composed of two or more layers separated by an airspace. The airspace makes a more effective sound insulator than a single wall of equal weight, leading to cost savings.

- Increase the width of the airspace.

A three-inch airspace provides significant noise reduction, but increasing the spacing to six inches can reduce noise levels by an additional 5 dBA. Extremely wide air spaces are difficult to design.

- Increase the spacing between studs.

In a single stud wall, 24 inch stud spacing gives a 2-5 dB increase in STC over the common 16 inch spacing.⁷

- Use staggered studs.

Sound transmission can be reduced by attaching each stud to only one panel and alternating between the two panels.

- Use resilient materials to hold the studs and panels together.

Nails severely reduce the wall's ability to reduce noise. Resilient layers such as fiber board and glass fiber board, resilient clips, and semi-resilient attachments are relatively inexpensive, simple to insert, and can raise the STC rating from 2-5 dB.⁸

- Use dissimilar leaves.

If the leaves are made of different materials and/or thickness, the sound reduction qualities of the wall are improved.⁹

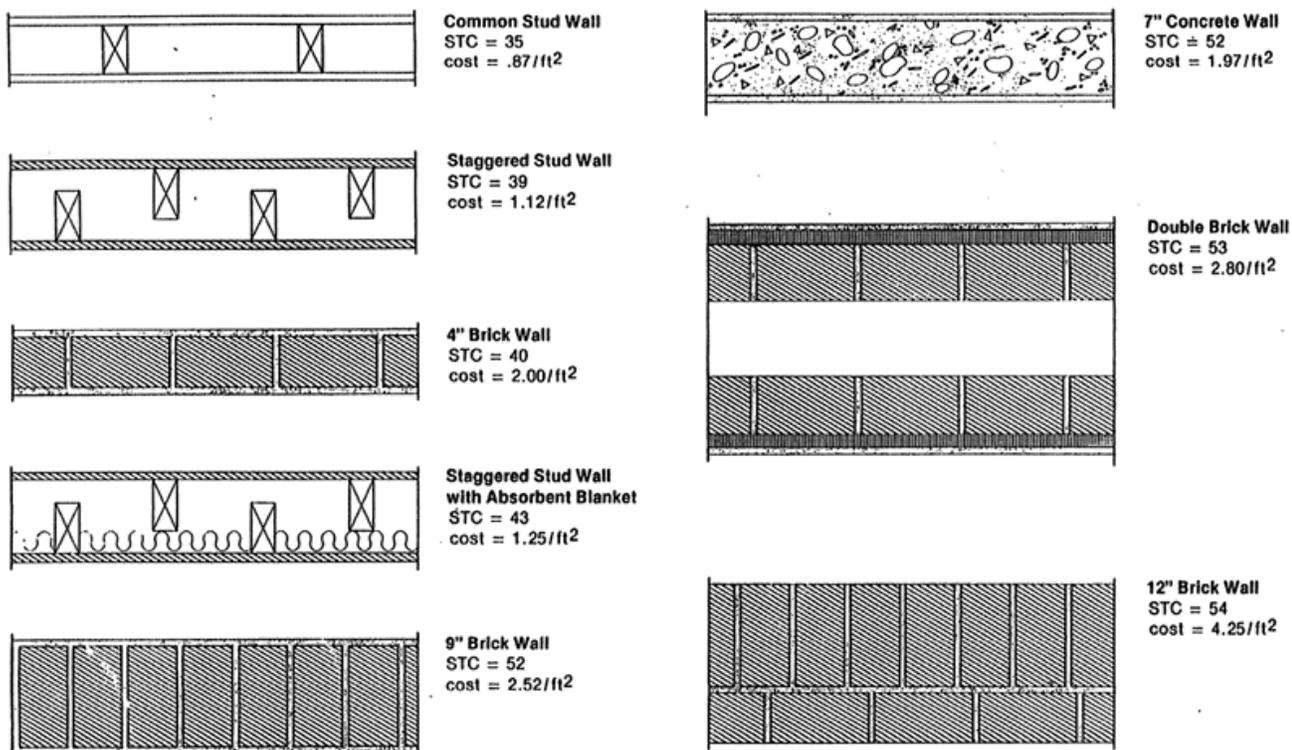
- Add acoustical blankets.

Also known as isolation blankets, these can increase sound attenuation when placed in the airspace. Made from sound absorbing materials such as mineral or rock wool, fiberglass, hair felt or wood fibers, these can attenuate noise as much as 10 dB.¹⁰ They are mainly effective in relatively lightweight construction.

- Seal cracks and edges.

If the sound insulation of a high-performance wall is ever to be realized, the wall must be well sealed at the perimeter. Small holes and cracks can be devastating to the insulation of a wall. A one-inch square hole or a 1/16 inch crack 16 inches long will reduce a 50 STC wall to 40.¹¹

Figure 4.13 shows a sample of wall types ranging from the lowest to the highest sound insulation values. The cost of these walls in dollars per square foot is given for comparison of cost effectiveness.¹²



4.13 Wall Types with STC Rating and Approximate Cost.

B) Windows

Sound enters a building through its acoustically weakest points, and windows are one of the weakest parts of a wall. An open or weak window will severely negate the effect of a very strong wall. Whenever windows are going to be a part of

the building design, they should be given acoustical consideration. Figure 4.14 illustrates the effects of windows on the sound transmission of walls. For example, if a wall with an STC rating of 45 contains a window with an STC rating of 26 covering only 20% of its area, the overall STC of the composite partition will be 33, a reduction of 12 dB.

The following is a discussion of techniques that can be used to reduce noise in a building by means of its windows. These techniques range from a blocking of the principal paths of noise entry to a blocking of the most indirect paths.

- **Close windows:** The first step in reducing unwanted sound is to close and seal the windows. The greatest amount of sound insulation can be achieved if windows are permanently sealed. However, openable acoustical windows have been developed which are fairly effective in reducing sound.¹³ Whether or not the sealing is permanent, keeping windows closed necessitates the installation of an air-conditioning system. The air conditioning system may in addition provide some masking of noise. (Masking is discussed below). If windows must be openable, special seals are available which allow windows to be opened.¹⁴
 - **Reduce window size:** The smaller the windows, the greater the transmission loss of the total partition of which the window is a part. Reducing the window size is a technique that is used because (a) it precludes the cost of expensive acoustical windows, and (b) it saves money by cutting down the use of glass. The problems with this technique are (a) it is not every effective in reducing noise; e.g., reducing the proportion of window to wall size from 50% to 20% reduces noise by only 3 decibels; and (b) many building codes require a minimum window to wall size ratio.
 - **Increase glass thickness:** If ordinary windows are insufficient in reducing noise impacts in spite of sealing techniques, then thicker glass can be installed. In addition, this glass can be laminated with a tough transparent plastic which is both noise and shatter resistant. Glass reduces noise by the mass principle; that is, the thicker the glass, the more noise resistant it will be. A 1/2-inch thick glass has a maximum STC rating of 35 dB compared to a 25 dB rating for ordinary 3/16-inch glass.
- However, glass thickness are only practical up to a certain point, when STC increases become too insignificant to justify the cost. For example, a 1/2-inch-thick glass can have an STC of 35; increasing the thickness to 3/4 inch only raises the STC to 37. However, a double glass acoustical window consisting of two 3/16-inch-thick panes separated by an airspace will have an STC of 51 and can cost less than either solid window.
- In addition to thickness, proper sealing is crucial to the success of the window. To prevent sound leaks, single windows can be mounted in resilient material such as rubber, cork, or felt.
- **Install Double-Glazed Windows:** Double-glazed windows are paired panes separated by an airspace or hung in a special frame. Generally, the performance of the double-glazed window may be increased with:
 - a. increased airspace width
 - b. increased glass thickness
 - c. proper use of sealing
 - d. slightly dissimilar thickness of the panes
 - e. slightly non-parallel panes

In general, the airspace between the panes should not be less than 2-4 inches if an STC above 40 is desired. If this is not possible, a heavy single-glazed window can be used. The use of slightly non-parallel panes is a technique employed when extremely high sound insulation is required, such as in control rooms of television studios.

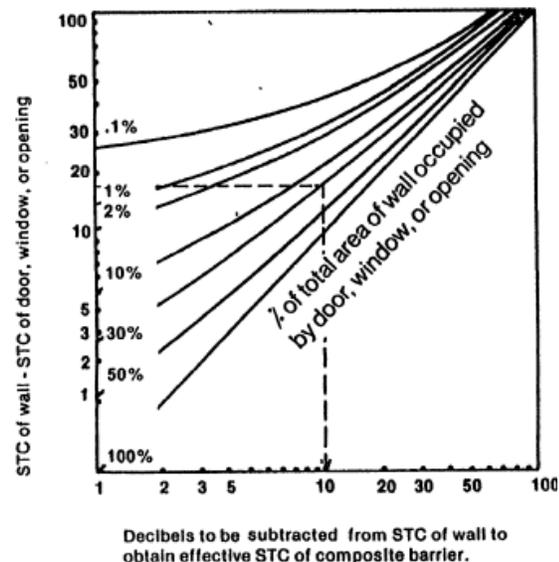
The thickness of double-glazed panes may vary from 1/8 to 1/4 inch or more per pane. Although thickness is important, the factors which most determine the noise resistance of the window is the use of sealant and the width of the airspace.

As in the case of all windows, proper sealing is extremely important. To achieve an STC above 43, double-glazed windows should be sealed permanently. If the windows must be openable, there are available special frames and sealers for openable windows which allow a maximum STC of 43.¹⁵

Permanently sealed double-glazed windows often require an air pressure control system to maintain a constant air pressure and minimal moisture in the airspace. Without this system, the panes may deflect, and, in extremely severe cases, pop out of the frames.

To further insure isolation of noise between double-glazed panes, the panes could be of different thicknesses, different weights, and slightly non-parallel to each other. This prevents acoustical coupling and resonance of sound waves.

C) Doors



4.14 Graph for calculating STC of composite barriers.

Acoustically, doors are even weaker than windows, and more difficult to treat. Any door will reduce the insulation value of the surrounding wall. The common, hollow core door has an STC rating of 17 dB. Taking up about 20% of the wall, this door will reduce a 48 STC wall to 24 STC. To strengthen a door against noise, the hollow core door can be replaced by a heavier solid core door that is well sealed¹⁶ and is relatively inexpensive. A solid core door with vinyl seal around the edges and carpeting on the floor will reduce the same 48 STC wall to only 33dB.¹⁷ An increased sound insulation value can be achieved if gasketed stops or drop bar threshold closers are installed at the bottom edge of the door. (See Figure 4.15)

The alternative solution to doors is to eliminate them whenever possible from the severely impacted walls and place them in more shielded walls.

D) Ceilings

Acoustical treatment of ceilings is not usually necessary unless the noise is extremely severe or the noise source is passing over the building. The ordinary plaster ceiling should provide adequate sound insulation except in extremely severe cases. An acoustically weak ceiling which is likely to require treatment is the beamed ceiling.¹⁸ Beamed ceilings may be modified by the addition of a layer of fiberglass or some other noise resistant material. Suspended ceilings are the most effective noise reducers but they are also the most expensive.

E) Floors

In the case of highway noise, floors would only require acoustical treatment if the highway were passing under the building. In this case, flooring would have to provide protection against structural vibrations as well as airborne sound.

Two ways to insulate a floor from noise are to install a solid concrete slab at least 6 inches thick or install a floating floor. In general, the floating floor gives the greatest amount of sound and vibration insulation; however, it is extremely expensive. Basically, a floating floor consists of a wood or concrete slab placed over the structural slab, but separated by a resilient material. The resilient material isolates the surface slab from the structural slab and the surrounding walls.

F) Interior Design

Overall interior noise levels can be reduced by the extensive use of thick, heavy carpeting, drapes, wall hangings, and acoustical ceiling tiles. These materials absorb sound. They cannot prevent noise from coming through the walls, but they can reduce overall sound levels by reducing sound reverberations.

G) Masking

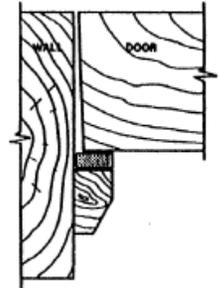
Another way of coping with noise is to drown it out with background noise. This technique is known as masking. It can be very effective in reducing noise fluctuations which are often the most annoying aspects of noise. Masking can be produced by air conditioning and heating systems, soft music, or electronic devices.

4.4 Barriers

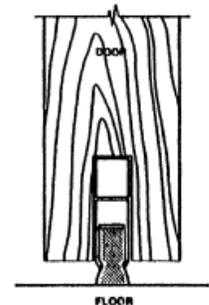
A noise barrier is an obstacle placed between a noise source and a receiver which interrupts the path of the noise. They can be made out of many different substances:

- sloping mounds of earth, called berms
- walls and fences made of various materials including concrete, wood, metal, plastic, and stucco
- regions of dense plantings of shrubs and trees
- combinations of the above techniques

The choice of a particular alternative depends upon considerations of space, cost, safety and aesthetics, as well as the desired level of sound reduction. The effectiveness of the barrier is dependent on the mass and height of the barrier, and its distance from the noise source and the receiver. To be effective a barrier must block the "line of sight" between the highest point of a noise source, such as a truck's exhaust stack, and the highest part of the receiver. This is illustrated in Figure 4.16.

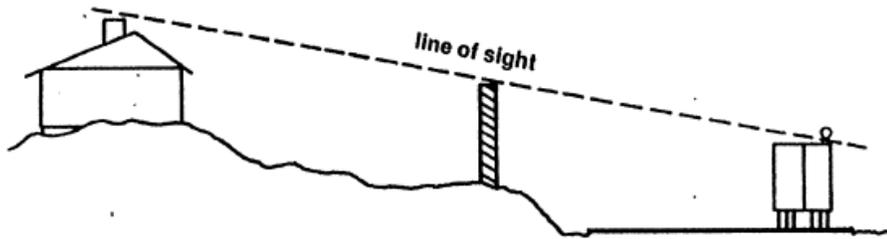


Gasketed door stop



Drop bar threshold close

4.15 Increased sound insulation can be achieved with gasketed door stops or drop bar threshold closers.



4.16 To be effective, a barrier must block the "line of sight" between the highest point of a noise source and the highest part of a receiver.

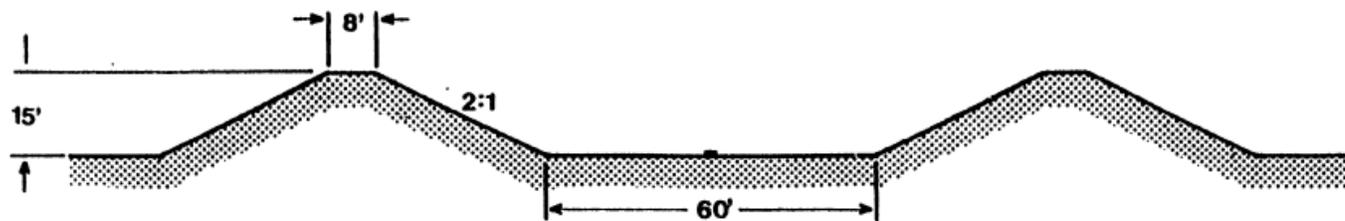
To be most effective, a barrier must be long and continuous to prevent sounds from passing around the ends. It must also be solid, with few, if any, holes, cracks or openings. It must also be strong and flexible enough to withstand wind pressure.

Safety is another important consideration in barrier construction. These may include such requirements as slope, the distance from the roadway, the use of a guard rail, and discontinuation of barriers at intersections.

Aesthetic design is also important. A barrier constructed without regard for aesthetic considerations could easily be an eyesore. A well-designed berm or fence can aesthetically improve an area from viewpoints of both the motorist and the users of nearby land.

A) Earth Berms

An earth berm, a long mound of earth running parallel to the highway, is one of the most frequently used barriers. Figure 4.17 shows a cross-section of a berm.



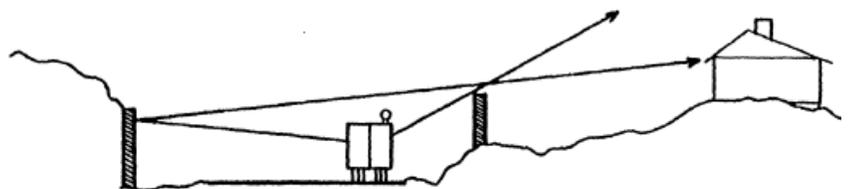
4.17 Cross section of a berm

Berms can range from five to fifty feet in height. The higher the berm, the more land is required for its construction. Because of the amount of land required, a berm is not always the most practical solution to highway noise. Different techniques must be applied in urban as distinct from rural settings.

A berm can provide noise attenuation of up to 15 dBA if it is several feet higher than the "line of sight" between the noise source and the receiver. This is comparable to the noise reduction of various walls and fences which are used as barriers. However, earth berms possess an added advantage: instead of reflecting noise from one side of the highway to another, as walls do,¹⁹ and thus increasing the noise heard on the opposite side, they deflect sound upwards. Figure 4.18 illustrates this phenomenon.

The cost of building a berm varies with the area of the country and the nature of the project. In California, the statewide average for building a berm is about \$1 per cubic yard when the earth is at the site.²⁰

In planning a berm, one must include seeding and planting in figuring cost. Also to be included are land costs and maintenance in relation to erosion, drainage, snowplowing, mowing, and perhaps future seeding. It costs approximately \$1,000 per acre per year to maintain a berm which is accessible to maintenance equipment.²¹



4.18 Wall barriers may reflect sound from one side of the highway to the other.

B) Walls and Fences as Barriers

In addition to the more usual function of keeping people, animals and vehicles from entering the highway right of way at undesired locations, a properly designed fence or wall can also provide visual and acoustical separation between highway noise sources and adjacent land areas. This method can reduce noise as much as 15 dBA.²²

The vertical construction and minimal width of walls and fences makes installation possible when space is severely limited. This is especially important when land costs are high, and where buildings are already adjacent to the highway. The advantages and disadvantages of wall and fence barriers are summarized in Figure 4.19.

The number of design variations for fence and wall barriers is virtually unlimited.

Acoustically, any solid continuous structure will suffice, provided that it is high enough, and provided that the barrier is of adequate mass and density.

The cost of a fence or wall type barrier can vary considerably according to the type of construction, the material used, local availability of materials and skills, and the barrier's dimensions. Not all types of barriers are suited for all climates, and local conditions may cause significant differences in the maintenance cost of the various barrier types. The cost questions must be evaluated on a local basis.

Some of the frequently used materials for fence and wall construction are masonry, precast concrete, and wood.

Masonry noise barriers can be made of concrete blocks, brick or stone. A concrete block barrier might range in cost from \$10 a linear foot for a 6-ft. high wall, to \$75 a linear foot for a 12-ft. high wall. This latter figure includes a safety railing. In general, a concrete block wall would cost \$50 to \$60 a linear foot.²³ To alleviate the monotony of a long run of wall, pilasters can be used: a 20 ft. high concrete wall with pilasters might cost \$300 per linear foot.²⁴ Brick and stone are extremely expensive and should only be used for special aesthetic considerations.²⁵

Precast concrete panels offer opportunities for cost reduction. A 13' 4" high wall in Fairfield, California constructed of precast concrete panels cost only \$29.50 per linear foot. Wood noise barriers are another possibility. They tend to be less expensive than other methods but are not as durable. An estimated cost for a 6' high 5/8" plywood fence is \$5.00 per linear foot.²⁶

C) Plantings

Plants absorb and scatter sound waves. However, the effectiveness of trees, shrubs, and other plantings as noise reducers is the subject of some debate. Some conclusions can, however, be drawn:

- Plantings in a buffer strip, high, dense, and thick enough to be visually opaque, will provide more attenuation than that provided by the mere distance which the buffer strip represents. A reduction of 3-5 dBA per 100 feet can be expected. Shrubs or other ground cover are necessary in this respect to provide the required density near the ground.
- The principal effect of plantings is psychological. By removing the noise source from view, plantings can reduce human annoyance to noise. The fact that people cannot see the highway can reduce their awareness of it, even though the noise remains.
- Time must be allowed for trees and shrubs to attain their desired height.
- Because they lose their leaves, deciduous trees do not provide year-round noise protection.

In general, plantings by themselves do not provide much sound attenuation. It is more effective, therefore, to use plantings in conjunction with other noise reduction techniques and for aesthetic enhancement.

The cost of plantings varies with the species selected, the section of the country, the climate, and the width of the buffer strip. For deciduous trees and evergreens, costs range from \$10 to \$50 a linear foot. The width of such a strip would be approximately 40 feet for deciduous trees and 20 feet for evergreens. Planting shrubs between the trees so as to form a dense ground cover would double the price.

D) Combinations of Various Barrier Designs

Often, the most economical, acoustically acceptable, and aesthetically pleasing barrier is some combination of the barrier types previously discussed.

For example, the Milwaukee County Expressway and Transportation Commission feels that barriers constructed of precast concrete on top of an earth berm provide maximum benefit for the cost.²⁷ They estimate that such a combination costs \$51 per linear foot.

In addition to cost advantages, an earth berm with a barrier wall on top of it possesses several other advantages over both a wall or a berm alone: 1) it is more visually pleasing than a wall of equivalent height; 2) the berm portion of this combination is less dangerous for a motorist leaving the roadway; 3) the non-vertical construction of the berm does not reflect noise back to the opposite side of the highway the way a wall does; 4) the combination requires less land than would be required for a berm of equivalent height and slope; and 5) the wall provides a fencing function not provided by a berm.

Another combination to be considered is that of plantings in combination with a barrier. Not only do plantings and ground cover provide some additional noise attenuation, but they also increase visual appeal.

4.5 Conclusion

Figure 4.19 provides a summary of the physical techniques which can be used by designers, builders, and developers to reduce highway noise impacts. Some conclusions follow which may be useful in getting them implemented.

Figure 4.19 Summary of Physical Techniques to Reduce Noise Impacts

Physical Technique	Potential Effectiveness	Situations Where Most Effective	Cost	Relevant Administrative Technique	Comments
Acoustical Site Planning	Good-excellent: depends on size of lot and natural terrain.	Before building construction, before subdivision development	Low. only costs are fees of acoustical consultant and site planner.	Building code* Health code	Fairly inexpensive but requires space which may be unavailable. Has limited sound reduction. Positive aesthetic impacts.
Acoustical Architectural Design	Fair	Before building construction.	Low: only cost is that of acoustical consultant	Building code* Health code	Low cost but limited effectiveness.
Acoustical construction.	Excellent for interior, poor for exterior.	During building construction best. Most costly after construction.	Varies with amount of noise reduction desired but generally high especially after construction.	Building code* Health code	Most effective noise reduction for interiors
Barriers	Fair-excellent, depends on height and mass	Varies with type of barrier	Moderate-high: varies with type of barrier, see below.	Zoning, subdivision rules, health code	High noise reduction and potentially low cost. Achieves exterior noise reduction. Can have adverse aesthetic impacts.
Earth Berms	Good-excellent	Best during road construction when earth is available. Costly after road construction. Impractical in densely populated areas where land is scarce.	Moderate-high: depends on availability of earth.		Good noise reduction properties and aesthetic appeal, but requires space and requires maintenance.
Walls and Fences	Poor-excellent, depends on height and mass	Any time	Low-high: depends on height and thickness.		Requires little space and no maintenance, but may be aesthetically unappealing and can reflect noise to other side of road.
Plantings	Poor	After road construction. After building construction.	Moderate high: depends on size of buffer strip.		Poor noise reduction but often necessary for aesthetic appeal. Best used in combination with other techniques.
Combinations	Good-excellent.	Depends on particular combination.	Moderate-high: depends on type of barrier used		Potentially high noise reduction and aesthetic appeal.

*Administrative techniques which can achieve any physical technique are health codes, occupancy permit procedures, architectural review boards, and municipal design services.

As is indicated by the chart below, five factors which must be considered in the selection of noise reduction measures include the following:

1. Noise reduction desired
2. Situation where the physical technique would be most effective
3. Cost

4. Relevant administrative techniques

5. Aesthetics

Noise Reduction: The physical techniques discussed vary in their noise reduction capabilities. For example, the effectiveness of the less expensive techniques, such as site planning and acoustical architectural design, is limited to situations where there is some distance between the buildings and the noise source. If the noise source is nearby and significant noise reduction is desired regardless of the expense, then more expensive measures, such as acoustical soundproofing and barrier construction, may be necessary.

Situation where a technique is most applicable: The applicability of a technique is determined by the population density of an area and the point in the development process at which the technique is to be used, i.e., its timing. In a densely populated area, site planning (perhaps in conjunction with construction of a berm and a region of plantings) can often solve the noise problem. In a high-density area where land is scarce and expensive, a better alternative would be barrier construction and acoustical soundproofing of the buildings.

The timing of a technique also determines whether or not it is applicable. There are three points at which physical noise reduction measures can be used: in the planning phase; during building construction; and after construction. Techniques applicable during the planning phase include acoustical site planning and acoustical architectural design. During the construction phase, those techniques most applicable for highways are berms and barriers, since building materials are available at the site; and during building construction the most appropriate measure is acoustical soundproofing. It is possible to undertake noise reduction measures after construction, but costs are much higher.

Cost: Cost is a very important consideration in the selection of a physical noise reduction technique. Generally, cost is determined by the amount of noise reduction desired and whether the noise measure is a preventative or ameliorative one.

The most effective noise reduction measures are often the most expensive. These include barrier construction and acoustical soundproofing. However, if action is taken as a preventative measure in the planning stage, there is often no need for the more expensive techniques.

Relevant administrative techniques: All these physical techniques depend upon administrative actions for implementation. It is possible that physical measures to reduce noise would be taken without local government action, but since they involve extra expense, it is unlikely that they would be adopted on any significant scale. Many administrative means exist to achieve each physical noise reduction technique. For example, a noise impacted area can be zoned to specify details of development design or construction. In such an area, buffer strips (acoustical site planning), acoustical arrangement of living spaces (acoustical architectural design), building insulation (acoustical construction techniques), and barrier construction could be required. Similar requirements could be included in the subdivision laws. Building and health codes, enforced by withholding an occupancy permit, are effective ways to bring about acoustical soundproofing. As explained in the section on Building Codes, particular acoustical construction materials can be required or specific performance standards established.

Aesthetics: Aesthetic and quality of life considerations are another important area of concern. They depend largely on local preferences and climate, and opinions of what is aesthetically pleasing will vary among communities.

Whatever the aesthetic judgement, aesthetic considerations must be incorporated into the planning and construction process to ensure that the solution which results is not offensive to the community. This can save a great deal of time and money in the long run.

Finally, it should be stressed that no single technique or combination of techniques is best for all situations, and that technique which is best will depend on the nature of the project. The factors which are discussed above (i.e., noise reduction, cost, applicability, and aesthetics) must be balanced against each other to determine which technique or combination of techniques will be most effective in a given situation.

¹ Hans Bernard Reichow, "Town Planning and Noise Abatement," *Architect's Journal*, 137-7 (February 13, 1963) pp. 357-360.

² "Live-in Wall, 3,900 Feet Long, is Also a Sound Shield," *Engineering Record*, (September 6, 1973).

³ "Live-In Wall is Also Sound Shield," *Engineering News-Record*, September 6, 1973.

⁴ "Live-in Wall..."

⁵ This technique is used extensively in Cerritos, California.

⁶ R.K. Cook and P. Chrzanowski, "Transmission of Noise Through Walls and Floors," Cyril Harris, ed., *Handbook of Noise Control*, McGraw-Hill Book Company, Inc. (New York, 1957).

⁷ Leslie T. Doelle, *Environmental Acoustics*, (New York, McGraw-Hill Book Company, 1972), pp. 232-233.

⁸ *Ibid*, p. 172.

⁹ *Ibid*, p. 162.

[10](#) Doelle, p. 20.

[11](#) United States Gypsum, *Sound Control Construction: Principles and Performance* (Chicago, 1972), p. 66.

[12](#) Costs taken from *National Construction Estimator, 1970-1*, 18th Edition, Craftsman Book Company (Los Angeles, 1970).

[13](#) U.S. Department of Housing and Urban Development, *A study of Techniques to Increase the Sound Insulation of Building Elements*, Report No. WR 73-5, Washington, D.C., June 1973.

[14](#) Los Angeles Department of Airports, *Guide to the Soundproofing of Existing Homes Against Exterior Noise*, Report No. WCR 70-2, March 1970, pp. 9-11, 22-30. In this report, the function and performance of a number of operable seals are described.

[15](#) *Ibid.*

[16](#) D.E. Bishop and P.W. Hirtie, "Notes on the Sound Transmission Loss of Residential-Type Windows and Doors," *Journal of the Acoustical Society of America*, 43:4 (1968).

[17](#) U.S. Gypsum, *Sound Control...*, p.100.

[18](#) *Ibid.*, p. 15.

[19](#) Reflection of noise from one side of the highway to another can increase sound levels by 3 dBA. Scholes, Salvidge, and Sargent, "Barriers and Traffic Noise Peaks," *Applied Acoustics*, 5:3 (July 1972) p. 217.

[20](#) This estimate was provided by the California Highway Department.

[21](#) *Ibid.*

[22](#) California Division of Highways, *Highway Noise Control, A Value Engineering Study*, (October 1972).

[23](#) Figure provided by an official of the California Highway Department.

[24](#) Representative cost estimates of materials and labor of construction but excluding real estate acquisition; private

[25](#) California Division of Highways, *Highway Noise Control, Value Engineering Study*, (October 1972), p. 33.

[26](#) California Division of Highways, *Highway Noise Control, Value Engineering Study*, (October 1972), p. 46.

[27](#) Milwaukee County Expressway and Transportation Commission, *Noise Impact Study of the Airport Spur Vol. II: Technical Report*, (March 1973), pp. 7-21.

EXHIBIT S

Conservation Buffers

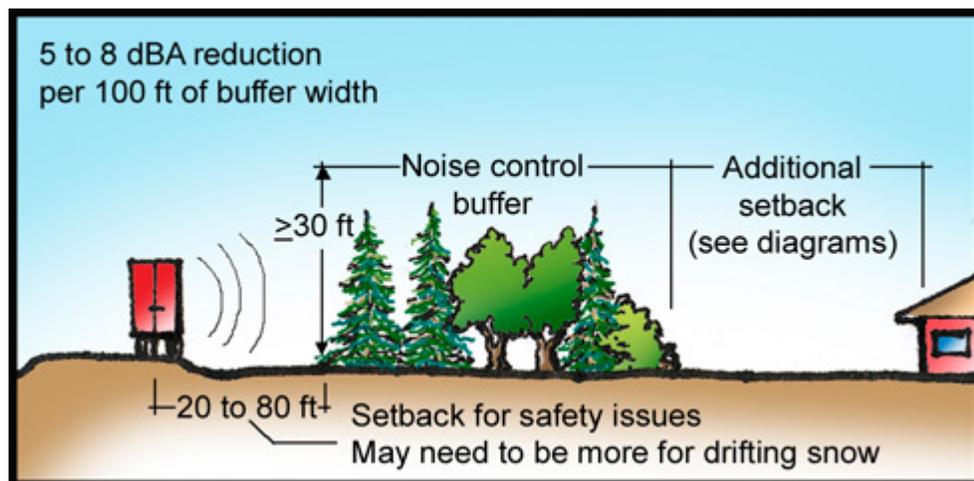
[USDA National Agroforestry Center](#)

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 - [Purpose](#)
 - [Limitations](#)
 - [Landscape Design Concepts](#)
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 - [6.0 Aesthetics & Visual Quality](#)
 - [7.0 Outdoor Recreation](#)

GUIDELINES / 6.0 Aesthetics & Visual Quality

- 6.0 [Introduction](#) 📄
- 6.1 [Rural-Urban Land Use Buffer](#) 📄
- 6.2 [Windbreaks for Odor Control](#) 📄
- 6.3 [Air Quality Buffers](#) 📄
- 6.4 [Buffers for Noise Control](#) 📄
- 6.5 [Developing an Ecological Aesthetic](#) 📄
- 6.6 [Attractive Roadside Corridors](#) 📄
- 6.7 [Buffers for Visual Screening](#) 📄

6.4 Buffers for Noise Control



Buffers can reduce noise from roads and other sources to levels that allow normal outdoor activities to occur. A 100-foot wide planted buffer will reduce noise by 5 to 8 decibels (dBA). Using a barrier in the buffer such as a landform can significantly increase buffer effectiveness (10 to 15 dBA reduction per 100-foot wide buffer with 12-foot high landform).

Guidelines are provided below for roads. Use the diagrams on the adjacent page to estimate a setback distance from a typical 100-foot wide buffer to achieve an acceptable noise level.

Buffer Guidelines for Noise Reduction Along Roads	
Moderate Speed Road (<40 mph)	High Speed Road (≥40 mph)
Plant a 20 to 50-foot wide buffer with the near edge of the buffer within 20 to 50 feet of the center of the nearest traffic lane	Plant a 65 to 100-foot wide buffer with the near edge of the buffer within 50 to 80 feet of the center of the nearest traffic lane

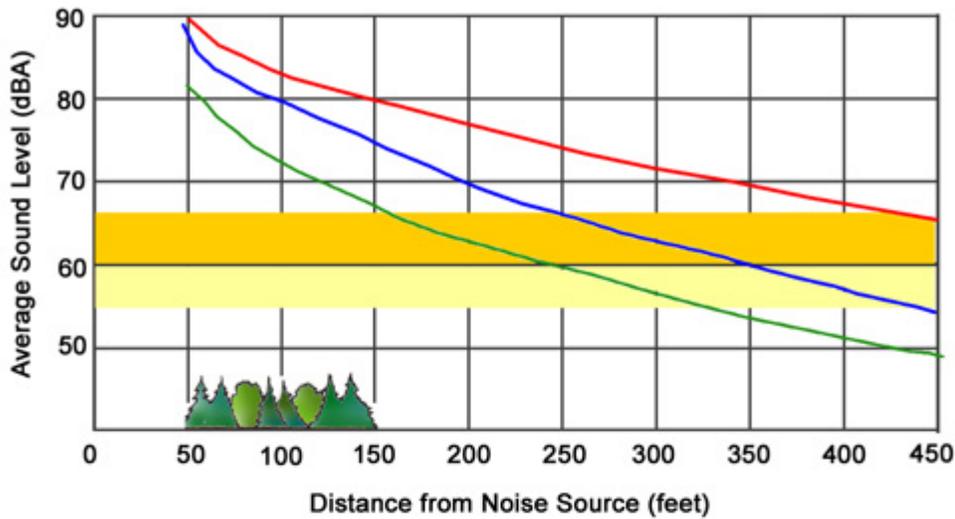
Key Design Considerations

- Locate buffer close to the noise source while providing an appropriate setback for accidents and drifting snow.
- Evergreen species will offer year-around noise control.
- Create a dense buffer with trees and shrubs to prevent gaps.
- Select plants tolerant of air pollution and de-icing methods.
- Natural buffers will be less effective than planted buffers.
- Consider topography and use existing landforms as noise barriers where possible.

Estimating Setback Distance from Noise Control Buffers

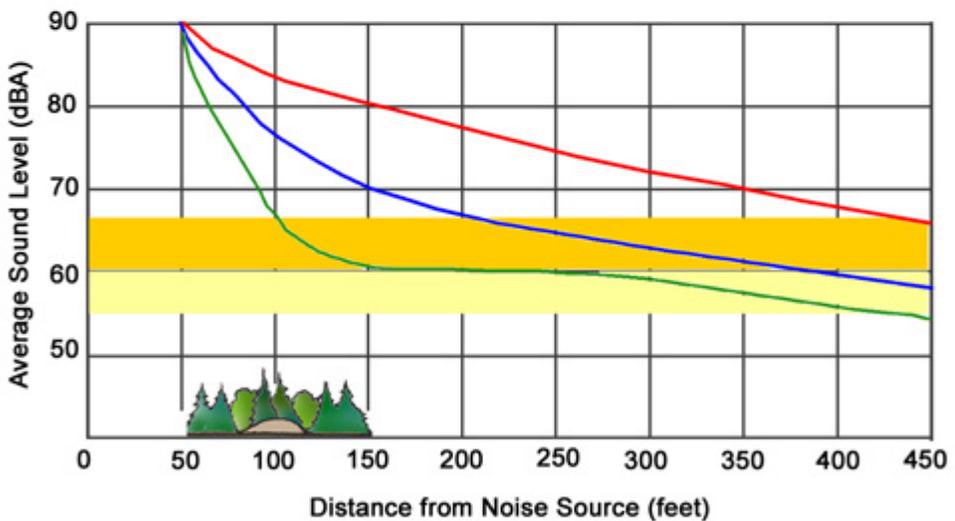
Example: An outdoor recreational site near a highway needs to be located to meet the desired noise levels of 60 to 65 dBA. If 100-ft wide tree/shrub buffer is used, the site needs to be 100 to 200 feet behind the buffer. The site can be located immediately behind the buffer if a 12-ft high landform is incorporated into the buffer.

Sound Level Decrease with Distance Due to Tree/Shrub Buffer



- Control - (No tree/shrub buffer - truck noise at 55 mph)
- Truck noise with 100-ft wide tree/shrub buffer
- Car noise with 100-ft wide tree/shrub buffer

Sound Level Decrease with Distance Due to Tree/Shrub and Landform Buffer



- Control - (No tree/shrub buffer - truck noise at 55 mph)
- Truck noise with 100-ft wide tree/shrub buffer & 4-ft high landform
- Truck noise with 100-ft wide tree/shrub buffer & 12-ft high landform

- 60 to 65 dBA acceptable noise levels for outdoor conversation
- 55 to 60 dBA acceptable noise levels for daytime residential areas

[DOWNLOAD: 6.4 Guidelines and](#)

[References \(PDF\)](#)

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EXHIBIT T

An official website of the United States government.

[Close](#)

We've made some changes to [EPA.gov](#). If the information you are looking for is not here, you may be able to find it on the [EPA Web Archive](#) or the [January 19, 2017 Web Snapshot](#).



Using Trees and Vegetation to Reduce Heat Islands

Trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands.

Trees and Vegetation Resources

- [Heat Island Compendium](#)
- [Related Webcasts](#)
- [What Communities are Doing](#)
- [Related Links on Trees and Vegetation](#)

Trees and vegetation lower surface and air temperatures by providing shade and through evapotranspiration. Shaded surfaces, for example, may be 20–45°F (11–25°C) cooler than the peak temperatures of unshaded materials.¹ Evapotranspiration, alone or in combination with shading, can help reduce peak summer temperatures by 2–9°F (1–5°C).^{2,3}

Trees and vegetation are most useful as a mitigation strategy when planted in strategic locations around buildings or to shade pavement in parking lots and on streets. Researchers have found that planting deciduous trees or vines to the west is typically most effective for cooling a building, especially if they shade windows and part of the building's roof.

Benefits and Costs

The use of trees and vegetation in the urban environment brings benefits beyond mitigating urban heat islands including:

- *Reduced energy use:* Trees and vegetation that directly shade buildings decrease demand for air conditioning.
- *Improved air quality and lower greenhouse gas emissions:* By reducing energy demand, trees and vegetation decrease the production of associated

air pollution and greenhouse gas emissions. They also remove air pollutants and store and sequester carbon dioxide.

- *Enhanced stormwater management and water quality:* Vegetation reduces runoff and improves water quality by absorbing and filtering rainwater.
- *Reduced pavement maintenance:* Tree shade can slow deterioration of street pavement, decreasing the amount of maintenance needed.
- *Improved quality of life:* Trees and vegetation provide aesthetic value, habitat for many species, and can reduce noise.



Shading in parking lot medians can provide extensive shading coverage. (Photo courtesy of E.G. McPherson)

The primary costs associated with planting and maintaining trees or other vegetation include purchasing materials, initial planting, and ongoing maintenance activities such as pruning, pest and disease control, and irrigation.

A study of urban forestry programs in five U.S. cities showed a range of expenditures: annual costs ranged from almost \$15 per tree in the Desert Southwest region to \$65 per tree in Berkeley, California. Pruning was often the greatest expenditure, accounting for roughly 25–40% of total annual costs (approximately \$4–\$20/tree). Administration and inspection costs were the next largest expenditure, ranging from approximately 8–35% of annual expenditures (about \$4–\$6/tree). Tree planting, surprisingly, accounted for just 2–15% of total annual urban forestry expenditures (roughly \$0.50–\$4/tree) in these cities.⁴

Although the benefits of urban forestry can vary considerably by community and tree species, they are almost always higher than the costs. The five-city study discussed above found that, on a per-tree basis, the cities accrued benefits ranging from about \$1.50–\$3.00 for every dollar invested. These cities spent roughly \$15–\$65 annually per tree, with net annual benefits ranging from approximately \$30–\$90 per tree.⁴

For More Information

More details are available in [Chapter Two](#) of EPA's *Reducing Urban Heat Islands: Compendium of Strategies*, which covers the following topics:

- How trees and vegetation reduce temperatures
- The benefits and costs associated with trees and vegetation
- Other factors to consider when using trees and vegetation
- Urban forestry initiatives

- Tree and vegetation tools and resources

References

1. Akbari, H., D. Kurn, et al. 1997. Peak power and cooling energy savings of shade trees. *Energy and Buildings* 25:139–148.
2. Huang, J., H. Akbari, and H. Taha. 1990. The Wind-Shielding and Shading Effects of Trees on Residential Heating and Cooling Requirements. ASHRAE Winter Meeting, American Society of Heating, Refrigerating and Air-Conditioning Engineers. Atlanta, Georgia.
3. Kurn, D., S. Bretz, B. Huang, and H. Akbari. 1994. [The Potential for Reducing Urban Air Temperatures and Energy Consumption through Vegetative Cooling \(PDF\)](#) (31 pp, 1.76MB). ACEEE Summer Study on Energy Efficiency in Buildings, American Council for an Energy Efficient Economy. Pacific Grove, California.
4. McPherson, E.G., J. R. Simpson, P. J. Peper, S. E. Maco, and Q. Xiao. 2005. [Municipal forest benefits and costs in five US cities \(PDF\)](#) (6 pp, 267K). *Journal of Forestry* 103(8):411–416.

LAST UPDATED ON DECEMBER 16, 2019

EXHIBIT U

Re: Viewing the Record for the ZBA application

From: Richard Golden (rgolden@bmglawyers.com)

To: aterhune@ldzhlaw.com

Date: Tuesday, January 14, 2020, 12:15 PM EST

Alyse

Happy New Year. Yes, I have been retained to represent Deborah Kopald in her ZBA appeal, and I will be present tomorrow evening. I look forward to seeing you there.

There is a lot for me to catch up on as you can imagine, so to save time I asked Deborah simply to request an opportunity for her to view the file to see if there is anything that was submitted by others that I need to respond to at the hearing. I assumed she would ask the ZBA secretary/clerk for that opportunity, which is the usual course and would need no lawyer intervention, either from you or me. I didn't know she was going to direct her request to you and the Chairman.

If you would be so kind as to consider this a request from me to you to allow my client to review the ZBA file to determine if anything has been added by anyone other than her. Alternatively, if you could please let me know who is the appropriate person to whom my client or I should direct that request.

Thanks.

Rick

Richard B. Golden, Esq.
Burke, Miele, Golden & Naughton, LLP
P.O. Box 216
40 Matthews Street, Suite 209
Goshen, New York 10924
845-294-4080 (O)
845-551-0895 (C)

On Jan 14, 2020, at 11:39 AM, Alyse Terhune <aterhune@ldzhlaw.com> wrote:

Hello, Rick, Happy New Year. It appears from the email below that your firm has been retained by Ms. Kopald. If so, please ask your client to communicate through you to me. Also, ask her to refrain from communicating directly with the Chairman of the ZBA or any other member of the ZBA. I would appreciate it. Thanks.

Alyse Terhune, Esq.
82 East Allendale Road
Saddle River, NJ 07458
(201) 934-9800

This transmission contains information from the law firm of Alyse D. Terhune, Esq., which may be confidential and/or privileged. This information is intended to be for the exclusive use of the individual or entity named above. If you are not the intended recipient, be advised that any disclosure, copying, distribution or other use of this information is strictly prohibited. If you have received this transmission in error, please notify us by telephone at 201 934-9800 or 212 772-0943 or by e-mail immediately and delete the message.

IRS CIRCULAR 230 DISCLOSURE:

To ensure compliance with requirements imposed by the IRS, we inform you that any U.S. federal tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding penalties under the Internal Revenue Code or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

From: Deborah Kopald [mailto:deborah_kopald@ymail.com]

Sent: Tuesday, January 14, 2020 11:36 AM

To: Jack Jannarone <jjannarone@highlands-ny.gov>; Alyse Terhune <aterhune@ldzhlaw.com>
Cc: Richard Golden <rgolden@bmglawyers.com>
Subject: Viewing the Record for the ZBA application

Chairman Jannarone and Ms. Terhune,

Is there anything else in the record for my appeal that has been submitted from other parties, besides what I submitted and the letter Mr. Honan presented at the start of the ZBA meeting requesting the hearing be put off?

Mr. Golden (cc'ed) and I would like to see the record before the meeting if there has been anything else submitted to this record. Let us know when before the Public Hearing is closed we may see it (so we can see it before the Public Hearing is Closed and be able to comment on it).

Pursuant to correspondence of Michael Sussman, thank you again for posting the sign about cell phones and making an announcement at the start of the meeting to keep their cell phones off and reminding Kelly Pecoraro to turn off the Wi-Fi before the meeting.

Sincerely,

Deborah

EXHIBIT V

246 Main Street
Cornwall, New York 12518
845-534-2980
NPI – 1447264965

May 1, 2020

Re: Debbie and David Tonneson

Post Office Box 183

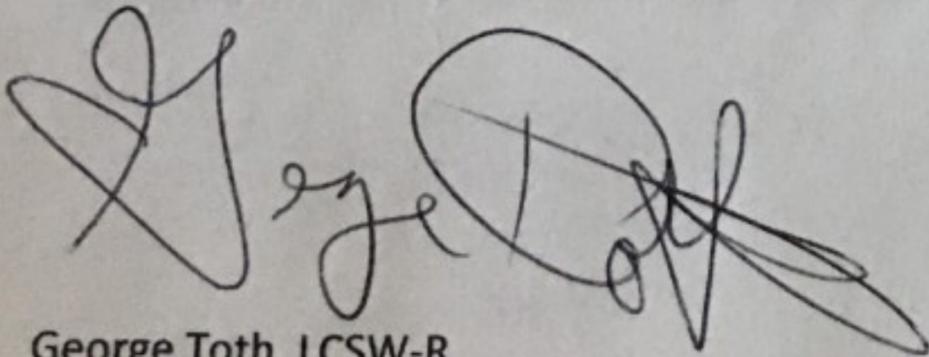
Fort Montgomery, New York 10922

To Whom It May Concern:

This is to indicate that Debbie and David Tonneson are active with supportive psychotherapy and diagnosed as F41.1.

It is noted that much of their anxiety and stress is exacerbated by the alleged abusive crimes continuing to be committed against them and their desire to live in peace.

Sincerely,

A handwritten signature in black ink, appearing to read "George Toth". The signature is stylized and somewhat cursive, with a large loop at the end.

George Toth, LCSW-R



2 Messages

FYI



From: Deborah Kopald

<deborah_kopald@ymail.com>

Date: April 11, 2020 at 5:21:52 PM EDT

To: Bob Livsey <blivsey@highlands-ny.gov>,

Justin Rider <JRider@riderweiner.com>,

Bruce Terwilliger <[bterwilliger@highlands-](mailto:bterwilliger@highlands-ny.gov)

[ny.gov](mailto:bterwilliger@highlands-ny.gov)>

Cc: Kelly Naughton

<knaughton@bmglawyers.com>

Tonnison was working with a crew yesterday and today in violation of the governor's order.

He is not essential construction. He does not qualify as essential property.

He does not have the right to have multiple people on the property working during this emergency.

This has been going on for weeks and for the last two days I have photograph proof of multiple parties on site.

He should have gotten a \$2K citation for yesterday and a \$3K citation today.

Everyone else is complying with the governor's orders. As usual Tonnison is allowed to do whatever he wants.





6 Messages



Although it is another unpleasant email from Ms. Kopald, I am obligated to send this to you. This seems to be focused on the Canterbury lot, which you obviously are not doing anything with.

Robert V. Magrino, Esq.
Robert V. Magrino, PC
222 North Main Street
New City, NY 10956
Tel (845) 639-2411
Fax (845) 638-1912
Magrinolaw.com

From: Deborah Kopald [mailto:deborahciskopald@gmail.com]
Sent: Thursday, December 12, 2019 6:53 PM
To: Robert V. Magrino
Subject:

It appears your clients have misrepresented that they own something they do not own to the police, Orange and Rockland Utilities and via you and a surveyor to a Court.

Please get them under control.

Tell Debbie TREBLE DAMAGES for cutting trees on Canterbury Forest Corporation lot.

And if there is any noise at night, I will hale them back into court for that.



FOIL Response prepared by Jack Jannarone

This document has been prepared to respond to three FOIL request submitted by Ms D. Kopald in June 2020.

Background: In normal times documents concerning ZBA applications are submitted by the applicant in eight copies to the Building Department at least ten days prior to a hearing. Documents can be submitted by hand, by the US Mail or by delivery service. At the building Department, documents are then date stamped, distributed to the appropriate individuals and a copy is filed. An electronic copy can also be submitted especially if the application has to be forwarded to Orange County Planning or other agencies. The Public then has the right to view the documents on file. When the Covid-19 pandemic struck, normal procedure became impossible. The Town Hall was closed. The Building Inspector was deemed essential, but his assistant, and his very part time secretary, were not. The Town Clerk was also not deemed to be essential although she occasionally picked up the Town Mail at the Post Office. The bottom line is that normal procedure would not and could not work.

Governor Cuomo issued Executive Order 202.1 in response to the Covid-19 emergency. This allowed Public Meetings to be conducted online. Because the Town Hall was closed, physical access to the documents submitted to the ZBA was limited and the Building Inspector was flooded with document to be printed and filed. This type of work would normally be done by his secretary. Therefore, in keeping with the intent of the Open Meetings Law and in order to provide access to the documents without endangering people's health, the documents began to be posted online on a newly created link on the Town website. In fact, documents related to the Public Hearings held in May 2020 on the 26 Mine Dock Road and Thayer Flats applications were also published on the Town's website for the same reasons.

All applicants have to meet mailing and posting requirements. An official notice was prepared and published in the local newspaper for both the May and June Public Hearings for Ms Kopald. Ms Kopald's May public hearing was adjourned until June at the request of her lawyer. Copies of both notices were provided to the applicant's attorney for mailing and posting.

There had to be a way to receive new input from the applicant and the Public (i.e., everyone other than the applicant). Because the building Inspector was short staffed, because I am the only member of the ZBA who has a town e-mail address, and because e-mail was the only reliable way to receive new material, I volunteered to receive new input using my town e-mail. This address was included in the Official Notice which was published in the paper and which was mailed and posted as required.

My role was to then forward anything that was received for distribution to the Board Members, the Board's Attorney, the Building Department for printing and filing, the Town IT manager for posting online and to Town Councilman Sullivan in his role as liaison to the Building Department and ZBA. I received nothing in reply from Councilman Sullivan addressing specifics of the Kopald appeal.

All e-mails were then posted on the Town website except for three. The three e-mails that were not posted are (1) an e-mail from Mrs Tonneson which although freely submitted by the Tonneson's contained information that is protected by HIPPA. It was deemed to be not appropriate to post this on the Town website. (2) An e-mail from Mrs Tonneson containing an e-mail written by Ms Kopald which contained inappropriate language by Ms Kopald. This e-mail was posted briefly and then removed. (3) An e-mail from Mrs Tonneson sent after the Public Hearing was closed, and therefore, not considered part of the record.

It is important to note that my response to the three FOIL requests contain only e-mails that originated after my response to Ms Kopald's previous FOIL requests. Also, I have not included duplicative e-mails where I am a recipient but which have been provided by others in the thread. With respect to any e-mails forwarded to the ZBA Attorney, the following note is included as part of this

FOIL response:

This FOIL response includes email correspondence from Jack Jannarone to the ZBA and the Town. The ZBA attorney may be copied on various emails. However, under no circumstances does making these emails available for the limited purpose of responding to these FOIL requests constitute a waiver of attorney client privilege by the Town of Highlands, the Chairman of the Zoning Board, Jack Jannarone, or any individual member of the Zoning Board.

It should also be noted that Mr John Ahearn, who is a lawyer working in the office of Ms Kopald's primary lawyer, Mr Golden, reviewed the files in the Building Department in person both before the Public Hearing in June and again on Thursday, 06/25, pursuant to FOIL requests that he had submitted. Therefore, Ms Kopald may already have the information that she is seeking.

To the best of my knowledge the following are e-mails that are to or from me and that are responsive to Ms Kopald's three recent FOIL requests.

Richard Sullivan <rsullivan@highlands-ny.gov>

Thu 6/18/2020 6:42 AM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Good morning Mr. Jannarone,

Just wanted to convey that I think you are a very rational competent chairman and an asset to the town of Highlands. Best wishes in your deliberations and thank you

Richie Sullivan

Sent from my iPhone

RE: Deborah Kopald Submissions

Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Thu 6/18/2020 5:27 AM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Jack, Post ???

Call me if you can

Thanks,

Bruce

From: Jack Jannarone

Sent: Wednesday, June 17, 2020 6:08 PM

To: Raymond Devereaux <raydev8385@gmail.com>; joemurphy112@yahoo.com; Joe McCormick

<jm2575@aol.com>; Daniel Zint <eagfire@aol.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Dorothy Torpey <dtorpey@highlands-ny.gov>; Kelly Pecoraro <kpecoraro@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>
Subject: Fw: Deborah Kopald Submissions

Here is a last minute submission by Kopald. Please print and post.

Jack

From: Lisa Alvarado <lalvarado@bmglawyers.com>
Sent: Wednesday, June 17, 2020 4:00 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Cc: Alyse Terhune <aterhune@ldzhlaw.com>; Rick Golden <rgolden@bmglawyers.com>
Subject: Deborah Kopald Submissions

Mr. Jannarone:

Attached please find additional affidavits in support of our revised submission on behalf of Deborah Kopald.

Thank you.

Lisa Alvarado
Paralegal
Burke, Miele, Golden & Naughton, LLP
40 Matthews Street, Suite 209
P.O. Box 216
Goshen, New York 10924
P: (845) 294-4080
F: (845) 294-7673

RE: Town of Highlands Consolidated ZBA - Kopald Application
Kelly Pecoraro <kpecoraro@highlands-ny.gov>
Wed 6/17/2020 7:38 AM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

1 attachments (123 KB)
Exhibit 2 - to SMH Letter to ZBA (06-16-2020).pdf;

This is exhibit 2. I didn't see a letter from Bruce. Am I missing something?

Kelly Pecoraro
Comptroller

Town of Highlands
254 Main Street
Highland Falls, NY 10928
Office Phone 845-446-4280 ext 325
Cell Phone 914-393-8896
Fax 845-446-6507

From: Jack Jannarone
Sent: Wednesday, June 17, 2020 6:17 AM
To: Kelly Pecoraro <kpecoraro@highlands-ny.gov>
Subject: Re: Town of Highlands Consolidated ZBA - Kopald Application

Exhibit 2 is a letter from Bruce. I do think that I saw it a long time ago, but not posted here. Just to be sure that we are doing everything correctly, please post it.

Jack

From: Kelly Pecoraro <kpecoraro@highlands-ny.gov>
Sent: Tuesday, June 16, 2020 8:56 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: RE: Town of Highlands Consolidated ZBA - Kopald Application

Jack,

I think exhibit 2 is a duplicate. It was previously posted. Let me know if you agree.

Thanks.

Kelly

Kelly Pecoraro
Comptroller
Town of Highlands
254 Main Street
Highland Falls, NY 10928
Office Phone 845-446-4280 ext 325
Cell Phone 914-393-8896
Fax 845-446-6507

From: Jack Jannarone
Sent: Tuesday, June 16, 2020 7:31 PM
To: Raymond Devereaux <raydev8385@gmail.com>; Joe McCormick <jm2575@aol.com>; joemurphy112@yahoo.com; Daniel Zint <eaglfire@aol.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Kelly Pecoraro <kpecoraro@highlands-ny.gov>; Dorothy Torpey <dtorpey@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>
Cc: Alyse Terhune <aterhune@ldzhlaw.com>
Subject: Fw: Town of Highlands Consolidated ZBA - Kopald Application

All, FYI

Bruce/Dorothy please print and file.

Kelly, please post including text below.

From: Stephen Honan <Shonan@fnmlawfirm.com>
Sent: Tuesday, June 16, 2020 4:56 PM
To: Alyse Terhune <aterhune@ldzhlaw.com>; Jack Jannarone <jjannarone@highlands-ny.gov>; Bernadette Kilduff <bernadettek@fmlpllc.com>; Diane Doyle <diane@fnmlawfirm.com>
Subject: Town of Highlands Consolidated ZBA - Kopald Application

Dear Alyse & Chairman Jannarone:

For the Board's consideration at tomorrow evening's ZBA Public Hearing, attached are my submissions on behalf of Tonneson, which consists of a Letter of today's date with Exhibits annexed 1-3.

Also submitted is my Letter to the ZBA of 1/15/2020 and Exhibits "A" - "D" for the Board's consideration.

Please contact me with any questions or concerns.

Very truly yours,

Steve Honan.

--

Stephen M. Honan, Esq.

Feerick Nugent MacCartney PLLC

96 South Broadway

South Nyack, NY 10960

845.353.2000

845.353.2789 (fax)

shonan@fnmlawfirm.com

FW:

Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Tue 6/16/2020 7:15 AM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

1 attachments (52 KB)

Scan20200616064828.pdf;

-----Original Message-----

From: highlandscopier@town.new-windsor.ny.us <highlandscopier@town.new-windsor.ny.us>

Sent: Tuesday, June 16, 2020 6:49 AM

To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Subject:

Note: the attachment is a letter from Fire Chief Smith dated Sep 6.2019 which is available at the Building Department JMJ

Wildlife and insects are all over the property, and even more so since the house has been completed.

Debbie Tonneson <debbietonneson@hotmail.com>

Mon 6/15/2020 12:58 PM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>;
- Stephen Honan <shonan@fnmlawfirm.com>;
- Debbie Tonneson <debbietonneson@hotmail.com>

26 attachments (25 MB)

ATT00001.txt; ATT00002.txt; ATT00003.txt; ATT00004.txt; ATT00005.txt; ATT00006.txt;

ATT00007.txt; ATT00008.txt; ATT00009.txt; ATT00010.txt; ATT00011.txt; ATT00012.txt;

ATT00013.txt; IMG_4069.jpg; IMG_4059.jpg; IMG_4058.PNG; IMG_4056.PNG; IMG_4053.PNG;

IMG_4050.jpg; IMG_4047.PNG; IMG_9749.jpg; IMG_4021.PNG; IMG_4015.JPG; IMG_4014.JPG;

IMG_3974.PNG; IMG_3976.PNG;

Contrary to what Miss Kopald claims, there is a vast amount of wildlife and insects on our property. Examples below:

Pictures are available on line JMJ

Fw: [Non-DoD Source] possible Army Corps of Engineers violations re: WEDNESDAY 7 p.m. re:Fw:
ZBA brief and Tree Hearing Webex login credentials

Jack Jannarone <jjannarone@highlands-ny.gov>

Mon 6/15/2020 12:24 PM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

2 attachments (3 MB)

Highlands Hemlock Street.pdf; 2020 USACE NY District Regulatory Program Applicant Information Guide.pdf;

To all. The Tonnesons already submitted a neg dec that they received from the Army Corps of Engineers concerning waters of the United States and wetlands. It appears that Ms Kopald also contacted the Corps, but didn't get the response that she expected. Bruce/Dorothy please print. Kelly, please post.

Jack

From: Orzel, Brian A CIV USARMY CENAN (USA) <Brian.A.Orzel@usace.army.mil>

Sent: Monday, June 15, 2020 11:15 AM

To: Deborah Kopald <deborah_kopald@ymail.com>

Cc: Jack Jannarone <jjannarone@highlands-ny.gov>

Subject: RE: [Non-DoD Source] possible Army Corps of Engineers violations re: WEDNESDAY 7 p.m. re:Fw: ZBA brief and Tree Hearing Webex login credentials

Ms. Kopald,

Based upon a desk-top evaluation of the property in question, Tax Map Parcel 11-1-1.52 in the Town of Highlands, it appears unlikely that the Tonnesons discharged fill material into waters of the United States, including wetlands.

When I don't have a lot of information on a site, but I want to get an idea of how wet a property might be, I go to the USDA web site and create a site-specific soil map. Their Web Soil Survey page is located at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Soils that are categorized as any degree of poorly drained could be wetland soils. Very poorly drained soils are almost always wetlands. Well drained soils are usually not wetlands, but sometimes would be in low or flat areas. Attached is the soil map that I generated

at the USDA web site. It shows all of the soils within the area that I outlined are well drained or excessively drained. The soil map, plus the steep topography of the property would lead me to expect that the property is unlikely to contain any waters of the United States, including wetlands.

For your general information, below is general guidance regarding the Corps regulatory program:

The Army Corps of Engineers regulates activities that include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas. Such activities may require a Department of the Army permit, in accordance with 33 CFR 320-332.

Most waterbodies, including wetlands, intermittent streams and natural drainage courses, are considered to be waters of the United States. Currently, the State of New York Department of Environmental Conservation (NYSDEC) recognizes and maps state fresh water wetlands as those wetland areas that are 12.4 acres or more and/or are ecologically unique. A NYSDEC determination classifying an area as a non-state regulated wetland does not free a property owner from his or her obligations under the Clean Water Act; the Corps regulates the discharge of dredged or fill material into all freshwater wetlands, regardless of size.

To remain out of Department of the Army jurisdiction completely, we recommend that an applicant limit the project to those areas upland of any waters or wetlands of the United States. Not only is this environmentally sound, but it could potentially save an applicant considerable time and expense while attempting to obtain necessary federal, state or local permits.

When fill material is contemplated to be placed within those areas of Corps jurisdiction, the extent of these waters of the United States needs to be delineated according to the Federal Methodology, which requires the evaluation of features including the hydrology, the vegetation, and the soils present on the site. The current method for delineating Army Corps of Engineers jurisdictional wetlands is in accordance with the "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region".

The manual may be obtained from the U.S. Army Corps of Engineers New York District website at: <https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4530>

The regional supplement may be obtained from the U.S. Army Corps of Engineers New York District website at: <https://usace.contentdm.oclc.org/utls/getfile/collection/p266001coll1/id/7640>

It is possible that a project may qualify for a nationwide general permit (NWP), in accordance with 33 CFR 330 and the Issuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860 - 2008). An activity is authorized under a nationwide general permit only if that activity and the permittee satisfy all of the nationwide permit's terms and conditions. Unless a nationwide general permit contains a condition requiring the applicant to notify the Corps prior to undertaking the proposed activity, a written authorization is not necessary. Activities that do not qualify for authorization under a nationwide general permit may still be authorized by an individual or regional general permit. The current nationwide permits can be found on the Army Corps of Engineers Headquarters website at: <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Nationwide-Permits/>, or at the New York District website at: <https://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/>.

Given the above, the Corps of Engineers does not need to be further involved in this.

If you have any questions, let me know.

Brian

Brian A. Orzel
Project Manager, Civil Engineer
NY District US Army Corps of Engineers
Regulatory Branch
26 Federal Plaza, Room 16-406
New York, New York 10278-0090

-----Original Message-----

From: Deborah Kopald [mailto:deborah_kopald@ymail.com]
Sent: Saturday, June 13, 2020 7:59 PM
To: Orzel, Brian A CIV USARMY CENAN (USA) <Brian.A.Orzel@usace.army.mil>
Subject: [Non-DoD Source] possible Army Corps of Engineers violations re: WEDNESDAY 7 p.m. re:Fw: ZBA brief and Tree Hearing Webex login credentials

Brian,

this ZBA hearing on Wednesday at 7 p.m. online (Town of Highlands NY) involves claims about the illegal destruction of a forest on a mountain along the Hudson River- and illegal wetland destruction- I think several provisions of the Army Corps of Engineers was violated- can you call me to discuss 845 446 9531.

It would be great if you could attend this hearing online. brief attached. I also have an affidavit with pictures and how I reconstructed the forest destruction that I could send along with affidavit by a Yale Forester regarding wetland destruction

Rgds, Deborah

=====

Wednesday 7 p.m. ZBA Hearing Kopald appeal

WebEx Participation Information:

Site:

Blocked<https://townofhighlands.my.webex.com/townofhighlands.my/j.php?MTID=ma66d60f521441df17695ecfb699e00e5>

Meeting number: 1322577214

Password: z9cRXvsWJ85

Telephone Participation Information:

Dial-In: (408) 418-9388

Password: 99279879

----- Forwarded Message -----
From: Lisa Alvarado

Mr. Jannarone:

Attached please find Richard B. Golden, Esq.'s submission in connection with the Deborah Kopald appeal. Please be advised that Ms. Kopald's affidavit and exhibits will be sent under separate cover.

If your office is unable to open the following email with exhibits due to its size, please contact our office and we will forward the exhibits in smaller portions.

Thank you.

Lisa Alvarado
Paralegal
Burke, Miele, Golden & Naughton, LLP
40 Matthews Street, Suite 209
P.O. Box 216
Goshen, New York 10924

Fwd: Tonneson's Fort Montgomery NY
Debbie Tonneson <debbietonneson@hotmail.com>
Sat 6/13/2020 3:39 PM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Electrical lines being installed in January, 2020 when David Tonneson was in the hospital with sepsis . These are not trenches for drainage pipes as was accused by Deborah Kopald.

Sent from my iPhone

Begin forwarded message:

From: "cjcmk1 ." <cjcmk@gmail.com>
Date: June 13, 2020 at 2:10:46 PM EDT
To: "debbietonneson@hotmail.com" <debbietonneson@hotmail.com>

Subject: Fwd: Tonneson's Fort Montgomery NY

----- Forwarded message -----
From: **cjcmlk1** . <cjcmlk@gmail.com>
Date: Thu, Jan 16, 2020, 3:18 PM
Subject: Tonneson's Fort Montgomery NY
To: <peiferc@oru.com>

Please see attached images of utility pole, service line, and covered conduit. Any questions or concerns should be directed to Jim Conley at 914-804-0428

Note: one picture would not copy. All are available online JMJ

Fwd: Property in Fort Montgomery, NY, Parcel 11-1-1.52
Debbie Tonneson <debbietonneson@hotmail.com>
Sat 6/13/2020 11:51 AM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>;
- Aces Surveying <jmillenlls@acessurveying.com>

4 attachments (3 MB)
20200506_15581703542_1_Drainage_Class.pdf; ATT00001.htm; 2019 USACE Regulatory Program Applicant Information Guide.pdf; ATT00002.htm;
Army corps of engineers report and guidelines.

Sent from my iPhone

Begin forwarded message:

From: "Orzel, Brian A CIV USARMY CENAN (USA)" <Brian.A.Orzel@usace.army.mil>
Date: May 6, 2020 at 7:14:57 PM EDT
To: "debbietonneson@hotmail.com" <debbietonneson@hotmail.com>
Subject: Property in Fort Montgomery, NY, Parcel 11-1-1.52

Ms. Tonneson,

This is in response to your email inquiry of May 3, 2020, regarding Tax Map Parcel 11-1-1.52 in the Town of Highlands, Orange County, New York.

In your email, you requested to know whether wetlands are located on your property.

The Corps of Engineers does not draw or maintain wetland maps. The only time that we would have information on the presence of a wetland would be if someone applied for a

permit from this office and we still have a record of it. I've checked our data base and it appears that the Corps of Engineers has never reviewed a project on your property.

When I don't have a lot of information on a site, but I want to get an idea of how wet a property might be, I go to the USDA web site and create a site-specific soil map. Their Web Soil Survey page is located

at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Soils that are categorized as any degree of poorly drained could be wetland soils. Very poorly drained soils are almost always wetlands. Well drained soils are usually not wetlands, but sometimes would be in low or flat areas. Attached is the soil map that I generated at the USDA web site. It shows all of the soils within the area that I outlined (hopefully encompassing the whole property) are well drained or excessively drained. The soil map, plus the steep topography of the property would lead me to expect that the property is unlikely to contain any waters of the United States, including wetlands.

The Corps of Engineers only has jurisdiction over projects in your area if there would be a discharge of fill material into waters of the United States, including wetlands. So, even if I had an indication that you might have wetlands on the property, all you would have to do to avoid our jurisdiction would be to not place fill material within the wetlands. But, since it appears unlikely that you have wetlands on the property, the point is moot.

Another clue as to whether or not you have wetland soils within your project area (the home site) is whether you can get a good percolation test for your septic system. If the soils that naturally occur on site have a percolation rate that favors the installation of a septic system, that means that water can pass through the pore space, allowing liquids to wick away from your septic field and tank. Wetland soils do not allow liquids to pass through rapidly enough to use for a septic field. By virtue of the fact that you told me that your septic site got a good perc test, the soils therein would not be wetland soils.

So, based upon the information that you provided and the information that I was able to find on line, it seems unlikely that you have any waters on site that are jurisdictional under Section 404 of the Clean Water Act.

If you need anything more definite than the above, you will need to hire a professional wetland delineator and have them submit a formal wetland delineation map and report to this office for our review.

For your general information, below is general guidance regarding the Corps regulatory program:

The Army Corps of Engineers regulates activities that include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas. Such activities may require a Department of the Army permit, in accordance with 33 CFR 320-332.

Most waterbodies, including wetlands, intermittent streams and natural drainage courses, are considered to be waters of the United States. Currently, the State of New York Department of Environmental Conservation (NYSDEC) recognizes and maps state fresh water wetlands as those wetland areas that are 12.4 acres or more and/or are ecologically unique. A NYSDEC determination classifying an area as a non-state regulated wetland does not free a property owner from his or her obligations under the Clean Water Act; the Corps regulates the discharge of dredged or fill material into all freshwater wetlands, regardless of size.

To remain out of Department of the Army jurisdiction completely, we recommend that an applicant limit the project to those areas upland of any waters or wetlands of the United States. Not only is this environmentally sound, but it could potentially save an applicant considerable time and expense while attempting to obtain necessary federal, state or local permits.

When fill material is contemplated to be placed within those areas of Corps jurisdiction, the extent of these waters of the United States needs to be delineated according to the Federal Methodology, which requires the evaluation of features including the hydrology, the vegetation, and the soils present on the site. The current method for delineating Army Corps of Engineers jurisdictional wetlands is in accordance with the "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region".

The manual may be obtained from the U.S. Army Corps of Engineers New York District website at: <https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4530>

The regional supplement may be obtained from the U.S. Army Corps of Engineers New York District website at: <https://usace.contentdm.oclc.org/utills/getfile/collection/p266001coll1/id/7640>

It is possible that a project may qualify for a nationwide general permit (NWP), in accordance with 33 CFR 330 and the Issuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860 - 2008). An activity is authorized under a nationwide general permit only if that activity and the permittee satisfy all of the nationwide permit's terms and conditions. Unless a nationwide general permit contains a condition requiring the applicant to notify the Corps prior to undertaking the proposed activity, a written authorization is not necessary. Activities that do not qualify for authorization under a nationwide general permit may still be authorized by an individual or regional general permit. The current nationwide permits can be found on the Army Corps of Engineers Headquarters website at: <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Nationwide-Permits/>, or at the New York District website at: <https://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/>.

If you have any questions, let me know.

Brian

Brian A. Orzel
Project Manager, Civil Engineer
NY District US Army Corps of Engineers
Regulatory Branch
26 Federal Plaza, Room 16-406

New York, New York 10278-0090

Note: the attachments are available online JMJ

Fw: 20200506_15581703542_1_Drainage_Class.pdf
Jack Jannarone <jjannarone@highlands-ny.gov>
Sat 6/13/2020 1:36 PM
To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@lewismckenna.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

1 attachments (476 KB)
20200506_15581703542_1_Drainage_Class.pdf;
All, FYI
Bruce/Dorothy, please print and place in the Kopald file
Kelly, please post on the Town website

Also see next submission which gives context.

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Saturday, June 13, 2020 11:49 AM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: 20200506_15581703542_1_Drainage_Class.pdf

Army Corp of Engineers Diagrams

Note: the attachment is available online. JMJ

Fw: Foil faced expanded poly styrene foam insulation that contains wifi inside the home.

Jack Jannarone <jjannarone@highlands-ny.gov>

Fri 6/12/2020 6:46 PM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

All, FYI

Bruce/Dorothy, please print and place in the Kopald file

Kelly, please post on the Town website

From: Debbie Tonneson <debbietonneson@icloud.com>

Sent: Friday, June 12, 2020 6:17 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>; Debbie Tonneson <debbietonneson@hotmail.com>;
Stephen Honan <shonan@fnmlawfirm.com>

Subject: Foil faced expanded poly styrene foam insulation that contains wifi inside the home.

We had this Thermo Max on the exterior of our structure.

*We feel Deborah Kopald could not be feeling any WiFi because

#1. The house is still unoccupied

#2. The special foil faced insulation

#3. The modem will be placed in excess of 300 feet from Deborah Kopald's house and from research, the signal rays deplete with distance and will go no further than 300 feet.

#4. The thermo pane windows are argon filled and research indicate that argon filled windows deflect WiFi signals.

Note; The attachments are available online. JMJ

Fw: Fort Montgomery fire department approval of driveway access.

Jack Jannarone <jjannarone@highlands-ny.gov>

Fri 6/12/2020 5:00 PM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

All, FYI

Bruce/Dorothy, please print and place in the Kopald file

Kelly, please post on the Town website

From: Debbie Tonneson <debbietonneson@icloud.com>

Sent: Friday, June 12, 2020 4:55 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Subject: Fort Montgomery fire department approval of driveway access.

Note: Attachments are available online. JMJ

No storm trenches or drains dumping water on Hemlock Street

Debbie Tonneson <debbietonneson@icloud.com>

Fri 6/12/2020 4:40 PM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

We have never installed storm trenches or drains Dumping water on Hemlock Street. Again, Deborah Kopald is miss represented our actions. The photo below from her Surveyor drone harassing surveillance, shows the trenches that were dug for the orange and Rockland electric utilities.

*Note: Deborah Kopald has made more than 20 unfounded and untrue allegations against us with the Town Of Highlands Police Department, the state of New York troopers, and the Town Of Highlands building department....all in her attempt to harass us and beat us down.

Note: Attachments are available online. JMJ

Fw: ACES Affidavit for Area Disturbed Tonneson Tax ID 11-1-1.52

Jack Jannarone <jjannarone@highlands-ny.gov>

Fri 6/12/2020 4:58 PM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

2 attachments (2 MB)

Affidavit 06-12-20 Site Plan.pdf; 19026TON Base 05-28-20 LLR S2 r2.pdf;

All, FYI

Bruce/Dorothy, please print and place in the Kopald file

Kelly, please post on the Town website

From: Aces Surveying <jmillenlls@acessurveying.com>

Sent: Friday, June 12, 2020 4:31 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Cc: debbietonneson@hotmail.com <debbietonneson@hotmail.com>

Subject: ACES Affidavit for Area Disturbed Tonneson Tax ID 11-1-1.52

Hello Jack.

On behalf of the Tonneson's please find attached PDF of Affidavit attesting that the entire area disturbed, or graded, during the entire construction process was 36,500 square feet. Well below the 43,560 requiring the preparation of a SWPPP. I have also attached a PDF of Sheet 2 the Site Plan for this project which is referred to as Exhibit D in the affidavit.

Please contact me at 914-906-8830 if you have questions, comments, or concerns.

Regards,

Jonathan N. Millen, L.L.S., NY Lic. No. 050746

Automated Construction Enhanced Solutions, Inc. dba ACES

1229 Route 300 – Suite 3

Newburgh, NY 12550

Office: 845-943-7198

Field: 914-906-8830

JMillenLLS@acessurveying.com

<http://www.acessurveying.com/>

***The contents of this e-mail and any attachments are intended solely for the addressee(s). This communication is intended to be and is to remain confidential, privileged, restricted, secret, and immunized, and may be subject to the agent-client privilege, work-product immunity, confidentiality, trade secret and proprietary restrictions. If you are not the intended recipient of this e-mail and any attachments, or if this message has been addressed to you in error, you are requested to take immediate steps to alert the sender by reply e-mail and then delete this message and its attachments. Do not deliver, distribute, copy, disclose or rely upon the contents of this message or any attachments.*

Note: attachments are available online. JMJ

Fw: Septic on Tonneson property
Jack Jannarone <jjannarone@highlands-ny.gov>
Fri 6/12/2020 4:43 PM
To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

All, FYI
Bruce/Dorothy, please print and place in the Kopald file
Kelly, please post on the Town website

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Friday, June 12, 2020 4:23 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: Septic on Tonneson property

The septic system was approved by two engineering companies. Ours and the Town Of Highlands.

Note: Images are available online. JMJ

Fw: Trees (ordinance of TOH)
Jack Jannarone <jjannarone@highlands-ny.gov>
Fri 6/12/2020 4:39 PM
To:

- Raymomd Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>

All, FYI

Bruce/Dorothy, please print and place in the Kopald file

Kelly, please post on the Town website

From: Debbie Tonneson <debbietonneson@icloud.com>

Sent: Friday, June 12, 2020 4:17 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Subject: Trees (ordinance of TOH)

*We vehemently oppose the fact that we took down 39 full grown live trees. Most trees were dead, diseased, and fallen due to the gypsy moth infestation the past few years.

Even though the Tonneson's have a legal permit which exempts a single-family home, we assert we only cleared fallen dead and dying trees. *Deborah Kopald's Google earth photos were from 2016 and does not reflect the forest of 2019.

* Note: According to the ordinance, a tree is a live plant that is at least 4 inches in diameter, 4 feet from the ground level, and 13 feet high in full foliage.

Note: Numerous images and photos are available online JMJ

Tonneson land development

Debbie Tonneson <debbietonneson@icloud.com>

Fri 6/12/2020 3:53 PM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Cc:

- Debbie Tonneson <debbietonneson@hotmail.com>

1 attachments (53 KB)
Affidavit 06-12-20 Site Plan.pdf;

Re: Tonneson land development
Jack Jannarone <jjannarone@highlands-ny.gov>
Fri 6/12/2020 4:11 PM
To:

- Debbie Tonneson <debbietonneson@icloud.com>

Could you ask Mr Millen to send me a copy of Sheet 2 that can be blown up. The version that you forwarded is too small to read.

Thanks

Jack Jannarone

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Friday, June 12, 2020 3:53 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Cc: Debbie Tonneson <debbietonneson@hotmail.com>
Subject: Tonneson land development

Fw: Utility line trenches (not drainage)
Jack Jannarone <jjannarone@highlands-ny.gov>
Thu 6/11/2020 8:28 PM
To:

- Raymomd Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Bruce, please print and place in the Kopald file
Kelly, please post.

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Thursday, June 11, 2020 6:57 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: Utility line trenches (not drainage)

Note: Photo and image available online. JMJ

Re: Site visit
Jack Jannarone <jjannarone@highlands-ny.gov>
Thu 6/11/2020 8:30 PM
To:

- Debbie Tonneson <debbietonneson@icloud.com>

Please create a new message so that it can be so that it can be printed for the file and posted online.

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Thursday, June 11, 2020 5:42 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: Fwd: Site visit

Sent from my iPhone

Begin forwarded message:

From: Debbie Tonneson <debbietonneson@icloud.com>
Date: June 11, 2020 at 4:49:58 PM EDT
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: Re: Site visit

Please let us know if you have any questions about Jaidin's property. We are complete and are awaiting a certificate of occupancy.

Please notify the other board members they are also welcome to personally inspect the site.

We are, and always have been, completely transparent.

Wildlife on the property on June 4th, 2020.....

Fire truck testing location accessibility on June 9, 2020.

Sent from my iPhone

On Jun 10, 2020, at 5:59 PM, Debbie Tonneson <debbietonneson@icloud.com> wrote:

I just saw your message Jack. Yes, come over anytime and feel free to walk around the house and through the house. The front door is unlocked. I will tell Dave and Jaidin that you might be coming. We would love for you to see that we have done everything correctly.

Also, there is no storm water drains going down the property as shown in her illegal aerial photographs. That is the Orange And Rockland Electric line that we brought down through the property because she would not let us hook up to the pole on Forest Hill Road.

And we purchased the vacant land. The house's she's referring to on the parcel were sold before zoning in the Town Of Highlands. Therefore, we want you and the board to know that it is not a subdivision. It is a single-family home on a 13.2 acre lot.

Sent from my iPhone

On Jun 9, 2020, at 6:14 PM, Jack Jannarone <jjannarone@highlands-ny.gov> wrote:

I haven't seen the property since last winter so I would like to drive over in a day or two. I drive a silver Hyundai Elantra, will be wearing a mask, will be practicing social distancing, and will be wearing a hat even though I am not bald.

Jack Jannarone
ZBA Chairman

ack Jannarone <jjannarone@highlands-ny.gov>

Wed 6/10/2020 10:09 AM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>

1 attachments (169 KB)

Scan20200610092359.pdf;

FYI from Bruce concerning phased permits

From: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Sent: Wednesday, June 10, 2020 9:36 AM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: FW:

Jack-in case you are wondering the 2015 Residential code is in effect for Mr. Tonneson's project.
Regards,
bruce

-----Original Message-----

From: highlandscopier@town.new-windsor.ny.us <highlandscopier@town.new-windsor.ny.us>
Sent: Wednesday, June 10, 2020 9:24 AM
To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Subject:

CS 3501i
[00:17:c8:24:7f:a9]

Note: unable to provide the attachment, check Terwilliger response. JMJ

Re: Deborah Kopald Submission
Jack Jannarone <jjannarone@highlands-ny.gov>
Tue 6/9/2020 11:28 AM
To:

- Kelly Pecoraro <kpecoraro@highlands-ny.gov>

Yes please. Both .pdf's submitted by Kopald yesterday.
Jack

From: Kelly Pecoraro <kpecoraro@highlands-ny.gov>
Sent: Tuesday, June 9, 2020 9:22 AM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: RE: Deborah Kopald Submission

Jack,

This has to be posted on the website, correct?

Kelly Pecoraro

Comptroller

Town of Highlands

254 Main Street

Highland Falls, NY 10928

Office Phone 845-446-4280 ext 325

Cell Phone 914-393-8896

Fax 845-446-6507

From: Jack Jannarone

Sent: Monday, June 8, 2020 5:21 PM

To: Raymond Devereaux <raydev8385@gmail.com>; Joe McCormick <jm2575@aol.com>; joemurphy112@yahoo.com; Daniel Zint <eaglfire@aol.com>; Kelly Pecoraro <kpecoraro@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>

Subject: Fw: Deborah Kopald Submission

From: Lisa Alvarado <lalvarado@bmglawyers.com>

Sent: Monday, June 8, 2020 4:52 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Cc: aterhune@ldzhlaw.com <aterhune@ldzhlaw.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Subject: Deborah Kopald Submission

Mr. Jannarone:

Attached please find Richard B. Golden, Esq.'s submission in connection with the Deborah Kopald appeal. Please be advised that Ms. Kopald's affidavit and exhibits will be sent under separate cover.

If your office is unable to open the following email with exhibits due to its size, please contact our office and we will forward the exhibits in smaller portions.

Thank you.

Lisa Alvarado

Paralegal

Burke, Miele, Golden & Naughton, LLP

40 Matthews Street, Suite 209

P.O. Box 216

Goshen, New York 10924

P: (845) 294-4080

F: (845) 294-7673

Note: The attachment is on the website and no doubt submitted directly to her by her lawyer. JMJ

Jack Jannarone <jjannarone@highlands-ny.gov>

Mon 6/8/2020 5:29 PM

To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Kelly Pecoraro <kpecoraro@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

1 attachments (13 MB)

Kopald Affidavit (with exhibits) 6-8-20.pdf;

Kelly, Please post this and the previous submittal on the Town website..

Jack

From: Lisa Alvarado <lalvarado@bmglawyers.com>

Sent: Monday, June 8, 2020 4:54 PM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Cc: aterhune@ldzhlaw.com <aterhune@ldzhlaw.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Subject: Deborah Kopald Submission (Email 2 of 2)

Note: Attachment posted on website and provided by her lawyer.

Re: Kopald Affidavits

Kelly Naughton <knaughton@bmglawyers.com>

Mon 6/8/2020 2:41 PM

To:

- Alyse Terhune <aterhune@ldzhlaw.com>

Cc:

- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Jack Jannarone <jjannarone@highlands-ny.gov>;
- Richard Golden <rgolden@bmglawyers.com>

Yes, it will be emailed and mailed by the end of the day today.

Thank you!

-Kelly

On Jun 8, 2020, at 2:21 PM, Alyse Terhune <aterhune@ldzhlaw.com> wrote:

Thank you, Kelly. A reminder, the application is due today.

Alyse Terhune, Esq.
82 East Allendale Road
Saddle River, NJ 07458
(201) 934-9800

This transmission contains information from the law firm of Alyse D. Terhune, Esq., which may be confidential and/or privileged. This information is intended to be for the exclusive use of the individual or entity named above. If you are not the intended recipient, be advised that any disclosure, copying, distribution or other use of this information is strictly prohibited. If you have received this transmission in error, please notify us by telephone at 201 934-9800 or 212 772-0943 or by e-mail immediately and delete the message.

IRS CIRCULAR 230 DISCLOSURE:

To ensure compliance with requirements imposed by the IRS, we inform you that any U.S. federal tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding penalties under the Internal Revenue Code or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

From: Kelly Naughton [<mailto:knaughton@bmglawyers.com>]
Sent: Monday, June 08, 2020 2:19 PM
To: Alyse Terhune <aterhune@ldzhlaw.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Jack Jannarone <jjannarone@highlands-ny.gov>
Cc: Richard Golden <rgolden@bmglawyers.com>
Subject: Kopald Affidavits

Hi Alyse,
For the Town's files, attached please find the Affidavit of Mailing, Affidavit of Service and the Affidavit of Posting for the Board's hearing. A hard copy will be mailed to the Town. Please let me know if you need anything further!
Thank you,
Kelly

Kelly M. Naughton, Esq.
Burke, Miele, Golden & Naughton, LLP
40 Matthews Street, Suite 209
P.O. Box 216
Goshen, New York 10924
(845) 294-4080 - P
(845) 294-7673 - F

Re:
Kelly Naughton <knaughton@bmglawyers.com>
Wed 6/3/2020 10:29 AM
To:

- Alyse Terhune <aterhune@ldzhlaw.com>

Cc:

- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Jack Jannarone <jjannarone@highlands-ny.gov>

Thank you Alyse!

Thank you Bruce; I am putting together the signage and mailings today, so they will be taken care of by the end of the week. If I have any questions, I will reach out.

Thank you!

-Kelly

> On Jun 3, 2020, at 8:43 AM, Alyse Terhune <aterhune@ldzhlaw.com> wrote:

>

> Kelly, see below.

>

> Alyse Terhune, Esq.

> 82 East Allendale Road

> Saddle River, NJ 07458

> (201) 934-9800

>

> This transmission contains information from the law firm of Alyse D. Terhune, Esq., which may be confidential and/or privileged. This information is intended to be for the exclusive use of the individual or entity named above. If you are not the intended recipient, be advised that any disclosure, copying, distribution or other use of this information is strictly prohibited. If you have received this transmission in error, please notify us by telephone at 201 934-9800 or 212 772-0943 or by e-mail immediately and delete the message.

>

> IRS CIRCULAR 230 DISCLOSURE:

> To ensure compliance with requirements imposed by the IRS, we inform you that any U.S. federal tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding penalties under the Internal Revenue Code or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

>

>

> -----Original Message-----

> From: Bruce Terwilliger [<mailto:bterwilliger@highlands-ny.gov>]

> Sent: Wednesday, June 03, 2020 8:12 AM

> To: knaughton@bmglawyers.com

> Cc: Alyse Terhune <aterhune@ldzhlaw.com>; Jack Jannarone <jjannarone@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>

> Subject: FW:

>

> Hi Kelly,

> I have been away from my office and have not touched base with Alyse Terhune since my return. I am checking to make sure the information and materials your client Deborah Kopald needs is in place. My office has sent the mailing list and the Procedure for Notice of Hearing information to your office twice and the placard for posting and necessary affidavits was given to John Ahern from your office on April 29th when he reviewed the ZBA file. If you should need anything let me know.

> Regards,

> Bruce

>

> -----Original Message-----
> From: highlandscopier@town.new-windsor.ny.us [<mailto:highlandscopier@town.new-windsor.ny.us>]
> Sent: Wednesday, June 03, 2020 7:51 AM
> To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
> Subject:
>
> -----
> CS 3501i
> [00:17:c8:24:7f:a9]
> -----
> <Scan20200603075102.pdf>

From: Jack Jannarone <jjannarone@highlands-ny.gov>
To: Raymond Devereaux <raydev8385@gmail.com>; Joe McCormick <jm2575@aol.com>;
joemurphy112@yahoo.com <joemurphy112@yahoo.com>; Daniel Zint <eaglfire@aol.com>; Alyse Terhune
<aterhune@ldzhlaw.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Dorothy Torpey
<dtorpey@highlands-ny.gov>
Sent: Thu, May 21, 2020 8:19 pm
Subject: Fw: AFFIDAVIT APP DIV TRO EMERGENCY fifth.pdf

Bruce/Dorothy, Please print the attachment and place in the Kopald ZBA file.

From: Debbie Tonneson <debbietonneson@hotmail.com>
Sent: Thursday, May 21, 2020 3:27 PM
To: Jack Jannarone; jmccormick@highlands-ny.gov; jmurphy@highlands-ny.gov;
rdevereaux@highlands-ny.gov; dzint@highlands-ny.gov
Subject: AFFIDAVIT APP DIV TRO EMERGENCY fifth.pdf

This is the first emergency appeal that Deborah Kopald filed against the Town Of Highlands and the Tonneson family. It's filled with false allegations and complete lies. I will be sending further emails of our response and then for some reason she chose to respond again even though the court will not allow it.

FYI: At no time did we have work crews working at the house during the governors directives during this pandemic. The picture she has is of parked vehicles that were our vehicles or Tony Squicciarini's vehicles when he borrows equipment from Dave Tonneson .
The photos of the two people that she claims are too balding men are of Debbie Tonneson and David Tonneson. We are a married couple and live together. To our knowledge, that is permissible.

Note: The affidavit is Ms Kopald's appeal the the Appellate Division, Second Department.
The picture taken by Ms Kopald shows what she claims are two bald men. JMJ

Fw: Tonneson Aff.pdf
Jack Jannarone <jjannarone@highlands-ny.gov>
Thu 5/21/2020 8:23 PM
To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

2 attachments (596 KB)

Tonneson Aff.pdf; ATT00001.txt;

Bruce/Dorothy, Please print the attachment and place in the Kopald ZBA file.

From: Debbie Tonneson <debbietonneson@hotmail.com>

Sent: Thursday, May 21, 2020 3:30 PM

To: Jack Jannarone; jmccormick@highlands-ny.gov; jmurphy@highlands-ny.gov; dzint@highlands-ny.gov; rdevereaux@highlands-ny.gov

Subject: Tonneson Aff.pdf

Our response

Note: The attachment is the response by David Tonneson to the Kopald appeal to the Appellate Division. JMJ

Reply Affd of DK (05-18-20).pdf

Debbie Tonneson <debbietonneson@hotmail.com>

Thu 5/21/2020 3:41 PM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>;
- jmccormick@highlands-ny.gov <jmccormick@highlands-ny.gov>;
- jmurphy@highlands-ny.gov <jmurphy@highlands-ny.gov>;
- rdevereaux@highlands-ny.gov <rdevereaux@highlands-ny.gov>;
- dzint@highlands-ny.gov <dzint@highlands-ny.gov>

2 attachments (818 KB)

Reply Affd of DK (05-18-20).pdf; ATT00001.txt;

FYI: If fees are waived for Deborah Kopald, it gives her more power to harass us and others in the future. We ask the zoning board of appeals to look objectively at her request. We assert that we have only follow the guidelines of the building inspector and the governors directives during this pandemic shut down.

She falsely claims we sent her a letter about cell towers which we did not. It did not come from us. We have absolutely no contact with her.

We as a family living of three living together have been the ones working on our own property. Everything she claims in her documents are complete fabrications and downright lies. She is a serial pro se Vexatious frivolous litigant. We hope and pray the court sees that.

Note: The attachment is Ms Kopald's REPLY AFFIDAVIT to the Appellated Division. JMJ

Fw: Affm of SMH - Affd of Tonneson - AOS (05-14-20).pdf
Jack Jannarone <jjannarone@highlands-ny.gov>
Thu 5/21/2020 8:24 PM
To:

- Raymomd Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>

2 attachments (4 MB)

Affm of SMH - Affd of Tonneson - AOS (05-14-20).pdf; ATT00001.txt;
Bruce/Dorothy, Please print the attachment and place in the Kopald ZBA file.

From: Debbie Tonneson <debbietonneson@hotmail.com>
Sent: Thursday, May 21, 2020 3:33 PM
To: Jack Jannarone; jmccormick@highlands-ny.gov; jmurphy@highlands-ny.gov; rdevereaux@highlands-ny.gov; dzint@highlands-ny.gov
Subject: Affm of SMH - Affd of Tonneson - AOS (05-14-20).pdf

Our attorneys response:

Note: The attachment is the response by Mr Honan, lawyer for Tonneson, to the Appellate Division. JMJ

Re: Kopald - Extension Request
Kelly Pecoraro <kpecoraro@highlands-ny.gov>
Thu 5/7/2020 7:41 AM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

And thank you for the kind words ?

Sent from my iPhone

On May 7, 2020, at 7:18 AM, Jack Jannarone <jjannarone@highlands-ny.gov> wrote:

Please see the attachment from Ms Kopald's lawyer requesting an adjournment of her her Public Hearing until June. I have agreed with the request based on his health issues. There is another Kelly on the thread. That is Kelly Naughton who is a law partner with Mr Golden and not our Kelly who has been so helpful to the ZBA during the Corona virus crisis in addition to performing her real job as Town Comptroller. But it never seems to end. Kelly, when can I call?
Jack

From: Kelly Naughton <knaughton@bmglawyers.com>
Sent: Wednesday, May 6, 2020 5:46 PM
To: Alyse Terhune <aterhune@ldzhlaw.com>; Jack Jannarone <jjannarone@highlands-ny.gov>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Cc: Richard Golden <rgolden@bmglawyers.com>
Subject: Kopald - Extension Request

Hi Alyse,
Please see the attached letter requesting an adjournment until the June meeting.
Thank you!
-Kelly

Kelly M. Naughton, Esq.
Burke, Miele, Golden & Naughton, LLP
40 Matthews Street, Suite 209
P.O. Box 216
Goshen, New York 10924
(845) 294-4080 - P
(845) 294-7673 – F

Fw: Another state police call!!! Harassment
Jack Jannarone <jjannarone@highlands-ny.gov>
Tue 4/14/2020 1:17 PM
To:

- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Alyse Terhune <aterhune@ldzhlaw.com>

ZBA members forwarded to your correct e-mail addresses. Bruce or Dorothy, Please print and place

in the Kopald ZBA file.
Jack

From: Debbie Tonneson <debbietonneson@hotmail.com>
Sent: Tuesday, April 14, 2020 12:06 PM
To: Bob Livsey; Justin Rider; Jack Jannarone; Bruce Terwilliger; Richard Sullivan; Richard Parry; jmurphy@highlands-ny.gov; jmccormick@highlands-ny.gov; rdevereaux@highlands-ny.gov; Francis Pierri; Ty King; esmith@highlands-ny.org; Stephen Honan
Subject: Another state police call!!! Harassment

We had another state trooper here today from the Newburgh office because Deborah Kopald turned us in for illegal construction. That is That is five false reports from her in the past week. Dave Tonneson is working by himself at our home. We own the property, we own the home, he's trying to stay busy, we are doing nothing wrong. We want to press charges against her for continuous harassment. The judge labeled her a vexatious litigant. Someone needs to protect us from her.

No law abiding family should have to put up with this abuse and torture. We are trying to cope with this coronavirus invisible enemy and are under a great deal of anxiety. We are trying to plan a wedding for our youngest child in which we don't even know can happen. We are doing small things around our own house. We are not making any noise. There are no crews here. We are following the law. We are being continuously and viciously attacked by her using The town please and the state troopers to visit our property. this is extremely stressful.

Fw: FYI
Jack Jannarone <jjannarone@highlands-ny.gov>
Mon 4/13/2020 6:45 AM
To:

- Alyse Terhune <aterhune@ldzhlaw.com>;
- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>

Bruce or Dorothy, Pleas print both messages in this thread and place in the Kopald ZBA file. [REDACTED]

Jack

From: Debbie Tonneson <debbietonneson@hotmail.com>
Sent: Sunday, April 12, 2020 9:35 PM
To: Francis Pierri <fpierri@tohpolic.com>; Bob Livsey <blivsey@highlands-ny.gov>; Bruce Terwilliger

<bterwilliger@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>; Richard Parry <rparry@highlands-ny.gov>; jmccormick@highlands-ny.gov <jmccormick@highlands-ny.gov>; jmurphy@highlands-ny.gov <jmurphy@highlands-ny.gov>; rdevereaux@highlands-ny.gov <rdevereaux@highlands-ny.gov>; Jack Jannarone <jjannarone@highlands-ny.gov>; Justin Rider <JRider@riderweiner.com>; Ty King <tking@highlands-ny.gov>; Debbie Tonneson <debbietonneson@icloud.com>; Debbie Tonneson <debbietonneson@hotmail.com>

Subject: Fwd: FYI

FYI

Deborah Kopald's continuous FALSE CLAIMS are harassment, slander, stalking, invalid and misleading lies. The Tonneson's ask for her to be charged under the law. OUR CIVIL RIGHTS are being blatantly violated. We are being discriminated against by the town because of the town's fear of her lawsuits. We know through foil that she has threatened almost every person that works for the town, in some capacity or another. We know that Justin Rider has been threatened to be turned into the Attorneys grievance committee of New York State. Is that why attorney rider will not agree to file charges against her? Clearly our rights as taxpaying landowners are being extremely violated. We are being denied the enjoyment of our property we paid her mother and uncle a lot of money for. She can file numerous lawsuits and cost the citizens of this community much revenue, are being discriminated against by the town because of the town's fear of her lawsuits, but she will never win because she is absolutely incorrect as documented by the state police on Saturday, March 28 and again on Saturday, April 11th. (On or about April 8th, we observed officer Huff at the base of our driveway and assumed Deborah Kopald was making false accusations yet again!)

* No crews have been working at our house! We have always complied with the governors directive. The picture that Deborah Kopald is talking about from the back deck was Dave Tonneson and his wife Deborah Tonneson. Deborah Tonneson waved at her. No one thumbed their nose at her. We have never purposely tried to make noise, never broke the law, and always follow the directive of the building inspector. That we can assure you. furthermore, We would be wonderful neighbors if she would just allow it. Clearly she will not. Please help us resolve this matter before we are forced to file our own lawsuit. We're trying really desperately not to.

Again, she is not the monarch of the Town Of The Highlands, (As she behaves) , and she was not elected to any official position. She cannot make up the laws or INTERPRET the laws as she sees fit. I advise the officials of the Town Of The Highlands to disregard her blatant threats and her Flaunting her legal knowledge. She will appeal anything she can, but she is incorrect, and will never win. She's only wasting the Town's money, and ours.

We will not be employing an attorney any longer. We have spent entirely too much money when the town's lawyer should be handling all of this himself!!!! Justin Rider and his firm needs to defend the building inspector at the ZBA public hearing and the members of the community, not just one individual. We ask, where was the town's attorney at the last ZBA hearing in January? He wasn't there. The building inspector, Our home and our investment was not defended.

Lastly, we're only simply trying to build a single-family home for our daughter and her fiancé who are to be married this summer. We ask, why is Deborah Kopald so afraid of one single family house on a 15 acre lot?

Sent from my iPhone

Begin forwarded message:

From: Bob Livsey <blivsey@highlands-ny.gov>
Date: April 12, 2020 at 6:35:00 AM EDT
To: Debbie Tonneson <debbietonneson@hotmail.com>
Subject: Fwd: FYI

Sent from my iPhone

Begin forwarded message:

From: Deborah Kopald <deborah_kopald@ymail.com>
Date: April 11, 2020 at 5:21:52 PM EDT
To: Bob Livsey <blivsey@highlands-ny.gov>, Justin Rider <JRider@riderweiner.com>, Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Cc: Kelly Naughton <knaughton@bmglawyers.com>

Tonneson was working with a crew yesterday and today in violation of the governor's order.

He is not essential construction. He does not qualify as essential property.

He does not have the right to have multiple people on the property working during this emergency.

This has been going on for weeks and for the last two days I have photograph proof of multiple parties on site.

He should have gotten a \$2K citation for yesterday and a \$3K citation today.

Everyone else is complying with the governor's orders. As usual Tonneson is allowed to do whatever he wants.

At one point he and a crew member were literally standing right next to each other thumbing their noses at me from the deck- so much for 6 feet distance. But again the rule that only one person is allowed on the site doing non-essential is there for a reason.

It continues to be unacceptable that the Town will not enforce any laws- local, state or federal or an emergency order of the Governor.

Furthermore, what kind of person works on Good Friday/Passover? and the next day? (This has been going on for weeks- but I have proof of multiple people on site at this juncture.

My rights continue to be violated every day in multiple ways by this Town which allows Tonneson to do what he wants. Then when I call the police on him, facts that can easily be proven are turned and twisted around, misreported and manipulated. This is something that the Town has also been accused of doing in an ongoing federal lawsuit.

If you fine him, he will comply. If you continue to thumb your nose at the law by allowing him to do so, I will be asking a court when I am able to do a lot more than merely shut him down pending an appeal.

Everyone else is complying with the Governor's order. We must be at home. Neither I nor anyone else should be subjected to ANY construction work from a crew. It is not legal.

Fw: FYI

Jack Jannarone <jjannarone@highlands-ny.gov>

Mon 4/13/2020 6:45 AM

To:

- Alyse Terhune <aterhune@ldzhlaw.com>;
- Raymond Devereaux <raydev8385@gmail.com>;
- Joe McCormick <jm2575@aol.com>;
- joemurphy112@yahoo.com <joemurphy112@yahoo.com>;
- Daniel Zint <eaglfire@aol.com>;
- Bruce Terwilliger <bterwilliger@highlands-ny.gov>;
- Dorothy Torpey <dtorpey@highlands-ny.gov>

Bruce or Dorothy, Please print both messages in this thread and place in the Kopald ZBA file. 



From: Debbie Tonneson <debbietonneson@hotmail.com>

Sent: Sunday, April 12, 2020 9:35 PM

To: Francis Pierri <fpierri@tohpolic.com>; Bob Livsey <blivsey@highlands-ny.gov>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>; Richard Parry <rparry@highlands-ny.gov>; jmccormick@highlands-ny.gov <jmccormick@highlands-ny.gov>; jmurphy@highlands-ny.gov <jmurphy@highlands-ny.gov>; rdevereaux@highlands-ny.gov <rdevereaux@highlands-ny.gov>; Jack Jannarone <jjannarone@highlands-ny.gov>; Justin Rider <JRider@riderweiner.com>; Ty King <tking@highlands-ny.gov>; Debbie Tonneson <debbietonneson@icloud.com>; Debbie Tonneson <debbietonneson@hotmail.com>

Subject: Fwd: FYI

FYI

Deborah Kopald's continuous FALSE CLAIMS are harassment, slander, stalking, invalid and misleading lies. The Tonneson's ask for her to be charged under the law. OUR CIVIL RIGHTS are being blatantly violated. We are being discriminated against by the town because of the town's fear of

her lawsuits. We know through foil that she has threatened almost every person that works for the town, in some capacity or another. We know that Justin Rider has been threatened to be turned into the Attorneys grievance committee of New York State. Is that why attorney rider will not agree to file charges against her? Clearly our rights as taxpaying landowners are being extremely violated. We are being denied the enjoyment of our property we paid her mother and uncle a lot of money for. She can file numerous lawsuits and cost the citizens of this community much revenue, are being discriminated against by the town because of the towns fear of her lawsuits, but she will never win because she is absolutely incorrect as documented by the state police on Saturday, March 28 and again on Saturday, April 11th. (On or about April 8th, we observed officer Huff at the base of our driveway and assumed Deborah Kopald was making false accusations yet again!)

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To: Bob Livsey <blivsey@highlands-ny.gov>, Justin Rider <JRider@riderweiner.com>, Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Cc: Kelly Naughton <knaughton@bmglawyers.com>

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If you fine him, he will comply. If you continue to thumb your nose at the law by allowing him to do so, I will be asking a court when I am able to do a lot more than merely shut him down pending an appeal.

Everyone else is complying with the Governor's order. We must be at home. Neither I nor anyone else should be subjected to ANY construction work from a crew. It is not legal.

FW: Kopald Application to ZBA - Town of Highlands
Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Wed 3/11/2020 6:14 AM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Cc:

- Richard Sullivan <rsullivan@highlands-ny.gov>

□1 attachments (59 KB)

Letter SMH to ZBA Chairman (03-10-2020).pdf;

[Good morning Jack](#)

From: Stephen Honan [mailto:Shonan@fnmlawfirm.com]

Sent: Tuesday, March 10, 2020 5:21 PM

To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Justin Rider <JRider@riderweiner.com>; Bernadette Kilduff <bernadettek@flmpllc.com>; Michael Matsler <mmatsler@riderweiner.com>

Cc: rgolden@bmglawyers.com

Subject: Kopald Application to ZBA - Town of Highlands

Dear Mr. Terwilliger:

Please submit the attached letter to the Clerk / Attorney for the ZBA for the Board's consideration relative to the above Application.

Thank you for your attention herein.

Very truly yours,

Steve Honan.

--

****Please note that our email addresses have changed****

Stephen M. Honan, Esq.

Feerick Nugent MacCartney PLLC

96 South Broadway

South Nyack, NY 10960

845.353.2000

845.353.2789 (fax)

shonan@fnmlawfirm.com

Note: Attachment is available from Mr golden who is a recipient. JMJ

Fwd: Cease and Desist

Debbie Tonneson <debbietonneson@hotmail.com>

Wed 3/11/2020 3:59 PM

To:

- Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Cc:

- Bob Livsey <blivsey@highlands-ny.gov>;
- Richard Sullivan <rsullivan@highlands-ny.gov>;
- Richard Parry <rparry@highlands-ny.gov>;
- Jack Jannarone <jjannarone@highlands-ny.gov>

FYI : email sent to our attorney:

Bruce, can you please provide the pictures that you took of the downed tree that we were cutting up to get away from the house? There are many dead, diseased, infested trees from the Gypsy moths, dying, fallen, and hollow trees that are going to fall, and if they land and injure or kill on one of my six grandchildren or their playmates, she will be held responsible. (Emphasis added!)

Of course we will follow the laws and ordinances, as we always have, but we are being singled out and targeted by this individual because she wants to control us and the land sold to us by her mother and uncle. We are being discriminated against, and we feel the Town of the Highlands should be aware of this issue. This could very well be a very dangerous situation. We are patiently waiting for the zoning board of appeals to make their interpretation of her complaints.

This constant harassment just adds to our case against her. We assert we have done nothing wrong. Yet another unfounded accusation and vexatious attempt to control Us and our property.

Sent from my iPhone

Begin forwarded message:

From: Stephen Honan <Shonan@fnmlawfirm.com>

Date: March 11, 2020 at 3:02:19 PM EDT

To: Debbie Tonneson <debbietonneson@hotmail.com>, Bernadette Kilduff <bernadettek@flmpllc.com>

Subject: Fwd: Cease and Desist

Debbie & Dave:

I rec'd this email when I returned to my office this afternoon. FYI.

Steve Honan.

----- Forwarded message -----

From: **Deborah Kopald** <deborahelisekopald@gmail.com>

Date: Wed, Mar 11, 2020 at 8:53 AM
Subject: Cease and Desist
To: <shonan@fnmlawfirm.com>

Please have your clients the Tonnesons and Paisley-Tonneson cease and desist from chainsawing any more trees.

Otherwise, I will have no choice but to tell the Appellate Division that there is more damage ongoing that needs to be stopped.

--

****Please note that our email addresses have changed****

Stephen M. Honan, Esq.
Feerick Nugent MacCartney PLLC
96 South Broadway
South Nyack, NY 10960
845.353.2000
845.353.2789 (fax)
shonan@fnmlawfirm.com



Re: Tonneson package
Raymond Devereaux <raydev8385@gmail.com>
Fri 3/6/2020 4:37 PM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Jack, Thanks. Glad you are back safely I trust. I'll review asap. Bruce indicated that DK or her lawyer requested a delay until April? Has this changed? Ray

On Fri, Mar 6, 2020 at 3:05 PM Jack Jannarone <jjannarone@highlands-ny.gov> wrote:

██████████ Ray, The Tonnesons submitted a package yesterday including an invitation for the ZBA members to tour their property. I asked Dorothy to make a copy for the Kopald ZBA file, and to mail one to Alyse. She made an extra copy as well so I placed it in the Vice Chairman's box. I don't know how well the color photos will copy, but I have the original, glossy 8x10's, and I will bring them to the meeting on the 18th.

Jack

Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Thu 2/13/2020 10:56 AM
To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

1 attachments (128 KB)
Scan20200213090620.pdf;

-----Original Message-----

From: highlandscopier@town.new-windsor.ny.us [<mailto:highlandscopier@town.new-windsor.ny.us>]
Sent: Thursday, February 13, 2020 9:06 AM
To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Subject:

Note: The attachment is Mr Golden's request for an adjournment from February to March
JMJ

Re: FW:
Jack Jannarone <jjannarone@highlands-ny.gov>
Thu 2/13/2020 8:55 AM
To:

- Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Yes, please do. Was it received on th 11th or yesterday? It should be the letter requesting an adjournment of the Kopald case until March.

From: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Sent: Thursday, February 13, 2020 8:15 AM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Subject: FW:

The envelope has not been opened since it was addressed to you. Should I open it and stamp it Feb, 11th?

-----Original Message-----

From: highlandscopier@town.new-windsor.ny.us [<mailto:highlandscopier@town.new-windsor.ny.us>]
Sent: Thursday, February 13, 2020 8:07 AM
To: Bruce Terwilliger <bterwilliger@highlands-ny.gov>
Subject:

Note: The attachment is the address side of a FedEx envelope. JMJ

Re: Mail
Jack Jannarone <jjannarone@highlands-ny.gov>

Thu 2/13/2020 7:06 AM

To:

- Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Thank you!

From: Bruce Terwilliger <bterwilliger@highlands-ny.gov>

Sent: Thursday, February 13, 2020 6:42 AM

To: Jack Jannarone <jjannarone@highlands-ny.gov>

Subject: Mail

Jack, you have mail from Goldens office.

Document

Dorothy Torpey <dtorpey@highlands-ny.gov>

Tue 2/4/2020 9:53 AM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>

Good Morning Jack,

We have received a document from The Supreme Court of Orange County for the Deborah Kopald matter. It will be in your mailbox. Also sending a copy out to Alyse today.

Thank you,

Dorothy Torpey

Town of Highlands Building Department

(845) 446-4280 EXT. 316

Kopald 7757-19.pdf

Debbie Tonneson <debbietonneson@hotmail.com>

Mon 2/3/2020 1:07 PM

To:

- Jack Jannarone <jjannarone@highlands-ny.gov>;

- Jack Jannarone <jjannarone@highlands-ny.gov>;
- Debbie Tonneson <debbietonneson@hotmail.com>

2 attachments (3 MB)

Kopald 7757-19.pdf; ATT00001.txt;

Note: the attachment is Judge Onofry's order Feb 3,2020. JMJ

From: Stephen Honan <Shonan@fnmlawfirm.com>
Sent: Wednesday, January 15, 2020 5:07 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Cc: Alyse Terhune <aterhune@ldzhlaw.com>
Subject: Re: ZBA Public Hearing 01-15-20 (Kopald Application)

Chairman Jannarone:
Thank you. I will provide paper copies as you have directed.
Steve Honan.

On Wed, Jan 15, 2020 at 4:35 PM Jack Jannarone <jjannarone@highlands-ny.gov> wrote:
Please do provide paper copies (5 board members, 1 for the record and 1 for our attorney). It is too late to get it out reliably in electronic format, but I will send anyway.

From: Stephen Honan <Shonan@fnmlawfirm.com>
Sent: Wednesday, January 15, 2020 4:18 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>; Bernadette Kilduff <bernadettek@flmpllc.com>
Subject: ZBA Public Hearing 01-15-20 (Kopald Application)

Dear Chairman Jannarone:

Attached hereto please find my submission to the ZBA in opposition to the above referenced application of Kopald. Kindly provide a copy of same to the ZBA attorney, Alyse Terhune, Esq., and your fellow Board members in advance of tonight's meeting. I trust electronic format is acceptable. Please let me know if I should provide hard copies by hand at tonight's meeting.

I apologize for submitting these documents directly to you, but I was unable to obtain the ZBA clerk's contact information.

Very truly yours,
Stephen M. Honan

--

****Please note that our email addresses have changed****

Stephen M. Honan, Esq.
Feerick Nugent MacCartney PLLC
96 South Broadway

South Nyack, NY 10960
845.353.2000
845.353.2789 (fax)
shonan@fnmlawfirm.com



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--

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845.353.2789 (fax)
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EXHIBIT W

Re: Examples of Deborah Kopald's inappropriate, vexatious, and slanderous emails.

From: Richard Golden (rgolden@bmglawyers.com)

To: aterhune@ldzhlaw.com

Cc: knaughton@bmglawyers.com

Date: Wednesday, June 17, 2020, 04:39 PM EDT

Alyse,

There will be nothing of which I am aware of this nature that will be sent to the ZBA or its Board members. However, I can't control the actions of my client that my client does not bring to my attention.

However, more problematic than my client's exercise of her First Amendment rights is Mr. Jannarone's outrageous and unwarranted directive that the emails by my client and the mischaracterizations by Debbie Tonneson be placed in Ms. Kopald's ZBA file (when they have nothing to do with the pending ZBA appeal) and that these documents be posted on the website. It is clear to me that the sole purpose of Debbie Tonneson sending her email and attachments to the ZBA Chairman was to prejudice the process against my client for using foul language and complaining regarding their private disputes and land transactions issues unrelated to the pending ZBA appeal issues. The Chairman's republication to the other ZBA members and on the Town's website appears to be for the same illicit purpose - prejudicing the process against my client. There was no need for that direction.

I request that you advise the ZBA that they are to disregard Debbie Tonneson's email and attachments for purposes of this appeal and make a statement for the record tonight that this email and its attachments are not part of the record for this appeal. To do otherwise will simply secure an unnecessary issue for any challenge to the ZBA's decision-making on this appeal. Neither of us wants that; the process demands better.

Rick

Richard B. Golden, Esq.
Burke, Miele, Golden & Naughton, LLP
P.O. Box 216
40 Matthews Street, Suite 209
Goshen, New York
845-294-4080 (Office)
845-551-0895 (Cell)

On Jun 17, 2020, at 3:59 PM, Alyse Terhune <aterhune@ldzhlaw.com> wrote:

Rick: I thought about not sending this to you, but, Tonneson sent it to the ZBA so they have seen it. I am simply concerned that none of my Board members get anything like this directed toward them from your client. Just wanted to make you aware.

Alyse Terhune, Esq.
82 East Allendale Road
Saddle River, NJ 07458
(201) 934-9800

This transmission contains information from the law firm of Alyse D. Terhune, Esq., which may be confidential and/or privileged. This information is intended to be for the exclusive use of the individual or entity named above. If you are not the intended recipient, be advised that any disclosure, copying, distribution or other use of this information is strictly prohibited. If you have received this transmission in error, please notify us by telephone at 201 934-9800 or 212 772-0943 or by e-mail immediately and delete the message.

IRS CIRCULAR 230 DISCLOSURE:

To ensure compliance with requirements imposed by the IRS, we inform you that any U.S. federal tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding penalties under the Internal Revenue Code or

(ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

From: Jack Jannarone [<mailto:jjannarone@highlands-ny.gov>]
Sent: Saturday, June 13, 2020 1:34 PM
To: Raymond Devereaux <raydev8385@gmail.com>; Joe McCormick <jm2575@aol.com>; joemurphy112@yahoo.com; Daniel Zint <eaglfire@aol.com>; Alyse Terhune <aterhune@ldzhlaw.com>; Bruce Terwilliger <bterwilliger@highlands-ny.gov>; Kelly Pecoraro <kpecoraro@highlands-ny.gov>; Dorothy Torpey <dtorpey@highlands-ny.gov>; Richard Sullivan <rsullivan@highlands-ny.gov>
Subject: Fw: Examples of Deborah Kopald's inappropriate, vexatious, and slanderous emails.

All, FYI
Bruce/Dorothy, please print and place in the Kopald file
Kelly, please post on the Town website

From: Debbie Tonneson <debbietonneson@icloud.com>
Sent: Friday, June 12, 2020 11:43 PM
To: Jack Jannarone <jjannarone@highlands-ny.gov>
Cc: Debbie Tonneson <debbietonneson@hotmail.com>
Subject: Examples of Deborah Kopald's inappropriate, vexatious, and slanderous emails.

#1. Because we refused to "obey her commands" about notifying her about every little noise. (We have a voicemail of her demanding a text before operating any tools.)
#2. Because Dave Tonneson spoke at the October 14, 2019 public hearing about Deborah Kopald's proposed very restrictive noise ordinance. (He did not oppose a noise ordinance, just an extremely restrictive noise ordinance. Kopald is always trying to find something to call the police about.)
#3. Because her mother and uncle sold us the 15 acre property without her knowledge and she lost control of the forest around her. (We are more than willing to sell the remainder of the property back to Deborah Kopald at the price we paid for it, minus the land where our daughter's house now sits.)

<image0.jpeg>
<image1.jpeg>
<image2.jpeg>
<image3.jpeg>
<image4.jpeg>
<image5.jpeg>

<image6.jpeg>
<image7.jpeg>

EXHIBIT X

Re: NOISE DIARY

From: Deborah Kopald (deborah_kopald@ymail.com)

To: deborah_kopald@ymail.com

Date: Friday, July 24, 2020, 01:55 PM EDT

1:51 chainsaw

On Friday, July 24, 2020, 01:41:21 PM EDT, Deborah Kopald <deborah_kopald@ymail.com> wrote:

1:40 p.m.whiny noise like faraway machine- leafblower/wheelwacker type noise

On Friday, July 24, 2020, 12:41:30 PM EDT, Deborah Kopald <deborah_kopald@ymail.com> wrote:

On Friday, July 24, 2020, 11:47:29 AM EDT, Deborah Kopald <deborah_kopald@ymail.com> wrote:

On Friday, July 24, 2020, 10:59:37 AM EDT, Deborah Kopald <deborah_kopald@ymail.com> wrote:

8:43- garbage truck tonneson

9:35 "weedwacker" generally down the hill- I heard it as some type of power tool

9:48 sound of heavy machinery

10:50 back from errands- saw earth movers and something mulching trees on 9w at the base of Corbine Hill
would not otherwise have heard that- did not hear traffic noise in the house.

11:35 traffic, not construction noise

11:44- traffic noise

12:41 traffic noise

EXHIBIT Y

Why Everything Is Getting Louder

The tech industry is producing a rising din. Our bodies can't adapt.

Cassidy Araiza / The Atlantic

- STORY BY BIANCA BOSKER
-
- NOVEMBER 2019 ISSUE

TECHNOLOGY

-
-
-
-

Link Copied

Karthic Thallikar first noticed the noise sometime in late 2014, back when he still enjoyed taking walks around his neighborhood.

He'd been living with his wife and two kids in the Brittany Heights subdivision in Chandler, Arizona, for two years by then, in a taupe two-story house that Thallikar had fallen in love with on his first visit. The double-height ceilings made it seem airy and expansive; there was a playground around the corner; and the neighbors were friendly, educated people who worked in auto finance or at Intel or at the local high school. Thallikar loved that he could stand in the driveway, look out past a hayfield and the desert scrub of Gila River Indian land, and see the jagged pink outlines of the Estrella Mountains. Until recently, the area around Brittany Heights had been mostly farmland, and there remained a patchwork of alfalfa fields alongside open ranges scruffy with mesquite and coyotes.

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In the evenings, after work, Thallikar liked to decompress by taking long walks around Brittany Heights, following Musket Way to Carriage Lane to Marlin Drive almost as far as the San Palacio and Clemente Ranch housing developments. It was during one of these strolls that Thallikar first became aware of a low, monotone hum, like a blender whirring somewhere in the distance. It was irritating, but he wrote it off. Someone's pool pump, probably. On another walk a few days later, he heard it again. *A carpet-cleaning machine?* he wondered. A few nights later, there it was again. It sounded a bit like warped music from some far-off party, but there was no thump or rhythm to the sound. Just one single, persistent note: *EHHNNNNNNNN*. Evening after evening, he realized, the sound was there—every night, on every street. The whine became a constant, annoying soundtrack to his walks.

And then it spread. In early 2015, Thallikar discovered that the hum had followed him home. This being Arizona, Thallikar and his neighbors rewarded themselves for surviving the punishing summers by spending mild winter evenings outside: grilling, reading, napping around plunge pools, dining under the twinkle of string lights. Thallikar had installed a firepit and Adirondack chairs in his backyard. But whenever he went out to cook or read, there was that damn whine—on the weekends, in the afternoon, late into the night. It was aggravating, and he felt mounting anxiety every day it continued. Where was it coming from? Would it stop? Would it get worse? He started spending more time inside.

The Brittany Heights neighborhood in Chandler, Arizona (Cassidy Araiza)

Then it was in his bedroom. He had just closed his eyes to go to sleep one night when he heard it: *EHHNNNNNNNN*. He got up to shut the window, but that made no difference at all. "That was when I started getting

concerned,” he observed later. He tried sleeping with earplugs. When that didn’t help, he also tied a towel around his head. When that still wasn’t enough, he moved into the guest room, where the hum seemed slightly fainter. Each night, he’d will himself to sleep, ears plugged and head bandaged, but he could feel the whine in his bones, feel himself getting panicky as it droned on and on and on and on and on. The noise hummed 24 hours a day, seven days a week, like a mosquito buzzing in his ear, only louder and more persistent. He sensed it coming from everywhere at once. Thallikar began to dread going home. As the months passed, he felt like he was in a war zone. He wrote in a text message that he felt as though someone was launching “an acoustic attack” on his home.

From April 2019: James Fallows on leaf blowers and activism

The earliest noise complaint in history also concerns a bad night’s sleep. The 4,000-year-old *Epic of Gilgamesh* recounts how one of the gods, unable to sleep through humanity’s racket and presumably a little cranky, opts “to exterminate mankind.”

Noise—or what the professionals call a “very dynamic acoustic environment”—can still provoke people to murderous extremes, especially when the emitter disturbs the receiver at home. After repeated attempts to quiet his raucous neighbor, a Fort Worth, Texas, father of two, perturbed by loud music at 2 a.m., called the police, who came, left, and returned less than an hour later, after the man had allegedly shot his neighbor three times—an incident not to be confused with the time a Houston man interrupted his neighbor’s late-night party and, after a showdown over noise, shot and killed the host. In New York City, a former tour-bus driver fed up with noisy parties across the hall allegedly sought help from a hit man. A man in Pennsylvania, said to have

had no more trouble with the law than a traffic ticket, ambushed an upstairs couple with whom he'd had noise disputes, shooting them and then himself, and leaving behind a sticky note that read, "Can only be provoked so long before exploding." There's the man accused of threatening his noisy neighbors with a gun, the man who shot a middle-school coach after they quarreled over noise, the man who fired on a mother and daughter after griping about sounds from their apartment, the man who killed his roommate after a futile request that he "quiet down," and the woman who shot at a neighbor after being asked to turn down her music—all since the beginning of this year.

Noise is never just about sound; it is inseparable from issues of power and powerlessness. It is a violation we can't control and to which, because of our anatomy, we cannot close ourselves off. "We have all thought of killing our neighbors at some point," a soft-spoken scientist researching noise abatement told me.

As environmental hazards go, noise gets low billing. There is no Michael Pollan of sound; limiting your noise intake has none of the cachet of going paleo or doing a cleanse. When *The New Yorker* recently proposed noise pollution as the next public-health crisis, the internet scoffed. "Pollution pollution is the next big (and current) public health crisis," chided one commenter. Noise is treated less as a health risk than an aesthetic nuisance—a cause for people who, in between rounds of golf and art openings, fuss over the leaf blowers outside their vacation homes. Complaining about noise elicits eye rolls. Nothing will get you labeled a crank faster.

Scientists have known for decades that noise—even at the seemingly innocuous volume of car traffic—is bad for us. "Calling noise a nuisance is like calling smog an inconvenience," former U.S. Surgeon General William

Stewart said in 1978. In the years since, numerous studies have only underscored his assertion that noise “must be considered a hazard to the health of people everywhere.” Say you’re trying to fall asleep. You may think you’ve tuned out the grumble of trucks downshifting outside, but your body has not: Your adrenal glands are pumping stress hormones, your blood pressure and heart rate are rising, your digestion is slowing down. Your brain continues to process sounds while you snooze, and your blood pressure spikes in response to clatter as low as 33 decibels—slightly louder than a purring cat.

“Quiet places have been on the road to extinction at a rate that far exceeds the extinction of species.”

Experts say your body does not adapt to noise. Large-scale studies show that if the din keeps up—over days, months, years—noise exposure increases your risk of high blood pressure, coronary heart disease, and heart attacks, as well as strokes, diabetes, dementia, and depression. Children suffer not only physically—18 months after a new airport opened in Munich, the blood pressure and stress-hormone levels of neighboring children soared—but also behaviorally and cognitively. A landmark study published in 1975 found that the reading scores of sixth graders whose classroom faced a clattering subway track lagged nearly a year behind those of students in quieter classrooms—a difference that disappeared once soundproofing materials were installed. Noise might also make us mean: A 1969 study suggested that test subjects exposed to noise, even the gentle fuzz of white noise, become more aggressive and more eager to zap fellow subjects with electric shocks.

In the extreme, sound becomes a weapon. Since at least the 1960s, scientists have investigated sound’s potential to subdue hostage-takers, protesters, and enemy troops, against whom one expert proposed using

low-frequency sound, because it apparently induces “disorientation, vomiting fits, bowel spasms, uncontrollable defecation.” The U.S. military, keenly aware of noise’s power to confuse and annoy, has wielded soundtracks as punishment: It tried to hurry along the Panamanian dictator Manuel Noriega’s surrender by blasting his hideout with rock music (Kiss and Rick Astley made the playlist); attacked Fallujah, Iraq, while pounding heavy metal on the battlefield (Guns N’ Roses, AC/DC); tortured Guantánamo detainees with a nonstop barrage of rap and theme songs (Eminem, the Meow Mix jingle); and, under the supervision of the FBI, attempted to aggravate the Branch Davidian cult of Waco, Texas, into surrender with a constant loop of Christmas carols, Nancy Sinatra, Tibetan chants, and dying rabbits. (“If they go Barry Manilow,” said a hostage negotiator at the time, “it’s excessive force.”)

Even when not intentionally deployed for harm, the sound of drilling, barking, building, crying, singing, clomping, dancing, piano practicing, lawn mowing, and generator running becomes, to those exposed, a source of severe anguish that is entirely at odds with our cavalier attitude toward noise. “It feels like it’s eating at your body,” a man plagued by a rattling boiler told a reporter. A woman who was being accosted on all sides by incessant honking told me, “The noise had literally pushed me to a level of feeling suicidal.” For those grappling with it, noise is “chaos,” “torture,” “unbearable,” “nauseating,” “depressing and nerve-racking,” “absolute hell,” and “an ice pick to the brain.” “If you didn’t know they were talking about noise, you might think they were describing some sort of assault,” Erica Walker, an environmental-health researcher at Boston University, has said. This has spurred scientists, physicians, activists, public officials, and, albeit less in the United States, lawmakers to join in the quest for quiet, which is far more elusive than it may seem. “Quiet places,” says the acoustic ecologist Gordon Hempton, “have been on the road to extinction at a rate that far exceeds the extinction of species.”

From April 2016: The future will be quiet

Thallikar went hunting for the source of the sound. At first he canvassed the neighborhood by foot, setting out around 10 or 11 o'clock at night, once the thrum of traffic had quieted down. When these "noise patrols," as he called them, yielded no answers, he expanded his perimeter—by bike, then by car. He'd pull over every few blocks to listen for the whine. The hum was everywhere: outside Building E of the Tri-City Baptist Church and the apartments in San Palacio; near the Extra Space Storage and the no perfect people allowed sign at Hope Covenant Church; ricocheting around the homes in Canopy Lane, Clemente Ranch, Stonefield, the Reserve at Stonefield. He'd go out multiple nights a week, for 10 minutes to an hour, taking notes on where the noise was loudest. The patrols dragged on—one week, two weeks, eight weeks—which led to spats with his wife, who wanted to know why he kept leaving the house so late at night.

Finally, as winter warmed into spring, Thallikar thought he'd identified the source of the whine: a gray, nearly windowless building about half a mile from his house. The two-story structure, which had the charm of a prison and the architectural panache of a shoebox, was clad in concrete and surrounded by chain-link and black-metal fences, plus a cinder-block wall. It belonged to a company called CyrusOne.

The CyrusOne data center in Chandler, Arizona (Cassidy Araiza)

There was no thrill in this discovery, just simmering fear that the noise might get worse. Thallikar visited the city-planning clerk, multiple times. She said she couldn't help and referred him to CyrusOne's construction manager. Kept awake by the noise at 11 o'clock one Saturday night, Thallikar phoned the man, who protested that he was trying to sleep.

“I’m trying to sleep too, dude!” Thallikar told him. When they spoke again the next day, the call ended abruptly, and without resolution.

According to CyrusOne’s website, the company’s Chandler campus offers *Fortune* 500 companies robust infrastructure for mission-critical applications. In other words, it’s a data center—a columbarium for thousands of servers that store data for access and processing from virtually anywhere in the world. When you check your bank balance or research a used car or book a hotel room, chances are decent that the information comes to you via one of the more than 40 CyrusOne data centers spread around the globe. CyrusOne houses servers belonging to nearly 1,000 companies, including Microsoft, Country Financial, Brink’s, Carfax, and nearly half of the *Fortune* 20.

Thallikar, wanting to confront the noise personally, made a surprise visit to CyrusOne. He found workers putting up a new building, but learned that the whine was unrelated to construction. It came from the chillers, a bulky assemblage of steel boxes and tubes permanently affixed to the sides of the two existing buildings. Servers, like humans, are happiest at temperatures between 60 and 90 degrees Fahrenheit, and the chillers were crucial in keeping the heat-generating machines comfortably cool as they worked. In the fall of 2014, around the time Thallikar started noticing the whine, CyrusOne had had room for 16 chillers. Now it was getting ready to add eight more. During a follow-up visit, Thallikar, who grew up in Bangalore and moved to Arizona in 1990 to study industrial engineering at Arizona State University, said he was informed by a worker at the site that immigrants like him should feel lucky to live in the U.S., noise be damned.

CyrusOne arrived in Chandler shortly before Thallikar did and broke ground two months after he closed on his home. For CyrusOne, Chandler

was a “dream come true,” Kevin Timmons, the company’s chief technology officer, told me. The city essentially offered CyrusOne carte blanche to develop an area three times the size of Ellis Island into one of the nation’s largest data-storage complexes: 2 million square feet protected by biometric locks, steel-lined walls, bullet-resistant glass, and dual-action interlocking dry-pipe sprinkler systems. CyrusOne even has two of its own substations humming with enough energy (112 megawatts) to light up every home in Salt Lake City—or, more relevant to the matter at hand, to power several dozen 400- and 500-ton chillers. CyrusOne’s Chandler facility was not only the company’s most ambitious, but the biggest to realize its strategy of wooing clients through ultrafast, just-in-time construction. CyrusOne could now boast of being able to complete a building in 107 days—faster than customers could have their servers ready. “It literally put us on the map,” Timmons said.

Arizona attracts data centers the way Florida attracts plastic surgeons. The state has low humidity; proximity to California—where many users and customers are based—but without its earthquakes or energy prices; and, thanks to lobbying efforts by CyrusOne, generous tax incentives for companies that drop their servers there. Walk 10 minutes due north from CyrusOne’s Chandler complex, and you’ll reach two other data centers, with a third just down the road. Drive 15 minutes from there, and you’ll come across three more. Continue farther east past Wild West Paintball, and you’ll hit an Apple data center, which will soon be joined by a Google facility, plus another data center from CyrusOne. Forty-five minutes west of Thallikar’s home, Compass Datacenters is building on more than 225 acres of land, a plot three times the size of CyrusOne’s in Chandler.

By the summer of 2015, Thallikar had thrown himself into an aggressive campaign to quiet the hum. He went up and down the city’s chain of command, pleading for help. He emailed Chandler’s economic-

development innovation manager, its economic-development specialist, and its economic-development director, who replied that Thallikar was the only resident to complain, but dutifully went out, twice, to listen for the high-pitched whine. He didn't hear it. "I do not think I am imagining things here and wasting people's time," Thallikar wrote back, adding that he'd taken his family on his patrol, "and they too could hear the noise."

For two years, Thallikar complained to anyone who would listen and even to those who would not. Meanwhile, CyrusOne kept building.

Thallikar emailed a news anchor, an executive producer, an editor, and several reporters at the local 12 News TV station, offering to help them "in experiencing the problem so they can relate to it." He emailed the mayor and all five members of the Chandler city council. Multiple times. Then daily. "The noise gets louder in the night and enters our homes. And the streets are filled with it," Thallikar wrote in one email. In another: "Just what will it take for one of you to respond to my emails." He presented his case at a city-council meeting, requesting that a task force be formed to research and stop the whine. He acknowledged that he'd been told the sound seemed suspiciously similar to the buzz of traffic on the 202 freeway nearby.

Thallikar took his campaign to his homeowners' association and to his neighbors. The response was tepid, though he did persuade one person to email the city. Thallikar reached out, again, to CyrusOne, and to the Chandler Police Department. Commander Gregg Jacquin promised to investigate, but suggested that Thallikar might have more success if he cooled it with all the emails to city officials, which were creeping into the high double digits. Thallikar started keeping a log of how the noise changed, hour to hour and day to day. It was getting louder, he was sure.

In the fall of 2015, Jacquin emailed Thallikar to say that he'd gone in search of the noise, but hadn't heard it. "I am not making this up—even though I do not have the measurement numbers," Thallikar wrote back. "The noise heard over the weekend starting on Saturday starting around 10 pm through Sunday was very very bad. I got a nervous headache, and had to take medications." He never heard back from Jacquin. Before long, Thallikar began to contemplate selling his home.

Noise is a clever enemy. It leaves no trace and vanishes when chased. It's hard to measure or describe. It is also relative. "Sound is when you mow your lawn, noise is when your neighbor mows their lawn, and music is when your neighbor mows your lawn," says Arjun Shankar, an acoustic consultant. Noise is also fiendishly difficult to legislate, though for nearly as long as humans have lived together, we have seen fit to try. The ancient Greeks of Sybaris are credited with introducing the first noise ordinance, in the eighth century b.c., banishing roosters as well as blacksmiths, carpenters, and other "noisy arts" from the city limits. In the United States, the appetite for noise control reached its apex in 1972, when President Richard Nixon enacted the country's first federal statute specifically targeting noise pollution, which empowered the Environmental Protection Agency to quiet the country. Nine years later, the Reagan administration withdrew funding for the Environmental Protection Agency's Office of Noise Abatement and Control, foisting responsibility back onto state and local governments. Since then, little has changed. "Unfortunately," says New York City's longtime noise czar, Arline Bronzaft, "the federal government is essentially out of the noise business."

In the ensuing decades, the war on noise has shifted to the margins—a loose flock of mom-and-pop organizers whose agitations have all the glitz and edge of a church bake sale. The mood on pro-quiet listservs skews

defeatist, the general tone more support group than picket line. (The landing page for the Right to Quiet Society politely instructs newcomers, “If you did not like what you saw here, without telling us, you might consider leaving quietly.”) Anti-noise crusaders band together in ragtag crews united by geography or irritant. Depending on whether your trigger point concerns planes, trains, blowers, Jet Skis, dirt bikes, concerts, boom cars, cars, motorcycles, or Muzak, you might join ROAR (Residents Opposed to Airport Racket), HORN (Halt Outrageous Railroad Noise), BLAST (Ban Leaf Blowers and Save Our Town), CALM (Clean Alternative Landscaping Methods), HEAVEN (Healthier Environment Through Abatement of Vehicle Emission and Noise), CRASH (County Residents Against Speedway Havoc), Pipedown (“the campaign for freedom from piped music”), or roughly 150 other organizations with varying levels of activity. In the United States, one of the few emitter-agnostic groups with a national scope is Noise Free America, which has 51 local chapters, noise counselors on call, and, for four out of the past six years, a tradition of going to Washington, D.C., to petition lawmakers—the pinnacle of which was once getting to meet then–Minority Leader Nancy Pelosi’s deputy chief of staff.

On a recent Sunday morning, I joined Noise Free America’s founder and director, Ted Rueter, for what he billed as a “noise tour” of Brooklyn—a pilgrimage to some of the borough’s most sonorously grating street corners. Rueter, a 62-year-old political-science professor, met me at a Starbucks on Flatbush Avenue wearing khaki shorts, a pink polo shirt, and Bose noise-canceling headphones. He was joined by three New Yorkers concerned with the din of their neighborhoods: Manohar Kanuri, a former stock analyst who lives above the incessant beeping of construction and delivery trucks in Manhattan’s Battery Park City; Ashley, a 40-something who’s moved three times in an effort to escape thunderous parties; and Vivianne, a woman who lives with the constant

staccato of honking livery cabs, dollar vans, and impatient drivers. (Ashley and Vivianne asked not to be identified by their real names.) For Rueter, who was in town from Durham, North Carolina, a tour of New York's cacophony seemed to have the exotic thrill of going on safari. Kanuri, Ashley, and Vivianne had corresponded extensively online, but this was their first time meeting in person, and they appeared delighted at getting to bond with sympathetic ears. "We build coalition this way," Kanuri said.

All three New Yorkers had tried tackling their noise issues through traditional avenues—the 311 nonemergency line (which receives more reports about noise than about any other issue), the local police, their city-council members, the public advocate, the mayor—but found the city unsympathetic, unresponsive, or ineffective. Before heading out on the noise tour, they sat in the Starbucks venting about the difficulties of catching emitters in the act and encouraging police to take action. Ashley had placed so many 311 calls that she worried about getting arrested, like a Bronx woman who was thrown in a holding cell on charges of entering false information in the public record after calling 44 times in 15 months—often to report her neighbors' racket. Vivianne warned Ashley that the police had probably pegged her as a "serial complainer"—among anti-noise crusaders, a dreaded fate.

Noise codes tend to be either qualitative (prohibiting subjectively defined "disturbing" or "unreasonably loud" noise) or quantitative (defining, in measurable terms, what constitutes disturbing or unreasonably loud noise). New York City's noise code, which is the latter, considers barking a nuisance only if a dog yaps for 10 minutes straight between the hours of 7 a.m. and 10 p.m., or for five minutes straight between the hours of 10 p.m. and 7 a.m. (Four and a half minutes of barking at 2 a.m. is, technically, permissible.) At night, restaurants can be fined if their music

measures in excess of 42 decibels from inside a nearby apartment and seven decibels above the level of ambient street sounds. [P] [SEP]

Most ordinances correlate punishable noise with loudness, though if you've ever tried to sleep through a dripping faucet, you know that something can be quiet and still drive you up the wall. Research confirms that what makes a sound annoying is only partially whether it whispers or roars. The volume at which noise begins to irritate varies depending on the source—we tolerate trains at louder volumes than cars, and cars at louder volumes than planes—and its pitch, or frequency. (Humans can hear sounds between 20 and 20,000 hertz, which roughly ranges from the low-frequency thump of subwoofers to the high-frequency buzz of certain crickets.) We are more sensitive to mid-frequency sounds—voices, birdsong, squealing brakes, shrieking infants—and perceive these sounds as louder than they are. Contrary to the stereotype of the old man shaking his fist, age and gender are not necessarily strong predictors of annoyance.

Nor must noises be heard in order to harm. Earplugs may dull the whine of motorcycles chugging outside your bedroom, but they're useless against the engines' low-frequency rumble, which vibrates the windows, floors, and your chest, and is the type of sound that's largely ignored in most official noise calculations. (Harley-Davidson, which considers that thudding a point of pride, tried to trademark the sound of its V-twin motorcycle engine, which its lawyer translated as "potato potato potato" said very fast.) When regulatory officials evaluate environmental noise—to determine, say, whether to soundproof schools near airport runways—their calculations emphasize the mid-frequency sounds to which our ears are most sensitive and discount the low-frequency sounds (think wind turbines, washing machines, kids galloping upstairs) that have been shown to travel farther and trigger stronger stress responses. "If you

actually measured sound using the right metric, you'll see that you're harming a lot more people than you think you are," says Walker, the environmental-health researcher, who is working with communities near flight paths and freeways to rethink how noise is quantified.

Not only was the whine agitating—*EHHNNNNNNNN*—but its constant drone was like a cruel mnemonic for everything that bothered him.

Years ago, the staff of a medical-equipment company became spooked by recurring sightings of a gray, spectral figure haunting their lab. One night, an engineer working late alone felt a chill pass through the room and, out of the corner of his eye, saw a soundless figure hovering beside him. When he wheeled around, no one was there. The next day, while adjusting one of the machines in the lab, he began to feel the same creeping unease. The poltergeist? A vibrating extractor fan, he realized. He published a paper on his ghost-busting, which concluded that the machine was emitting low-frequency sound waves: pulses of energy too low in frequency to be heard by humans, yet powerful enough to affect our bodies—comparable, he found, to the inaudible vibrations in a supposedly haunted cellar and in the long, windy hallways that appear in scary stories. In addition to causing shivering, sweating, difficulty breathing, and blurry vision as a result of vibrating eyeballs, low-frequency sounds can also, apparently, produce ghosts.

Read: City noise might be making you sick

For two years, Thallikar complained to anyone who would listen and even to those who would not. Meanwhile, CyrusOne kept building. The company finished three new buildings and bought 29 more acres of land in Chandler, growing the site to more than 85 acres. In a press release, it congratulated itself for “ensuring CyrusOne maintains the largest data

center campus in the Southwest and one of the largest in the United States,” and cheered plans to build a comparable facility in California.

Some nights, Thallikar couldn't sleep at all. He started wearing earplugs during the day, and stopped spending time outdoors. He looked for excuses to leave town and, in the evenings, returned to his old neighborhood in Tempe to take his constitutionals there. As he drove home, he'd have a pit in his stomach. He couldn't stop himself from making the noise a recurring conversation topic at dinner.

Not only was the whine itself agitating—*EHHNNNNNNNN*—but its constant drone was like a cruel mnemonic for everything that bothered him: his powerlessness, his sense of injustice that the city was ignoring its residents' welfare, his fear of selling his home for a major loss because no one would want to live with the noise, his regret that his family's haven (not to mention their biggest investment) had turned into a nightmare. *EHHNNN. EHHNNNNNNNNNN. EHHNNNNNNNNNNNNNNNNNN*. He tried meditating. He considered installing new windows to dull the hum, or planting trees to block the noise. He researched lawyers. And he made one final appeal to the newly elected members of the Chandler city council.

Lo and behold, one wrote back, promising to look into the issue.

The council member followed up a few weeks later. “According to the chief, police had visited 16 times on the site and conducted investigations on your claim,” he wrote. “They found the noise level was not significant enough to cause an issue.” Thallikar contacted a real-estate agent. He would lose money, and he'd have to move to a smaller house, but by the end of 2017, he'd decided to sell his home.

Commander Edward Upshaw of the Chandler police doesn't foresee citing CyrusOne for the noise. "Not going to happen," he said. (Cassidy Araiza)

To spend time with noise warriors is to become frustratingly attuned to every gurgle, squeal, clank, and creak. As I set out with Rueter and the three New Yorkers on the noise tour, the anonymous din of Flatbush Avenue splintered into a riotous skronk of bleating cars, rattling generators, and snarling planes. Sirens yowled and vents whistled; a motorcycle *potato-potato-potatoed* and a can skittered on the concrete.

R. Murray Schafer, a Canadian composer who, in the 1960s, pioneered the field of acoustic ecology, has advocated "soundwalks" as an activity that, even more effectively than ordinances, could curb noise pollution by making people more aware of their habitat's acoustics. A soundwalk—during which you actively listen to the sonic demeanor of your surroundings—might involve tallying the number of car horns you hear in the course of an hour or scavenger-hunting for sounds with specific characteristics, like a buzz followed by a squeak. Schafer saw soundwalks as a way to address our sonological incompetence. Teach people to tune in to their soundscapes, and they will understand which sounds to preserve and which to eliminate, then act accordingly.

The first stop on our noise tour was, mercifully, a place of quiet. We gathered in silence around a small koi pond on the Brooklyn College campus. I forced myself to listen carefully. An air conditioner purred. Water burbled. A child hollered. "See, once a kid comes, that's when the screaming starts," Ashley said.

She and Kanuri discussed the inefficacy of earplugs and the pros and cons of analog versus digital white-noise machines. Ashley said she slept with

three white-noise machines (which hardly makes her an exception among the sound-sufferers I met) and, because of a whistler in her office, had started wearing earplugs at work.

“Are you familiar with something called slow TV?” Kanuri asked Ashley. “It’s a sailboat that runs 10 hours, and all you hear is the ship breaking water. That’s it. Every now and then you’ll hear *bruhhhhh*—another ship that passes by. That’s it. It’s beautiful. It’s *beautiful*.”

Stéphane Pigeon, an audio-processing engineer based in Brussels, has become the Taylor Swift of white noise, traveling the world recording relaxing soundscapes for his website, myNoise.net, which offers its more than 15,000 daily listeners an encyclopedic compendium of noise-masking tracks that range from “Distant Thunder” to “Laundromat,” a listener request. (White noise, technically speaking, contains all audible frequencies in equal proportion. In the natural world, falling rain comes close to approximating this pan-frequency *shhhhhh*.) Impulse noises, such as honking, barking, hammering, and snoring, are the hardest to mask, but Pigeon has tried: While traveling in the Sahara, he recorded “Berber Tent,” a myNoise hit designed to help snorees by harmonizing the gentle whoosh of wind, the burble of boiling water, and the low rattle of snoring. Because covering up a snorer’s brief, punchy *HRROHN!* is exceedingly difficult, “the goal is to try to persuade you that snoring could be a beautiful sound,” Pigeon told me.

After a few minutes at the pond, we reluctantly tore ourselves from the quiet to prowl Brooklyn’s streets for sounds. Farther north on Flatbush Avenue, encircled by lowing horns and a wheezing Mister Softee truck, Kanuri used his sound-meter app to measure the ambient noise—a disappointing 75.9 decibels, lower than everyone had thought but still more than 20 decibels above the threshold at which, per a 1974 EPA

report, we get distracted or annoyed by sound. (Decibels, which measure volume, are logarithmic: Turn up a sound by 10 decibels, and most people will perceive its loudness as having doubled.) The soundscape shushed as we approached the stately brownstones near Prospect Park, then thumped to life again when we stopped for lunch at, of all places, Screamer's Pizzeria. "Would it be possible during our short stay here to turn down the music?" Rueter asked a server.

Desperate ears call for desperate measures, and the noise-afflicted go to elaborate lengths to lower the volume. Kanuri taught himself to code so he could analyze New York City's 311 data and correlate noise complaints with elective districts; he hoped he could hold politicians accountable. Having tried moving bedrooms and also apartments, Ashley is now moving across the country, to a suburb in the Southwest. I spoke with a New Yorker who, unable to afford a move, has been sleeping in her closet—armed with earplugs, headphones, an AC unit, a fan, and two white-noise machines. A Wisconsin man who'd re-insulated, re-drywalled, and re-windowed his home was ultimately offered sleeping medication and antidepressants. An apartment dweller in Beijing, fed up with the calisthenics of the kids upstairs, got revenge by attaching a vibrating motor to his ceiling that rattled the family's floor. The gadget is available for purchase online, where you can also find Coat of Silence paint, AlphaSorb Bass Traps, the Noise Eater Isolation Foot, the Sound Soother Headband, and the Sonic Nausea Electronic Disruption Device, which promises, irresistibly, "inventive payback."

One might also run for president. Arline Bronzaft, the New York City noise czar, speculates that Donald Trump's presidential campaign was motivated by his quest to quiet the aircraft that disrupted Mar-a-Lago's "once serene and tranquil ambience"—so described in one of the lawsuits Trump filed in his 20-year legal battle against Palm Beach

County. Six days after he was elected—and the Federal Aviation Administration shared plans to limit flights over his resort—a Trump spokesperson announced that he would abandon the lawsuit.

Scientists have yet to agree on a definition for noise sensitivity, much less determine why some individuals seem more prone to it, though there have been cases linking sensitivity to hearing loss. What *is* clear, however, is that sound, once noticed, becomes impossible to ignore. “Once you are bothered by a sound, you unconsciously train your brain to hear that sound,” Pigeon said. “That phenomenon just feeds itself into a diabolic loop.” Research suggests habituation, the idea that we’ll just “get used to it,” is a myth. And there is no known cure. Even for sufferers of tinnitus—an auditory affliction researchers understand far better than noise sensitivity—the most effective treatment that specialists can offer is a regimen of “standard audiological niceness”: listening to them complain and reassuring them the noise won’t kill them. Or, as one expert put it, “lending a nice ear.”

From October 2019: Rebecca Giggs on why whale songs are getting deeper

During the summer of 2017, Cheryl Jannuzzi, who lived a short drive from Thallikar, in Clemente Ranch, began to hear humming coming from somewhere behind her house. For a while, she’d had to endure the clang and beep of construction, but this was different—like an endlessly revving engine, or a jet warming up for takeoff.

Jannuzzi contacted the city, and was told that the complex directly across Dobson Road from her backyard was a data center. This was news to her, and she wasn’t sure what to make of it. “They’re just housing data,” she thought. “That shouldn’t be making so much noise.”

Around Halloween, Jennifer Goehring started to notice a buzzing sound. It gave her headaches and kept her up at night, but her husband couldn't hear it, and neither could her kids. She worried that she might be losing her mind. She began sleeping with sound machines and pillows over her head, and went to the doctor to be sure she didn't have an ear infection. She didn't.

Noise is becoming autonomous and inexhaustible. Human noisemakers have to sleep, but our mechanical counterparts do not tire, die, or strain their vocal cords.

Amy Weber was with her Bible-study group in her backyard when she became aware of a consistent tone that hummed above everyone's voices. She and her husband, Steve, had heard the construction on Dobson Road for ages, but this whirring sound didn't seem to stop, or change. They tried to identify it by process of elimination, even climbing out of bed one night to clear crud from their pool pump, which, they discovered, wasn't turned on.

Eventually, through their own patrols, they identified the source. The week after Christmas, the Webers papered Clemente Ranch with flyers and created a website asking people if they'd been bothered by a "constant humming/whirring sound" coming from CyrusOne. Complaints from more than 120 people flowed in.

Thallikar heard about the Webers' efforts from one of his neighbors, and on January 23, 2018, he went to their home for the standing-room-only inaugural meeting of the Dobson Noise Coalition. People complained about headaches, irritability, difficulty sleeping. Jannuzzi had tried to muffle the sound by installing thick wooden barn doors over her sliding glass doors, and another neighbor had mounted sound-absorbing acoustic board in her bedroom windows. For five years, you couldn't

have bought a house on Jannuzzi's block, but now several of her neighbors were planning to move.

When it was Thallikar's turn, the story of his three-year odyssey poured out: the sleepless nights, the feelings of being under attack, the unresponsive officials and unanswered emails. Jaws dropped. He wanted to know why no one else had spoken up earlier. "I think we all went through a period of 'Maybe it'll go away,' " said one neighbor. Others had assumed something was wrong with them, or else had struggled to trace the sound to its source.

The Dobson Noise Coalition jumped into action. Its members circulated a petition asking CyrusOne to stop its racket, which 317 people signed. They wrote to CyrusOne, twice, but heard nothing. They contacted Chandler officials—who were considerably more receptive to the group than they had been to Thallikar alone—and got the city manager to send CyrusOne's CEO a certified letter requesting a "plan of action." For weeks, CyrusOne responded with silence.

Amy Weber, who co-founded the Dobson Noise Coalition, in front of her home (Cassidy Araiza)

The nature of noise is shifting. Sonic gripes from the 18th and 19th centuries—church bells, carriage wheels, the hollering of street criers—sound downright charming to today's ears. Since then, our soundscape has been overpowered by the steady roar of machines: a chorus of cars, planes, trains, pumps, drills, stereos, and turbines; of jackhammers, power saws, chain saws, cellphones, and car alarms, plus generators, ventilators, compressors, street sweepers, helicopters, mowers, and data centers, which are spreading in lockstep with our online obsession and racking up noise complaints along the way. Communities in France,

Ireland, Norway, Canada, North Carolina, Montana, Virginia, Colorado, Delaware, and Illinois have all protested the whine of data centers. That's to say nothing of what drones may bring. "The next century will do to the air what the 20th century did to the land, which is to put roads and noise everywhere," Les Blomberg, the executive director of the nonprofit Noise Pollution Clearinghouse, told me. Noise, having emancipated itself from the human hand, is becoming autonomous and inexhaustible. Human noisemakers have to sleep, but our mechanical counterparts, which do not tire, die, or strain their vocal cords, can keep up a constant, inescapable clamor.

Study after study has reached the hardly earth-shattering conclusion that we largely prefer the sounds of nature to those of machines. A 2008 research project that played subjects 75 recordings, ranging from a cat's meow to skidding tires, found the five most agreeable sounds to be running water, bubbling water, flowing water, a small waterfall, and a baby laughing. Other studies—echoing spa brochures—tell us that natural sounds promote relaxation.

And yet we're muffling them with our racket, to the detriment of other species. The concentration of stress hormones in elk and wolf feces spikes when snowmobiles arrive, then returns to normal when the machines disappear; a similar pattern was observed for North Atlantic right whales subjected to the whine of ship traffic. (One bioacoustics researcher told *The New York Times* that the acoustic emissions of air guns, used to map the ocean floor, are creating a "living hell" for undersea creatures.) Birds in noisy habitats become screechier to make themselves heard above our din—sparrows that "used to sound like, say, George Clooney would now sound like Bart Simpson," one ornithologist told a reporter—and this phenomenon has been linked to decreases in species diversity, bird populations, and tree growth.

Though data are scarce, the world appears to be growing louder. The National Park Service's Natural Sounds and Night Skies Division, which sends researchers to measure the acoustics of the American outdoors, estimates that noise pollution doubles or triples every 30 years. The EPA last measured our nation's volume in 1981; assuming (generously) that our collective cacophony has remained constant, calculations from 2013 estimate that more than 145 million Americans are exposed to noise exceeding the recommended limits. In the absence of more recent surveys, the volume at which emergency vehicles shriek is telling, given that sirens must be loud enough to pierce the ambient noise level. According to measurements by R. Murray Schafer, a fire-engine siren from 1912 reached 88 to 96 decibels measured from 11 feet away, whereas by 1974, sirens' screeches hit 114 decibels at the same distance—an increase in volume, he noted, of about half a decibel a year. The latest fire-engine sirens howl louder still: 123 decibels at 10 feet.

Not everyone bears the brunt of the din equally. Belying its dismissal as a country-club complaint, noise pollution in the U.S. tends to be most severe in poor communities, as well as in neighborhoods with more people of color. A 2017 paper found that urban noise levels were higher in areas with greater proportions of black, Asian, and Hispanic residents than in predominantly white neighborhoods. Urban areas where a majority of residents live below the poverty line were also subjected to significantly higher levels of nighttime noise, and the study's authors warned that their findings likely underestimated the differences, given that many wealthy homeowners invest in soundproofing.

“If you want to access quietness, more and more you have to pay,” says Antonella Radicchi, an architect who helps map quiet spaces in cities. Radicchi believes access to quiet havens should be a right for every city dweller, not only the rich, who can afford to escape noise—via spas,

silent yoga retreats, lush corporate campuses. For \$6,450, not including airfare, you too can take a plane to a car to a motorboat to a canoe to a hiking trail to spend three days with a tour group along Ecuador's Zabalo River, which was recently named the world's first Wilderness Quiet Park. The designation was developed by the acoustic ecologist Gordon Hempton, who has crisscrossed the globe recording natural soundscapes and, through his nonprofit, Quiet Parks International, is on a mission to "save quiet." The organization is developing standards to measure the quietness of parks, trails, hotels, and residential communities, and will offer accreditation to areas that are suitably silent. (The Zabalo River qualified for Wilderness Quiet Park status by having a noise-free interval of at least 15 minutes, during which no man-made sounds were audible.)

Read: How noise pollution impairs learning

I spoke with Hempton via Skype several days after he'd returned from the Zabalo River. He was tan, with close-cropped gray hair and a tattoo on each forearm—one, of a leaf, inspired by his most recent visit to the Zabalo and another, he said, by an epiphany during his first solo campout in the Amazon jungle. Like other quiet advocates, Hempton speaks with the calm confidence, parallel sentence structure, and hypnotic cadence of a guru. I asked him what he sees as the value of quiet. "The further we get into quiet, the further we discover who we are," Hempton said. "When you speak from a quiet place, when you are quiet, you think differently. You are more uniquely yourself. You are not echoing advertisements. You are not echoing billboards. You are not echoing modern songs. You're echoing where you were." When I asked Hempton's co-founder the same thing, he chided me: "That question itself comes from a noisy situation."

Before starting Quiet Parks International, Hempton launched an effort to preserve the sonic pristineness of the Hoh Rain Forest in Washington's Olympic National Park. In 2005, Hempton could sit in the park for an hour without hearing man-made sounds—there was only the low, breathy whistle of the wind, the tap of rain on Sitka spruce, black-tailed deer crunching over felled hemlock, and marbled murrelets trilling. Today, thanks to an increase in flights from a naval air base, Hempton says the noise-free interval has dropped to 10 minutes.



Cassidy Araiza / *The Atlantic*

This summer, I traveled to Chandler to hear the whine for myself. A few months after the creation of the Dobson Noise Coalition, CyrusOne

emailed the group promising to be a “good neighbor” and said it would install “sound attenuation packages” on its chillers by October 2018. But that October came and went, and, the neighbors agreed, the noise was worse than ever.

So they kicked their efforts into high gear. In the 17 months since the Dobson Noise Coalition was founded, its members have consulted lawyers, filed police reports, gotten coverage in the local news, and met with Chandler’s chief of police. Armed with videos, written testimony, and detailed timelines, more than two dozen unsmiling neighbors dressed in red presented their grievances to the Chandler city council. That finally got them a meeting with CyrusOne.

In May, delegates from the Dobson Noise Coalition parleyed with delegates from CyrusOne, including an acoustic consultant the company had hired. According to his measurements, the whine of the chillers falls between 630 and 1,000 hertz—directly in the mid-frequency spectrum, the range our ears are most sensitive to—and is a pure-tone sound, widely considered exceptionally irritating. CyrusOne reiterated that it would spend \$2 million wrapping each and every chiller in custom-made, mass-loaded vinyl blankets designed to lower the whine by 10 decibels. Any future chillers would also be swaddled.

Kevin Timmons, CyrusOne’s chief technology officer, took me on a golf-cart tour of the exterior of the mission-critical facility, of which no inside tours are permitted without a signed nondisclosure agreement. Even Timmons kept getting locked out of different quadrants and having to summon security guards for help. He first heard about the noise complaints in early 2018, and said the neighbors’ annoyance came as a surprise. “We were a little bit stunned for a number of months while we tried to figure out if this was real,” he told me. “And it was made clear to

us that, whether real or imagined, it is something that we have to do something about.” He regretted not acting faster and worried that even after the seven-figure soundproofing, some people could never unhear the whine: “Once you hear an annoying sound, humans could actually start listening for that sound.” Recently, he told me, residents living near a CyrusOne data center in Dallas have started complaining about a hum.

The week I visited, CyrusOne had finished wrapping 24 of the now 56 chillers at the Chandler complex. The neighbors were split on whether the blankets helped, but they were unanimously livid that the city had allowed a data center in their backyard in the first place. They had a lot of questions about due diligence: What studies had been done? What measurements taken? None, I learned: Chandler’s city planners are not required to consider noise when issuing permits, nor did they. Plus, most of CyrusOne’s land was zoned for industrial use in 1983, 13 years before the closest homes, in Clemente Ranch, were built. The neighbors all knew the local noise code, chapter and verse—“No person shall disturb the peace, quiet and comfort of any neighborhood by creating therein any disturbing or unreasonably loud noise”—and demanded to know why CyrusOne hadn’t at the very least been cited, given that it was unquestionably disturbing their peace, quiet, and comfort.

I posed that question to Commander Edward Upshaw, a 33-year veteran of the Chandler Police Department, as we cruised the outskirts of the CyrusOne campus, a steady hum faintly audible over the rumble of late-afternoon traffic. “Issuing a citation and charging somebody with a crime for this level of noise? Not going to happen,” Upshaw said. We pulled over in Chuparosa Park and stood a few yards from the cinder-block wall that marked the outer edge of CyrusOne. “People sell radios that make white noise or waves that’s louder than this,” he said. “There’s people that pay for this! I don’t know what the issue is.” We drove inside

Clemente Ranch. “If you called a New York police officer for this noise, tell me what would happen. Tell me! Tell me what would happen.”

The following evening, I drove to Thallikar’s home, one in a row of tidy stucco houses bordered by saguaros and Jeep Wranglers. We sat in his living room next to a glass coffee table covered with folders and papers documenting his noise fight.

After teaming up with the Dobson Noise Coalition, Thallikar decided to hold off on selling his home. He was “cautiously optimistic,” but still wanted to know why the city allowed the “monstrosity,” with its “goddamned machines,” to escape punishment for disturbing the peace. He rejected the idea that anyone could judge the hum based on a short visit. “They are going there and sampling the problem,” Thallikar said. “I’m experiencing it day and night.” But he conceded that CyrusOne’s noise level was about 20 percent better than it had been, and he’d recently moved back into his master bedroom.

As CyrusOne had gotten quieter, though, Thallikar had noticed another, different whine. Through a new round of patrols, he’d traced it to GM Financial, which was equipped with its own platoon of chillers. He presented his findings to the city manager in a PowerPoint presentation, which identified as sources of “injurious noise pollution” chillers and generators at GM Financial; the Digital Realty data center around the corner from his home; and, potentially, the forthcoming Northrop Grumman complex. (Digital Realty and GM Financial said they were aware of the complaints but, after investigating, deemed no action necessary; the owner of Northrop Grumman’s building told me any noise concerns were “unfounded.”)

Thallikar offered to take me on a listening tour of the injurious noise pollution, and we hopped into a road-worn Toyota Camry, which Thallikar

steered to the GM Financial parking lot. We sidled up to a locked metal gate. “You hear this?” Thallikar said. *EHHNNNNNNNN*, said something from within the enclosure. “I don’t know how many units they have inside. You hear this, right? In the evenings it becomes louder and louder.”

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After a few other stops, we doubled back to concentrate on the area around CyrusOne. For more than an hour, we circled its campus, pulling over every so often. As the sun and traffic dropped, the intensity of the hum rose. The droning wasn’t loud, but it was noticeable. It became irritatingly noticeable as the sky dimmed to black, escalating from a wheezy buzz to a clear, crisp, unending whine.

“This is depressing,” Thallikar said as we stood on a sidewalk in Clemente Ranch. “Like somebody in pain, crying. Crying constantly and moaning in pain.”

We were silent again and listened to the data center moaning. Which was also, in a sense, the sound of us living: the sound of furniture being

purchased, of insurance policies compared, of shipments dispatched and deliveries confirmed, of security systems activated, of cable bills paid. In Forest City, North Carolina, where some Facebook servers have moved in, the whine is the sound of people liking, commenting, streaming a video of five creative ways to make eggs, uploading bachelorette-party photos. It's perhaps the sound of Thallikar's neighbor posting "Has anyone else noticed how loud it's been this week?" to the Dobson Noise Coalition's Facebook group. It's the sound of us searching for pink-eye cures, or streaming porn, or checking the lyrics to "Old Town Road." The sound is the exhaust of our activity. Modern life—*EHHNNNNNNNN*—humming along.

The hum had settled into a strong, unwavering refrain by the time Thallikar dropped me off at my hotel, which looked out over the CyrusOne campus. I could see a new building under construction, plus a lot for another building of equal size. Beyond that, just down the street from where Thallikar lived, was a bald patch of land with space for two more buildings. CyrusOne had room to add 96 more chillers, almost double the number whining now.

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EXHIBIT Z

Ambient Noise Is "The New Secondhand Smoke"

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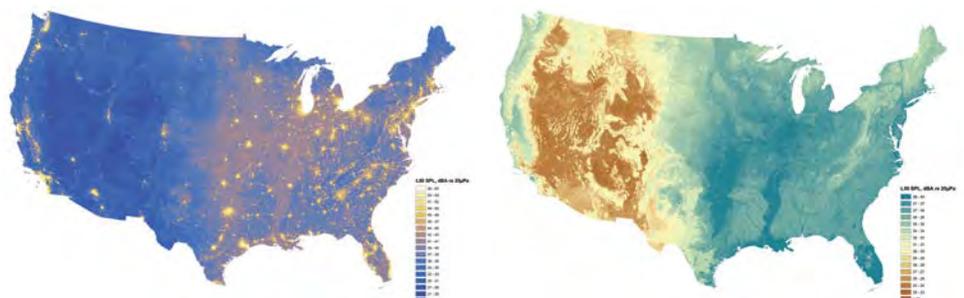
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Excessive ambient noise causes hearing loss; disrupts sleep, function, and communication; and causes nonauditory health effects for millions of people.

Ambient noise is the new secondhand smoke (Fetterman, 2018). Like unwanted tobacco smoke, noise doesn't just bother people but also adversely affects human health and function. Secondhand smoke causes cancer, sudden infant death syndrome, respiratory disease in children, and coronary heart disease (Centers for Disease Control and Prevention [CDC], 2018). Similarly, unwanted single exposures to loud noise can cause hearing loss, tinnitus, and hyperacusis, whereas chronic noise exposure undoubtedly causes hearing loss and tinnitus. Noise disturbs concentration and interferes with learning. Chronic noise exposure has little known but well-documented nonauditory health effects including cardiovascular disease (Münzel et al., 2018) and increased mortality (Basner et al., 2014; Hammer et al., 2014). The sounds that matter to people are the ones reaching the tympanic membranes of the listener or perhaps the cochlear hair cells and associated peripheral nerves and central auditory processing centers.

Noise exposure is a public health problem, with noise levels in everyday life high enough to cause hearing loss (Flamme et al., 2012; Neitzel et al., 2012; Mayes, 2019). Perhaps because of this, the CDC recently reported that approximately 25% of adults aged 20-69 years had noise-induced hearing loss. Of these, 53% showed hearing loss without significant occupational noise exposure (Carroll et al., 2017). Importantly, although the nonauditory health effects of noise are small for each exposed individual, the population health impacts are large because millions of people are exposed to excessive transportation noise.

Figure 1. National Park Service noise maps showing existing conditions (left) and natural conditions (right). Without human activity, nature is generally quiet. **Left:** dark blue, <20 dB(A); brown, 41-47 dB(A); tan, 50-54 dB(A). **Right:** brown, <20 dB(A); yellow, 30-31 dB(A); dark green, 38-40 dB(A). Noise levels are average (50%) measurements on a typical summer day, meaning that half of the time noise levels will be higher and half of the time they will be lower than those mapped. From National Park Service, 2017.



Nature Is Generally Quiet, with Noise Indicating Danger

The National Park Service (2017) noise maps (Figure 1) show that without human activity, environmental sound pressure levels are remarkably low, in the 20-30 dB(A) range. In nature, loud sounds are rare and may include thunderstorms, earthquakes, volcanic eruptions, waterfalls, and certain animal sounds. In all animals, hearing is used to obtain information about the environment, to detect danger, for communication, and for entertainment.

In nature, loud noise often indicates danger and causes “fight or flight” responses. These involuntary physiological responses involve two primitive systems, the autonomic nervous system and the neurohormonal or hypothalamic-pituitary axis. Noise causes almost instantaneous increases in blood pressure and pulse via the sympathetic nervous system (Babisch, 2014). It takes a little longer, but noise causes release of adrenocorticotrophic hormone that, in turn, causes the release of steroid hormones from the adrenal gland and increases in serum epinephrine and norepinephrine levels. More recently, it has been shown that stress causes inflammation of the vascular lining (Tawakol et al., 2017) and that noise exposure specifically causes this inflammatory change (Radfar et al., 2018). These physiological effects and their clinical outcomes, best studied for transportation noise, are summarized in Figure 2.

Specific Noise Levels Affecting Human Health and Function

It has long been known that specific noise levels affect human health and function (Passchier-Vermeer and Vermeer, 2000). These levels are based on expert systematic reviews of extensive published research. Despite their age, these specific noise levels remain valid. In some cases, such as studies of noise exposure causing hearing loss, older studies cannot be replicated because it is now unethical to endanger research subjects when the risk of harm is certain.

The National Institute for Occupational Safety and Health (NIOSH; 1998) recommended an 85 A-weighted decibel [dB(A)] equivalent continuous sound pressure level for 8 hours [$L_{Aeq(8)}$; see Table 1 for a list of abbreviations] as the level to reduce the risk of hearing loss from occupational noise exposure in 1972 (NIOSH, 1998). The monograph by the Environmental Protection Agency (EPA; 1974), still authoritative and never rescinded, listed a 45 dB day-night-weighted sound pressure level (L_{dn}) as interfering with indoor

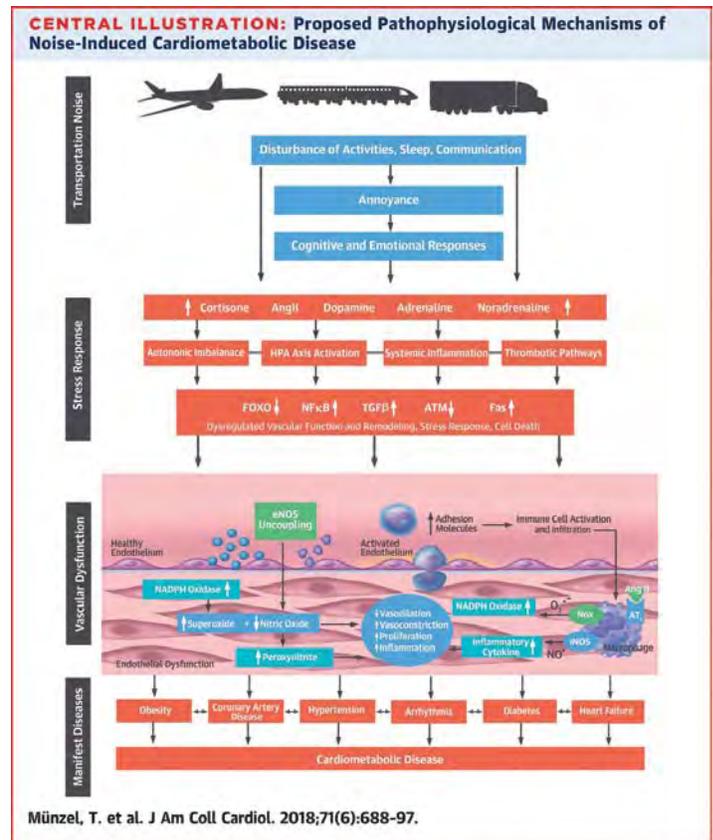


Figure 2. Proposed pathophysiological mechanisms of noise-induced cardiometabolic disease. Noise is stressful, causing chemical changes leading to vascular dysfunction, which, in turn, leads to disease. AngII, angiotensin II, a chemical causing vasoconstriction; HPA, hypothalamic-pituitary axis. The other factors affect the stress response and cause vascular dysfunction. For more details and abbreviations, see Münzel et al., 2018. From Münzel et al., 2018, with permission.

activities, a 55 dB L_{dn} as interfering with outdoor activities, a 70 dB(A) maximum time-weighted and A-weighted sound pressure level (L_{Amax}) as an ambient-noise level interfering with speech comprehension in people with normal hearing, and a daily average of 70 dB A-weighted equivalent continuous sound pressure level for 24 hours [$L_{Aeq(24)}$] as the noise exposure level to prevent hearing loss. Moulder (1993) added 58 dB(A) L_{Amax} as the ambient-noise level interfering with speech comprehension in people with hearing loss dining in restaurants. [For ease of use, this has been rounded up to 60 dB(A) L_{Amax} in Table 1.] This is still much quieter than almost all restaurants in which noise levels were measured in Manhattan (Scott, 2018). In 1999, the World Health Organization (WHO) added 30 dB(A) $L_{Aeq(8)}$ as the noise level required for uninterrupted sleep, noted that 45 dB L_{Amax} will disrupt sleep, and recommended only 1 hour of exposure

Table 1. Specific noise levels affecting human health and function

Sound Level	Effect	Source
30 dB(A) [$L_{Aeq(8)}$]	Sleep disruption	WHO (Berglund, et al., 1999)
45 dB (L_{dn})	Disturbance of concentration and interference with learning	EPA, 1974; WHO (Berglund et al., 1999)
45 dB (L_{Amax})	Sleep disruption	WHO (Berglund et al., 1999)
55 dB daily average (L_{den})	Nonauditory health effects	WHO, 2018
60 dB(A) (L_{Amax})	Interference with speech comprehension for hearing impaired	Moulder (1993) for US Architectural and Transportation Barriers Compliance Board
70 dB daily average [$L_{Aeq(24)}$]	Hearing loss	EPA, 1974
70 dB(A) (L_{Amax})	Interference with speech comprehension for those with normal hearing	EPA, 1974
85 dB(A) [$L_{Aeq(8)}$]	Occupational noise exposure (recommended limit)	NIOSH, 1998
85 dB(A) [$L_{Aeq(1)}$]	Recommended exposure to prevent hearing loss	WHO (Berglund et al., 1999)

WHO, World Health Organization; EPA, Environmental Protection Agency; NIOSH, National Institute for Occupational Safety and Health; $L_{Aeq(8)}$, A-weighted equivalent continuous sound pressure level for 8 hours; L_{dn} , day-night weighted sound pressure level; L_{den} , day-night-evening-weighted sound pressure level; L_{Amax} , maximum time-weighted and A-weighted sound pressure level; $L_{Aeq(24)}$, A-weighted equivalent continuous sound pressure level for 24 hours; $L_{Aeq(1)}$, A-weighted equivalent continuous sound pressure level for 1 hour. Definitions from WHO, 2018.

to 85 dB(A) [$L_{Aeq(1)}$] to prevent hearing loss (Berglund et al., 1999). The WHO report also discussed 55 dB(A) as the level at which adverse health effects of noise occur, and this noise level [55 dB day-night-evening-weighted sound pressure level (L_{den})] has been emphasized in later reports (WHO, 2018).

Specific Noise Levels

The nine specific noise levels affecting human health and function (Table 1) are discussed in order of increasing sound pressure levels, with emphasis on the disability rights aspects of ambient noise and safe noise exposure levels for the public. It is important to emphasize that in the United States, there are no federal guidelines, standards, or regulations for non-occupational or public noise exposure (Carroll et al., 2017).

Sound energy causes auditory damage and activates the stress responses to noise. The equal-energy hypothesis states that equal amounts of sound energy will produce equal amounts of hearing impairment and other effects, regardless of how the sound energy is distributed in time (Kryter, 1994; Berglund et al., 1999). The hypothesis may, however, underestimate the damage done by intermittent or impulse noise. In the United States, most noise levels affecting humans are measured in

A-weighted decibels because difficulty understanding speech is the material impairment from occupational noise exposure (NIOSH, 1998). Although A-weighted decibel measurements may be relevant for speech comprehension, the total sound pressure level is likely more important for human health.

Low-frequency noise [C-weighted decibels; dB(C)] may also impact humans, specifically causing damage to hair cells in the vestibular system responsible for balance (Stewart et al., 2016). An association between hearing loss and falls has been reported, with worse hearing being correlated with increased fall risk (Lin and Ferrucci, 2012). There are no published standards for occupational or nonoccupational low-frequency noise exposure.

Thirty A-Weighted Decibel Noise Causes Sleep Disruption

Sound pressure levels as low as 30 dB(A) $L_{Aeq(8)}$ and 45 dB L_{Amax} can cause sleep disruption (Berglund et al., 1999). There are individual variations in sensitivity to sound during sleep and variations in sensitivity to sound during different phases of the sleep cycle. Even if the noise does not wake the sleeper, the sound causes electroencephalogram changes and also results in increases in heart rate (Buxton et al., 2012). Sleep

is important for human health and function (Colten and Altevogt, 2006). Inadequate, interrupted, or poor-quality sleep is associated with a multiplicity of ailments, including anxiety, obesity, depression, hypertension, diabetes, dementia, and increased mortality (Cappuccio et al., 2010).

The implications for noise control are obvious. Nighttime noise sources, including heating and ventilation equipment; transportation noise; and noise from restaurants, bars, and clubs adjacent to residential neighborhoods, must be reduced to allow high-quality uninterrupted sleep. Horn-based alerts, which can be as loud as 90 dB, should be changed to electronic chirps that can be decreased in volume or turned off altogether. Better sound insulation of walls, roofs, and windows will help, but people may prefer to leave the windows open at night. Eliminating or reducing sound at the source is always better than trying to deflect, insulate, or isolate it later.

Forty-Five A-Weighted Decibels Interfere with Human Activity Including Learning

Quiet is necessary for human thought and concentration, which are disrupted at ambient sound levels of 45 dB L_{dn} . This is best researched in terms of noise interfering with learning (Bronzaft and McCarthy, 1975; Brill et al., 2018) and cognition (Clark and Paunovic, 2018a). High ambient-noise levels also decrease worker productivity and product quality (Berglund et al., 1999; Dean, 2019).

Daytime noise must also be reduced. Daytime noise particularly impacts those at home during the day, which includes vulnerable populations such as the elderly, children, those too sick to go to work or school, and an increasing percentage of the workforce working at home at least part of the time. One particularly intrusive urban and suburban noise source is the gas-powered leaf blower (Walker and Banks, 2017). Recent success in banning these in Washington, DC, provides a blueprint for action in other communities (Fallows, 2019). Again, eliminating noise at the source is preferable to increased sound insulation.

Forty-Five Decibel Noise Disrupts Sleep

Single episodes of noise at 45 dB L_{Amax} are loud enough to disrupt sleep (Berglund et al., 1999).

Fifty-Five Decibel Average Daily Noise Exposure Causes Nonauditory Health Effects

At an approximately 55 dB time-weighted average for 24 hours (L_{den}), noise exposure causes or is associated with a

wide variety of nonauditory health problems including cardiovascular disease (Münzel et al., 2018), obesity (Pyko et al., 2017), diabetes (Dzambhov, 2015), reproductive problems (Ristovska et al., 2014), and mental health disorders (Clark and Paunovic, 2018b). The adverse health effects are small for each individual, but the population health impacts are large because of the large number of people affected by transportation noise. A 1 or 2 mmHg increase in systolic blood pressure is unlikely to cause problems in an individual, but if enough individuals are exposed, the average increase in blood pressure will cause some people to have heart failure, heart attacks, or strokes.

There are multiple studies in the European literature on the adverse effects of transportation noise on health. These include road traffic noise (Halonen et al., 2015), railroad noise (Seidler et al., 2016), and aircraft noise (Correia et al., 2013; Basner et al., 2017). Most experts conclude that the data are strong enough to establish causality of transportation noise exposure for the adverse health effects. (Basner, 2016) This body of research supports the recent WHO Environmental Noise Guidelines for the European Region (2018).

Again, the implications for acoustic engineering and design specifications for structures in which people work, live, and sleep are clear: sound transmission coefficients of windows, walls, and roofs must be increased and transportation noise sources must be reduced as much as possible. Effective measures include enforcement of exhaust noise regulations, requiring different combinations of road surface and tire materials, noise barriers (Rochat and Reiter, 2016), changes in aircraft flight patterns, better track and wheel maintenance, and use of rubber rather than wooden or concrete track ties. Other regulatory solutions, such as prohibiting engine braking and restricting airport operating hours, are also feasible.

Sixty A-Weighted Decibel Ambient Noise Is a Disability Rights Issue

The Americans with Disabilities Act (ADA) defines a disability as “a physical or mental impairment that substantially limits one or more major life activities,” with hearing and communicating specified as major life activities (ADA National Network, 2017). People with moderate to severe auditory disorders, including not only hearing loss but also tinnitus and hyperacusis, appear to meet the ADA standard for having disabilities. High ambient-noise levels make it difficult for those with hearing loss to understand speech, worsen tinnitus, and are painful for those with hyperacusis.

Of the three auditory disorders, only hearing loss is well understood (Cunningham and Tucci, 2017). Tinnitus is commonly called ringing in the ears but technically is the perception of sound for which there is no external auditory stimulus (Bauer, 2018). Hyperacusis is a sensitivity to noise in which noise levels that don't affect most people are perceived as uncomfortable or actually painful (Baguley, 2003). People with hyperacusis often describe noise as being like a needle stuck in the ear. The most severely affected hyperacusis patients have difficulty leaving their homes, and when they do, they wear both earplugs and earmuff hearing protection.

Auditory disabilities are invisible and underappreciated. Unlike the blind, who have difficulty living independently, people with hearing loss have no problem walking or driving, shopping, preparing food, or traveling. People with hearing loss can compensate for their disability by asking someone to repeat something, cupping a hand to the ear, or seeking out quiet spaces in which to converse (Fink, 2017b). Despite this, hearing loss causes major problems in social function, leading to isolation, depression, and other problems.

There are ADA protections for the deaf and for those with profound hearing impairment (>81-90 dB decrement), including workplace modifications to allow gainful employment and mandated auxiliary aids and services, such as fire alarms with strobe lights, teletype communication devices, and sign language interpreters when needed (US Department of Justice, 2010). However, there are no ADA Access Guidelines for those with only mild (25-40 dB), moderate (41-60 dB), or severe (41-80 dB) hearing loss, and no ADA standards for ambient-noise levels in places of public accommodation (US Access Board, 2002).

High ambient-noise levels have a disproportionate impact on older people due to their high prevalence of hearing loss. Half of those over 65 and 80% of those in their 80s have at least 25-40 dB hearing decrements (Lin et al., 2011). Many older people live alone, and a restaurant meal may be the only time they converse with others.

For a variety of reasons, hearing aids do not help users understand speech in noisy places as much as desired because they primarily increase audibility but do not improve intelligibility (Lessica, 2018). As a consequence, people with hearing loss need lower ambient-noise levels to be able to understand speech. The technologies for reducing and controlling noise have been known for more than half a century. These include

designing mechanical devices to be quieter or isolating, insulating, reflecting, deflecting, or absorbing the sound (Beranek, 1960). For the built environment, noise control techniques are also well understood (Harris, 1994). Relatively inexpensive items such as ceiling panels, wall hangings, carpets, and draperies can help control noise and reduce reverberation. Restaurant acoustics are reviewed by Roy and Siebein (2019). The simplest environmental modification costs nothing: turning down the volume of amplified sound.

Reducing ambient-noise levels will likely require governmental action. Laws and regulations could specify a decibel level or a functional measure, perhaps requiring indoor sound levels low enough to allow people to converse without straining to speak or to be heard. This is approximately 70-75 dB(A) for those with normal hearing and near 60 dB(A) for those with hearing loss. With appropriate enabling legislation, crowd-sourced smartphone applications, such as iHEARu (ihearu.co) and SoundPrint (soundprint.co), could provide data for local communities to initiate enforcement actions against noisy establishments.

Noise Exposure Above a 70 Decibel Time-Weighted Daily Average Will Cause Hearing Loss

The only evidence-based safe noise exposure level to prevent hearing loss is 70 dB time-weighted average for 24 hours [$L_{Aeq(24)}$], not the 85 dB(A) occupational exposure level (Fink, 2017a). Occupational exposures occur 8 hours a day, 240 days a year at work, for 40 years. (NIOSH, 1998) Noise is different from other occupational exposures such as ionizing radiation or toxic solvents because exposure continues outside the workplace, all day long, all year long, for an entire lifetime. The EPA (1974) adjusted the NIOSH-recommended exposure level (REL) for 24-hour daily exposure, 365 days a year, to calculate the daily 70 dB time-weighted average safe noise exposure level to prevent hearing loss. The EPA document carefully states that this is *not* an official regulation or standard.

The 70 dB daily average [$L_{Aeq(24)} = 70$] is probably too much noise exposure to prevent hearing loss. The EPA adjusted the REL for additional daily and annual exposure time but not for lifetime exposure. In 1967, life expectancy for a man was only 67 years. With male life expectancy now approaching 80 years in the United States, adjustment for the additional years of exposure is needed. The additional years of exposure are among the factors explaining why hearing loss is so prevalent in older people (Anderson et al., 2018).

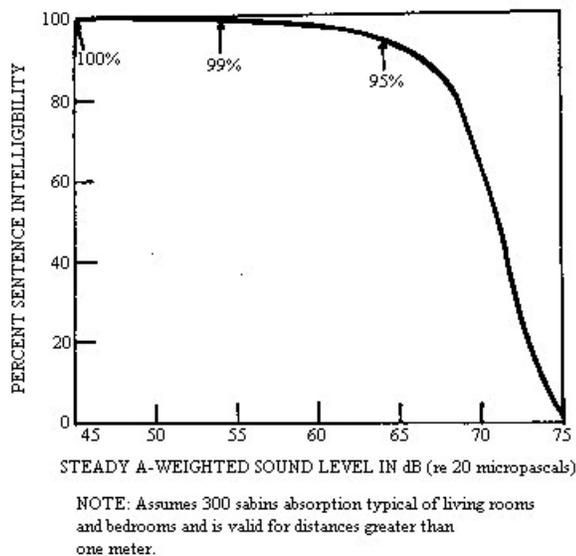


Figure 3. Normal voice sentence intelligibility as a function of the steady background sound level in an indoor situation. At the typical conversational distance of 1 meter using normal speech volumes, people with normal hearing require 45 dB(A) ambient noise for 100% speech comprehension. Speech comprehension decreases noticeably at approximately 70 dB(A) ambient-noise levels and reaches zero at 75 dB(A). From EPA, 1974, Figure D-1.

From a public health perspective, the NIOSH noise criteria (1998) allow an 8% excess risk of hearing loss after 40 years of occupational noise exposure. This means that workers exposed to 85 dB(A) at work have an 8% increased risk of hearing loss compared with a similar population not exposed to occupational noise. The concept of excess risk is problematic because it assumes that hearing loss is part of normal aging, which is probably not true (Fink, 2017c) and an 8% risk of injury is not acceptable for the public. The difference between occupational and public noise exposure standards was discussed in a NIOSH Science Blog post (Kardous et al., 2016). However, the principles of occupational noise control (Murphy, 2016) can be applied to the public.

Seventy to Seventy-Five A-Weighted Decibel Ambient Noise Interferes with Speech Comprehension in Those with Normal Hearing

Ambient noise also interferes with speech comprehension for those with normal hearing. This has been known since 1974, when the EPA published the graph in **Figure 3**. The text states that the maximum sound level that will permit relaxed conversation with 100% sentence intelligibility is 45 dB, but the decrement in speech intelligibility does not become mean-

ingful for most listeners with normal hearing until ambient noise reaches 65-70 dB.

Eighty-Five A-Weighted Decibels Are an Occupational Noise Exposure Standard

The National Institute on Deafness and Other Communication Disorders (NIDCD; 2017) states that “long or repeated exposure to sound at or above 85 decibels can cause hearing loss.” This statement is accurate but misleading. Eighty-five decibels or A-weighted decibels without a time limit is not a safe noise exposure level (Fink, 2017a). The auditory injury threshold is 75-78 dB(A) (Mills et al., 1981; Flamme et al., 2012) and may be as low as the effective quiet level, the sound pressure level required to recover from noise-induced temporary threshold shift, which is only 55 dB(A) (Kryter, 1994).

Unfortunately, in the absence of any federal guideline, standard, or regulation for nonoccupational noise exposure, the 85 dB sound level of the NIDCD has become the de facto federal safe noise exposure level. It is often cited as a safe volume level or as the sound pressure level at which hearing loss begins, without exposure time, by audiology experts in media reports; it is mentioned in educational materials such as the Dangerous Decibels program (bit.ly/28W7TA4) and in materials provided by the American Speech-Hearing-Language Association (ASHA) and the American Academy of Audiology and is used as a volume limit for headphones marketed as “safe” for hearing in children as young as 3 years, without specifying a time limit for exposure (Saint Louis, 2016).

At an 85 dB(A) occupational exposure, an employer must implement a hearing conservation program (OSHA, 2002). Elements of a hearing conservation program include baseline audiograms, education about noise protection, provision of hearing protection devices, annual audiograms, and meticulous record keeping. Obviously, the public has no such protections.

One Hour at Eighty-Five A-Weighted Decibels Can Cause Hearing Loss

WHO recommends only 1 hour of exposure at 85 dB(A) [$L_{Aeq(1)}$] daily for the public to prevent hearing loss (Berglund et al., 1999). An occupational noise exposure calculator will show that after only a 1-hour exposure, it is impossible for the listener to achieve the 70 dB average daily noise exposure level to prevent hearing loss. This means that noise levels in many restaurants are high enough to cause hearing loss during a typical meal lasting 1-2 hours.

Conclusion

Until the introduction of jet aircraft and the building of the interstate highway system, the United States was generally a quiet place except perhaps for a few large cities or for those living near factories, railroad yards, and tracks (Owen, 2019). The first publication about noise as a public health hazard appeared in 1969 (Ward and Fricke, 1969). As part of the nascent environmental movement, noise pollution was recognized as an environmental problem, not a health or public health problem. In 1972, the Noise Control Act (US Congress, 1972) established "a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare." The EPA was directed by Congress to coordinate the programs of all federal agencies relating to noise research and noise control. Additional legislation included the Noise Control Act of 1978 (US Congress, 1978). Unfortunately, during the Reagan years, the attempts by the EPA to control noise pollution ran afoul of that administration's antiregulatory stance, and the EPA Office of Noise Abatement and Control (ONAC) was defunded by Congress (Shapiro, 1992). The federal government has done little about noise since then. A rare exception has been the work of the National Park Service about noise in national parks, as required by Congress.

The defunding of the ONAC led to the decline of the acoustic science and engineering professions in the United States. Noise control was left to cities and states, which lacked the funding and technical expertise to deal with noise. Several recent developments indicate that the federal government is again recognizing hearing and noise as important for the public and the nation. Reports from the National Academies of Science, Engineering, and Medicine (NASEM) include *Noise and Military Service* (Institute of Medicine, 2006), *Technology for a Quieter America* (National Academy of Engineering, 2010), and *Hearing Health Care for Adults: Priorities for Improving Access and Affordability* (NASEM, 2016). The latter led to passage of the bipartisan Warren-Grassley Over-the-Counter Hearing Aid Act in 2017 (Warren and Grassley, 2017). Finally, the Federal Aviation Administration (FAA) Reauthorization Act of 2018 includes specific mandates for studies of aircraft noise (US Congress, 2018).

This renewed federal interest in noise levels affecting the public offers an opportunity for the Acoustical Society of America and its members to stake out their rightful position as the source for information and standards for noise control, with the expertise to offer solutions to noise problems. This

will help acoustic science and engineering return to relevance in the third millennium, hopefully leading to a quieter and healthier world for all.

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BioSketch



Daniel Fink is board chair of The Quiet Coalition (Lincoln, MA). He is a retired internist on the Emeritus Medical Staff of Cedars-Sinai Medical Center (Los Angeles, CA). Dr. Fink developed tinnitus and hyperacusis after a one-time exposure to loud noise. He served on the board of the American Tinnitus Association from 2015 to 2018 and now serves as an expert consultant to the World Health Organization (Geneva, Switzerland) on its Make Listening Safe program. He is also a subject matter expert on noise and the public for the National Center for Environmental Health at the Centers for Disease Control and Prevention (Atlanta, GA).

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**Post-Hearing Statement of Daniel Fink, M.D., to the
Washington, D.C. City Council's Committee of the
Whole Regarding the Leaf Blower Amendment Act of
2017 (Bill No. 22-234), July 2, 2018**

**Gas-powered Leaf Blower Noise is Hazardous to the
Auditory and Non-Auditory Health of Residents of the
District of Columbia**

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Post-Hearing Statement of Daniel Fink, M.D., to the D.C. City Council's Committee of the Whole Regarding the Leaf Blower Amendment Act of 2017 (Bill No. 22-234), July 2, 2018

EXECUTIVE SUMMARY

As one of the nation's leading experts on noise and health, I am commenting on health issues related to gas-powered leaf blower (GLB) noise. The vast majority of GLBs emit noise at dangerously high levels, loud enough to cause hearing loss and non-auditory health problems. In addition, these loud noise levels pose special risks for vulnerable populations in the District of Columbia (e.g., children, pregnant women, the elderly, and those at home with illnesses), are a disability rights issue for those with auditory disorders, and are loud enough to interfere with concentration and communication for those working from home.

Animals evolved in quiet. Noise is stressful because historically it indicates danger. Only a few marine mammals can close their ears. The ear lacks protective mechanisms against loud noise, which causes hearing loss, tinnitus, and hyperacusis. Involuntary physiological responses to noise include: 1) an autonomic nervous system response, leading to increases in heart rate and blood pressure; 2) a neuroendocrine response, leading to increases in stress hormone levels, in turn leading to abnormalities in blood glucose, blood lipids, blood viscosity, and clotting factors; and 3) an inflammatory response, causing vascular inflammation, also leading to cardiovascular disease and death.

Noise as quiet as 35 decibels (dB) can disrupt sleep and at 45 dB is loud enough to interfere with human activity. At slightly louder noise exposure levels, 55 dB time weighted average, noise exposure causes the stress responses noted above. These in turn lead to anxiety, premature birth, low birth weight, obesity, hypertension, cardiovascular disease, and death. At 70 decibels time-weighted average for 24 hours, noise causes hearing loss. The auditory injury threshold is only 75-78 A-weighted decibels (dBA). The ability to understand speech decreases at 70 dBA ambient noise and approaches zero at 75 dBA. None of this information is new, even if it is not widely known. The vast majority of GLBs in home and commercial use emit noise greater than 70 dB at 50 feet.

To respond to the problem of GLB noise, many cities across the United States have already banned GLB use, without any noticeable problems in landscape maintenance. These bans have withstood legal challenge. There is no reason why this City Council can't take steps to protect District residents from the adverse health effects of GLB noise, Failure to protect citizens from noise may be viewed in the long gaze of history as harshly as the government failure in Flint, MI to protect citizens, especially children, from water contaminated with lead.

Post-Hearing Statement of Daniel Fink, M.D., to the D.C. City Council's Committee of the Whole Regarding the Leaf Blower Amendment Act of 2017 (Bill No. 22-234), July 2, 2018

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INTRODUCTION

Thank you for accepting my post-hearing written statement. I apologize for being unable to attend the July 2, 2018 City Council meeting in person. By way of introduction, I am regarded as one of the nation's leading advocates for noise control and one of the nation's and the world's experts on the effects of noise on the public, i.e., the effects of non-occupational noise exposure on hearing and general health.

I graduated from Yale University cum laude with honors in biology, received the M.D. from the University of Rochester (NY) School of Medicine and Dentistry, and trained in internal medicine at the University of Cincinnati Medical Center. I received an M.B.A. from the Wharton School at the University of Pennsylvania, where I was also a Robert Wood Johnson Foundation Clinical Scholar and a Senior Fellow at the Leonard Davis Institute of Health Economics. I am certified by the American Board of Internal Medicine, and licensed to practice medicine in California. After a brief foray into academic medicine, the bulk of my career was in medical management, broadly dealing with issues of resource management and quality improvement. I finished my full-time career as a faculty physician at Cedars-Sinai Medical Center in Los Angeles, CA, teaching medical students and residents, and remain on the Emeritus Medical Staff there. My noise activities, begun in late 2014, constitute an unpaid second career.

Although my specialty is internal medicine and not otolaryngology, I have learned enough about noise and health since 2014 to have had presentations accepted at national and international meetings, including the Institute for Noise Control Engineering (INCE) in Providence, RI in 2016 ("What is a safe noise level for the public?") and in Grand Rapids, MI in 2017 ("Transportation noise exposure is strongly correlated with morbidity and mortality"), the 12th Congress of the International Commission on the Biological Effects of Noise (ICBEN) in Zurich,

Switzerland in 2017 (“Hearing loss is probably not part of normal aging”, and “Disability rights aspects of ambient noise for people with auditory disabilities”), and at the 174th meeting of the Acoustical Society of America (ASA) in New Orleans in December 2017 (“Disability rights aspects of ambient noise for people with auditory disabilities under the Americans with Disabilities Act”). I have written articles for Tinnitus Today, published by the American Tinnitus Association, for Hearing Health, published by the Hearing Health Foundation, and blog posts for Silencity (www.silencity.com) and for The Quiet Coalition.

The paper presented at INCE 2016 appeared as an editorial in the January 2017 issue of the American Journal of Public Health. [1] The two IC BEN papers are available online. [2,3] The ASA presentation was published in Proceedings of Meetings on Acoustics in December 2017. [4] I have been asked to write an article for the Fall 2019 issue of Acoustics Today, also a publication of the ASA.

I am founding board chair of The Quiet Coalition, a group of professionals from various disciplines concerned about the impacts of noise on health, environment, learning, productivity, and quality of life in America. From 2015 until June 30, 2018, I served on the board of the American Tinnitus Association. I serve as an expert consultant to the World Health Organization on its Make Listening Safe program, and as an informal consultant to the Centers for Disease Control and Prevention (CDC) on noise and health issues. In 2016, I was among members of the medical community- perhaps the very first- who alerted the CDC that noise was a health and public health issue needing its urgent attention, not just an occupational health and safety problem. [5] I am a member of the Acoustics Proposal Review Committee for the Facilities Guidelines Institute, chartered by Congress in the 1946 Hill-Burton legislation to set architectural standards for health care facilities. I am also Medical Advisor for SoundPrint, a smart phone app that records and reports restaurant noise levels, and serve as Interim Chair of the Health Advisory Council for Quiet Communities, Inc. in Lincoln, MA. Again please note that these are all voluntary unpaid positions.

I have no financial conflicts to disclose, specifically holding no stock or other investments in companies manufacturing either gas or battery powered yard maintenance equipment including leaf blowers unless such investments are in mutual fund and similar investments without my direct involvement in investment decisions. My only goal is to make the world a quieter place, and to find quiet restaurants in which to enjoy the meal and the conversation with my wife.

The adverse health effects of noise are summarized in the Figure on the next page. These include both direct effects including hearing loss, sleep disturbance, and stress responses, and indirect effects that also lead to involuntary physiologic changes and adverse health effects.

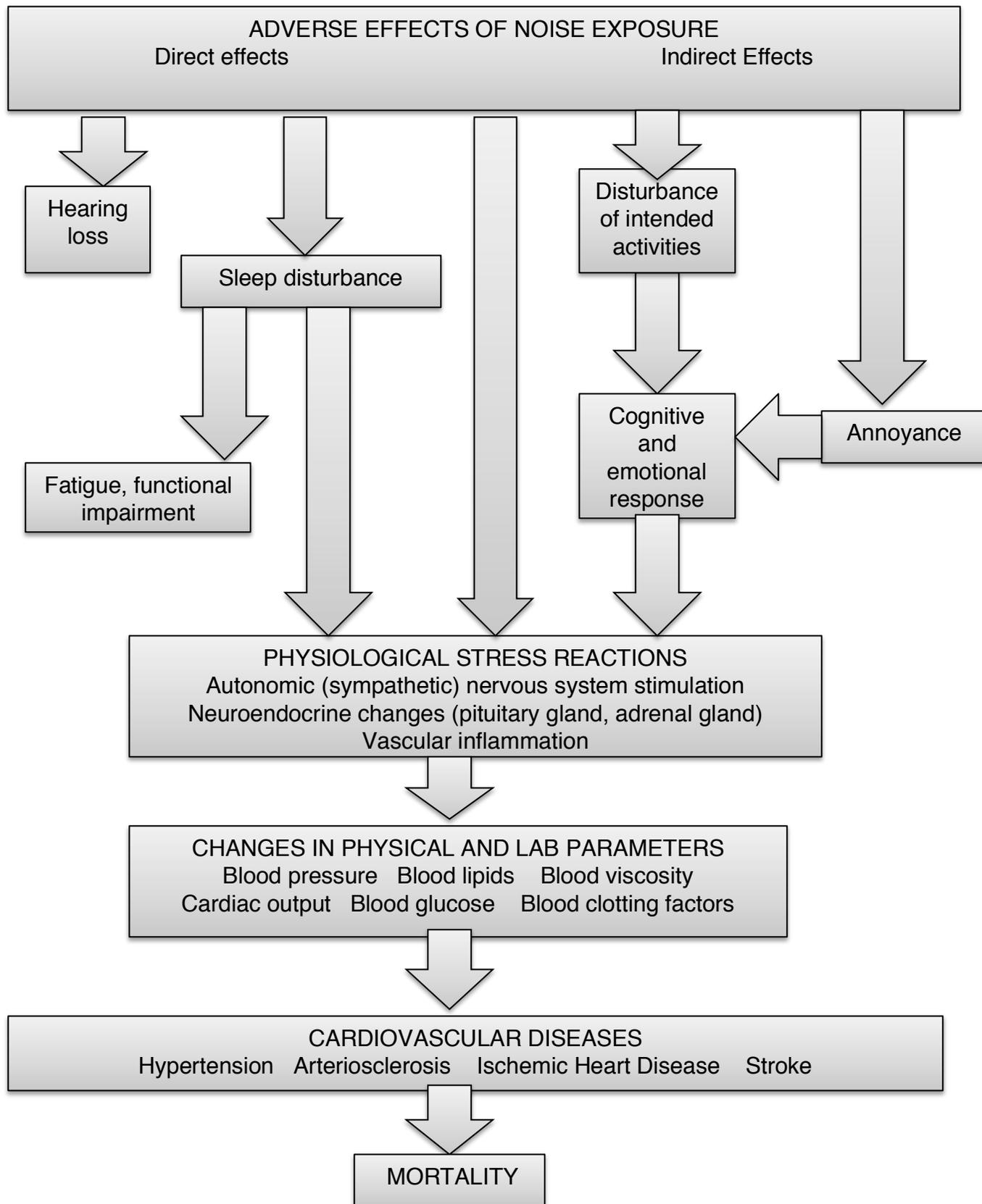


FIGURE Adverse Effects of Noise Exposure Adapted with permission from Babisch W, Updated exposure-response relationship between road traffic noise and coronary heart disease: A meta-analysis. Noise Health 2014;16:1-9.

ADVERSE HEALTH EFFECTS OF NOISE: HEARING LOSS

As shown in the Figure, noise is a pervasive environmental pollutant with both direct and indirect adverse effects on human health. These adverse health effects were summarized in 2014 by Hammer et al. [6] and by Basner et al. [7]. This is not new information and no more research is needed to be absolutely certain that noise exposure causes hearing loss and a multitude of non-auditory human health problems. The scientific evidence is incontrovertible.

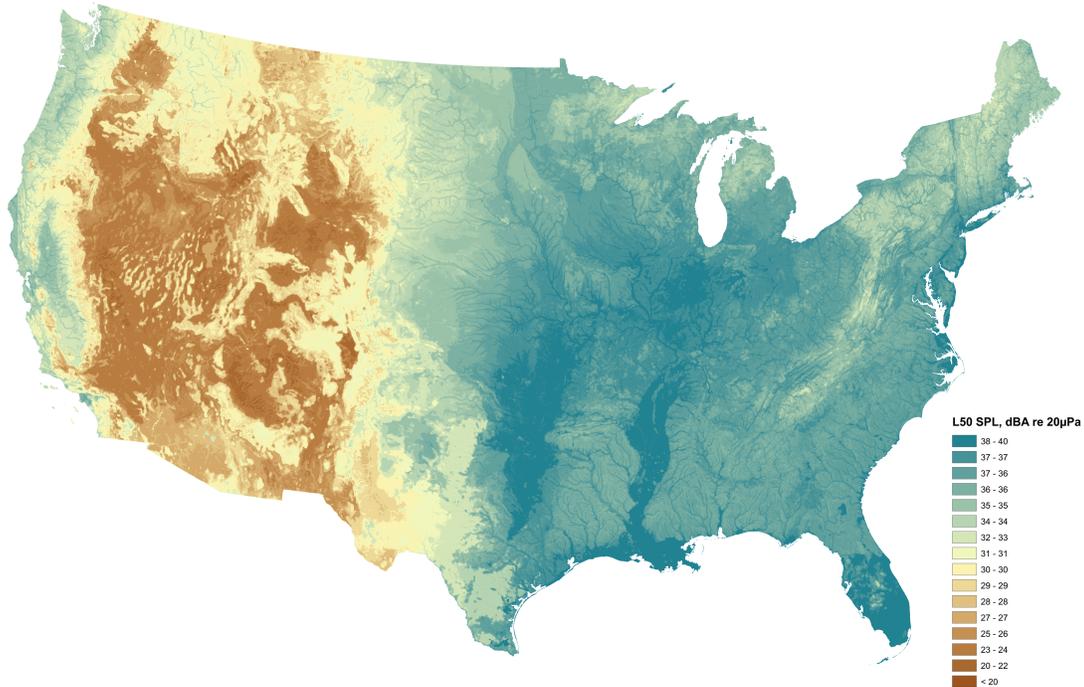
An evolutionary biology perspective helps explain why noise causes health problems. The hearing sense appears to have evolved from a primitive vibration detection sense in one-celled organisms, generally either to help detect food or to help avoid being eaten. As the hearing sense evolved over time, it developed exquisite sensitivity. Predators use hearing to find food. The snowy owl uses hearing to find rodents under a foot of snow. Herbivores, from rabbits to prairie dogs to deer, antelope, and zebras, use hearing to detect danger. Except for a few marine mammals, most animals can't close their ears. Hearing and noisemaking also developed for communication, in insects, reptiles, birds, and especially mammals. One of the evolutionary advances helping mammals become the dominant species in almost all environments was the development of specific cochlear mechanisms to amplify sound, allowing detection of food, avoidance of predators, and communication over long distances. [8]

One thing that hasn't changed, though, is that animals, including humans and our primate ancestors, evolved in quiet. The National Park Service noise map (see next page) shows that without human activity, ambient environmental noise levels are very low, below 40 A-weighted decibels (dBA)* in the entire United States and below 30 dBA in much of the country. [9] In nature, loud noise is rare- a thunderstorm, a landslide, a waterfall, an earthquake- and perhaps a collection of birds in a tree at dusk, a lion's roar, or primates communicating with each other through the forest, so mammals including humans did not develop protective mechanisms against loud noise.

What is a safe noise level for the public? The National Institute for Deafness and Other Communication Disorders states on its website, "Long or repeated exposure to sound at or above 85 decibels can cause hearing loss." [10] This statement is true, but misleading. Eighty-five decibels without time limit is not a safe noise exposure level for the public. Eighty-five A-weighted decibels (dBA) is an occupational noise exposure level that even with strict time limits- 8 hours a day, 250 days a year, for 40 years at work- does not protect all exposed workers from hearing loss. This topic was discussed in detail in the NIOSH Science Blog post on February 16, 2016. [11]

*A glossary of technical terms can be found in Reference 17.

National Park Service Sound Map- Natural Conditions (Green = Sound Pressure Level (SPL) 40 dBA, Brown = SPL 30 dBA)



There appear to be no experimental studies of the health dangers of GLB noise for humans, and it is unlikely that such studies will ever be done. Ethical considerations and federal law protect research subjects from harm. The dangers of noise for hearing and general health are now so well known that it would be difficult if not impossible to get needed institutional approvals for such studies. Researchers studying other noise issues, e.g., whether earplugs protect hearing in those attending an outdoor music festival [12], have had to design their studies to work around these ethical and legal concerns. The earplug study recruited subjects only among those who did not care enough about their hearing to be planning to use hearing protective devices at the music festival, who were then randomized to ear plug use or not.

Research regulatory requirements would not preclude observational or epidemiologic studies of hearing loss or other health issues in those exposed to GLB noise, but based on numerous articles about GLB noise in print and broadcast media, it does not appear that such studies would add much to our knowledge of the health impacts of GLB noise.

I will discuss the safe noise level in great detail because it is imperative to understand precisely why noise is a major health and public health problem. As I wrote in the American Journal of Public Health in 2017 [1], the only evidence-based safe noise level to prevent hearing loss is a time-weighted average of 70 decibels for 24 hours over a lifetime. This is not new information. This noise exposure level was calculated by the Environmental Protection Agency (EPA) in 1974 [13], based on data collected by the National Institute for Occupational Safety and Health (NIOSH) from occupational studies of hearing loss after workplace noise exposure. [14] Those calculations remain valid.

As with potential studies of the health effects of GLB noise on humans, the occupational noise exposure studies on which the EPA and NIOSH monographs are based cannot ethically be repeated, since it is now known that noise exposure causes hearing loss. This is a rare instance where older studies, despite what would now be viewed as obsolete equipment and inadequate measurement protocols, remain both valid and important because the research needed to obtain new information about noise exposure and hearing loss in controlled conditions just cannot be done.

A full discussion of the decibel scale and sound measurement is beyond the scope of these comments, but it is important to understand that the decibel scale is a logarithmic scale and a proportional, not an absolute, measurement of sound intensity or energy. Because of the mathematics of logarithms, a 3 dB increment indicates a doubling of the sound energy or sound pressure level (SPL). An 85 dB sound has 31.6 times more energy than a 70-decibel sound, not 21% more as might commonly be thought. The term loudness also has specific technical meaning in psychoacoustics- “the subjective perception of sound pressure”- and is often misused in discussions about sound measurements to mean either the absolute sound pressure level or the relative sound pressure level measured in decibels. Both uses are wrong. In general, it takes a 10-dB increase for humans to have perceived sound intensity to have doubled, but perception of “loudness” depends on many factors and is an unreliable measure of sound intensity or SPL.

The NIOSH level is A-weighted, for occupational safety and health purposes, to reflect the frequencies heard in human speech. The decision to use A-weighting, rather than C-weighting or unweighted decibels, appears to have been made because hearing loss was the compensable injury workers were presenting to workers compensation authorities after occupational noise exposure. This may not be appropriate for auditory health and certainly not for the non-auditory health effects of noise. A-weighting reduces measured sound levels by approximately 5-7 decibels. The causal factor for sound damage is the total energy of the sound, with some evidence that higher frequency sound damages cochlear hair cells needed for hearing, and lower frequency sound damaging vestibular hair cell

involved in balance. [15,16] C-weighting emphasizes lower frequency sounds, below 200 Hertz.

The EPA adjusted the NIOSH 85 dBA Recommended Exposure Level for the additional time exposure- 24 hours a day instead of 8 hours a day, and 365 days a year instead of 250 days a year, to calculate the 70 decibel safe noise exposure level for the public, to prevent noise-induced hearing loss in 99% of the public. [13] By convention, time-weighted averages are presented as dB, not dBA or dBC. The 70 dB safe noise exposure level to prevent hearing loss has also been reported by the World Health Organization (WHO) [17], in a review article by Passchier-Vermeer and Passchier [18], by a National Institutes of Health (NIH) Consensus Conference [19], and by others. (NIH reported that the safe noise level to prevent hearing loss is 75 dB for 8 hours, but mathematically this is the same as 70 dB for 24 hours.)

The actual safe noise exposure level to prevent hearing loss must be less than 70 dB time weighted average for 24 hours over a lifetime for several reasons. First, the EPA only adjusted the greater exposure time for hourly and daily greater exposure, but not for the greater years of exposure, so the EPA's calculations were only based on 40 years noise exposure. There are no occupational studies of noise exposure and hearing loss over more than 40 years. With life expectancy in the United States approaching 80 years [20], it is clear that further adjustments downward must be made for the greater lifetime noise exposure. The additional years of noise exposure undoubtedly explain most of the high prevalence of hearing loss in older Americans. [21]

Second, the NIOSH noise exposure studies on which the EPA calculations were based assumed that workers had quiet when not at work, something that is no longer true. (*Vide infra*) This is not explicitly stated by NIOSH, but is implied in the numbers in Tables 1-1 and 1-2 in the NIOSH Noise Criteria monograph [14].

Third, the NIOSH noise exposure recommendations that were adjusted by EPA allowed an 8% rate of "excess hearing loss" in workers exposed to occupational noise at the 85 dBA level. This presupposes that hearing loss is part of normal aging, which is almost assuredly not true [2] so the actual rate of hearing loss in people exposed to noise at 85 dBA must be greater than 8%.

Finally, an evolving body of research over the last decade, most notably by Liberman and Kujawa at Harvard University and the Massachusetts Eye and Ear Infirmary, strongly suggests that there is no temporary auditory damage. [22,23] This research shows that if a noise- such as that emitted by a GLB- is loud enough to cause temporary auditory discomfort, it is most likely causing permanent auditory damage.

As reported in the Washington Post [24], GLBs produce noise emissions as loud as 112 dB. GLB manufacturers and landscape maintenance companies may claim that there are quiet GLBs, and indeed there may be such devices, but they are few and far between. A quiet GLB is as rare as a safe cigarette. A review of seven popular commercial GLBs by OPE (Outdoor Power Equipment) Reviews [25] found that all produce noise greater than 100 decibels at the user's ear, with sound levels at 50 feet ranging from 76 to 83 decibels. Studies done by others presented at the July 2, 2018 hearing before your Committee on B22-234 confirm that GLBs are too noisy. Often, if the GLB is used outside the homeowner's or office worker's window, the distance is much closer than 50 feet, and the sound level greater than at 50 feet. Greater sound levels are also produced by use of GLBs on noise-reflective hard surfaces, in partially enclosed spaces, e.g., courtyards, and by gang use of GLBs, with three or more GLBs sometimes being used at the same time as other gas-powered yard maintenance equipment, such as lawn mowers or tree trimmers. [24]

GLB noise exposure by nature is intermittent. The landscape workers come to the property, and "mow, blow, and go." Intermittent noise exposure has not been well studied in the occupational setting, with rough approximations being made to account for the intermittency of the noise exposure. This is discussed in the NIOSH Noise Criteria monograph. [Pages 28-29 in 14]. Basically, the same noise exposure criteria apply for intermittent noise as for continuous noise exposure.

An important concept to consider is the total daily noise dose. How much noise is a person exposed to in a day? GLB noise clearly contributes to the total daily noise dose for those exposed to it. As shown by Flamme et al in Kalamazoo County, MI [26], confirmed by Neitzel in Sweden [27], most adults receive excessive total daily noise doses, exceeding the EPA and WHO safe noise exposure thresholds for preventing noise-induced hearing loss. As also discussed by Flamme, the auditory injury threshold- the threshold at which auditory damage from noise begins- is as low as 75 dBA, and the effective quiet level- the level at which the ear begins to recover from noise damage- is only 55 dBA and may be as low as 48 dBA. There is some evidence that the effective quiet level, 55 dBA, is really the sound level at which auditory damage begins. [28]

The problem of non-occupational noise exposure causing hearing loss is unfortunately not merely a theoretical concern. In 2017 the Centers for Disease Control and Prevention (CDC) reported that approximately 25% of American adults age 20-69 had noise-induced hearing loss (NIHL), known to be caused by noise and not by other causes from the characteristic audiometric notch. Most concerning was the finding that of the people with NIHL, a large percentage had no occupational noise exposure whatsoever. [29]

It is commonly thought that hearing loss isn't a big problem. This may be because hearing loss is an invisible disability, and because hearing loss generally does not become common until the seventh decade of life, when most Americans are out of the workforce. [21] Also, coverage for hearing health care and certainly for hearing aids- generally the only treatment for hearing loss, except for cochlear implants for those with extreme hearing loss- is very limited in most health insurance plans and federal health programs, i.e., Medicare and Medicaid, so the economic impact of treating hearing loss falls upon individuals and not governments or insurance companies.

This is an important misconception. Hearing loss is not benign. For younger Americans, hearing loss causes social isolation and major economic impacts, limiting lifetime income by several hundred thousand dollars compared to those with normal hearing. [30] For older Americans, hearing loss is strongly correlated, in stepwise fashion, with increases in social isolation [31], accidents [32], falls [33], and dementia [34, 35], all of which are in turn strongly correlated with increased mortality in elderly Americans.

An additional consideration is that occupational standards, and standards developed by the EPA for environmental pollutants, are for workers and normal healthy adults. Public health practice, and in the United States the law, [36] require that exposure standards be developed to protect vulnerable populations, among them children, pregnant women, and the elderly. While there is no federal guideline, recommendation, or standard for noise exposure [29], noise exposure standards for these vulnerable populations must be more protective than those for workers. The World Health Organization has published information about the specific dangers of noise for children. [37] Approximately 11% of the District's population is age 0-9, and 12% is over 65 years of age. [38] Presumably many of the very young and very old are largely at home during the day, where they are exposed to GLB noise.

Those who are at home during the day because they are sick, disabled retired, or working from home constitute another segment of the population requiring quiet, as do shift workers who sleep during the day. From the EPA report (Figure D-1 in [13], the ability to understand speech begins to decline at 70 dBA ambient noise levels and is almost zero at only 75 dBA. Approximately 40% of Americans work at least part time from home. [39] GLB noise interferes with both the concentration of those working at home, and their ability if needed to carry on telephone conversations.

Those with auditory disabilities- hearing loss, tinnitus, and hyperacusis- also suffer inordinately from GLB noise. For those with hearing loss, quiet ambient noise is especially important to allow understanding speech. [3,4] Also, a phenomenon known as recruitment, which takes place with or without the use of

hearing aids, can amplify loud noises for the hearer and make them painfully loud. Those with hyperacusis- a sensitivity to noise in which sound levels that don't bother those with normal hearing are perceived as painful- are extremely bothered by GLB noise. Those with tinnitus have their symptoms worsened by GLB noise. All those at home during the day, an increasing segment of the population, are much more bothered by GLB noise than someone who leaves the house before 8 a.m., whether for work or school, and returns after 5 or 6 p.m.

ADVERSE EFFECTS OF NOISE: PHYSIOLOGICAL STRESS RESPONSES

As discussed above, noise is generally perceived as a warning sign. Noise causes stress. [40] Research shows that noise causes activation of three different physiological systems that evolved to respond to stress. The first response, within milliseconds of loud noise being heard, is from the autonomic nervous system, with an increase in blood pressure and pulse rate. [41] The second response, which takes a little longer, is an increase in adrenocorticotrophic hormone (ACTH) via the pituitary, which in turn leads to increases in mineralocorticoid stress hormone levels produced by the adrenal gland. [42] The third response, about which less is known, is an inflammatory response to stress, with activation of the immune system, especially in the blood vessels.

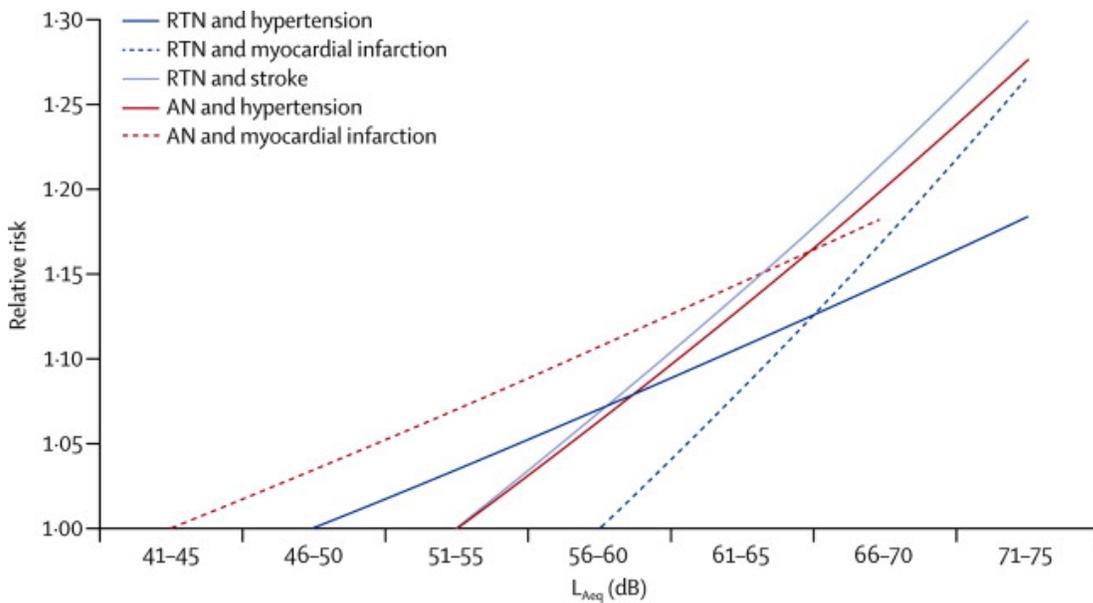


Figure 3 Relative risks of noise exposure and adverse cardiovascular outcomes

RTN: Road Traffic Noise AN: Aircraft noise From Basner et al, Auditory and non-auditory effects of noise on health, Lancet 2014; 383:1325-2332 [7]

The inflammatory response to stress was described by Tawakol et al at the Massachusetts General Hospital. [43] Stress as measured by psychological tests was correlated with vascular inflammation as measured by several research techniques, and long-term follow-up showed an increase in both cardiovascular events and mortality in those with more stress and more inflammation. These data have not been specifically linked to stress caused by noise, but provide a logical explanatory link between noise exposure and increase in cardiac deaths caused by air traffic noise. As shown in Figure 3 in Basner et al.'s review article [7], the increase in myocardial infarction (heart attack) begins at aircraft noise exposure in only the 45-decibel range. [6] GLB noise may be most similar to aircraft noise in both its intermittency and the frequency band range of the sound.

These responses are involuntary. They cannot be controlled. They cannot be habituated, i.e., repeated exposure to the same noise still produces the same involuntary physiological responses. [45] Events that an individual cannot predict and cannot control, such as GLB noise, are more stressful than those that the individual can control. [46] The invasion of quiet moments at home, at work, or at school by GLB noise is stressful for almost everyone.

GLBs were invented in the 1950s but their use didn't become widespread until the 1990s when drought conditions in southern California led to their widespread adoption for clearing lawn cuttings and dust, rather than washing down the lawn and hard surfaces with water from a hose nozzle. Early on, there were complaints about GLB noise, but these complaints have become greater in recent years.

Since, as noted earlier, there appear to be no specific studies of adverse health effects of GLB noise on the public, we must rely more generally on the thousands of studies of the adverse effects of noise on health. Obviously GLB noise contributes to an individual's total daily total noise dose, which causes hearing loss as discussed above, but also non-auditory adverse health outcomes. This body of work is well known in Europe, even if that knowledge has not crossed the Atlantic Ocean, with the early epidemiology studies appearing in the 1980s. In 2002, the European Union issued the Environmental Noise Directive, [47] requiring member states to take steps to measure and reduce environmental noise. In 2011 the WHO issued a monograph about the Global Burden of Disease from Noise [48], summarizing morbidity, mortality, and disability from the adverse effects of noise.

These adverse health effects include cardiovascular disease, including high blood pressure, heart attack, heart failure, cardiac dysrhythmias, and stroke [49,50,51]; reduced cognitive ability, hyperactivity, anxiety, and other mental health problems [52]; poor reproductive outcomes, including low birth weight and prematurity [53]; and obesity [54]. The evidence is strongest for the adverse cardiovascular health effects, with the Central Illustration in Reference 51

graphically summarizing recent research. As Babisch commented, the question isn't whether there is an effect of noise on cardiovascular health, but on the precise nature of the exposure-response relationship. [42] Furthermore, as Basner stated, "The overwhelming majority of noise effect researchers today accept that there is a causal relationship between environmental noise exposure and increased cardiovascular risk." [55] A recent article in the Washington Post also reported on this body of work. [56]

These are population health impacts, which are difficult if not impossible to measure on the individual level. The health impacts of noise are small for each exposed person, but large from a population health perspective because of the millions of people exposed. [6] An increase in the average systolic blood pressure by 1 mm may not be significant for one particular person, but if 100 million people are exposed to noise loud enough to cause this blood pressure increase, a certain number will have heart disease, stroke, or death because of it. Lending credibility to the studies are exposure-response curves, e.g., a 6% increase in the risk of coronary heart disease for each 10 dBA increase in traffic noise, starting at exposure levels as low as 50 dBA. [49, also see Figure 3]

By their very nature, transportation noise exposures are intermittent so the intermittency of GLB noise exposure would appear to be accounted for within the study designs of the effects of transportation noise on cardiovascular health, with one important exception. That is because studies of adverse health effects of transportation noise include total daily noise exposure, with nighttime noise being an important factor because it disrupts sleep. Obviously, GLBs are almost always used during daytime hours. It is impossible to separate daytime noise exposure from nighttime noise exposure in epidemiologic studies, but the residents of the District of Columbia, just like the residents of London [57,] are exposed to continuous noise. Daytime GLB noise adds to this noise exposure.

In many communities, a team of landscape maintenance workers using two or three or more GLBs [24], along with other workers using gas powered lawn mowers, tree trimmers, chain saws, etc. create a disturbing cacophony of sound. Even if the landscape maintenance workers only care for one property on the block, another team will soon arrive to care for another nearby property. This means that anyone at home during the day is exposed to GLB noise, combined with noise from the other landscape maintenance equipment, from early in the morning (as early as 7 a.m. in some communities, certainly by 8 a.m.) until the sun sets, almost every day of the week all year long except in the winter in colder climates, and perhaps when it rains heavily.

Additionally, the frequency band distribution of GLB noise includes a low frequency component that is especially troublesome, since it can travel through windows and walls for long distances. This means that GLB use down the block or even on the next block can be troublesome. From the EPA monograph [13],

we know that noise levels of 45 decibels can disturb human function, e.g., concentration. GLBs are used during the day, so nighttime sleep disruption is not an issue as it is for other urban noise sources, e.g., transportation noise, but many people have to sleep during the day. This population includes shift workers, babies and children taking naps, the elderly, and those who are sick or disabled. Sound levels as low as 33 decibels can disrupt sleep. [5] Good sleep is important both to normal function and to health. It has recently been shown that deep sleep is when the brain removes toxins that accumulate during the day. [59] Bad quality sleep and shorter sleep times are correlated with both mortality [60] and the development of dementia. [61]

LEAF BLOWER REGULATION

In addition to my expertise in noise and health, I also have experience in municipal government and some familiarity with zoning codes and other municipal regulations. I served on the Board of the South Robertson Neighborhoods Council in Los Angeles and on its Land Use Committee from 2007 to 2009. (The neighborhood councils were created by the new Los Angeles city charter in 1999, to provide community input to the city.) It is clear that state and local governments have the authority to regulate noise, such as nuisance noise, noise transmission in buildings, noise from heating, ventilation, and air conditioner systems, and specifically noise from GLBs. More than 100 cities in the United States have already enacted leaf blower bans, ranging from Santa Monica, CA, which bans all leaf blowers, to Sonoma, CA, which bans only GLBs, Maplewood, NJ, which bans GLBs only in the warmer months, to Newton, MA, which has more detailed leaf blower regulations than one sentence can cover. The authority of cities to regulate leaf blower use, including banning their use entirely, has been upheld in courts in multiple jurisdictions. There would appear to be no legal reason why this City Council cannot pass such an ordinance in the District of Columbia.

For those concerned about burdening police authorities with enforcement of a GLB ban, consider the enforcement model used in Santa Monica, CA. Any citizen can report a leaf blower violation with the date, time, and location of the violation to the city's Office of Sustainability and the Environment, which in turn issues a citation. A cell phone picture can be used to supplement the report. Penalties can be assessed against the property owner, property manager, landscape maintenance company, or the person operating the leaf blower. [62] Kevin McKeown, the mayor of Santa Monica at the time this ordinance was passed and who still serves on the city council there, assures me that there has been no problem in

enforcing the law. Mr. McKeown can serve as a resource to this Council on the leaf blower issue.

I also have some expertise in gardens and plants. From 2005-2014, before I became a noise specialist, I served on the Board of the Theodore Payne Foundation for Wild Flowers and Native Plants, Inc. (www.theodorepayne.org). I wrote articles about native plants and gardens, and volunteered as a docent at the Foundation's nursery and on its Garden Tour. For the last fifteen years the Foundation has sponsored an annual tour of home and municipal gardens planted with California native plants. Every year several gardens on the Foundation's Garden Tour are located in Santa Monica. I can assure those concerned about the appearance of the landscape in the absence of GLBs that, from personal observation that the yards and gardens in Santa Monica are just as beautiful and well-groomed as those in other cities in southern California that allow GLB use. Even without GLB use, the Santa Monica gardens-with native plants or without- are pristine.

Furthermore, the concerns of those claiming that a GLB ban will cost jobs and lead to loss of economic viability for landscape maintenance companies are clearly misplaced. A search of the popular consumer referral sites Yelp and Angie's List for landscape maintenance and lawn service companies in Santa Monica, CA and Sonoma, CA finds scores of companies ready to care for the lawns and gardens in those cities without using GLBs. When market forces fail to protect the public and regulatory intervention is needed, the markets always adapt.

There are viable alternatives to GLBs, specifically rechargeable battery-powered leaf blowers. Some cities, e.g., South Pasadena, CA and Southampton, NY, have switched entirely to battery-powered leaf blowers for maintenance of city parks and municipal buildings. For home use, in the last year or two, the "big box" home improvement stores, e.g., Home Depot, Lowe's, and others, have started carrying rechargeable battery-powered leaf blowers and other yard maintenance equipment, including lawn mowers, powered by the same rechargeable batteries. These have become popular enough to be advertised in advertising supplements in the Sunday papers, and in in-store displays. And of course, rakes and brooms still work.

CONCLUSION: ADDITIONAL REGULATORY, LEGAL, AND POLITICAL CONSIDERATIONS

The Noise Control Act of 1972 established federal policy to promote an environment for all Americans free from noise that jeopardizes their health or welfare. [63] The EPA created an Office of Noise Abatement and Control (ONAC) to implement the congressional mandate. ONAC was quite successful until it was defunded during the Reagan administration. [64,65] At that time, EPA officials assured Congress that the benefits of noise control were highly localized and that state and local officials could still engage in noise control activities. (Page 20 in [64]) The proposal to ban GLBs in the District of Columbia falls within that local governmental authority.

The failure of state and local officials to protect the health of their constituents from environmental hazards is perhaps most noticeable today in the sad story of lead contamination of municipal water supplies in Flint, MI, where thousands of residents were sickened and children's brains irreparably damaged from lead in the water, and scores died from legionella infections spread by inadequate water treatment. This tragedy received broad media coverage in 2015, and has recently been summarized in two books. [66,67]

I am certain that the members of this Council, and their citizens, do not want noise pollution from GLBs causing similar adverse health effects in the District. Please take action now to ban GLBs from the District of Columbia. The interval of three and a half years before the bill's provisions would become effective allows plenty of time for an education campaign, for affected stakeholders to adjust their practices, for replacement of GLBs with rakes, brooms, or battery-powered leaf blowers, and for everyone to begin looking forward to a quieter and healthier place to live and work.

The only possible adverse outcome I can foresee from a GLB ban is that members of this Council may be deafened by the applause from their grateful constituents, most of whom favor such a ban, and perhaps even crushed by the press of grateful crowds trying to offer their thanks.

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