

**BOONE COUNTY BOARD OF ADJUSTMENT
BOONE COUNTY ADMINISTRATION BUILDING
BOONE COUNTY FISCAL COURTROOM
BUSINESS MEETING
JUNE 13, 2018
6:00 P.M.**

Mr. Whitton called the meeting to order at 6:00 P.M.

BOARD MEMBERS PRESENT:

Mr. Justin Bailey
Mrs. Sherry Hempfling
Mr. Richard Miller, Vice-Chairman
Mr. George Whitton, Chairman

BOARD MEMBERS NOT PRESENT:

Mr. Chris Vaught

STAFF MEMBERS PRESENT:

Mr. Kevin T. Wall, AICP, Director, Zoning Services

LEGAL COUNSEL PRESENT:

Mr. Dale T. Wilson

APPROVAL OF MINUTES

Mr. Whitton stated the Board members received copies of the minutes of the Boone County Board of Adjustment meeting of May 9, 2018. He asked if there were any comments or corrections? Mrs. Hempfling moved to approve the minutes and Mr. Miller seconded the motion. Mr. Whitton called for the vote and it carried unanimously.

ACTION ON REVIEWS

1. Request of Duke Realty for a Variance to allow the modification of the 4/11/18 Boone County Board of Adjustment conditions. The conditions were imposed on a Variance approval to allow Amazon to construct a 20' tall fence. The approximate 47.7 acre site is located at 2305 Litton Lane, Boone County, Kentucky and is zoned Industrial One (I-1) and Industrial Two (I-2).

Mr. Wilson said this item first came in front of the Board on April 11, 2018. He indicated the entire record of that evening (minutes, application, Staff Report, exhibits, etc.) can be incorporated into the record tonight if the Board makes a motion, second, and passage to do so. He asked if the Board would like to do that? Mr. Whitton said he would entertain a motion to include all aspects of the April 11, 2018 record, as it pertains to this application, into the record tonight. Mr. Miller so moved and Mr. Bailey seconded the motion. Mr. Whitton called for the vote and it carried unanimously.

Staff Member, Kevin Wall, presented the Staff Report which included a PowerPoint presentation (see Staff Report). The Staff Report indicated the April 11, 2018 Boone County Board of Adjustment minutes would be entered into the record (see Exhibit 1).

Mr. Brian Dunham, an attorney with Frost, Brown, Todd, said he was here tonight on behalf of Amazon. They are not asking for anything different than what was previously approved, as it relates to the wall. They are asking for the Board's consideration to modify the conditions that were established at that meeting. It became apparent after analyzing the meeting minutes and conditions that the Board, Staff, and residents were under the impression that on-site sound testing had already been performed. That was not the case. They did have a technical report prepared by their sound engineer and it included a lot of numbers that could be confused by a lay-person. The Amazon business people that spoke on the issue that evening did not realize the number being used in the calculation was based on an industry standard. There are industry standards for various types of activities (trucking, loading, unloading, coupling, decoupling, etc.) that take place on a property like the Amazon site. Rather than getting variable decibel levels all along the site, the sound engineer took the industry standard and ran calculations. Based on that, they cannot provide the sorts of information that was envisioned by the conditions. Since the last meeting they have:

1. Worked with Planning Commission Staff and put together a new condition that's in the application.
2. Sent all residents that received notice of this meeting a copy of the proposed condition.
3. Sent letters to the adjoining property owners or people that spoke at the April meeting which explains what they are seeking at this meeting. The letter also ensured the neighbors that they plan on moving forward with the wall in all due haste.

They feel like the new condition strikes a balance in protecting the interests of Planning Commission Staff, the Board, and residents. It is also something Amazon is comfortable proceeding with. They realized shortly after the April meeting that they were going to have to come back to the Board to revise the conditions. Since that time, they have continued to work with the Planning Commission and Building Department to keep the ball moving. If they receive approval tonight, the Planning Commission and Building Department should be a couple days out from issuing approvals to allow wall construction to begin. The latest construction schedule that he's heard is wall construction would start on June 25th. They are aware that everybody wants the wall as soon as possible. He indicated that he was present to answer questions and was here with Ryan Wilson, with Amazon, and Ben Mueller, their sound engineer. They have not received any phone calls from the residents since their letters went out.

Mr. Ryan Wilson, with Amazon, said they realize this is an important community issue and they have the right people in the room to answer questions. Hopefully, everybody has received a copy of the letter that was mailed out to the residents last week (see Exhibit 2). They want to move forward with the wall as quickly as possible and are expecting construction to be complete in September. He indicated that he would be available for questions.

Mr. Miller said he would like to ask the sound engineer a question. Mr. Benjamin Mueller, P.E., said he was a Principal with Ostergaard Acoustical Associates in West Orange, New Jersey. He prepared the supplemental acoustical analysis that's part of the record (see Exhibit 3). Mr. Miller said when he made the motion to put the conditions in about the sound study they had been told that readings were taken. With that, he requested those readings be supplied to be able to show that when the wall was constructed that it was going to give the efficacy that had been presented (a reduction of 6 decibels). He has read the supplemental study and has a small amount of experience with this type of thing. He has one concern. He does not doubt that any of the numbers presented in the study are correct based on the formula. However, without any existing sound readings taken, at the generators and receivers, there is no way of knowing if they are getting a 6 decibel reduction. He said he was going to use some hypothetical numbers. Lets say Amazon is generating 20 decibel levels and the receiver (closest house) is getting 10 decibels of noise. In theory, if the wall is working as designed the sound level at the house should go down to 4 decibels. However, if you don't have existing sound levels, build the wall, and then take readings on the generator side (20 decibels) and receiver side (10 decibels) you can say that the wall has provided a 10 decibel level reduction. He said he doubts there is that big of a gap in the field and is using extremes in his example. He asked for the existing sound levels to be provided because it would allow them to show the receivers were getting a 6 decibel reduction. Mr. Mueller said the analysis favored using a stagnant conductural value for noises because all the noise on site are variable. They have multiple sources (coupling, decoupling, truck movements, backup alarms, etc.) and distance is a factor. The easiest way to catch all of that is to provide an analysis and say the wall, which is a static element, is always going to provide that reduction regardless of what the noise source is. So if the noise source was 70 decibels the wall will reduce it to 63 decibels. When you look at the details in the letter it deals with octave frequency paths. The performance of the wall (its height, length, and materials) is going to attenuate frequencies differently. There are certain noise sources, like coupling to coupling, that have lower noise frequencies (more of a rumble) and other noise sources that have higher frequencies. The materials and geometries are going to mitigate these sounds differently. They did months of research on the noise sources. His professional opinion is that regardless of the source, and where it is, they will achieve the project goal of reducing noise levels by 6 decibels. He cannot see anything going wrong if the wall is constructed as it's laid out.

Mr. Miller said that they have no existing data to show the wall will actually reduce the sound level by 6 decibels at the receiver. After readings are only going to show a reduction level between the generator and the receiver. They will not necessarily show the decibel level improved because the existing levels at the receiver are not known. Mr. Mueller said they can still determine things like that because sound is a science. Regardless if the wall is there, they can say that a truck is 120' away from the receptor and they can also measure 120' in another direction. They understand the sources on site and are able to generalize those. Mr. Miller said you can debate theory but anytime he has been involved in a study they always took existing readings and after readings. Mr. Mueller said they would do that if they had a stationary noise source, such as a generator or rooftop equipment. Mr. Miller said they have a problem with their generators and the receivers are fixed. They could take the worst case levels for their generators (take a reading on each kind of sound) and get a baseline of what the existing noise levels are. The receivers are all fixed because the houses and decks are not moving. They could get readings at different places to establish a baseline of what the existing decibel levels are. These would be based on the different sounds that are coming from the Amazon site. This way when they do readings after the fact at the receiver they will know the efficacy of the wall, it isn't theory. Mr. Mueller said

the variability of the sources on site create a problem. They would be comparing measurements taken months apart. They have no way of correlating that. The 50 decibel level measured in June is related to the measurement taken in September. They would then have to draw a conclusion that the 50 decibel level went down to 43 decibels. However, the source wasn't the same. They would have to do a controlled study. So currently, the neighbors are being exposed to noise that is coming from activity on site. They could have deployed a monitor that took readings over a month's time and they would have wound up with a research project on what might occur. Instead of taking that road, they chose to say that they know what the maximum truck levels are based on their independent research and text book type stuff. They can take these elements, do their analysis, and jump right to the end to say that they can mitigate the noise levels of concern. They will be able to stand behind the report and mitigate and minimize the potential for noise complaints. It's a catch all for all the noise sources on site. The site is very large and the dynamics change each day. The closest parking stall to a house isn't used each day. Their analysis includes that and looks at the fact that 90% of the time the noise is coming from elsewhere. Mr. Miller said he understands that but without existing noise levels they can't show they are achieving a 6 decibel reduction over what exists. Mr. Mueller said the proposed condition before the Board would require them to do a sound study if there are still unresolved noise issues after the wall is built. Because they don't have any steadfast criteria to go by, such as a noise code, they are trying to find something that will effectively satisfy the neighbors. They are the litmus test to him because if they satisfy them then they are in great shape. Because they have a variable site they can always go back and measure on both sides of the wall and show that a noise source of strength is going to be reduced by the amounts predicted in the report. Mr. Miller said he agreed but it doesn't mean that the receiver's sound level will be reduced by 6 decibels. Mr. Mueller said it does though. Mr. Miller said if the current noise levels across the border are 10 decibels at the receiver level and the generator is at 20 decibels you would expect the receivers noise level to go down to 4 decibels after wall construction. However, if you go back after the wall is constructed and take a reading of the generators and receivers and it's 20/10, you are showing a 10 decibel reduction. In reality though, there has been no reduction over what the existing noise levels were. Without any existing readings you can't prove that the neighbors levels have been reduced by 6 decibels.

Mr. Bailey asked what it would take for them to do existing readings? He realized they do not want to take the time and money to do that. He asked if the reading could be done and then if the neighbors aren't happy they can take a look at whether the wall worked or not. It sounds like they are 100% confident that the wall will lower the decibel levels and make the neighbors happy. Mr. Mueller agreed. Mr. Bailey asked if that would make Mr. Miller happy? Mr. Miller replied that some baseline data will allow them to do some comparisons. As it stands now they have nothing to compare their results to, other than the theoretical reduction. He said he agrees with the calculations they are showing and that the wall will work. The theoretical data just doesn't prove that they are going to reduce the existing difference because they don't have baseline levels.

Mr. Dunham said he wanted to make sure he understood Mr. Bailey's question. Mr. Bailey replied that he would like them to take the existing readings. It sounds like the applicant's team is 100% confident that the wall will lower the noise levels for the neighbors and make them happy. The existing noise levels will not need to be dived into if that is the case. But if the neighbors come back and say things aren't any better they will have the data to fall back on. He really doesn't want them to have do any existing readings but he is trying to

reach a compromise with Mr. Miller. Mr. Dunham replied they cannot do that because there are so many variables, such as the size as the project. What they are willing to do is comply with the proposed condition. If the neighbors complain and have issues after the wall is up, they will do additional testing, regardless of what the decibels levels are.

Mr. Mueller said he knows they are using words like theoretical and Mr. Miller is comparing that to tangible data. In his mind, as a scientist and engineer, he wants to reduce the variables as much as possible. To him, a measurement tomorrow is not comparable to a measurement in September. Another expert or professional can have a field day with that because it is so disconnected. Their proposal is to go back after the fact and measure. By a limited number of techniques he can look at what the levels would be, could be, and are. Noise sources are going to be omnidirectional (radiate in all directions). So in one direction they have a wall (will be completed in September) and in another there will be no wall. They will be measuring on both sides of the wall. They will be getting the incident noise level from the source and will have the reduced measurement on the other side. He disagrees that they are not able to understand what is happening today nor able to show measurements in the future that show that the wall will have a benefit.

Mr. Dunham said even if they can't show the noise levels will drop by 6 decibels at each household, they will be able to say that the noise levels will be six decibels better in September when the wall is complete. This is the best solution they can come up with. This is 10 to 20 times what they budgeted and more than most people would have done. They are doing it because they want to be good neighbors. They will be able to revisit this after the wall is up and verify that the wall is working the way they expect it to.

Mr. Miller said he appreciates what Amazon is doing. Any effort to reduce the decibel levels is a benefit. Psychologically, the residents will get a noise reduction benefit from not seeing the generators. This is a fact and is mentioned in the report. He has just never seen a noise study done without a baseline study. Mr. Dunham said he agreed but a lot of those cases just involve someone going out with a wand purchased at Radio Shack and taking readings. They would indicate the noise levels today are 20 decibels, noise levels in six months are 10 decibels, and there was a 10 decibel reduction. It is much more complicated than that because of the variables, such as time of year, insects, weather, wind, etc., that play into it. Mr. Miller said he understands all of that but he doesn't know what they are going to do if the neighbors come back and complain. The baseline study would allow them to prove they are getting the desired reduction even if it doesn't seem like they are. Mr. Mueller said hopefully everybody sees their effort. They simply could have built a 12' tall wall and not have gone through the Variance process. In his professional opinion, a 12' wall would underperform at upper story receptors. They have a varied landscape, some stories are below grade of the site, but to the north this is not the case. A 20' wall will cover the upper story receptors. These are the type of things that are taken into consideration. He believes their rationale is solid and the performance will be static. He believes it is unnecessary to make this into a research project. The project team is 100% confident that it is going to have the intended effect.

Mr. Whitton said he knows there are people in the audience that want to speak. He doesn't want to go over the things that were discussed at the last meeting. However, if someone has a question about the proposal he would like to hear from them.

Mrs. Melissa Eschan said she was at the April 11th meeting and she was very happy with what they offered to do. They don't have to build the wall. They have nothing, if the stipulations are there but they decide not to build the wall. It feels like every truck that comes in and goes out is right in her yard. Mr. Bailey came and observed it. It doesn't matter what the particular number falls to. Two people on her street have their houses for sale and twenty groups that have come through haven't bought them. People cannot sell their houses and are stuck. Any reduction in decibel level will help and the wall will also help visually. She asked that the Board not hold this issue up any longer. Whatever they do will be a big help and they need it sooner rather than later.

Mr. Tony Droz asked exactly where the wall was being constructed? Mr. Jay Smith, with Duke Realty, reviewed the PowerPoint slide. He indicated it would be 20' tall from finished grade and would be located on top of the retaining wall. The existing 8' tall chain link fence will be taken down. Mr. Droz asked if the wall was 20' tall from grade or below ground? Mr. Smith replied it would be 20' tall from grade. Mr. Droz said he lives at 2569 Bethlehem Lane. He currently cannot sell his house because all the prospective buyers ask about the trucks on the Amazon lot.

Mrs. Lori Donegan said she wanted to thank both parties for everything they have done. From a lay person's point of view, some people are still struggling with the decibel reduction that is being explained and are hoping it can be put in simpler terms. Reduction is relative and her concern is what noise levels do they have after the wall is built. Is the level acceptable for everyday living. She does not see that information anywhere. She asked if that level was 10 decibels or 100 decibels? Mr. Whitton said what he heard tonight is that is very difficult to quantify. He has also heard that the wall has to reduce the noise levels. Mrs. Donegan stated there are industry standards so what is the industry standard for what the noise level should be? She also wants to make sure they are getting the right type of wall for the problem. Mr. Whitton said they have put a lot of time and energy into it and they are at 5 times their original budget. He added that Amazon doesn't have to construct this wall. She replied that her senses tell her that this is probably a very good wall but she would like to see it complies with industrial standards. Mr. Whitton said the applicant has indicated they would be willing to talk with the neighbors after the wall is constructed. She said one of the things that was mentioned was the wall is 120' from the neighbors. She thinks the wall will be about 60' away from some of the neighbors. She doesn't know if that difference would mean anything. She asked if the industry noise reduction number could be explained? Mr. Mueller said they begin every project by establishing project criteria. They went down this path by using a lot of the industry standards. They know they have a situation where the current noise level is unacceptable. They take a look at what level they want to achieve. When they talk about decibels, they are logarithmic in nature. So when you look at a reduction you are also looking at a logarithmic reduction. Most people will not notice a reduction of 1 to 2 decibels. People with acute hearing will notice a 3 decibel level reduction. A 6 decibel level reduction will be a noticeable difference to most people with typical hearing. A 10 decibel difference would decrease the loudness by half. Their target is to achieve at least a 6 decibel reduction. They are putting up a 20' tall wall to achieve that number and with most frequencies they will get beyond that. There is no way from an engineering perspective to design to achieve a reduction of 6 flat on the nose. They are getting benefit from the fact that the wall has 5" of concrete. The only other limitations are the height and length of the wall. The 20' height is sufficient to get above a noticeable reduction and the length addresses where the trucks are in the parking lot relative to adjoining houses. He professionally believes they are conforming with all industry standards. The wall is not being short changed and nobody

wants to see it come back again to be modified. The future noise levels should be more than acceptable for industrial property adjoining residential property. This solution has a track record of being useful. This solution may not catch everything. They may have an outlier noise source or ultra sensitive noise receptors. This is always something that may have to be contended with and he has nothing in his arsenal to predict that. This solution should be acceptable to 95% of the public. Mrs. Donegan asked if there was a way of showing them that the standard was reasonable. Mr. Mueller asked Mrs. Donegan if she had seen the letter that he had written? He said the formulas he used can be looked up online.

Mr. Dunham said the Board should take comfort that they are not here today because Amazon violated a noise code and has to do this. They are here today asking to go above and beyond and they have engaged some of the best people in the country to solve the problem with the neighbors. The solution of a 2,000 foot long, 20' tall wall, with 5" of poured concrete shows that they are not cutting any corners here. They fully believe this is the right and best fix.

Mr. Whitton asked Mr. Wilson what an appropriate motion would be? Mr. Wilson replied that the Board has the choice of modifying the conditions as proposed, adding additional conditions, or denying the request and going with the conditions that are already in place. Mr. Wall stated the Staff comments include some recommended tweaks to the proposed condition. Mr. Dunham responded that they are absolutely fine with the proposed tweaks as drafted by Mr. Morgan and Mr. Wall. They would welcome a motion to approve the amended condition as revised by Staff.

Mr. Miller made a motion to revoke the existing conditions and accept the revised condition as worded by Staff.

The condition reads as follows:

"In the event there are unresolved sound concerns raised by neighboring residents within 6 months following installation of the wall (based on the date Boone County Building Department performs the final inspection), the applicant will, within 60 days of being notified of such concern by Boone County Planning Commission, carry out a field study to determine the noise reduction the wall provides. The Boone County Planning Commission Staff will determine appropriate testing locations for the field study (subject to necessary access being granted by the applicable residents), and unmitigated sound levels would be represented via measurements on the applicant's side of the wall while mitigated sound levels would be represented via measurements on the residents' side of the wall. The difference between the two is the noise reduction. Results from the study will be provided to the Boone County Planning Commission Staff for review and comparison to the submitted analysis. Should the study indicate that the sound wall's anticipated transmission/insertion loss properties were not met, the applicant will investigate the cause of this and analyze any additional measures to remedy this."

Mr. Bailey seconded the motion. He called for the vote and it carried unanimously.

2. Request of Quality Signs for Recycling Express for a Conditional Use Permit to allow the construction of a new freestanding sign with an electronic message center in a Commercial Services (C-3) zoning district. The approximate 12.2 acre site is located at 8505 Dixie Highway, Boone County, Kentucky.

Staff Member, Kevin Wall, presented the Staff Report which included a PowerPoint presentation (see Staff Report). He added the applicant sent a supplemental email after the Staff Report was finalized. Mr. Mark Stottman, with Quality Signs, submitted a copy of the email into the record (see Exhibit 4).

Mr. Stottman stated that he was representing Recycling Express. The email shows what the sign is capable of doing. However, they are agreeable to limiting the sign to 3 lines of text with a 10 second message hold time. The dimmer is built into the sign.

Mr. Whitton asked Mr. Stottman if he was agreeable with Staff's recommended conditions? Mr. Stottman said he was agreeable with all of them.

Mr. Miller asked if the new sign was going in the same exact location as the monument sign? Mr. Stottman replied it would be in the same location. Mr. Miller said the power lines appear to be close. Mr. Stottman replied the sign would be located behind the powerlines.

Mr. Whitton asked if anybody else in the audience wanted to speak for the request? There was no response.

Mr. Miller made a motion to approve the request with the following conditions:

1. The electronic message center shall only display alphanumeric messages. The messages shall not contain any apparent motion (video, flashing messages, scrolling messages, running messages, moving patterns or boards of light, illusion of moving objects, rotating shapes or similar animation effects, etc.).
2. No more than three lines of text shall be displayed on the electronic message center at any given time.
3. All messages on the electronic message center shall be displayed in amber characters on a black background and be held on screen for a minimum of ten (10) seconds.
4. The electronic message center shall be equipped with a dimmer and messages shall dim as the sky gets darker.
5. The property owner shall work with Boone County Planning Commission to resolve any lighting issues (brightness, glare, etc.) that are caused by the subject sign on Dixie Highway or adjoining properties.
6. Off premise-businesses shall be prohibited from advertizing on the sign.

Mr. Bailey seconded the motion. Mr. Whitton asked if there was any further discussion? There was no response. He called for the vote and it carried unanimously.

OTHER

No other business was discussed.

ADJOURNMENT

Mr. Whitton asked for a motion to adjourn the meeting. Mr. Miller made a motion to adjourn and Mr. Bailey seconded the motion. Mr. Whitton called for the vote and the meeting was adjourned by unanimous consent at 7:00 p.m.

APPROVED

Mr. George Whitton

ATTEST:

Kevin T. Wall, AICP
Director, Zoning Services

Exhibits

1. 4/11/18 Boone County Board of Adjustment Meeting Minutes
2. 5/5/18 Letter From Ryan Wilson to the Residents
3. Supplemental Acoustical Analysis
4. 6/8/18 Email from Mark Stottman