

ILLINOIS POLLUTION CONTROL BOARD

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MICHAEL A. PETROSIUS and DARLA G.
PETROSIUS,

Complainants,

v.

THE ILLINOIS STATE TOLL HIGHWAY
AUTHORITY,

Respondent.

JUN 30 2006

STATE OF ILLINOIS
Pollution Control Board

PCB 04-36
(Citizens' Enforcement --
Noise)

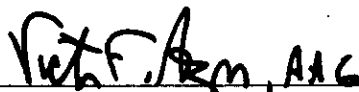
NOTICE OF FILING

To: Carol Webb
Hearing Officer
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Scott Dworschak
Attorney for Complainants
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Chicago, Illinois 60610

PLEASE TAKE NOTICE that today I filed with the Office of the Clerk of the Pollution Control Board the original and nine (9) duplicates of the Post-Hearing Brief of the Respondent Illinois State Toll Highway Authority, a copy of which is hereby served upon you.

Illinois State Toll Highway Authority

By: 
Lisa Madigan, Illinois Attorney General

June 30, 2006

I, the undersigned, certify that I have served the attached Post-Hearing Brief, by messenger and first class mail, upon the following persons: Scott Dworschak (messenger) and Carol Webb (First Class Mail).



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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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STATE OF ILLINOIS
Pollution Control Board

MICHAEL A. PETROSIUS AND DARLA G. PETROSIUS,

Complainants,

v.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY,

Respondent.

PCB 04-036
(Citizen's Enforcement - Noise)

RESPONDENT POST HEARING BRIEF

NOW COMES the Illinois State Toll Highway Authority ("Tollway") by its attorney, LISA MADIGAN, Attorney General for the State of Illinois, and moves The Illinois Pollution Control Board ("Board") to dismiss the Complainants' Complaint based upon the evidence presented at the hearing held on December 5 and 6, 2005.

The uncontested evidence showed that the Tollway followed its noise policy, based upon FHWA's noise guidelines, when it designed and constructed the sound walls on I-294. It was undisputed that the wall was designed for the Tollway by a licensed professional design engineering firm, constructed by the Tollway and met the recommendations of the traffic noise study. Nor was there any evidence to suggest that the design was defective or that the wall was improperly constructed. Furthermore, there was no evidence presented that contradicted the testimony of the Tollway's employees and an independent expert that the noise wall near the Complainants' home effectively mitigates the traffic noise in accordance with the Tollway's noise policy.

I. STATEMENT OF FACTS

The Tollway is "an instrumentality and administrative agency of the State of Illinois" vested with "all powers necessary or appropriate to enable" the Tollway to carry out its

legislative purpose, which is to “construct, operate and maintain a safe, modern and limited access highway designed for the accommodation and the needs of the traveling public within the State.”¹ The Tollway began operation in the late 1950’s with a system of toll highways including the “Tri-State,” which goes from near the Wisconsin boarder to the north (I-94) bypassing the City of Chicago to the west (I-294) and ends near the Indiana boarder to the south (I-80/I-94). The Complainants’ home, located at 7337 Maridon Road, LaGrange, Illinois is located adjacent to I-294 and the 75th Street Interchange (also known as Plaza 34) near Milepost 22.1. ((Transcript Volume I, pages 17-21 (“Tr. I at __” or Tr. II at __”); see also Joint Exhibits 1, 2 and 3 (“Jnt. Ex. #”))

Currently there are more than 1.4 million vehicles that use the Tollway daily. (Tr. I at 191) The average of daily traffic count in 2003 on I-294 by Milepost 22.1 is 77,010 Southbound and 71,650 Northbound making a total of 148,550 vehicles per day. The 75th Street interchange (Plaza 34) has an average traffic count of 3750 entering and 3550 exiting the Southbound I-294. (Complainants’ Exhibit 11 (“Comp. Ex. #”)) The 75th Street interchange was constructed at the same time as I-294 was widened in 1995 pursuant to an Intergovernmental Agreement between the Tollway, the Illinois Department of Transportation (“IDOT”) and the Village of Hodgkins. (Comp. Ex. 15) Not only did the widening of I-294 and the 75th Street interchange facilitate public travel, but the interchange enhanced job growth and commercial development in the area by increasing the shipment of freight by UPS and the Burlington Northern railroad. (Tr. I, at 197-198) the area around the 75th Street interchange was described as being “much more industrial here than residential” (Tr. I at 198) and the area, based upon historical and current use, makes the placing of the 75th Street interchange suitable to its environment. (Tr. I at 233) The Complainants conceded that the area is historically an “industrial-commercial area.” (Tr. I at 61)

¹ *Toll Highway Act*, 605 ILCS 10/1.

The economic value to the communities of the Tri-State is in the billions of dollars and provides a good number of jobs. (Tr. I at 191) The 75th Street Interchange, which is adjacent to the Complainants' home, has a substantial impact on the State's economy (Tr. I at 193) with billions of dollars worth of merchandise coming from the facilities serviced by 75th Street. (Tr. I at 195)

The Complainants' residence was built in 1964 (Respondent's Exhibit 2 and 3, ("Resp. Ex. #")). The house was built after the Tollway was constructed and in operation. Later, the Tollway spent \$500 million widening the central portion of I-294, which included the 75th Street interchange. (Tr. II at 7-8) This also included \$11 million for construction of noise walls. (Tr. Vol. II at 19) This project, widening the road and building the 75th Street interchange and the noise walls, was completed around November 15, 1993. (See Resp. Ex. 14) The Complainants' purchased the house on May 3, 1995 which was over a year after the I-294 was widened and the 75th Street interchange was constructed. (Resp. Ex. 1) There is no evidence that there were any changes to the dimensions of the roadway, interchange or the wall since the construction was completed. Even the Complainants conceded that when they purchased the house it was on the edge of a residential area adjacent to the Tollway and that the Tollway, including the 75th Street interchange and the noise walls, were there before they bought the house. (Tr. I at 71)

The Complainants purchased their house in 1995 for \$145,000. (Tr. I at 71-72) They bought it in one day, because "the houses in the area were going for over \$200,000" and they felt that at \$145,000 "we were getting a deal." (Tr. I at 72) Eight (8) years later the appraised value of the house nearly doubled to \$260,000 in 2003. (Tr. I at 72; Resp. Ex. 1, 2 and 3.) The Complainants were aware that the home's proximity to the Tollway would effect the value of the house. (Tr. I, at 48) When they inspected the house they became aware of the Tollway, (Tr. I at 49) and Ms. Petrosius admitted that during their inspection she looked out the windows and saw

pavement on the road and the trucks using the Tollway. (Tr. I at 90) Furthermore, they heard the traffic noise during their inspection of the house. (Tr. I at 49) However, they purchased the house because they liked the area and the access to transportation and the Complainants uses the road regularly. (Tr. I at 47) They did not find any problems when they inspected the house. (Tr. I at 50) However, they claim that they noticed the noise “immediately” upon moving in. (Tr. I at 28)

After moving in, the Complainants began to notice the revving of trucks, jake-braking, bouncing of trailers and the noise from tires of the traffic. (Tr. I at 29) It was when they tried to sleep that they found that the noise from the Tollway bothered them. (Tr. I at 50) The sounds that affected their sleep the most was the banging of the trucks and the jake-braking. (Tr. I at 32) These unusual noises disturbed their sleep and woke them up. (Tr. I at 53)

After purchasing the house they did not like using their yard because of the noise. (Tr. I at 31-32) The Complainants testified that the noise limited their use, as well as their children’s use of the yard and they could not entertain people outside. (Tr. I at 43) They then approached the Tollway because of the noise from the Tollway (Tr. I at 39)

When the Complainants met with Tollway representatives, they asked that the wall be heightened and extended. (Tr. I at 130) The Tollway representatives told them that the Tollway must follow its Sound Policy and it was “explained to him the criteria of the noise policy. We adhere to that quite faithfully.” (Tr. I at 131) Since the Tollway takes “any complaint seriously,” the Tollway tries to identify the problem and fix it “usually with in 24 to 48 hours. If it’s not the pavement, then we tend to look and see what other sources of noise could be the cause.” (Tr. I at 139-140) At the meeting with the representatives, the Complainants were shown the plans of the road, the noise study and the lay of the land. (Tr. I at 172) they were showed

from the plans for the wall how the wall had been built to the design specifications. (Tr. I at 145-146).

As a follow up, Rocco Zuccherro and Ms. Anderson went to the house to determine if the walls were truly effective, and based upon his test, the “results were – basically showed that the walls did reduce the noise from Interstate 294.” (Tr. I at 173) Mr. Zuccherro documented his findings in his “Draft Summary” in which he noted that the wall was designed to meet the specifications of the Noise Analysis Report and factored in that the wall was coming to its terminus. Thus the wall needs to “step down at 4’ increments” and the wall’s location and height were “adjusted to accommodate the undulating terrain and the roadway drainage system.”

His field-test of the sound levels confirmed that the wall was effective in reducing traffic noise. The walls reduced the noise from the vehicles using the Tollway from a range of 78 dBA to 81 dBA without the wall to a range of 63 dBA to 68 dBA with the wall, a significant reduction. Based upon his findings he concluded that the noise barriers were designed in accordance with both the Federal Highway Administration’s regulations² (“FHWA”) and the Tollway’s noise policies which were utilized in the Versar study. (Resp. Ex. 15)

The Tollway utilized FWHA’s sound wall criteria found in 23 CFR 772 in developing its sound policy. (Comp. Ex. 8) The Tollway voluntarily adopted these guidelines, which it is not required to follow, at a substantial cost to the Tollway to benefit those residents along the Tollway. (Tr. I at 246) There are three stages to road building: planning, design and construction. (Tr. II at 7) As a part of the planning stage, the Tollway employs a noise consultant to conduct a noise study to ascertain the existing noise level and then extrapolates future noise levels based upon projected traffic volumes and then recommends wall locations. (Tr. I at 201) The noise study utilizes field studies and computer modeling. (Tr. I at 203) The

² 23 CFR 772.

traffic model was created by FHWA which requires its use. (Tr. II at 190-191) After a noise study is completed it is turned over to the designer along with other data to design a noise wall.

Mr. Wagner testified that during the planning stage for the project widening the central part of I-294, the Tollway's noise study was conducted by Versar. Versar put out receptors and identified the noise levels from the field and then put that data into the computer model to project and identify areas needing noise abatement. (Tr. II at 30) Versar made a model and formulated recommendations that were given "to the designers who had to actually physically create the plans." (Tr. II at 33) Versar recorded the field data showing that on June 6, 1989 the receptors by Maridon by the Tollway registered readings of 70.4 leq. dB(A) and 70.2 leq. dB(A) as well as the number of cars and trucks and their speed. (Resp. Ex. 8 and 10) The computer model predicted 66.1 Leq. dB(A). (Resp. Ex. 9) With these numbers, a determination was made that a noise wall may be appropriate. (Tr. II at 31) Based upon the number derived, Versar generated a recommendation for the height of the sound walls. (Comp. Ex. 17)

Mr. Wagner identified the location of the sound wall along I-294 that was adjacent to the Complainants' home. He identified on the plan the location to be about Station 1347. According to the plan drawings, the wall heights by the house about 13 feet and begin to step down. The roadway profile or pavement elevation undulates with the terrain thereby varying the difference in height between the pavement and the wall. The differences range from the wall being significantly higher to being one (1) foot below the pavement height depending upon the pavement elevation. (Tr. II at 40-42) Mr. Wagner noted that the wall heights were different than what was proposed in the Versar recommendations (Tr. II at 50) because the designer considers the topology, hydrology, and drainage along the road. (Tr. II at 69) As stated by John Wagner the "designer's responsibility to incorporate all aspects of design, not just the wall, but drainage and the roadway and everything else that needs to be coordinated." (Tr. II at 70) The

Versar study was supplied to the designer to assist in the design and not as specifications. (Tr. II at 51-52) Mr. Wagner testified that in his opinion the “designer did meet” the “recommendations that were provided by Versar.” (Tr. II at 52-53) Mr. Zuccherro observed that the noise wall was designed and constructed in compliance with the FHWA rules as adopted by the Tollway. (Resp. Ex. 15)

The sound wall design engineers are pre-qualified with the State to practice design engineering (Tr. II at 65) and are licensed professional engineers in the State of Illinois. The designers are approved to do business with IDOT, the Tollway and other state agencies. (Tr. II at 66) The actual wall design takes into consideration not only the traffic noise as described in the Versar report but also the detailed topography of the site, with its hydrology and drainage issues. (Tr. II at 68-69) Mr. Wagner noted that the maximum wall height used by the Tollway is 25 feet but “we recommend not really going much more than 20 feet” because of feasibility issues including cost and maintenance. (Tr. II at 71)

The Tollway does not build noise walls that are not feasible when the “abatement measures would pose a threat to safety, hinder maintenance or create operational problem to drain the environment, obstruct drainage or alter watershed boundaries.” (Resp. Ex. 8 and Tr. I at 208-09) The average height of a Tollway noise wall is 12 to 16 feet. (Tr. I at 213) The Tollway limits wall heights to a “20 feet, maybe 22 feet” because of structural stability and wind load.” (Tr. I at 210) Walls that are above 20 feet create “cost-effectiveness issues and also gets into structural issues.” (Tr. at 213)

Mr. Zak testified that the Complainants’ home is located in a nice residential area but is very noisy because of the proximity to the Tollway. (Tr. II at 90) He observed that 85-90% of the noise impact was from truck tires, truck engines, jake-braking, and trucks banging and clanging. (Tr. II at 96) Despite the amount of truck traffic he opined that the ambient noise or

background noise, which he derived from the regulatory table, fell within Category 3, Moderate residential area. (Tr. II at 127)

He testified that he followed the applicable Board regulations when conducting his noise study and that in his opinion the Tollway is classified as Commercial or “C” noise generator based upon the pending adoption of the LBCS (35 IAC 901.101). (Tr. II at 141) He did concede that all times before and including the time the Complaint was filed I-294 would have been classified as “U” or Unclassified. (Tr. II at 140) He further conceded that the numerical guidelines set forth by FHWA are inconsistent with his application of the Board’s noise limits. (Tr. II at 146) Nonetheless, he opined that based upon his understanding that the Board would adopt the LBCS classifications; the Tollway was in violation of the numerical standards for Class C to Class A properties.³ (Tr. II at 143) He formed that opinion despite the fact that the rules did not become effective until March 10, 2006, which was more than four months after he testified on December 6, 2005. (See R03-9 at Ill. Reg. 5533)

Mr. Zak opined that based upon the sound measurement in his report the sound levels exceed the 901.102(a) limits as well as exceeded the ambient sound levels he derived from the table (Comp. Ex. 18, p. 7), because “we assumed that at the time we did our survey that the new rules to be applicable.” (Tr. II at 139) However, Mr. Zak conceded that if the regulations indicated that the Tollway was Unclassified, “there’s no restrictions as far as numerical is concerned, but there would still be nuisance” and he further conceded that “when this thing was built and the complaint filed, was unrestricted/[unclassified], there is no numerical violation, correct?” by responding that was “correct.” (Tr. II at 240-241) Although later conceding that he did not know if toll roads are exempt from the nuisance regulations (Tr. II at 170), Mr. Zak

³ The Complainant failed to disclose this part of Mr. Zak’s report found on pages 1 and 2 and the Hearing Officer refused to admit those pages into evidence. (Tr. II at 173)

opined that the sound levels coming from the Tollway would be a nuisance based upon the sound levels and problems complained of by the Complainants. (Tr. II at 106)

Mr. Zak, the Complainant's expert, recommended a wall a quarter-mile long and 18 feet high or higher in order to break the line of sight of the vehicles. (Tr. II at 113; see also Comp. Ex. 18, p. 8) However, Mr. Zak observed that "even putting in an 18-foot wall, the area is still going to exceed the Board's sound limits." (Tr. II at 126) However the recommended height would not be tall enough to block the line of sight which he claimed to be essential, because the wall had to be at least 13 feet above the pavement to block the highest exhaust stacks commonly used on semi-tractors, (Comp. Ex. 18, p. 8) and the wall needs to be several feet higher than necessary to break the line of sight to gain a bit of additional noise reduction. (Tr. II at 125)

The Tollway's expert, William Barbel, testified that he conducted a noise study in conformity with the FHWA traffic noise study guidelines which were adopted by the Tollway. (Tr. II at 180) The guidelines are mandatory for new or significant road building projects. 23 CFR 772. The guidelines are meant to consider impact from traffic noise approaching 67 dBA: what the impact is and what is needed to abate it if feasible. (Tr. II at 182) The criterion establishes impact on residences as the noise level approaches 67 dBA. (Tr. II at 182) Mr. Barbel testified that the "feasibility" of abatement merely responds to can the noise be abated and what is the minimum elevation for the wall. (Tr. II at 185) However, he noted that design feasibility is not considered because the factors a designer would evaluate, such as soil, soil strength, drainage and wall materials are not considered in the planning stage. (Tr. II at 186)

Mr. Barbel testified that he went to the Complainants' home and conducted his noise study to determine if the wall was effective. (Tr. II at 189) He ran two receptors simultaneously, one at the wall to detect the unabated noise and one at various locations on the Complainants' property. (Tr. II at 198-199; see also Resp. Ex. 17) Taking the numbers derived from his field

test, Mr. Barbel ran the data through the FHWA computer simulation. (Tr. II at 201) He testified that based upon his study the wall effectively reduced the noise levels between one (1) and eleven (11) dBA depending upon the location of the receptor. (Resp. Ex. 18, p. 7) Mr. Barbel testified that he took his test during peak traffic hours when the noise levels should be the highest. (Tr. II at 195) He noted that there are all eight (8) lanes that equally contribute to the noise. (Tr. II at 197) Mr. Barbel testified without contradiction that the lower frequency, which were the ones the Complainants complained of, such as the jake-braking and exhaust pulsations, need a higher wall to be attenuated. (Tr. II at 205)

Mr. Barbel opined that based upon his sound study, to effectively attenuate the noise complained of would require a wall 20 to 30 feet above pavement grade. He noted that based upon the topography of the site (with the side of the road significantly lower than the pavement) the wall would have to be up to 45 feet tall. (Tr. II at 206) He testified that an 18 foot wall would allow an evident amount of noise to come over the wall. (Tr. II at 208) He concluded that the proposed 18 foot wall would not be feasible based upon the cost alone: it would cost about \$1.3 million to construct the wall he described and \$800,000 for the proposed 18 foot wall. (Tr. II at 207) However, that amount far exceeds the economic feasibility threshold established by both the Tollway⁴ and IDOT, which has a \$24,000 per resident threshold. (Tr. II at 207)

Mr. Barbel testified that the Tollway's sound wall complied with the Federal regulations. (Tr. II at 246) He noted that the 67 dBA threshold was developed by the FHWA as a compromise between FHWA, the US EPA and various state Departments of Transportations to eliminate subjective standards and establish a uniform policy nationwide. (Tr. II at 213) He testified that he does not believe that the Board's noise regulations, which are inconsistent with the FHWA's regulations, are applicable to roads and thus not applicable to the Tollway. (Tr. II

⁴ Mr. Zuccherro testified that the Tollway spends about \$30,000 per abutting residence. (Tr. I at 210)

at 247) He noted that the Tollway's Board voluntarily adopted the FHWA's noise guidelines and implemented them at a substantial cost to the agency. (Tr. II at 246)

The Tollway has limited funds to cover extra costs or unplanned expenditures. Mr. Zuccherro testified that Tollway does not make a profit. (Tr. I at 182) The Tollway establishes a budget and for every dollar raised in tolls or bonds, there is a commensurate expenditure. If there is an increase in a budgetary expenditure, the Tollway has "to decide what gets cut, be it project, staff or otherwise." (Tr. I at 183) The Tollway's Board has the statutory responsibility to make policy and expend the funds. The General Assembly granted the Tollway the exclusive authority make final and conclusive determination of plans and specifications of roads it builds and such approvals are not subject to review by any other administrative agency. 605 ILCS 10/32.

II. DISCUSSION

The evidence and the applicable law clearly established that the Tollway did not violate the Board's numerical noise limits. Nor does the noise generated by vehicles on the Tollway constitute a nuisance pursuant to the criteria set forth by the Environmental Protection Act.

A. The Tollway did not violate the numerical noise standards

The Complainants first argue that the Tollway violated the numerical standards set forth in 35 IAC 900.102. Before proceeding to analyze the numerical standards cited by the Complainants, it is necessary to analyze the Complainants' failure to address the issue of ambient sound. The Complainants mistakenly try to separate the ambient noise from the traffic on the Tollway which is in fact the cause of the ambient noise.

1. Ambient Noise Levels

Mr. Zak testified that ambient/background noise is "normally the sound that creates a background for the area where a measurement is being taken. In your typical noise survey you

measure the noise source of interest, in this case the Tollway.... In this situation here the ambient is such that we really can't measure any ambient because the Tollway is so predominant as far as the noise source." (Tr. II at 119) Mr. Zak conceded the Tollway noise would be the background noise under different circumstances. (Tr. II at 128) However, it is illogical to argue that the ambient noise is not the background if you are complaining about the cause of background noise. Therefore, the Board should consider the Tollway as the background or ambient noise and not subject to numeric standards because background noise which is the Tollway overwhelms most other noises. (See Tr. II at 119-120 and *Roti v. LTD Commodities* (February 15, 2001), PCB 99-19 slip op. at 19 and *Roti v. LTD Commodities*, 355 Ill. App.3d 1039. (Ill. App. 2nd Dist. Feb 09, 2005))

Furthermore, the Board should disregard the Complainants' numeric violation numbers because they failed to properly correct the value of the property-line-noise-source emissions by properly determining the long-term background ambient noise. 35 IAC 910.106(b). Based upon the rules, if any of the direct measurement techniques described would have been utilized, they would have shown that the background noises generated by the vehicles driving on the Tollway are the ambient noise. However, Mr. Zak chose land category tables because they were the best method for determining the ambient noise levels. ((Comp. Ex. 18) (See 35 IAC 910.106(b)(6)(E)).

Although he testified that he thought the Complainants' home was in a Category 3, "Quiet Commercial and Industrial Areas, and Moderate Residential Areas," the 910.106(b)(6)(E) definitions clearly defy his assertion. The Board's Tables of Long-Term Background Ambient Noise defines each Category as follows:

Category 1: Noisy Commercial and Industrial Areas. Very heavy traffic conditions, such as in busy downtown commercial areas, at intersections of mass transportation and other vehicles, including the Chicago Transit

Authority trains, heavy motor trucks and other heavy traffic, and street corners where motor buses and heavy trucks accelerate.

Category 2: Moderate Commercial and Industrial Areas, and Noisy Residential Areas. Heavy traffic areas with conditions similar to subsection (b)(6)(E)(i) of this Section but with somewhat less traffic, routes of relatively heavy or fast automobile traffic but where heavy truck traffic is not extremely dense, and motor bus routes.

Category 3: Quiet Commercial and Industrial Areas, and Moderate Residential Areas. Light traffic conditions where no mass transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at low speeds. Residential areas and commercial streets and intersections with little traffic comprise this category.

Category 4: Quiet Residential Areas. These areas are similar to Category 3 in subsection (b)(6)(E)(iii) of this Section but, for this group, the background is either distant traffic or is unidentifiable.

Category 5: Very Quiet, Sparse Suburban or Rural Areas. These areas are similar to Category 4 subsection (b)(6)(E)(iv) of this Section but are usually in unincorporated areas and, for this group, there are few if any near neighbors. 910.106(b)(6)(E)

The evidence clearly shows that the ambient noise by the Complainants home falls within the definition of Category 1 and not Category 3. The eight lanes of the Tollway and the industrial commercial property encompassing the UPS and Burlington Northern intermodal railroad freight yard as depicted in Jnt. Ex. 1, 2 and 3 constitute a heavy traffic area used by both heavy trucks and cars. The area falls clearly within the description of Category 1, with its “very heavy traffic conditions” from the Tollway; “intersections of mass transportation and other vehicles” from the Burlington Northern intermodal facility and the entrance ramp at 75th Street; and especially the “heavy motor trucks and other heavy traffic” and where “heavy trucks accelerate” at the entrance ramp to I-294.

The description of Category 2 does not fit because, despite its requirement of residences in its definition, it requires that the area be “where heavy truck traffic is not extremely dense.” The evidence shows that the truck traffic is extremely heavy and it is dense in the area adjacent to the Complainants’ house. Categories 2, 3, 4 and 5 are not are not applicable, despite the proximity of the Complainants’ residence to the Tollway, because the 75th Street interchange and

I-294 have more than 140,000 vehicles passing their home every day on I-294 and more than 7300 vehicles (again mostly trucks) entering and exiting at the 75th Street interchange. The Complainants conceded the area was historically an industrial-commercial region and the traffic is heavy and therefore cannot be described as light. The traffic is so heavy that Mr. Zak testified that the Complainants' home was the loudest place he tested in the last four years.⁵ (Tr. II at 103)

Thus applying the ambient noise from a Category 1 area, as detailed in 910 Appendix A, shows that the Board's background sound levels for heavily traveled public right-of-ways, such as the Tollway, exceed the decibel levels. The "limits" are exceeded sometimes by more than 10 decibels in all but at the 31 Hz and 63 Hz frequencies of 901.102(a) listed in the chart for the alleged Class C to Class A.

- Frequency:	31	63	125	250	500	1000	2000	4000	8000
-901.102(C) (C to A)	75	74	69	64	58	52	47	43	40
-910 Appendix A	70	71	72	70	67	63	57	53	48

Based upon the above, it is apparent that Mr. Zak utilized the wrong ambient noise category. Although Mr. Zak's report states an ambient sound level in his Table 2 (Comp. Ex. 18), he failed to comply with the regulations requiring that the "raw 1-hour L_{eq} must be corrected for long-term background ambient sound." 35 IAC 910.106(a)(4). Mr. Zak wrote in his report that "When ambient levels fall ten or more decibels below the noise source there is no correction needed." (Comp. Ex. 17 p.7) However, by failing to utilize the proper category, he failed to include the necessary correction. If he had used the proper category (Category 1) the ambient noise level would have been greater than most of the noise source frequencies. His failure to utilize the proper category is fatal to his conclusion because his raw numbers have not been corrected. Furthermore, it is questionable whether under the Board's measurement rules it is

⁵ With few exceptions, the vehicles using the Tollway were not in violation of vehicle noise emission limits set forth in 35 Ill. Adm. Code 902. (Tr. II at 95-97) So the noise levels are attributable to the cumulative effect of the vehicles.

even possible to do a noise study when the ambient noise levels exceed the property-line-noise source. Nonetheless, Mr. Zak did not apply the necessary correction to his raw data.

35 IAC 901.103(b)(2) has been interpreted by the Board and the Courts to require strict adherence to the standard that “all measurements and measurement procedures under subsection (b)(1)(B) of this Section must correct, or provide for the correction of such emissions for the presence of ambient or background noise in accordance with the procedures in 35 Ill. Adm. Code 910.” *Roti v. LTD Commodities* (February 15, 2001), PCB 99-19 slip op. at 19. The Board also noted in a similar measurement case but involving the Tollway as ambient noise, that one of the experts “admitted that correction for background noise could not be made because the background noise from traffic on the Tollway was above the numeric limits in all octave bands...[the] estimated levels were not used to correct the measured sound levels.” *Id.* Therefore, the Board in *Roti* could not find LTD violated the numeric limits because the failure to correct for ambient sound levels. *Id.* Similarly the Complainants failed to make the proper correction because the wrong Category was used as the ambient sound. Based upon the Complainants’ failure to strictly comply with requirement to correct for ambient noise, the numeric violation claim must be denied.

2. Land Classification

The Complainants not only failed to comply with the measurement regulations, they incorrectly classified the Tollway as “Class C Land” instead of “Class U Land.” The Complainants applied the 35 IAC 901.102 limits associated with the wrong land classification to the Tollway. The Complainants erroneously determined that the proper land classification of the Tollway should be “Class C Land” based upon rules not adopted at the time of construction of I-294 (1956-1958); at the time of construction widening of I-294 and building the 75th Street interchange (1993); at the time of the filing of the Complainants’ Compliant (filed September 25,

2003) and at the time of the hearing (December 5 and 6, 2005). The rules⁶ were adopted by the Board on March 2, 2006 and became effective on March 10, 2006. (See R03-9 at Ill. Reg. 5533) Mr. Zak testified that he used the unapproved rules because “we assumed that at the time we did our survey that the new rules to be applicable.” (Tr. II at 139)

Mr. Zak conceded that if the regulations indicated that the Tollway was Unclassified, “there’s no restrictions as far as numerical is concerned, but there would still be nuisance” and he further conceded that when the road was built and the complaint filed they were classified as “U.” (Tr. II at 240-241) The Complainants provides no legal basis for the retroactive application of presumed Class C classification. The record shows that it was a mere presumption that the new rules would be applicable.

The Complainants also improperly interpreted the subsequently adopted administrative rule in arguing that toll roads and all highways and public right-of-ways are Land U C because they fall within LBCS Function 4130 and the Land Use C.

a. Retroactive application of LBCS

The Board should not consider its subsequent adoption of the Land Based Classification Standard (LBCS) because that Standard should not be retroactively applied to this case. The Board should apply the Class U Classification from the SLUCM. The facts clearly show that the rules utilized by Mr. Zak were not in effect at the time the Complaint was filed and they were subsequently adopted and became effective on March 10, 2006. More than two (2) years passed between the Complaint being filed and the effective date of the rules and more than four months after Mr. Zak’s testified at the hearing on December 5 and 6, 2005 claiming the Tollway exceeded the numerical standards.

⁶ *In the Matter of: Proposed New and Updated Rules for Measurement and Numerical Sound Emissions Standards Amendments to 35 Ill. Adm. Code 901 and 910, approved R03-9 (March 2, 2006).*

However, the Board should not retroactively apply the LBCS classification in this case. Applying the Class C numeric noise restrictions to the Tollway in this case would constitute a retroactive law. A retroactive law is “one that takes away or impairs vested rights acquired under existing laws, or creates a new obligation, imposes a new duty or a new disability to transactions or considerations already past.” *Fireside Chrysler-Plymouth Mazda v. Chrysler Corporation*, 129 Ill.App.3d 575, 581 (1st Dist. 1984). Furthermore, a “legislative amendment cannot be given retroactive effect in the absence of clear expression of legislative intent to do so.” *Id.* There is a presumption amendatory action is “only intended to apply prospectively” which is rebuttable if there is express language or by “necessary implication” it was intended to be retroactive, but the presumption only applies to substantive law and not procedural. *Levy v. McKiel*, 184 Ill. App.3d 240, 244 (2nd Dist. 1989). Since the alleged change clearly would alter substantive law and not procedural law, it is legally presumed to be not retroactive.

The Board’s decision adopting the rule in R03-9 does not mention retroactive application but rather an effective date subsequent to the decision. Thus, it is clear that the Board’s intent was that the rule should not be retroactively applied. Furthermore, it is clear from the Board’s description of the SLUCM codes as the “existing regulations” that the Board considered them the applicable regulations at the time of the March 2, 2006 order approving the LBCS. *In the Matter of: Proposed New and Updated Rules for Measurement and Numerical Sound Emissions Standards Amendments to 35 Ill. Adm. Code 901 and 910*, R03-9, Slip op. at 7 (March 2, 2006). The Complainants are bound by the law as it was when their complaint was filed, which clearly classifies the Tollway as “U.”

At the time of the filing of the Complaint and the hearing, the applicable Classification of Land use was set forth in §901.101, Appendix B based upon the SLUCM coding system. Based upon Appendix B, the Tollway would fall under the general two-digit coding number 45

(Highways and street right-of-way), the three-digit 452 (Expressways) and the four-digit, 4520 (Expressways, which is defined in footnote 10 as “divided highways for through traffic with full or partial control of access with grade separation at major crossroads”). 35 Ill. Admin. Code 901.101, Appendix B, p. 12-13. The applicable regulations categorize the land use for SLUCM 450 as “U” and not “C.” *Id.* Furthermore, the applicable regulations provides that “Class C land shall include all land used as specified by SLUCM Code 211, through 299 inclusive, 311 through 396 inclusive, 411, except 4111, 412, except 4121, 421, 422, 441, 449, 460, 481 through 499 inclusive, 7223 and 7311 used for automobile and motorcycle racing, and 811 through 890 inclusive.” 35 IAC 901.101(c). SLUCM Code 450 (Expressways), which includes the Toll Highway System, is not included in the definition of Class C land use and therefore it is not subject to the Board’s Class C numerical sound limits.

Under cross-examination Mr. Zak conceded this fact by saying “there’s no restrictions as far as numerical is concerned.” (Tr. 2 at 240-241) Therefore, there is no numerical sound violation based upon the regulations applicable at the time of filing this case.

3. LBCS designation of public highways

Even if the Board were to apply the new LBCS, the Functions listed in Land-Based Classification Standards as subsequently adopted by the Board do not categorize the Tollway or any other public highway, street or right-of-way as Class C. Despite Mr. Zak’s contention in the stricken portion of his report (Comp. Ex. 18, p. 2) that the designation of Class C is based upon Function Code 4130, it is clear that the Board did not intend to include public right-of-ways in Class C.

Function Code 4130 falls under the broad general 4100 series “Transportation services,” which includes the more specific road-transportation functions of the 4130 series, “Road, ground passenger, and transit transportation;” and the 4140 “Truck and freight transportation services”

which are broken down to includes various types of transportation service types, but none of the categories include the public right-of-way. 35 Ill. Adm. Code 901, Appendix B. Function 4130, is defined in the LBCS as “[t]he road, ground passenger and transit transportation category comprises a variety of passenger transportation functions, such as urban transit systems; chartered, school and interurban bus transportation; and taxis. Establishment types primarily reflect the mode of transit utilized.” *Land-Based Classification Standards*. (LBCS) (Jeer, Sanjay. 2001. Land-Based Classification Standards. Online, <http://www.planning.org/LBCS>. American Planning Association: Chicago, Illinois). The Tollway as a highway, obviously does not fall within that definition.

However, Structure Code 5130 (Highways and roads) is applicable, “The subcategories provide for roads follow the Federal Highway Administration’s (FHWA) functional road classification scheme.” *Id.* The Board in the hearings and its orders up-dating the land classification system in its Rulemaking Case R03-9 never mentioned that there would be any impact on public roads, including the Tollway, IDOT or municipal right-of-ways. Specifically, the Board in its section on “History of Noise Rulemaking” compares the SLUCM codes and the LBCS and observes in its brief discussion of Section 901.101 that “the Board believes that the LBCS functional categories are very similar to the SLUCM categories listed in the existing regulations at Part 901, Appendix A.” *In the Matter of: Proposed New and Updated Rules for Measurement and Numerical Sound Emissions Standards Amendments to 35 Ill. Adm. Code 901 and 910*, R03-9 slip op. at 7 (March 2, 2006) If the Board intended to affect right-of-ways, the Board would have at least discussed such a major change to the rules. Because such an interpretation of the rules would render many if not most of the right-of-ways and highway in urban areas to be in violation of the Board’s numeric standards, it would necessitate the remediation of hundreds, if not thousands of miles of roads that would be in violations of

numeric noise levels associated with Class C land use. This would impose a substantial cost on the State and transportation agencies without even a mention or comment from Board concerning this interpretation. The absence of comments on this issue from the Board is indicative of the Board's intent of merely updating the classification system and not expanding the universe of Class C land uses.

Additionally, the Tables in the Appendices of 35 Ill. Admin. Code 910.106(b)(6)(E), which set forth the ambient/background noise levels for the five categories of land, especially for Categories 1 and 2 which are clearly derived from heavy truck and other vehicular traffic found in heavy industrial areas, indicates that the Board did not intent to restrict the noise coming from public right-of-ways such as highways and toll roads. The Board also did not limit or modify its regulations of noise emissions from motor vehicles in 35 Ill. Admin. Code 902. The Board's obviously did not intend to restrict the noise from highways and public right of ways because the background levels of road noise would not exceed those found in Class C properties if they were regulated. Therefore, by omitting to modify the ambient noise tables associated with road traffic and/or the noise emission from the vehicles themselves, the Board made it evident that it intended not to expand those land uses, such as roads, which would be captured by the expansion of Class C land uses, but rather to merely update the category system without expanding land uses falling within Class C.

The Complainant misclassified the Tollway's roads under LBCS 4130 and thereby erroneously categorized the Tollway as Land Class C. Under the LBCS the Tollway as any highway or right-of-way is not classified as Function 4130.

The Board should deny the Complainants' claim that the Tollway violated the numeric noise limits in 35 IAC 901.102 because the Complainants failed to strictly comply with the Board's measurement regulations; the Complainants incorrectly applied the wrong LBCS to the

Tollway and erroneously the Class C land use category to the Tollway, which was and is “Unclassified”; and the Complainants tried to apply retroactively rules it construed (incorrectly) made the Tollway a Class C property without any clear legislative intent of the retroactivity of the rule change. Therefore, the Complainants’ claim that there was a numeric violation should be denied.

B. The Tollway Does Not Create a Nuisance

The Complainants next allege that the noise generated by vehicular traffic on the Tollway constitutes a public nuisance violation of 35 Ill. Admin. Code 900.102.⁷ Although the Complainants do show that the noise interfered with their enjoyment of life, they failed to establish that the sound emissions generated by the Tollway are unreasonable and thereby constitute a public nuisance. The factors to be considered listed in the Environmental Protection Act weigh in the favor of the Tollway. 15 ILCS 5/33(c). The Board must consider consideration “all the facts and circumstances bearing upon the reasonableness of the emissions, discharges or deposits involved including, but not limited to:

- (i) the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;
- (ii) the social and economic value of the pollution source;
- (iii) the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved;
- (iv) the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source; and
- (v) any subsequent compliance.” *Id.*

⁷ The Noise Section of the Environmental Protection Act has as its purpose “to prevent noise which creates a public nuisance.” 415 ILCS 5/23. “No person shall cause or allow the emission of sound beyond the boundaries of his property, as property is defined in Section 25 of the Illinois Environmental Protection Act, so as to cause noise pollution in Illinois, or so as to violate any provision of this Chapter.” 35 IAC 900.102. Noise pollution is defined as “the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity.” 35 IAC 900.101.

Although the Complainants presented evidence that the sound emissions interfered with their enjoyment of life, the Board and the Courts have consistently required more. “Noise emissions are a noise nuisance if the noise interferes with the complainant’s enjoyment of life *and the interference is unreasonable*. [Cites omitted] The principal difficulty in determining whether noise emissions constitute a nuisance lies in defining the level at which the interference becomes unreasonable. The Board must balance the costs and benefits of abatement in an effort to distinguish “the trifling inconvenience, petty annoyance or minor discomfort” from a “substantial interference with the enjoyment of life and property.” [Cite omitted]” *Roti v. LTD Commodities*, 355 Ill.App.3d 1039, 1051 (Ill. App. 2nd Dist. Feb 09, 2005) The Board must weigh the five listed factors in Section 33(c) factor in ascertaining the reasonableness of the noise emissions. *Id.*

1. Interference with health, general welfare and physical property

Although at the hearing the Complainants testified at great lengths about how the noise interfered with their sleep and enjoyment of their property, the facts in their totality indicate that the interference does not rise to the level of substantial interference. The first factor considers the “character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people.” 415 ILCS 5/33(c)(1). The factor requires the consideration of the Complainants’ health, general welfare and their property. Michael Petrosius testified that the noise interrupted his sleep (Tr. I at 32) and that it was the unusual noises like jake-braking (low frequency) and banging and clanging of trucks (high frequency impact sounds) that disturbed his sleep the most. (Tr. I at 53 and 62) Darla Petrosius testified that she, her husband and one daughter (occasionally) wake up at night because of the noise. (Tr. I at 86) However, they did not testify that they suffered any adverse health problems or other problem other than the inconvenience of waking up from the noise. The Tollway concedes that the

records supports a finding that there was interference with their enjoyment of life, the question is the degree of interference and “accordingly the Board must consider if the emissions unreasonably interfere with the complainants’ enjoyment of life.” *Saxbury and Saxbury v. Archer Daniels Midland, Hull, Illinois Division*, PCB 04-79 Slip op. at 10.

The Complainants argue that the Board should consider Mr. Zak’s noise readings in considering the character and degree of the noise citing *D’Souza v. Marraccini*, 1996 Ill. Env.Lexis 510 at 15 (PCB96-22 May 2, 1996). However, as noted above, the Tollway did not exceed numeric limits. Although they readings are high (P.E. 18) they within the range of background/ambient noise the Board adopted for areas like the 75th Street interchange which fall within a Category 1. 35 IAC 910.106(b)(6)(E). The un rebutted evidence from the Tollway expert Mr. Barbel and Mr. Zuccherro clearly established that the Tollway complied with FHWA’s guidelines for noise when the Tollway planned, designed and constructed the widened I-294 and the 75th Street interchange. Both Mr. Barbel and Mr. Zuccherro testified that they conducted tests at the Complainants’ home and found that the wall was effective in reducing noise and was designed and constructed properly. (Tr. I at 173 and Tr. II at 205; see also Resp. Ex. 15 and 17)

The impact of the noise emissions on the Complainants should not be considered substantial. Although the Complainants testified about how the noise disturbed their sleep, prevented them for using their backyard and generally interfered with their life, their actions remodeling their home contradict their words. They spent \$30,000 to convert the garage into a family room and adding a four season room that goes into the backyard but not spending any money on the area they sleep indicates a different priority. They testified that they did not want to move so they fixed up the house around to address their needs. (Tr. I at 55-58) However, their needs had nothing to do with the noise they claim that bothered them so much. Their priorities in home improvement show that the noise was more of a “trifling inconvenience, petty

annoyance or minor discomfort” than “substantial interference with the enjoyment of life and property.”

The Complainants also assert that they do not use their property to the extent that they would like because of the noise. This includes having to keep the windows closed, not using the outdoors and entertaining friends infrequently. (Tr. I at 43) This should not be considered substantial in light of Complainants’ improving the home without regard to the noise as noted above. Although the use of the Complainants’ property may have been limited, the value of their property has increased substantially. Mr. Petrosius testified that they purchased the house so quickly because they knew they “were getting a deal.” (Tr. I at 72) He testified that they purchased the house for \$145,000 in 1995 and by 2003 the appraised value was \$260,000. (Tr. I at 71-72) They acknowledged that their home’s proximity to the Tollway affected the price of the home at the time of purchase because comparable homes were selling for \$200,000. However, that was one of the reasons they bought the home.

The evidence showed they were willing to buy the house despite the Tollway and the noise because they liked the house. Mr. Petrosius testified that he was aware that the Tollway was next to the house but liked the house and the area (Tr. I at 28). They should have reasonably heard the traffic noise but claims that he was “blinded by the area” into not noticing the “constant” traffic noise. (Tr. I at 51) On the other hand, Mrs. Petrosius testified that before buying house, she “heard the traffic noise” and saw pavement on the road over the wall, which were the faults they are now complaining about. (Tr. I at 90) The evidence showed that the Complainants knew what they were buying and ignored the noise because it was a great deal.

The fact that the Complainants wake up at night and have to keep their windows closed and not use their property to the extent they would like is only part of the first factor’s analysis. The Board also has to consider the character and degree of injury to, or interference with

“general welfare and physical property of the *people*.” 415 ILCS 5/33(c)(i). [emphasis added] Although several parties filed comments stating that the traffic noise adversely affects them, there is no evidence or inference that the noise affects the other people involved: the more than 140,000 drivers passing the 75th Street interchange daily. There is no evidence or inference that the noise adversely affects the industrial-commercial activity that is conducted at the UPS facility or the Burlington Northern intermodal freight facilities serviced by the 75th Street interchange.

The Board has consistently looked at more than just the interference to Complainants. The Board has noted that “there comes a point at which the evidence establishes that, whatever the complainants’ subjective experience, there is no unreasonable interference with the noise source is evaluated objectively.” *Saxbury*, at 10. citing *Sweda v. Outboard Marine Corporation and the City of Waukegan*, PCB 99-38 (August 5, 1999) and *Scarpino v. Henry Pratt Co.*, PCB 96-110 (Apr. 3, 1997). In *Saxbury* the Board noted that the noise source “did not generally interfere with enjoyment of life, lawful business or activity in the **noise impact community as a whole**.” [emphasis added] *Id.* The evidence clearly shows that a reasonable inference can be made that as a whole, the community’s general welfare and property interests are not adversely affected by the noise from the vehicles using the Tollway. Those using the Tollway and the 75th Street interchange are benefited by the Tollway’s presence while they are not adversely impacted by the noise generated by the Tollway.

Therefore, the Board should find the character and degree of interference to be minimal in light of the totality of the public as a whole and the Complainants in particular.

2. Social and Economic value of the Pollution Source

The undisputed evidence clearly shows that the Tollway in general and specifically at and by the 75th Street interchange has enormous positive impact on the social and economic well

being of the community and the State. The Tollway and the interchange not only address the traffic needs of the area and make travel within and through the State easier, but it also provides a large number of jobs and billions of dollars of economic activity for the communities along the Tollway as well as billions of dollars of merchandise entering the stream of commerce through the 75th Street interchange. (Tr. I at 191-198) The Tollway itself does not create the noise, rather it is the vehicles that travel on it that creates the noise. The level of the noise increases and decreases in direct proportion to the social and economic impact of the Tollway. As commercial and personal vehicle use increases there is a corresponding increase in the economic and social impact the Tollway has on the community. With the Tollway providing a strategically placed modern and efficient means for commercial and personal travel through and in the State, it has become a vital component to the State's economy. The social and economic value of the Tollway as the "pollution source" is enormous and it is even significant to the Complainants, who use it on an almost daily basis and that formed part of the basis for selecting their home.

Therefore, the social and economic impact of the vehicles using the Tollway weighs heavily in favor of the Tollway.

3. Suitability of Tollway in the Area

The Tollway and the 75th Street interchange are ideally situated in its their current location because they are adjacent to a major historically commercial-industrial area in the region and provides road access to and from the railroad and the UPS facility.

The suitability of the Tollway and the 75th Street interchange is properly demonstrated by the aerial photographs of the area. (Jnt.Ex. 1, 2 and 3) The photographs clearly depict an area with a heavy concentration of various modes of transportation – the railroad, UPS facility and the canal – adjoining and accessible to the Tollway by the 75th Street interchange. The unrebutted testimony of Mr. Zuccherro was that the area around of the 75th Street interchange was described

as looking “much more industrial here than residential” (Tr. Vol. I at 198) and the area, based upon historical and current use, makes the placing of the 75th Street interchange suitable to its environment. (Tr. Vol. I at 233) The Complainants conceded that the area was historically an “industrial-commercial area.” (Tr. I at 61) Furthermore, the 75th Street interchange was built after the Tollway, IDOT and the Village of Hodgkins entered into an intergovernmental agreement for the construction of the interchange which was in the best interest of all parties. (Comp. Ex. 15)

Furthermore, the Tollway’s Board performed its statutory duty to “construct, operate and maintain a safe, modern and limited access highway designed for the accommodation and the needs of the traveling public within the State,”⁸ when it approved the planning, design and construction of the Tollway, the widening of the Tollway and the 75th Street interchange. (See Tr. II at 18) The Tollway approved plans and authorized the \$500 million widening project which included the 75th Street interchange and \$11 million dollars for noise walls. (Tr. II, 7-8 and 19) The General Assembly delegated to the Tollway’s Board the responsibility to make such determinations:

All determinations made by the Authority in the exercise of its discretionary powers, with the approval of the Governor if such approval is expressly required by the provisions of this Act, including without limitation, the location and terminal points of any toll highway or section to be constructed by it, *the materials to be used in its construction, the plans and specifications thereof*, the tolls to be charged for the use thereof, and the letting of contracts for the construction of toll highways or any part thereof, or the sale of bonds, shall be conclusive and shall not be subject to review by the courts or by any administrative agency of the State.” 605 ILCS 10/32. [emphasis added]

Finally there is the “the question of priority of location in the area involved.” 415 ILCS 5/33(c)(3). The Tollway, including I-294, was built and became operational in the 1950’s. The Complainants’ home located at 7335 Maridon Road, LaGrange, Illinois was built in 1964 (Resp.

⁸ Toll Highway Act, 605 ILCS 10/1.

Ex. 2 and 3), after the Tollway was constructed and in operation. Later, the Tollway spent \$500 million on the central portion of I-294, which included the 75th Street interchange. (Tr. Vol. II at 7-8) This also included \$11 million for construction of noise walls. (Tr. Vol. II at 19)

Even the Complainants conceded that when they purchased the house it was on the edge of a residential area adjacent to the Tollway and that the Tollway, including 75th Street interchange and the noise walls, were there before they bought the house. (Tr. Vol. I at 71.) As discussed above, they “heard the traffic noise” and saw pavement of the road over the wall before they bought the house. (Tr. I at 90) And it is apparent that they bought the house knowing there was noise from the Tollway but bought it because they liked the area and thought it was a good deal. (Tr. I at 72)

Based upon the evidence, it is clear this factor is clearly and heavily on the side of the Tollway. The evidence shows that the Tollway’s I-294 and the 75th Street interchange are ideally situated to enhance social and economic benefits associated with the area’s historic heavy industrial-commercial activities. The Tollway has temporal priority over the Complainants’ house which was built after the roadway. Further the Complainants moved in after the Tollway was widened, the 75th Street interchange was constructed and the noise wall was erected. Therefore, the suitability of the Tollway in the area strongly favors the reasonableness of the noise coming from the users of the Tollway.

4. Technical Practicability and Economic Reasonableness of Mitigation

The Complainants failed to establish both the practical and economic reasonableness of the proposed noise wall for reducing the noise generated by the users of the Tollway. Indeed the Complainants fail to address this issue. Although they argue that the Complainants have made efforts to reduce the impact of the noise by performing some self-help, they do not present any factual or legal basis for the mitigation they propose, which is a longer and higher noise barrier

wall. The facts brought out at the hearing clearly show that not only is it unlikely that the wall proposed would reduce the noise substantially but it is uncertain that such a wall is possible to build. Furthermore, the wall is not economically reasonable to build based upon its cost, the limits of money available to pay for it and established objective standards for cost benefit analysis for sound walls. The Board has observed part of the test is the need for "practical solutions that are economically reasonable to alleviate the interference." *Gardner and Gardner v. Township High School District 211*, PCB 01-86, Slip op. at 13 (July 11, 2002).

The Complainant did not establish that the proposed wall would be effective. The testimony established that the Complainants' principal concern was noise from trucks (causing them to wake at night), specifically their acceleration and deceleration (jake-braking) and the impact noises from the banging of the trucks. (Tr. I at 29) Mr. Zak conceded that the proposed 18 foot wall would not reduce the noise levels to the limits for Class C to A. (Tr. II at 126) The proposed wall would not even break the line of sight of the vehicles, which he found to be a problem with the wall.

The wall by the Complainants' house (Station 1344 to Station 1349) is stepping down while the land slopes down toward the wall (to allow for the drainage ditch) and from the wall slopes up again. (Comp. Ex. 16) At Station 1345 the pavement is higher than the wall and the height is 10.5 feet. Around it the walls range from 12.5 feet at Station 1346 to 14 feet at 1347 and drops to 8.6 feet at 1344 at the end. (Comp. Ex.16; see Mr. Wagner's description in Tr. II at 39-42) In order to break the line of sight that Mr. Zak said was necessary (Tr. II at 109), the wall would have to be at least 13 feet above the pavement height (Mr. Zak noted a couple of feet extra would help) which is about 10 feet above the height of the wall currently installed. This would require total height of at least 23 feet to meet Mr. Zak's criteria and exceeds the proposed wall height by five (5) feet.

Mr. Barbel testified that the proposed wall height does not factor in the low frequency sounds and the impact sounds that need higher: walls about 20 to 30 feet above the pavement requiring a wall up to 45 feet tall. (Tr. II at 206 and Resp. Ex. 17)

Finally, since both Mr. Zak and Mr. Barbel observed that noise perception is subjective and since the wall would not be totally effective, it is fair to conclude that the proposed wall would be built without helping the Complainants at a substantial cost.

The other feasibility issue is whether it is possible to construct the wall of the suggested height. It appears that the proposed 18 foot wall is based upon Table 3a of the Versar study which "recommends" an 18 foot wall. (Comp. Ex. 17) However, as discussed above, the designer had to consider not only the Versar recommendations and the Tollway policy, but also soil types, hydrology and drainage. (Tr. II at 68-69) As was readily apparent in the photos of the wall from the Tollway side, there is a large drainage ditch, which was identified as a the reason to move the wall so the ditch could be maintained. (Tr. I at 208) and Resp. Ex. 11, 12 and 13)

The Complainants failed to address the fundamental question which the Tollway's designers addressed when designing the wall: would the abatement measures "pose a threat to safety, hinder maintenance or create operational problem to drain the environment, obstruct drainage or alter watershed boundaries." (Resp. Ex. 8) The Tollway limits wall heights to a "20 feet, maybe 22 feet" because of structural stability and wind load." (Tr. I at 210) Walls that are above 20 feet "gets into cost-effectiveness issues and also gets into structural issues." (Tr. I at 213) However, the average height of a Tollway noise wall is 12 to 16 feet. (Tr. I at 213) Neither Mr. Wagner, the Tollway's project engineer nor the sound experts were willing to testify that the wall proposed by the Complainants was able to be reasonably and safely constructed at that location.

The final issue is the economic reasonableness of tearing the existing wall down by the Petitioner's home and replacing it with a higher and longer wall. The Complainants never raised the cost issue and just assume that cost is not an issue. However, Mr. Barbel testified that the cost of the wall proposed by the Complainants would be at least \$800,000, while a wall that mitigate to a level that addresses the Complainants' concerns, if it could be built, would cost at least \$1.3 million. (Tr. II at 207) These estimates, not provided by the Complainants, are planning estimates and not based upon designs and if anything unusual were found in the soil type (such as sand or peat), the hydrology or drainage, the costs would only increase. The expenditure of \$800,000 would be unreasonable under IDOT's guidelines (\$24,000 per residence impacted). Such an expenditure would require 33 residences being mitigated. Furthermore, such an expenditure would be unreasonable un the Tollway's guidelines of \$30,000. It would require need about 26 residences being remediated. (See Resp. Ex. 5 and 6 and Tr. II at 207)

Even including the handful of neighbors that submitted comments or a review of the Aerial photograph shows that less than 10 residences could even be generously included in the number of residences. In *Roti*, the Board reviewed its decisions on economic feasibility, noting that it found reasonable walls that cost from \$2,220 to \$20,000. PCB 99-18, Slip op. at 29. The Board noted that \$300,000 was a significant sum for a for profit business such as LTD and that it was reluctant to order such an expenditure without more certainty as to the effectiveness of the design. *Id.* at 29-30. Therefore, the cost per residence would not justify such a standard based upon the objective standards established by IDOT and the Tollway guidelines.

The Tollway guidelines are summarized and distributed to the pubic (Comp. Ex. 8). The Tollway applies them strictly and equally to all parties. Ms. Anderson testified that the Tollway does not deviate from its guidelines and strictly follows them. (Tr. I at 131) Although Ms. Petrosius claimed that she does not want to be treated any different than anyone else, (Tr. I at

102) what the Complainants propose would be completely atypical and contrary to the Tollway's noise policy that is applied equally to everyone. Similarly Mr. Zuccherro testified that the Tollway followed its draft policy which was and is based upon FHWA's guidelines. (See 23 CFR 772 in Resp. Ex. 7). The Board should give the Tollway Board's decision great weight. Since it was legislatively granted the authority to make the financial and planning decisions related to Tollway, its decision to plan, design and construct the I-294 and the 75th Street interchange with the sound wall it approved per its policy should carry great weight. This is especially relevant in the budgetary considerations for such significant expense. As described by Mr. Zuccherro, the Tollway does not operate with a profit and all projected funds are budgeted: any unexpected expenditure would require a cut somewhere else. (Tr. I at 182-183) Therefore, there are no available budgeted funds to install the proposed wall nor are their profits that could be used to pay for the wall. Thus it is economically unreasonable for the Tollway to demolish parts of the existing wall, which is effectively mitigating the noise now, and erect a new higher and longer wall.

The evidence clearly shows that the Complainants' proposed wall is not technically practical because it does not reduce the noise emissions based upon the requirements of their own expert and because there is no evidence that their proposed wall could be designed and reasonably constructed. Furthermore the evidence established that the proposed wall would not sufficiently mitigate the noise to meet the noise limitations described to by Mr. Zak.

5. Subsequent Compliance

The evidence shows that although the Tollway previously built a noise wall at the cost of \$11 million when it widened I-294, it nonetheless responds to all complaints about noise. In *Saxbury*, the Complainants maintained that after the mitigation the noise source was still an interference but Board noted that the factor favored the Respondent because they made

“significant efforts to reduce the noise” by spending \$5,600 trying to resolve the noise issue. PCB 04-79 at 13-14. In the instant case, the Tollway expended \$11 million building noise wall along with the costs for noise studies and design of the wall. The Tollway undertook extensive measures to address the Complainant’s concerns consistent with the Tollway’s policies. Ms. Anderson testified that the Tollway takes all noise complaints seriously. (Tr. I at 139-140) She testified that whenever a complaint comes in, the Tollway tries to address it or at least explain the Tollway’s policy. (Tr. I at 139-140) She testified that the Tollway upon hearing Mr. Petrosius’ initial complaint responded by finding out his concerns and ground down bumps on the Tollway by his home. (Tr. I at 131-133) Furthermore, the Tollway responded to their concerns by conducting a field test to ascertain whether the wall was constructed properly and to determine the effectiveness of the wall. Upon inspection and testing, Mr. Zuccherro concluded the wall was constructed to the design specifications and that his informal test showed that the wall was effective. (Tr. I at 173) Since the wall conformed to both the Federal and the Tollway guidelines and there was nothing wrong with the wall as constructed, there was nothing the Tollway could do for the Complainants.

Therefore, this factor goes slightly toward the Tollway because the Tollway tried, within its policies, to help the Complainants.

6. Factors Show Noise Emissions are Reasonable

The evidence overwhelmingly shows that the noise emissions generated by the vehicles using the Tollway are reasonable in light of the fact that the impact that the noise has on the Complainants’ health and enjoyment of the property is clearly dwarfed by the benefits the Tollway provides to the general welfare of the people and the enormous social and economic value the Tollway provides the State, the communities serviced by the Tollway and the businesses that utilize the Tollway to deliver billions of dollars worth of goods and employ many

individuals. In addition, the location of the Tollway and the 75th Street interchange is ideally suited for its surroundings. It was built before the Complainants' house was built on the border of an area that has been historically heavily industrial and commercial, which to this day remains heavily industrial and commercial with a large number of heavy trucks and trains going through the area. Finally, the reasonableness of the noise emission of the Tollway and the 75th Street interchange is firmly established when the Board considers that the Tollway already conducted a noise study pursuant to Federal Highway Administration regulations, hired a State of Illinois licensed professional engineering firm to design a noise wall considering the noise study recommendations and constructed the noise wall at a cost of more than \$11 million. This wall has been shown to effectively reduce noise from the Tollway. On the other hand the Complainants failed to show that their proposed wall is technically feasible to build and even if built would reduce the noise sufficiently address the Complainants concerns. The Complainants failed to show that their wall was economically reasonable, on the contrary, the Tollway established that it would be extremely expensive and not economically feasible to design and construct the proposed wall.

Therefore, the Board should find the noise emission to be reasonable and that they do not constitute a public nuisance.

C. Civil Penalties

The Board should not assess any civil penalties. 415 ILCS 5/42. Not only does the Complainant not seek them, but they are not warranted. The Tollway has gained no economic benefit from the noise generated by the traveling public. Although the Tollway collects tolls, the tolls are used exclusively for governmental purpose and not private gain.

The noise is generated by vehicles the State and Federal governments licensed and thereby authorized to travel on the roads. The Tollway's statutory purpose is to design, construct

a system of toll roads for the traveling public. The evidence clearly established that not only did the Tollway do this but it also at great expense mitigated the noise using Federal Highway Administration guidelines that it was not bound to follow. The unrebutted evidence established that the Tollway followed its voluntarily adopted rules and policies for noise abatement for the benefit of those people who are next to the Tollway. Therefore, the civil penalties are not warranted because the Tollway did not violate any regulations and took voluntary measures at great expense to attempt to mitigate the noise as best as technically and economically feasible.

WHEREFORE, the Tollway moves the Board to find in its favor and enter judgment in its favor and against the Complainants and dismiss the Complaint.

Illinois State Toll Highway Authority

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