AMENDED MEETING RECORD

NAME OF GROUP:	PLANNING COMMISSION
DATE, TIME AND PLACE OF MEETING:	Wednesday, August 19, 2015, 5:30 p.m., Hearing Room 112 on the first floor of the County-City Building, 555 S. 10th Street, Lincoln, Nebraska
MEMBERS IN ATTENDANCE:	Jeanelle Lust, Cathy Beecham, Tracy Corr, Michael Cornelius, Maja V. Harris, Chris Hove, Dennis Scheer, Lynn Sunderman, and Ken Weber; David Cary, Steve Henrichsen, Brian Will, Geri Rorabaugh and Amy Huffman of the Planning Department; media and other interested citizens.
STATED PURPOSE OF MEETING:	Regular Planning Commission meeting

Chair Jeanelle Lust called the meeting to order and acknowledged the posting of the Open Meetings Act in the back of the room.

Lust announced that Planning Commission previously approved the suspension of the rules to delay the regular biennial election of the Planning Commission officers until September 2, 2015.

Lust informed individuals wanting to testify on the Commercial Wind Energy text amendment that they should add their names to the sign-up sheet, which is located just outside the Chambers, as testimony will be taken in the order individuals sign up. In addition, it was noted that additional seating with television monitors is available in the adjacent Studio Room.

Next, Lust requested a motion approving the minutes for the regular meeting held August 5, 2015. Cornelius moved approval, seconded by Corr and carried 7-0-2: Corr, Cornelius, Harris, Hove, Scheer, Sunderman, and Weber voting 'yes'; Lust and Beecham abstained.

CONSENT AGENDA
PUBLIC HEARING & ADMINISTRATIVE ACTION
BEFORE PLANNING COMMISSION: **August 19, 2015**

Members present: Lust, Beecham, Scheer, Corr, Cornelius, Harris, Hove, Sunderman, and Weber.

The Consent Agenda consisted of the following items: **ANNEXATION NO. 15007, CHANGE OF ZONE NO. 15020, ANNEXATION NO. 15008, CHANGE OF ZONE NO. 15022, and CHANGE OF ZONE 2463E.**

Use Permit No. 126D was removed from the Consent Agenda, as the applicant requested a 2-week deferral.

There were no ex parte communications disclosed.

Scheer moved to approve the Consent Agenda, seconded by Beecham carried 9-0.

REQUEST FOR DEFERRAL:

USE PERMIT NO. 126D - AMENDMENT TO CONVERT OFFICE SPACE TO APARTMENTS AND INCREASE NUMBER OF MULTI-FAMILY DWELLING UNITS FROM 195 TO 297, AND REDUCE OFFICE FLOOR AREA FROM 225,00 TO 174,00 SQUARE FEET, ON PROPERTY GENERALLY LOCATED AT EXECUTIVE WOODS DRIVE AND YANKEE HILL ROAD. **August 19, 2015**

Hove moved to grant the request of the applicant for a 2-week deferral for public hearing and action on September 2, 2015, seconded by Weber carried 9-0.

There was no public testimony provided on this application.

ANNEXATION NO. 15006 TO ANNEX APPROXIMATELY 46 ACRES AND ADJACENT RIGHTS-OF-WAY, GENERALLY LOCATED AT SOUTH 63RD STREET AND YANKEE HILL ROAD.

Staff recommendation: Approval.

AND

CHANGE OF ZONE NO. 04075F TO AMEND THE VILLAGE GARDENS PLANNED UNIT DEVELOPMENT BY EXPANDING THE BOUNDARY BY APPROXIMATELY 46 ACRES; A CHANGE OF ZONE FROM AG TO R-3 PUD; A PLANNED UNIT DEVELOPMENT DESIGNATION OF SAID PROPERTY, AND A DEVELOPMENT PLAN WHICH PROPOSES CHANGES TO THE ZONING ORDINANCE AND LAND SUBDIVISION ORDINANCE FOR ADDITIONAL SINGLE-FAMILY DWELLING LOTS ON THE UNDERLYING R-3 ZONED AREA, ON PROPERTY GENERALLY LOCATED AT SOUTH 63RD AND YANKEE HILL ROAD.
PUBLIC HEARING BEFORE PLANNING COMMISSION: August 19, 2015

Members present: Lust, Beecham, Corr, Cornelius, Harris, Hove, Scheer, Sunderman, and Weber.

Staff recommendation: Conditional Approval.

There were no ex parte communications disclosed on these items.

Staff presentation: **Brian Will of Planning Staff** came forward to state these applications were delayed from the July 22 agenda at the request of the applicant to allow the applicant to meet with staff to work out some issues. Will noted that a number of issues were resolved and the applicant will present a motion to amend. Will stated that this is the sixth modification to the original Village Gardens PUD. The area of annexation consists of approximately 46 acres of land and a modification of PUD to allow up to an additional 168 dwelling units. Will noted that were three issues that have been discussed. First, the pipeline planning area along Yankee Hill Road. This issue has been resolved to the agreement of staff and the applicant. The second issue relates to pedestrian connections, and the final issue relates to street connections, which the Planning staff is requesting at the very southern portion of the PUD. Once the applicant has presented the motion to amend, Will indicated he will respond and address questions.

Proponents:

1. DaNay Kalkowski, came forward on behalf of 1640, LLC and Village Meadows, LLC, which is the developer of this area. These applications are an extension of the existing Village Gardens PUD, adding 45 acres with single-family residential with one area of town homes/patio homes along the south side of Yankee Hill Road. There is a retirement facility to the west and future commercial or apartment use to the east.

Kalkowski noted that they did work with the Planning Department and Health Department staff to clear up a couple of issues. However, there are two things they want to discuss, and she provided a proposed motion to amend. Kalkowski noted that staff are in agreement with Conditions 2.2 and 2.6, which deals with the setback to pipeline planning area. They still have disagreement with Conditions 2.4 and 2.9. Condition 2.4 requires the developer to make a street connection from the town home area to a future roadway in the area to the east to the future commercial/apartment area. The applicant is requesting the deletion of this condition, as they don't believe an additional street connection is necessary or desirable in this location. If it is required, it would be an impediment to lot and home sales for this town home development, which is proposed at 39 lots. There is vehicular and pedestrian access to Bridle Lane, which is located on the north. There will be a pedestrian connection to Yankee Hill Road to the future trail. This will allow for free movement within and around the area with limited vehicular access, which is the character that the developer wants to attain. There are other town home developments which have more density that have single vehicular access points, including Weeping Willow Development with 30 units; Cape Charles in Williamsburg with 64 units; Bishop Square has 48 units; and Wilderness Ridge with 70 units. In terms of Condition 2.9, they are in agreement with Planning staff that the pedestrian access be located in Block 11, but they are not in agreement to the pedestrian access connecting the cul-de-sac to the street. The Planning Department has

the ability to require a pedestrian connection when there is a block length of over 1,000 feet and where it is needed for pedestrian traffic. In this case, Block 14 has a block length of 1,061 feet. The applicant doesn't believe that the pedestrian access is needed or desirable in this block, primarily because of the maintenance of pedestrian easements due to grade differentials in addition to hurting the marketability of the adjacent lots. This is a square block and adding the pedestrian connection doesn't gain much as far as saving steps. The motion to amend would eliminate the pedestrian connection from Block 14.

Lust asked if there are pedestrian accesses to other cul-de-sacs. Kalkowski identified other pedestrian access points in the other blocks, which are much more significant because the blocks are a lot longer.

Lust asked if there are two lots stacked up in the cul-de-sac? Kalkowski indicated that the lots are two deep.

Hove questioned whether the area to the east has proposed planned development. Kalkowski indicated that it is shown as commercial in the Comprehensive Plan but it was recently changed from mixed use office to the neighborhood designation. It consists of 30 acres, so it is likely that there will be a mix of use but there are no plans at this time.

Beecham asked if there is a bike trail along Yankee Hill Road. Kalkowski stated that there is a future proposed bike trail along there.

Corr asked for clarification on the sidewalk wavier for Blocks 22 and 23. Kalkowski stated that they added the road connection so the waiver is no longer being requested.

2. Bob Benes, owner/developer of Village Meadows and Aspen Builders, came forward and stated that they develop lots and build homes, which gives him a different perspective since he meets with the people who want to live in an area. This provides him with information in terms of what will sell for a given area and he tries to achieve that. The biggest requests are for cul-de-sacs, dead-end streets, limited traffic, etc. He recently took over the Weeping Willow development which consists of single-family "patio homes" where outside maintenance of the property is taken care of, i.e. snow removal, grass, etc., and this appeals to the "empty nesters". This development was very successful and they continue to get requests for this type of development from individuals who don't want a big house, winter elsewhere and know that their property is taken care of. Putting in another access point increases the cost of all the other lots substantially and it takes away from the character of the area.

Benes also indicated he has an issue with the sidewalk requirement. He understands the need to have more walkable neighborhoods, but this additional pedestrian access will change the character of the area. Benes showed how neighborhoods used to be developed with cul-de-sacs and curved roads and how they are today due to block length requirements, which promotes straight roads. He indicated that he is not concerned about

block length. People like to walk more, so the extra 24 steps would not be an issue. This sidewalk really goes nowhere and there are likely only four houses that would even use it. Benes noted that it is very difficult to sell lots that are adjacent to a sidewalk. In addition, they can be difficult to build, as they need to meet ADA requirements.

Corr asked if the patio home road would be private or public. Benes indicated that it would private and maintained by the homeowners association.

3. Ken Emmons, 9014 Whispering Wind Drive, real estate agent, stated that he supports the elimination of the sidewalk. In their neighborhood, there were tracks in the snow behind some houses indicating that there were people walking behind their homes at night. Usually the living space is in the back of the house, so when there is a sidewalk back there, it provides access to pedestrians in general, not just the people who live in the area. Most people do not want people walking behind their homes. A lot of people will put up a privacy fence when they are adjacent to these pedestrian areas, which creates a tunnel effect and can create safety issues. Emmons noted that he has been involved with new home sales since 1975 and this does impact the value of the lots. The block length requirements are changing the character of the new neighborhoods with straight streets and rows of houses. Because the price on these lots is lower, it increases the price of the other lots. It will also have quite a slope, which will create hazardous conditions when there is snow and ice on it. It will only add to the homeowners associations duties and maintenance fees.

4. Jyl Voge, 7947 Weeping Willow Lane, stated that she lives in Willow Springs and they have one street that serves as the entrance/exit. Neighbors walk their pets and grandchildren through their community, as they know that vehicles will not be speeding by or taking shortcuts to get to the neighborhood areas. This one access provides a safety barrier for their area. The neighbors in the area know the vehicles that belong in the area. People like this area, as it is very quiet. She is not aware of anyone in the area complaining that a second access point is needed for the area.

5. Don Mach, 9040 Foxtail Drive, came forward and stated that he has 210 feet of sidewalk and a very large yard; they are looking downsize. They also own property in Colorado and have friends who live in an area similar to the patio home development that is being proposed. He and his wife are very interested in this type of neighborhood. They have been actively looking for a townhouse and haven't seen anything that they like as well as this concept. They like the location and they like the idea of a single access. This is the type of lifestyle that they would like to have. They travel quite a bit and they want to live in a safe area with trusting neighbors. If there is another entrance added to this development, they would likely change their minds about buying a home in this area.

Opponents: None.

Questions of Staff:

Brian Will of the Planning Department returned to the podium and stated that staff is in agreement with all of the changes of the motion to amend with the exception of two - staff is recommending that Condition 2.4 be retained and that Condition 2.9 be modified to stated “Blocks 11 and 14". Will noted that one of the pedestrian connections was added recently. Staff was in agreement to not providing pedestrian access in the three north blocks. The rationale was that there is a school to east and likely a commercial area to the south, so it would provide an east/west flow for kids getting to and from school or people going to the commercial center. Will noted that sidewalks are not just intended for the people living within the neighborhood but provide for a connection among and between neighborhoods. This enhances safety rather than detracts from safety. In terms of the street connection and marketability of the lots, Will noted that this will apply to any development that comes before the Planning Commission. Previously, we have held that the marketability of lots is not rationale, as this is not addressed in the Comprehensive Plan or the subdivision ordinance. It is designed to layout neighborhoods with blocks that have a reasonable length and include pedestrian connections when this is exceeded to allow people to move freely through these areas. They do not have any idea what is going to occur in the commercial area. In the case of raw land development, there are no constraints. In the examples identified, there were constraints with the surrounding developments. In some situations, there may be some unique circumstance where a waiver might be justified; however, there is no justification here. Staff rely on the Comprehensive Plan for guidance and the subdivision ordinance and zoning ordinance require it. Will noted that with these two changes to the motion to amend, staff would fully support this and recommend approval.

Corr asked how staff feels about the street for the patio homes being a private roadway. Will indicated that it is okay but they would support a public street as well.

Corr stated that there hasn’t been much discussion about the pipeline and decreasing it 21 feet. Will stated that part of the calculation involves the maximum operating pressure of the line. By reducing this to 200 feet from 221 feet, this gives the developer enough of a building envelope on those lots to build a house. The Health Department and Planning Department staff are comfortable reducing this to 200 feet. Will stated that is does not related to capacity but pressure.

Corr questioned why we have been using 221 feet all along and now going down to 200 feet. Will explained that this is the formula that is used that relates to the maximum operating pressure. In this case, they are using the actual operating pressure rather than the maximum operation pressure.

Corr asked if there is additional berming being required. Will stated that nothing is being required by staff in terms of berming and landscaping.

Corr asked if the property to the west is where the retirement community is being

developed. Will stated that this is correct. They know it and the structures with the liveable areas will be outside and they will have requirements to meet.

Hove referred to the sidewalk at the back of the cul-de-sac and asked if someone were at school on the west side and heading east using one of the streets to get home. Would they have to take a detour to go into the cul-de-sac and go out the back side. Will stated that this is correct but it works both ways and works east to west as well. Hove noted that eventually they would need to get on a street to get home. Will stated that he used the example of students but indicated that they need to consider the rationale for determining the size of a block as 1,000 feet. It is not just for the folks in neighborhood, but for the greater public.

Hove asked for clarification in terms of the Comprehensive Plan and the additional street to the south. Will explained that it relates to block length, which is a quarter mile or 1,320 feet. The intent is to provide good connectivity in most neighborhoods and you can reflect back on that standard as one of the things that has helped guide us. In this case, this is just a large cul-de sac. Will stated that you don't build large segregated communities like that but rather have connectivity.

Hove asked what is wrong with having a large cul-de-sac, as it seems like demand is there? Will explained that there is a standard and this is not how neighborhoods are designed. Steve Henrichsen of the Planning Commission came forward and stated that traffic is being moved from one area to another. If there is another connection to Yankee Hill Road, the trip would be made much shorter because there is another connection to get out. If there is not another connection, then you push traffic past other peoples' houses. This is generally why you have multiple connections in a neighborhood to disperse the traffic. Everyone would love to have a house on a street that no one else drives past but they could drive by everyone else's house. We went through this discussion last December where they indicated why there should be multiple connections to disperse the traffic.

In terms of the pedestrian access, Henrichsen indicated that someone could potentially need to walk approximately 450 to 500 feet out of their way if the pedestrian access is not provided. This is why they went with 1,000 feet to try to reduce the length that someone would have to walk.

Beecham stated that when considering the connection to Yankee Hill Road and dispersing the traffic if this would put more traffic through private streets. Henrichsen stated that in order to have cut-through traffic here, a number of turns would be required; individuals generally take a more direct route.

Beecham asked how big the route out will be. Looking at the number of houses to the north with the future commercial development, would more people from the north cut through? Henrichsen stated that it would depend on the layout of the new development, so it makes more sense to retain a connection at this point. Beecham asked to see which streets connect to Yankee Hill Road. Steve identified four.

Applicant Rebuttal:

Mr. Benes came forward and stated that they do not know what is going to happen to the east and they don't know that the street is exactly where it is shown. He is not building it. They are up against a unique piece of land. Punching residential into the commercial changes the charter of the development. These people don't mind driving up and turning to get out. The people in the higher traffic areas will be paying less. People pay premium for the private lots on the cul-de-sac. The Comprehensive Plan talks about the flow of neighborhoods but should also address giving people what they want. He is spending millions of dollars to build the streets, water and sewer. He wants a project that he knows will be successful. If they put in a street access, they will lose two lots and profitability drops and it gets scary. He explained his comment about having to take 24 extra steps, based on the block length and the fact that each step is 2 ½ to 3 feet. If the circle was 24 steps smaller they wouldn't be asking for this. They don't feel enough people would even use it and it would cost approximately $30,000 to put the sidewalk in.

ACTION BY PLANNING COMMISSION: August 5, 2015

Cornelius moved approval as amended by the motion to amend offered by the applicant with the exception of Condition 2.4, which would be retained and require a street connection, seconded by Beecham.

Cornelius stated he agrees with many of the staff arguments in regards to connectivity but believes that the connectivity is not necessary for the immediate property owner or the surrounding property owners. This is his motivation for keeping the road connection. Looking at the layout of the proposed development, the block that is in question with regards to the sidewalk is roughly square and the benefit that is achieved by punching a sidewalk through is minimal compared to walking around from either direction. Therefore, on the balance, he doesn’t believe it is necessary and this is why he made this motion.

Hove indicated that he will vote against it because he doesn't believe the street connection is necessary. His parents are moving into the Cape Charles development specifically because of the fact that it is safe and there is one entrance/exit. This is a high demand type of product these days.

Sunderman agreed with Hove's comments. He believes it is doable and makes sense in this area to limit the street connection there, as these are smaller lots and takes into consideration the pipeline, which is pushing the property line back. This is a unique and wonderful solution to the battle they have between pipeline and building along it.

Weber stated that he agrees with Sunderman's comments and the added factor that they don't know what is going to happen with the commercial area and it could possibly cause more traffic to go through the area if the second access point is put in.

Beecham stated that she is concerned because there are a lot of houses to the north and they could be funneling a lot of people trying to get to Yankee Hill through a small private area that is intended to be very quiet. She seconded the motion for discussion purposes but will not support it.

Lust indicated that she agrees with the motion as made and believes that street connectivity isn't just for the benefit of the people living in the neighborhood and there are quite a few houses in this development. What will happen is that you will force the traffic from that development to run by the other houses. If they follow the connectivity plan that they have been following, they will have development that makes sense and doesn't necessarily have traffic backups going by other people's property.

Hove stated that those properties have not been developed yet so when those people buy those properties, they are going to see that there is going to be more traffic there.

Corr stated that she is an old stodgy accountant and she prefers straight streets and grids – not everyone likes curves. She doesn't wear a Fitbit, and she likes block length limitations, which contribute to more walkability than the curvy streets. She has also been part of a project in the core where they were having problems with vandalism and she has seen over the past year how more activity and more pedestrians going through an area actually increases safety. To her, increased traffic equals increased safety; there are more eyes on the road. It works. More eyes, more traffic – both foot and vehicular – it will increase safety. She strongly believes that the Comp Plan has the walkability and connectivity in there for a reason. She believes that this is important. They had a briefing this year about keeping those minimum block lengths to a certain standard and they all agreed and came to that compromise. She believes that it is okay to hold developers to that. When a developer comes up and says, "well, it is only so many steps or if I made the lots a little bit smaller than this wouldn't be an issue", then make them smaller. She challenged them. If you don't want to put out the millions of dollars to develop this when there will likely be good returns, she has a hard buying it. Another thing that the

Commission addressed this year is the walkway with the tunnel effect in between due to privacy fences and they made adjustments to that regulation to help decrease that effect. They also came to a compromise on that issue and they need to hold developers to that standard. Corr further stated that with the cul-de-sacs and kids walking to and from school – what if you are walking to school with a buddy and they live in the cul-de-sac? They might want to walk with a buddy to their home on a cul-de-sac and then walk through that to their home on the other side. They are not going to walk all the way through; they will cut through. Kids climb over fences, even her's which are 6-feet high. In reality, kids aren't walking to school today, they get driven. She has a problem with this as well. She has a lot of problems with this development, and this isn't all of them. She could keep going. She doesn't like this development. She thinks that it needs some changes.

Scheer stated that he is going to vote to support the motion. He thinks there are plenty of sidewalks in this development. With the streets and the way it is laid out, there is plenty of access. He agrees with Michael's motion. He also agrees that the additional street access is important. He is bothered by the fact that they don't know what will develop directly east of this property but he believes that the Comprehensive Plan is better supported by continuing to carry that additional street connection rather than eliminating it.

Following the discussion relating to the motion on the floor, Rorabaugh stated that the vote on the annexation and the change of zone need to be called separately and requested that they act on the annexation first.

ANNEXATION NO. 15006 TO ANNEX APPROXIMATELY 46 ACRES AND ADJACENT RIGHTS-OF-WAY, GENERALLY LOCATED AT SOUTH 63RD STREET AND YANKEE HILL ROAD.

Cornelius moved for approval of the annexation, seconded by Scheer, and the motion carried 9-0.

CHANGE OF ZONE NO. 04075F TO AMEND THE VILLAGE GARDENS PLANNED UNIT DEVELOPMENT BY EXPANDING THE BOUNDARY BY APPROXIMATELY 46 ACRES; A CHANGE OF ZONE FROM AG TO R-3 PUD; A PLANNED UNIT DEVELOPMENT DESIGNATION OF SAID PROPERTY, AND A DEVELOPMENT PLAN WHICH PROPOSES CHANGES TO THE ZONING ORDINANCE AND LAND SUBDIVISION ORDINANCE FOR ADDITIONAL SINGLE-FAMILY DWELLING LOTS ON THE UNDERLYING R-3 ZONED AREA, ON PROPERTY GENERALLY LOCATED AT SOUTH 63RD AND YANKEE HILL ROAD.

Rorabaugh repeated the motion made previously by Cornelius to move approval as amended by the motion to amend as offered by the applicant with the exception of Condition 2.4, which would be retained and require a street connection, seconded by Beecham. The motion failed 3-6 (Cornelius, Scheer and Lust voting 'yes'; Beecham, Corr, Harris, Sunderman, Weber and Hove voting 'no').

Hove moved approval as amended by the motion to amend as offered by the applicant, seconded by Beecham. The motion carried 5-4 (Beecham, Harris, Sunderman, Weber and Hove voting 'yes'; Cornelius Corr, Scheer and Lust voting 'no').

TEXT AMENDMENT NO. 15009 TO AMEND THE LANCASTER COUNTY ZONING REGULATIONS REGARDING SECTION 13.018 "COMMERCIAL WIND ENERGY CONVERSION SYSTEMS" TO REVISE THE SPECIAL PERMIT CONDITIONS FOR WIND TURBINE PROJECTS.
PUBLIC HEARING BEFORE PLANNING COMMISSION: August 19, 2015

Members present: Beecham, Cornelius, Corr, Harris, Hove, Lust, Scheer, Sunderman, and Weber.

Staff recommendation: Approval

Beecham disclosed that she received a phone call from Marilyn McNabb, a member of the Wind Energy Working Group.

Staff presentation: **Steve Henrichsen of Planning staff** explained that two weeks ago, Commission was given a technical briefing on the text as proposed in the staff report; those details will not be repeated today. There will be a presentation by Scott Holmes of the Health Department regarding why the noise standard was chosen since this is an aspect that has received many comments.

There were three memos handed out to clarify items. The first was to clarify that the total turbine height is measured by going up to the hub height and adding the length of the fully extended blade. Most turbines approved in Nebraska are approximately 400 feet total height. The second was a clarification to language to make clearer that we consider the impact of multiple turbines on one lot, and not just any single turbine. The last memo was information requested by Commissioner Beecham. A table was provided showing regulations in other states for comparison. This information was compiled last April for the working group. There was also a question about whether there are noise standards and noise study requirements in other parts of the County zoning regulations for other types of uses and the answer is yes, for motor sports facilities.

Scott Holmes of Health Department staff stated that the exiting noise standards in the code were adopted in 2011, which were approved by both the Planning Commission and the County Board. As they exist, there is a 35 decibel (dB) limit at all times, which is measured at the property line and it allows that a noise study would probably be required. The proposed changes include a relaxation of these standards to 40 dB during the day, 37 dB at night, measured at the dwelling unit, with the requirement of a noise study, and that complaints to be handled by the County Board.

Holmes went on to give definitions for terminology related to noise and annoyance. Noise ordinances in general are intended to protect people from hearing loss and annoyance. Noise annoyance can have health impacts which are physiological and can be measured objectively by checking physical responses through blood pressure, heart rate, and cortisol levels. Holmes stated that wind turbine noise is unique and complex and cannot be accurately compared to other sounds even at the same dB level. Modulation effects are the main cause of noise complaints and turbines also produce inaudible infra sounds.

Holmes said the Health Department reviewed dozens of studies in making the health-based noise limit recommendations. The top studies were excellent studies that underwent rigorous review and examined multiple factors. He explained that epidemiological studies conclude whether or not exposure to wind turbine noise results in health effects. They are not designed to find causality but rather associations. When all data has been compiled, then conclusions about causality might be made. There is a limited connection between noise and annoyance which does not mean there is no connection; it means it cannot be ruled out entirely and it cannot be explained by other factors like chance, bias, and confounding. Limited evidence suggests there is also a link between turbines and sleep disturbance. Health impacts of wind farms cannot be comprehensively assessed at this time because they are relatively new; there are some data gaps and no long-term studies.

Holmes said that turbine noise is more annoying than other kinds of noise at the same levels. Noise metrics were used to calculate a range percentage of the population who may experience significant annoyance at particular levels. Compared with noise levels from around the world, 37 dB is roughly average. A range of 35 - 40 dB appears to be acceptable to around 80% of people.

DaNay Kalkowski of Seacrest and Kalkowski came forward representing landowners in Lancaster County and stated that although there is no doubt in the value of providing renewable energy and creating economic development, commercial wind farm installations are not necessarily compatible with other uses allowed in the AG Zoning in Lancaster County because the population is denser and there is a greater variety of agricultural and residential uses in place. Therefore, it is imperative to provide adequate protection for abutting landowners, especially to non-participating landowners. The proposed noise limits are reasonable and necessary standards and they protect the health and safety of neighbors. There are issues with the proposed setback language and a motion to amend is being proposed. The first request is to change reference in G1 and G2 from 10 acres to

20 acres due to the impact on small acreages verus larger farm parcels. The standard lot size in the AG zoning district is 20 acres, so protection should extend to those owners. The second request is to lengthen the setback distance to a half-mile or five times the full height of the turbine. A 1,000 feet is not enough to protect a non-participating property owner. The implementation of wind energy should not come at a cost to neighboring landowners.

Cindy Chapman, 1850 Gage Road, Firth, came forward representing residents of Lancaster County concerned with the effects of turbines on health, safety, and property values, many of whom were in attendance. Chapman participated in the working group that met last spring to discuss the proposed text amendment. She shared testimony of several residents who live near commercial wind turbines and who testified before public service commissions in Wisconsin and Michigan. “Sara” stated her 6 month old child quit sleeping through the night and woke screaming due to pressure in her ears. “David” said that no person should have to live with the array of health problems experienced. “Carrie” and “Karen” reported headaches, pressure in ears, exhaustion, and lack of sleep. These are examples of individuals who are suffering as a result of proximity to turbines. Many abandoned their homes and filed lawsuits against their county and the developers.

Chapman continued by stating the proposed sound limits are protective of all residents but there is significant concern with the proposed setback limits. According to sound modeling that was submitted as part of an application to the Planning Department last fall, the 40dB limit was about a half-mile distance. It is counterintuitive to have a setback that is less than what the sound levels would require in order to be in compliance. Even the developer who submitted applications states on their website that 500 to 1,000 meters from a dwelling unit is the minimum setback they would use. Gage County is considering one-half mile. Creating conflicting standards encourages developers to manipulate sound models and once the turbines are in, there is no going back and residents are stuck.

Chapman concluded by saying that Lincoln is growing and acreage lots are increasing. If 500-foot turbines are placed in these areas, acreage development will stop. No matter how worthy the cause, other people’s health, safety, and welfare should not be diminished in order to achieve the goal.

Larry Chapman, 1850 Gage Road, Firth, came forward to state his concern over flaws in the proposed amendment. The first knowledge he had of a proposed wind farm caused alarm because the project seemed to be so far down the path to development with very little public input. As a result, residents began meeting with County Planning and Health staff. The information appeared consistent with what developers were providing to departments all across the nation, which was all pro wind energy. Weeks later after a public meeting, it became apparent that the dozens of people who showed up were upset.

During the meetings, the Planning Department was provided with a number of peer reviewed scientific studies that point out the dangers of turbines located too close to homes, including one from the Brown County Board of Health, which declared wind turbines to be a human health hazard. People are waking up to these concerns.

Chapman went on to say that it seems obvious that a property 1,000 feet away from a turbine is not going to sell for the same value. Some real estate studies show property values are diminished by 15 to 20 percent. The World Health Organization says that with noise above 40 dBA, adverse effects are experienced among a diverse population, people have to adapt their lives to cope with night noise, and vulnerable groups are more severely affected. Raising it above that would be irresponsible. If a turbine were installed at the edge of a property, it limits how that property can be used. People have the right to expect to be protected and the proposed draft fails to address these issues. Please take a longer and harder look at what is going on.

Judy Daugherty, 1333 W. Gage Road, came forward in opposition to state that zoning a wind farm is a complex issue that needs more research. Planning staff has not acknowledged any of the sound evidence provided to them from various public sources. They appear to be willing to do whatever it takes to get wind development in the county. Wind developers, specifically Volkswind, appear to have written many of the zoning changes and their letter was attached to amendments and not cataloged with the rest of the letters sent in. It is a sad day when developers who are only thinking of profits dictate local zoning regulations and the public gets shoved to the sidelines. At the briefing to the Commissioners, the Planning staff stated that turbines could be built within the 1,000 foot setback but that is not true. According to manufacturer recommendations, minimum setbacks like the 1,300 feet suggested by GE and Vestas are a “no-build” zone for the reason of safety. Vestas recommends that in the event of an emergency, a 1,600-foot radius must be cordoned off. The National Fire Protection Agency recommends a 1,500-foot area of no vegetation around turbines in case of fire. The staff report reached a different conclusion. Daugherty questioned the authority of Planning to suggest a setback that is less than what is recommended by many other agencies. She stated she is not against turbines but these suggested setback regulations put people in danger. She implored the Commissioners to do more research, stating that the Planning Department has failed to do their research and has been misleading in their answers to the Commission.

Curtis Schwaniger, 3650 W. Hallam Road, Hallam, came forward to state that he hopes Commissioners will consider the newest health and safety information that has come out since 2013. Citizens are getting more aware of them and local officials have changed their thinking and amended ordinances previously passed. He gave several examples of locations around the country who have amended their codes to change to a greater setback distance and reduce the dB limit. There is a lot of change in wind tolerance and the 1,000-foot setback is not acceptable anymore. The laws must address the most vulnerable--elderly, ill, and especially to kids. The risk to kids is hard

to realize at this time. World Health Organization recommends that night sound levels be less than 30 dB and a minimum setback of 1,500 meters for the average population. Anything less than one mile for vulnerable populations would be irresponsible.

John Hansen, 1305 Plum Street, Lincoln, came forward as a member of the Nebraska Farmers Union. He stated he has been involved in renewable energy zoning issues since the 1970s. He represents the interests of both landowners and renewable energy and acknowledged that there is a fine line between protecting the public and representing the interests of those groups. In his experience, there has always been a tradeoff between traditional family farms and those who move into rural areas. Newcomers must be willing to accept traditional farm activities. There are those who feel strongly they have a right to develop their wind resources when appropriate and that is now among the list of normal kinds of activities go on in farming. These are not urban environments and wind develop has to be considered in that same kind of category as farm activities, but there must be balance. It is difficult to determine what levels should be used. He said that on his own farm in Madison county, he does not have any neighbors or towns for 12 miles. Just the sound of the wind itself is well above 37 dB. It is a challenge in Lancaster County to come up with setbacks that are going to make people happy and still allow a wind project to be built. An immense amount of capital is invested and it adds to the tax base. There must be a balanced approach that still allows projects to be built.

Greg Schwaniger, 2401 W. Hallam Road, Hallam, came forward to state that multiple generations of his family have farmed in the area. He feels it is important to protect health and still allow farmers like him to have wind turbines if that is a farming activity they choose. Other farm sounds create noise. This is one activity that protects farmers from the volatility of prices and many other factors of the industry. Many wind farms in other areas are fine. It is not fair to limit what he and other individuals do on their land. The sound limit should be raised to 50 dB.

Anne DeVries, 684 E. Aspen Road, Cortland, stated that as a mechanical engineer, she has kept up on much of the research. The latest includes information that wind turbines may become quieter. She stated she opposes some of the recommendations made by Planning and Health staff and very much supports the development of wind energy. She supports a higher dB level. Global warming is a serious issue and blocking the development of turbines is a step in the wrong direction. Everyone will feel pain from global warning and she would rather it be from noise than from no drinking water. People must fight misinformation from the fossil fuel industry. There is not time to wait for accurate studies. Wind development in Iowa has created cheaper rates and no health impacts. Noise annoyance is a part of life and she would rather take her chances with that in order to avoid climate change. These decisions will affect those made in other counties. This state should not fall behind when it comes to helping with climate change.

David Levy, 1700 Farnam Street, Omaha, stated that he has been involved in numerous zoning regulations related to wind energy. There have been very few issues with regulations far less restrictive than the ones proposed today. The examples given earlier about severe health impacts did not occur in Nebraska or even in Iowa where there is a great deal of wind development. These provisions need to be workable and, as proposed, they are unduly restrictive. First, using Leq levels to determine an average is biased toward higher levels and is not accurate. Treating participating and non-participating land owners the same is unprecedented. If one is choosing to participate, they should be allowed to choose any consequences associated with it. Making sure that no one is annoyed is a futile effort, so those who wish to participate should not have that opportunity taken away from them. There are no published findings of significant health effects. No other county has a table showing less than 50 db and these restrictions are significantly more restrictive than the rest of the state. The 30-minute/day amount for shadow flicker is also unworkable due to seasons. These regulations fail to strike a balance.

Joe Wood, Project Manager at Volkswind, gave a very brief overview of the applications Volkswind submitted that involved 13 participating landowners in Lancaster County. He stated they have also submitted alternate language that both protects the public and is reasonable and in line with most other counties in this state and throughout the Midwest. The sound levels proposed severely limit development and overlook the significant economic benefits, landowner compensations, good jobs, and environmental benefits of wind development.

Beecham asked what the justification is for the 75 dB limit suggested. Wood clarified that their proposal is for 55 dB for participating and 50 dB for non, with an allowance for 5 dB above ambient noise levels.

Cornelius inquired about suggested manufacturer distances. Wood stated that he has not seen or read through a safety manual. Of the 48,000 projects that are installed, he has never heard of any case where a 1,000-foot area has been cordoned off for safety reasons. In most places, land owners continue normal activities right up to the turbines.

Harris asked how the turbines are made quieter at night. Wood replied that there are different types of turbines with different options. In the wind industry, slowing the blades down is called “curtailment”. There can also be adjustments to the angle of the blades which will reduce the amount of air sweeping through.

Hove asked if Wood knew the amount of land that would be eliminated in Lancaster County based on the proposed amendment. Wood said that would be difficult to answer without looking closely. It would be significant with the 10 acres vs. 20 acres, with the amount of acreages out there and more significant setbacks.

John Atkeison, 2601 N. 44th Street, Lincoln, stated that this is a difficult topic and there is a tremendous volume of information out there and that information gets shaped. Many of the health impacts appear to be subjective, based on studies. One issue that needs more emphasis is what is being done in terms of climate policy and how to decrease greenhouse pollution while there is still time. The effects of climate change have been accepted. There is still time to act. If climate change became more severe, it is important to question if agriculture would even continue to be viable. Environmental factors should play in to your decision making because this amendment is shaping energy policy. He offered information about a local event, adding that experts in the climate change field are always available to Commissioners.

Kelly Carstens, 2601 N. 44th Street, came forward to state that she has lived in Nebraska her entire life. She will not repeat what others have already said, but she has invested her time tonight to make public testimony that there is a need to stop burning fossil fuels and to think about impacts to future generations. She supports the development of wind energy.

Larry Oltman, 899 E. Gage Road, Cortland, stated that he is a small- to mid-size farmer and his family has farmed the same location for over 100 years. Not everyone in the county agrees but most believe everyone has the right to independence. If the setback were greater that 1,000 feet, no small farmer would be able to participate. In his family's case, wind generation will help with taxes and provide greater diversification. As dryland farmers who do not rely on water, this is a major step in providing additional income. Iowa is an agricultural state, too. They also have almost 100% more population per acre than Nebraska. Wind development has been there a long time with very little complaint. There doesn't appear to be much information about people getting ill. Nebraska citizens should be allowed progress in the area and to participate in generating more electricity. Longevity shows that property values do not drop after the first 6 months to a year. Nebraskans should be allowed to harvest the wind.

Harris asked Mr. Oltman if, as a farmer who may participate, he is in support of the proposed setback for participating landowners working with the wind company. Mr. Oltman replied that he supports the 1,000 foot setback but nothing larger because opportunity is eliminated for those who own a quarter or even half section.

Ken Haar, 13901 NW 126th, Malcolm, came forward to express support for less stringent sound regulations than proposed, more in line with what is present in other states. There are many myths about living in rural areas. The country is not idyllic, clean and quiet. In reality, there can be dust in the air during harvest; there are odors and noise from cattle operations; and there is noise associated with other farm operations like grain driers. There are already many lights on the horizon and some farm lights stay on all night. These can all be considered annoyances, but no one asks for regulations to remove them because they are part of living in a rural area. Iowa has six times the wind development of Nebraska and that is not inconsequential. There has been $10 billion of

investment and all the economic development that comes with it. Economic development is an important consideration. When considering health, there is annoyance but the effects of climate change also have the potential to bring major health problems. You are setting energy policy as well. He strongly encourages a balance between development and protecting the public.

Graham Jordison, 221 S. 27th Street, Lincoln, came forward to state that he is a former resident of Carroll County, Iowa. He loves living in Lincoln now and it is considered one of the healthiest and most well-educated cities in the Midwest. People have different ideas of living in rural areas. His home in Iowa had a population of 20,000 for the entire county, so it was much smaller in population but was very similar to Lancaster County in terms of the diversity of land uses. In his former community, many people made their living from the land so when wind development arrived over a decade ago, many were concerned. But many were also excited and realized this would be a great opportunity to rejuvenate the community. All have benefitted. There are good neighbor agreements and non-participants also benefit from property tax relief and new jobs. He stated he wanted to share his personal story because with strict sound limits such as the ones proposed, it would be difficult to build and he wondered why the County would pass on such an opportunity. The regulations should be more in line with other counties. In Carroll County, there was no noise limit. The setback distance guaranteed safety and citizens appreciated the tax dollars and jobs. He showed a sound meter and stated his speaking voice is probably at 75 dB. Even though the sound is not the same, most things in a home would violate the noise limit.

BREAK: 8:24 P.M. **MEETING RESUMED: 8:30 P.M.**

Barrie Marchant, 611 N. 26th Street, Lincoln, came forward to state that living near the football stadium, he and his neighbors deal with traffic, noise, and cars parked along every street on game days. Most neighbors get along with it because it is accepted and people generally like the games. Some do not like it and would love it if the traffic issues could be fixed and the crowds could be quieted during games. It seems reasonable at first to complain about it, but after more complaints, it becomes clearer that those who continue to do so just don't like the games in the first place. He stated that he doesn't know the people who are opposed to wind development but maybe they are totally against wind farms and there are no regulations that would ever be acceptable. Please listen to your staff about what really makes sense and don't let those who are against it in general pretend that they are giving rational reasons.

Jeff Brown, 13500 W. Pella Road, Wilbur, stated that at his location, he could be surrounded on three sides by turbines if the setback is 1,000 feet. He is worried about the impact to his taxes and the long-term value of his property as a non-participant. The land will not be worth as much if it is surrounded by towers. Also at his location near the Blue River, there are many bald eagles. When people talk about environmental impact, they should mention the impacts the turbine will have and include the maintenance. He

wondered about the depth of the counter balance in the ground and if it affects ground water. There are too many unanswered questions and he is totally opposed. Turbines might be fine in an area where there are less people, but he spends three quarters of his time outdoors and he does not want to see them and be surrounded. He asked the Commissioners to please give special consideration to the people who live near wind development projects. Many people who are in favor do not even live in the areas so they will not be negatively affected.

Russell Miller, 341 S. 52nd Street, stated that the Planning Commission represents all 300,000 people in county and this is a big deal. This is a unique opportunity to reduce pollution from Sheldon Station. He listed some amounts of pollutants emitted from the station and the many health problems associated with exposure to those pollutants. When the plant updates to hydrogen, numbers will be reduced by about half. Wind energy could reduce emission by another 40%, so that would be a dramatic reduction. Kids and the elderly are very susceptible to air pollutants. That segment of the population is growing. He urges the sound limit be raised to 50 dB in the day and 45 dB at night. Some will suffer, but more will benefit from the improvement to the air quality.

Carolyn Butler 621 Lakewood Drive, Lincoln, came forward in support of wind development. As a single parent and a home and business owner, she is not politically oriented, but people who try to be good citizens must do more. She felt compelled to add her voice. At age 57, this is her first time testifying. Climate change is the issue of our time. Switching to green energy quickly and safely is an answer. The cost of burning fuel is more and more evident. It causes health issues, extreme weather events, and creates threats to national security. She urged the Commissioners to look at ways to harness energy at safe levels and to do as much as possible to make sure all have been heard and that the process is swift and uncomplicated.

Jane Kleeb, 1010 N. Denver Avenue, Hastings, came forward representing Bold Nebraska, a group focused on local food and energy issues. Over 1,500 people have signed a petition – 894 in Nebraska and 335 in Lancaster County. Bold Nebraska supports the proposed ordinance but is not taking a position on sound levels and will trust the position of health experts. The group has worked intensely on zoning issues when it comes to oil pipelines. Many hours have been dedicated to dealing with landowners in favor of and against pipelines and to establishing safe practices for setbacks. Oil pipelines do not have decommissioning plans. If there is no plan, there should be a clear way that citizens can file a complaint and that developers are fined for noncompliance. Protecting property rights and standing up for landowners are cornerstones of Bold Nebraska. We are happy that wind does not have eminent domain because then it would not even matter what landowners think. This is difficult, but important. Nebraska is an agricultural state but it could also be a clean energy state. It is just as important to make sure property rights are protected while adding clean energy.

Darren Compton, 7800 W. Hallam Road, Hallam, stated he is located just inside of the proposed project area. There has been much testimony about protecting land to be used as owners see fit. Those who are not participating ask for the same rights. Protection should be for all 80 of his acres. There is already a noise ordinance in place and it is 35 dB measured to the property line. Sheldon Station has no contract with Volkswind to purchase the electricity so it could go out of state if there is no agreement. He stated he does not believe there will be benefits to the tax base. Noise from farming is not like the modulating sound of turbines; it is white noise that can be tuned out. The setbacks are fine if the noise limit is 37 dB measured at the property line. The proposed Volkswind towers produce 110 dB at the hub, so if you account for sound dissipation, it sets the turbine back to a half mile. If the noise limit is reduced, that reduces the need for setbacks.

Tom Schuerman, 2000 W. Princeton Road, Hallam, came forward to state that as an engineer and certified energy manager, he is generally in favor of wind energy; however, as a citizen who lives on the edge of one proposed wind farm, these decisions will have a direct long-term impact. Good or bad, he and his family will be stuck. This subject needs a careful and well thought out approach. One thing that should be added is that the setback recommendation of the manufacturers should be followed. No private citizen designed the turbines, selected materials, or conducted quality control tests. It is rumored that the information is confidential and proprietary but there is no reason one company would gain advantage over another by sharing the information. Locally, there should be setback distance, but if the manufacturer recommendation is greater, that distance should be used. There is no harm in holding the manufacturer accountable for their own equipment.

Lisa Sullivan, Director of Wind Development for Nextera Energy, stated that Nextera is the largest builder and operator of wind energy in the world. They have been in business for 26 years and have over 100 wind farms with more than 10,000 turbines in 19 states and 4 Canadian provinces. Though Nextera is not developing in Lancaster County at this time, the changes being implemented here may impact regulations made in other counties.

Sullivan went on to explain the siting process that is used for designing a wind farm. The first iteration eliminates areas that cannot have turbines sited due to interference of cellular or radar signals. Also during this phase, the developer works with the Fish and Wildlife Service and the Nebraska Game and Parks Commission to eliminate all sensitive riparian and wetland areas. The next iteration avoids roads, pipelines and existing structures such as farm silos and center pivots. Next, setbacks to residential structures are measured. Nextera's standard setback is 1,400 feet. Finally, the effects of sound and shadow flicker are taken into account. She went on to say that some typical restrictions that have been used are 30 hours of shadow flicker per year and a 50 dB noise limit. This process leaves a very limited amount of land available for siting turbines. If the regulations were more restrictive and reduced the sound level to 37 dB,

one would not be able to develop a wind farm. When it comes to shadow flicker, shadow occurs in the fall and spring. To restrict it to 30 minutes per day would limit development because there are many days where there is no flicker, but there are other days that exceed 30 minutes. These restrictions would limit development altogether.

~~Corr~~ Harris asked how tall the Steele Flats turbines in Gage and Jefferson are. Sullivan replied that she believes they are 80 meter towers with 100 meter blades. Corr went on to ask about the setbacks in Gage County. Sullivan replied Nextera's company standard is 1,400 feet regardless of local ordinances. ~~Corr~~ Harris asked the reasoning for maintaining that setback. She answered that it is a safe distance and it is our company standard.

Corr asked Nextera's per day standard as it relates to shadow flicker. Sullivan explained that Nextera does not have a per day, but a per year because it depends on the position of the sun – in the fall and spring, there is flicker. It is difficult to gauge minutes per day. Corr asked if there is a common allowed time limit on flicker among states. Sullivan said it the 30 hours per year. Nextera tries to lessen the impacts of flicker through landscaping or working with homeowners to install awnings and also in the siting to keep them far enough away to avoid having the issue.

Hove asked what the dB sound levels are at Nextera's 1,400 foot setback. Sullivan replied it really depends on atmospheric conditions but the standard is typically 50dB.

Beecham asked for clarification about whether the setback is measured to the lot line or the dwelling. Sullivan said to the dwelling unit.

David Schwaniger, 28500 SW 14th Street, Martell, came forward to state that his home would be right in the middle of the wind farm that was proposed last fall. He urges consideration of a 50dB level because at 37, it effectively limits wind development. Turbines will provide benefits from the income to the tax base and participating and non-participating land owners. He stated that his real estate taxes have gone up 150% in the last 5 years. While corn was at $6 - $8, that cost was bearable. Now that it is at $3.25, it is not. The ground that generations of his family worked very hard to pay for with after-tax dollars is being taxed at a rate of $81 per acre. That will not go down. Help with real estate taxes would be positive. The country is not an ideal place – there are lights, noise, and livestock odors. Those are all parts of living there. Schwaniger went on to say that flashing lights can be seen in every direction from his property and he had no say in whether or not they were installed. Relief from any increase in taxes caused by wind turbines are paid for by the developer according to stipulations of contracts with Volkswind

STAFF QUESTIONS:

Corr asked what the designated future land use is in the Hallam area in the 2040 Comprehensive Plan. She stated she is aware this amendment will apply to all of

Lancaster County and not just this area. Henrichsen explained that an incorporated community has jurisdiction over their 1-mile area. The 2040 Comp Plan tries to reflect each community's comp plan. Generally, the southeast portion of the county is shown as agricultural. There are not many specifically designated low-density acreage sites such as are found in the southeast or southwest of the 3-mile jurisdiction. That said, prior to 1979, the zoning designation was different so there were many 10-acre lots and farmstead splits. Even in an area designated for agricultural use, there are a fair amount of smaller acreage lots that develop over time.

Corr wondered if the northern part of the county is still designated as primarily agricultural use. Henrichsen said yes, the vast majority of the county is. The Comp Plan has tried to cluster acreages in certain areas such as along West Denton Road and South 68th Street. Partly because there is no rural water district in the north, there are not large areas designated for acreage subdivisions. There is the AG CUP which allows for 8 cluster lots.

Corr continued by asking if there was knowledge of Denmark's residential composition for comparison. Holmes stated he could not answer that question specifically without more research. In Denmark, they have different sound levels for what they call residential, small village and on up. It is a different structure.

Corr then referenced the letter from Volkswind dated June 12th, they provided a chart comparing counties in Nebraska. She asked if staff verified that information. Henrichsen said yes, that chart was submitted in 2014. It was used as a starting point in compiling information for the working group and their representation was accurate. Corr went on to note that Jefferson County is not among the counties compared. She asked about the levels in Jefferson County. Henrichsen responded that staff used websites and not all 90 counties were checked, but from looking in depth at over 20, it is clear they all follow very much the same format. It is not uncommon to take ordinances of another county to be used as a "best practices" boiler plate. Certainly, each one is then tailored based on their particular circumstances.

Corr asked for verification of some data. A report stated that when an individual has less control, the perceived annoyance is higher and that increased sound equates to increased annoyance. Holmes confirmed that is correct. Corr asked if the smell of a cattle yard is an annoyance. Holmes said yes, it would probably be classified as an odor nuisance under local and state codes. Corr then said that there are annoyances out there and this is fairly normal in agricultural circumstances.

Corr then inquired if staff has been able to get any recommended safety setbacks from manufacturers. Henrichsen answered that manuals were viewed and appeared to be for technicians who were approaching the turbine for maintenance. In one, there was some reference made to parking your vehicle more than 1,000 feet away. That said, when staff was trying to set up tours with Steele Flats, this question was brought up. They

said they have one facility where they can control all of the turbines and turn them off when necessary, so they have access roads and drive right up to the location. It was hard to equate the focus of the safety manuals with how people relate on a day-to-day basis living within a turbine area.

Corr said that someone brought up decommissioning and the consequences if violated. She asked if it is correct that developers are required to put up a bond so if they don't complete the decommissioning, they would forfeit that money. Henrichsen said that the general idea is that there be a decommissioning plan. The ordinance is not as specific as some others in detailing every last part of a decommissioning plan. Instead, there is the special permit process. The developer would likely propose a decommissioning plan during the application process and it would be part of the conditions for approval. The review also includes working with the County Attorney's Office regarding what is an appropriate amount for bond. The idea is that if the work is not done, the legal right exists to use those funds to do whatever is necessary. He went on to say that in many counties, the focus of the bond is to protect the conditions of roads. The turbine itself is left to the property owner. This regulation is trying to look from the point of view of removing some of the base. If the entire base is required to be removed, it costs more than the entire turbine. What we heard from developers is that the materials and the metal in the turbine itself would be valuable to someone even 20 years from now and would be worth someone salvaging even if a company walked away. There is a proposal from Volkswind that the bond is not presented until the 15th year when the turbine is nearing the end of its life cycle, rather than letting the bond sit idle for 25 years.

Corr said she understands there are no landscaping requirements and asked about the possibility of working with neighbors to do awnings and plantings to negate flicker. Henrichsen said that in the testimony from the Nextera representative, the point was that rather than trying to figure flicker by minutes per day, it is better to use the cumulative amount of 30 hours per year. Non-participants may still have to put up with some amount of flicker at certain times of the year, but that 30 hours would add up quickly. Corr said that one letter compared flicker to the flicker of tree leaves and asked if that was an accurate comparison. Henrichsen said he viewed a video of one hour of flicker and it was very different. It was a constant pace, on/off again effect. The lack of control over shadow flicker is also a factor. A tree can be removed, but the flicker cannot be stopped. Corr asked if it can be masked with a room darkening blind. Henrichsen said yes, that is possible, but the point is that residents feel that if it is a beautiful day, they should not have to do that.

Corr asked for clarification about the differences in dB levels, stating that 10 dB does not sound like half of 20 dB. Holmes said that is correct. The dB scale is logarithmic so to the human ears, if you go from 40dB to 50dB, it is twice as loud.

Lust asked why both the 30-hour per year and the 30-minute per day amounts were used regarding shadow flicker. Henrichsen said that other regulations were looked at for reference and it was a judgement call; 30 minutes per day seemed like a reasonable amount to put up with per day. Lust asked if this regulation basically came from another county's ordinance. Henrichsen said yes, and it was one that made sense when it was considered.

Weber asked if more flicker is present in winter. Henrichsen said shadows are longer certain times of year and that was part of the discussion. Weber went on to ask how it is handled if a citizen notified someone of excessive flicker, but by the time anyone arrived to investigate it the flicker was gone. Henrichsen said that if someone is dealing with a violation, a likely place staff would start would be with the modeling. Then if the complaints said it was more than that amount, staff would get out there as quickly as possible to be there at the appropriate time of day and to get an idea of whether shadows are getting longer or shorter.

Beecham asked how much flicker is affected by direct sunlight versus a hazy day. Henrichsen said that type of deduction was not made, but that if it is sunny, the shadow is bright and crisp.

Lust asked about the Canadian studies and said they did not offer any recommended dB levels. Holmes said the Health Canada study was an epidemiological study that was descriptive and identified what they found. The Canadian Academy's was different. They provided data that talked about the level of annoyance identified in the Health Canada and other studies as well and were providing a review where they identified the levels at which they found health connected annoyance issues.

Holmes continued, saying that one thing to take into account in the Health Canada study is that they surveyed 1,238 homes and measured cortisol in hair and other indicators and almost none of those homes were exposed to levels above 45 dB.

Lust read a statement from a study that said the current state of evidence about whether annoyance is caused by exposure to wind turbine noise alone, or whether factors such as visual impacts and person attitudes modify noise annoyance relations, and to what extent those factors can be measured independently. She asked for staff response to people who say these studies don't support the dB levels that are being proposed. Holmes said that would be an odd interpretation to say that it does not support it because the study does not say anything about the dB levels. All it reports is

what data says relative to annoyance. Annoyance is measurable. It acknowledges that one cannot ferret out from annoyance whether it is strictly caused by the noise, or other factors like the tower, lights, shadow, and property use issues. Those factors cannot be separated out because once the turbine is there, it is there.

Holmes went on to say there have been double blind studies and they have identified that turbine noise is associated with affects in people who did not know whether or not turbines were in operation. This study came out more recently. That would be one study to consider as part of the evidence, but one study cannot be taken to mean that is the final result. Lust asked if that study was provided in the packet to Commissioners. Holmes said it is referenced but not provided in entirety.

Lust asked how much confidence there is that the dB levels suggested will eliminate annoyance. Holmes said that Planning Commissioners have the difficult decision of deciding how much annoyance is acceptable. Health staff set a level that where it is believed the vast majority of people will not be affected. If the goal is to eliminate annoyance, the only option is not have turbines. We looked at potential health impacts and established a level that we believe less than 10% would be affected.

Lust said there was also testimony about some of the polluting affects of coal burning. She asked if the numbers mentioned tonight were accurate. Holmes said the numbers provided by testifier Russ Miller are not current, but are historic numbers. The Health Department regulates Sheldon Station and has a full air quality program. Sheldon meets all federal, state, and local air quality criteria requirements. They are various controls to reduce emissions and those emissions have been significantly reduced from what was reported. The other issue in relation to NPPD is that they are going to partner with a company called Monolith to take down a unit and run with Hydrogen and not coal which will further reduce emissions by half. The assumption that wind is going to eliminate the use of coal is probably not accurate and is something that NPPD should be asked about.

Lust asked if Holmes would agree that wind energy is emission free. He responded that in general it is, though nothing is zero emissions. It takes energy to build the parts, so it is not zero. But when operational, they produce no emissions.

Harris noted that in ordinances in other states and countries, it seems common to have wind speed conditions factored into the noise levels. She asked if that was considered. Holmes said there are some that do include that but most do not. That is a much more complicated formula. Health previously proposed a level that measured noise which should not exceed a certain level 10% of the time and frankly, it was too confusing. There are levels that increase with wind speed like in Denmark. That is something this body could consider.

Harris asked what the rationale was for making the level the same for participating and non-participating land owners. Holmes said that as a public health professional, he has developed regulation for various issues. It is never the case that environmental regulations are established where the population who benefits gets higher allowable levels of exposure than people who are not benefitting. Our recommendation is that there should be a single, truly health-based standard that is not based on economic factors.

Harris asked if it would be accurate to say that the health impact of noise on someone who participated and had a positive association with wind energy would not have the same risk as for those who were opposed to it. Holmes said that could be suggested, but that is not what the Health Canada study suggested. It was not only non-participating people who had health impacts, but there is strong evidence that people who benefit do not complain about noise. It is hard to assess whether or not they are having the health consequences, but there are fewer reports of annoyance. The real issue is that there is no long-term data that shows whether or not people have other health consequences. As far as annoyance and initial impacts, it appears to be less for those who participate.

Scheer asked if there is another aspect to the participating versus non-participating standards being similar to noise standard in that the regulations refer to a special permit for a piece of property that stays with property and not the participant. Henrichsen said that correct, the permit runs with the land. If, in a few years, a participating property is sold, one could assume after the turbines are built, the potential buyer would be aware of associated contracts and the permit.

Beecham said that the conversation about mitigating health risks revolves around annoyance. She asked if annoyance is as great a risk as air quality and if there is a matrix showing which factors rank the highest in terms of posing health risks. She explained that she is trying to get a handle on annoyance. Holmes said there is not a matrix. Heath Department did not attempt to do a comparative analysis because that was not the question at hand. The question involved one issue: how much noise the wind turbines would generate and how this noise affects health, so it was very much focused on annoyance and the results of that.

Lust noted that annoyance is subjective, so it is the case that Commissioners are trying to come up with an objective measure to prevent a subjective level of annoyance. Holmes agreed and said that is what most noise regulations do. Most communities have a general noise code. Those are built on the potential for hearing loss, but also on annoyance. It should not feel odd that there would be a code that addresses annoyance. He has personally administrated such a code in Lincoln for 25 years.

Hove said there was testimony about how close a turbine on a participating property can go to a property line and whether non-participants are prevented from building on there own land within the 1,000 foot setback. Henrichsen said the setback applies only to the turbine. The property owner retains the right to build within the property as long as they follow the normal setbacks. Earlier testimony may have been getting at the fact that if a turbine is that close, it is undesirable to build there. As a result, they feel prevented from doing it, but legally, they still have the right. If the turbine is there and then a property owner builds within the 1,000 feet, the turbine does not have to go away. It becomes non-conforming, but it has the right to be there.

Hove asked if a turbine can be built right at the property line of participating owners. Henrichsen said in most cases, one would not build along the property line due to proximity to non-participating owners. When there is a whole series of participating properties, then the property lines are not as important. Hove asked Henrichsen to address the 1,400 foot limit set by Nextera. Henrichsen said that the proposed setback for Lancaster County is 1,000 feet or 3 times the full height. So, for example, the Steele Flats turbines are 422 feet tall. Three times that height is over 1,200 feet, so the taller turbines will be well over the 1,000 setback. As far as the health impacts, if there is a 40 dB limit, the distance will be beyond 1,400 feet.

Hove wondered about the testimony regarding tax benefits. Henrichsen said those are to the county as a whole. There were examples given of $200,000 or more that went to a county nameplate tax and was distributed among various agencies. Hove asked if taxes could go down. Henrichsen said that is potentially the case if the county were able to lower the overall levee. In a county with a smaller population and a smaller tax base, this will have a bigger impact. In Lancaster, with more industry and a higher population, the relative impact is probably less, though many city and county officials would say that any amount of taxes coming in is a benefit.

Hove asked if any thought has been given to the proposed amendments. Henrichsen said the amendments proposed by DaNay Kalkowski were trying to address the need for a larger setback. In a previous discussion, it was suggested that staff did not put enough emphasis on safety. That is not true. The health impacts are addressed by the noise standards and language regarding shadow flicker and ice throw. The setback has more to do with the visual impact and on property value of smaller acreages. Hove wondered if noise would not be revealed as an issue until after the turbine was built. Henrichsen replied that is why there is also a requirement for a noise study in advance. He said Chapman showed a sound model from an initial proposal that showed noise contours in her testimony. If a special permit application came before Planning Commission, you would see similar models. Then even after it is approved, there are actual measurements to see what is happening on the ground and a process for investigating complaints.

Weber said his house is near S. 67th Street and there are days when it is much noisier than others due to many variables. He wondered how this was factored in. Holmes responded that the way that was addressed was by incorporating the requirement to do noise studies in all four seasons and in “worst case scenarios”, which could include factors like high humidity, inversions, and wind direction. Consideration would also be given to what percentage of time that worst case could be expected.

Lust questioned the structure of the language in the section covering noise levels and which level would be used among the choices given. Holmes gave the example of an area with a 40 dB ambient noise level. A level of 3 dB above that would be allowed, so 43 dB. Lust said that language should clarify that it is “whichever is more” from among the choices. Henrichsen said that is addressed in the first sentence where it states no level would be “in exceedance of”. Lust asked, if a level of 3 above ambient is allowed, why set a 40 dB level at all. Holmes said that could be done, but there are ambient levels much lower than 37 dB in areas, which would exclude the operation of turbines. Sunderman stated that he would also feel more comfortable if the language were clarified to read “the greater of”. Holmes said that would be up to Law to change. He added that the change would not address the issue of 3 dB above the ambient level. He further clarified that if the ambient noise levels were 25 dB, 3 above that would be 28 dB, so a turbine would have to be five miles away to meet that level and could not be sited anywhere. Lust said the intent was for this to mean whichever was the greater level. Holmes said yes.

Cornelius asked if it is possible to calculate the worst-case given the variability of factors that affect noise. Holmes said yes. The modeling packages allow you take in all of those variables.

Lust asked if this meant that the level would be 40 dB on the worst day. Holmes said no, it means an average Leq of 40 dB over a time period. Lust asked about the 10-minute measure period. Holmes said there is an international standard for measuring turbine noise. It is highly complicated and includes use of specific equipment. Complaints go to County Board because they would have to order the turbine company to do noise monitoring and measuring which would be done by a third party firm.

Cornelius asked if the third party firms are reliable. Holmes said yes, the third party process will result in accurate measurements. Henrichsen added that when it comes to worst-case levels, letter ‘J’ in the regulations is about information that must provided up front for consideration of the application. The worst-case level is provided, but is not a standard used later. It is just for information to judge the impact on non-participants.

Cornelius clarified that his question pertained more to the accuracy of predicting or deriving the various levels using math. Holmes responded saying that in recent monitoring and modeling, they were able to predict almost to a 0.01 level of accuracy. The data continues to be refined and incorporated into the modeling practice. Hove

asked if the modeling has been done with local properties so we know they would be within the dB levels. Holmes said no models were provided. There were photos of the modeling results that showed simple circles but that would not include worst-case scenarios. If you look at wind modeling for the county, you would realize that in the winter the wind blows from north and summer from south, so you would definitely see oblong shapes. Scheer said that it is not unusual to have not seen that modeling yet, since it would come with the special permit applications. Holmes said basic modeling was done to assess where turbines could be sited.

Beecham said that there was testimony that using Leq was already skewed to favor higher level sounds. Holmes said that if there was an acoustician or noise specialist here, they would not agree, and neither would he. Leq is the average level of noise over time so if the sound goes up and down, it is the average level between the highs and lows. It is not skewed towards higher or lower level noises. It is the most commonly used measurement with noise.

Hove asked if this modeling would be done in the entire project area before the project proceeds. Henrichsen said yes. He stated he wanted to clarify that last autumn, Volkswind submitted a proposed text amendment and seven special permit applications in Lancaster County. The applications started down the process and as it neared time to appear before Planning Commission, Volkswind agreed there should be a greater public participation process. They withdrew the text amendment and put the special permit applications on hold. They needed to see what would be adopted by the Lancaster County Board and then adjust their applications based on those regulations. Those permits are still on hold. Staff formulated these regulations for county-wide use. There are fewer acreages in the north so there are possibilities for turbines there as well. Hove asked if more complete modeling would be available at that time. Henrichsen said yes, that is all public information and is available now on the seven applications that are on hold.

Cornelius requested the County Attorney approach to hear thoughts on the position of manufacturer suggested safe distances versus the liability of the County.

Brittany Behrens, County Law Department, came forward and stated that information can be requested from manufacturers, but there is nothing that can be done legally to require them to turn it over. There will be some differentiation between companies and setbacks. If the Planning Commission and the experts in the field have brought forward regulations based on their expertise, then our office does not have any questions with that. Today was the first time we heard from one of the developers about their own company standard setback. She went on to say that there are two issues–(1) the liability of county and (2) that of the developer. Those would be determined as a case-by-case analysis dependent on the situation and the damages that arise. Many factors

were considered up front such as the likelihood of towers tipping and damage to roads. We are confident that those issues have been addressed industry wide. If evidence were brought forth that showed a clear delineation between the 1,400 foot and the 1,000 foot setback, that would certainly be looked into.

Harris questioned that if a company had to live up to the sound levels, turbines would have to be located greater than the proposed setback, which is three times the height of the turbine or 1,000 feet, whichever is greater. Henrichsen said that in looking at the preliminary modeling that was presented, the type of noise standard as proposed would create a large space between tower locations and other properties and that could make it difficult to locate in Lancaster County. In looking at the maps presented, yes, when you model the 40 dB level, it is often more than the 1,000 feet setback level.

Harris asked if there is a realistic idea of what type of setback will be followed. Henrichsen said he hesitates to use the word “setback” because the noise level is not requiring a specific setback distance. Harris said she understands that it is not a set distance, but rather a buffer area of space. Henrichsen agreed it creates separation. But there were no measurements from turbines to see on average how far away that 40 dB level would be met because the sound modeling does not create perfect lines. It also takes into account elevation and many, many other factors, so it is never a perfect number.

Harris asked a followup question – why suggest allowing the physical structure to go that close if it is not realistically possible to meet the sound levels. Henrichsen said the minimum distance from other properties addresses other factors. Setbacks are a standard part of most of the ordinances and in many counties, the setback is the bigger of the two because the noise level is set at 50 dB. It is important to have that minimum because there could be areas where the background noise level is high and turbines do not add anything to the noise, so the setback is still there to provide some protection from other impacts. Harris concluded that the decisions about distance are primarily driven by noise. Henrichsen said setbacks were also included to account for the fact that the actions of Planning Commission and the County Board are unknown. If noise standards are increased, then the setback standards become more important.

Lust said if dB levels remain at what is proposed, it most likely limits the chances of a wind farm going forward. Henrichsen replied that he is not able to give that rendered opinion. There are parts of the county where there could be enough participating property owners or where development could cross into an adjacent county. Lust said but this project as proposed would not go forward. He said that would be a question for Volkswind.

Joe Wood, Volkswind, approached to answer questions. He stated that this is a tough question. There are many variables in the way the sound is modeled and there is an exception for background noise, so to truly answer that, baseline ambient noise levels

would need to be established to see if compliance would still be a possibility. If you look at other factors like curtailment to reduce noise during certain periods, a lot of investors would shy away from the performance of the project. These models need to be based on point of emission of sound, so in a way it is “chicken before egg” because the locations need to be established before accurate modeling can be done. Most developers would agree that sound limits at the proposed levels would make it very hard, if not impossible, to construct turbines.

Harris noted that Volkswind proposed 55 dB level for participating and 50 for non. She asked if projects become more feasible if the ordinance had 55 dB for participating, but kept the lower standards for non participants. Wood said it makes a difference, but still the setbacks associated with the lower limit dB are very large and it would still be tough to comply.

Lust said that there was testimony that the 30-hour per year on shadow flicker was more appropriate. Volkswind did not propose that particular change. She asked if it would move things forward. Wood said yes, it would help, but he added that his experience with shadow flicker modeling is limited.

Cornelius asked if proposed text changes in Section B referred to a single turbine, or all of them. Henrichsen replied that all of them would be looked at. Cornelius said that the sun behind an entire line of turbines would produce separate flicker. Corr asked if it is a cumulative effect or individual. Henrichsen said that as it is drafted, it talks about any one. He pointed out it is a shadow, so they would overlap. It would be hard to say one is not doing as much as another. The language talks about any one. Cornelius said that is not hard to construct a model or imagine that a line of turbines could each get sun over a period of time. So some locations could see flicker for an amount of time, several times per day, depending on location. Henrichsen agreed and reiterated that as drafted, it is singular; any one turbine could be allowed 30 hours per year.

Beecham pointed out several items in the Health Canada report that measured physical and self reported effects. It appeared that the study is saying that those who self reported that they were stressed did show measurable signs of stress, but they could not find a direct causal link physically between wind turbine noise and the symptoms. So in other words, it is not causing high blood pressure, it is the annoyance that causes other symptoms. Holmes said that is at least correct in that large study. Beecham said she agreed with the statement Lust made about the difficulty of objectively regulating something subjective.

Beecham went on to refer to a table in the staff report comparing the dB levels of various other common sounds. She questioned if the sound output of wind turbines would need to be as low as that of a quiet living room. Holmes reiterated that turbine noise cannot be compared to any other common noise because it is a completely different type of sound. The measurable levels are low, but it is a particularly irritating

sound. It is not constant like another noise that could be louder, constant, and considered “white noise” that covers up other noises. It is a modulating noise and people can expect to be more annoyed by it.

Holmes went on to say there have been suggestions as to why studies identify effects in some people but not others. It may not simply be that they are personally annoyed by it. But people have different susceptibilities. There is a suggestion in the literature that one of the problems is identification of people who are more susceptible to sound exposure. That is a data gap and is proven in many other studies. That is another potential explanation.

Beecham said, so to build on that, if Commissioners were tasked with writing guidelines for a lunchroom and there are some who are allergic to peanuts, for example, do Commissioners write a policy that says no one can bring peanut butter, because some have allergies. She stated she is struggling with that component because it is difficult to figure out how much to dictate based on something so subjective.

Beecham went on to say that the World Health Organization (WHO) says the outdoor annual night time average of 40 dB is the level below which no sleep disturbance should occur even amongst the most vulnerable. She wondered why Health recommended the 37 dB level. Holmes said the 40 dB from WHO was completed in 2008 or 2009 and was addressing traffic and airport noise. If they included turbines it would not be surprising if they had a lower level for that noise. A level where 20% of people are highly annoyed is significant; that is 1 in 5 people and does not even include children. Health landed on the 37 dB based on the number of people that would likely be annoyed. If we pulled a number out of the air, the current 35 dB level appears to be “no observable affect” level which means that below 35 dB, it appears you do not have annoyance levels. Health was trying to consider what some level of acceptable lever of noise would be. Corr asked if the 37 dB means that approximately 90% would not be annoyed. Holmes said that is what is estimated.

Beecham noted that the Mass study uses 37 as their residential number. Holmes said they put out a table of what they call “promising practices” and that is based on Denmark’s current levels. That is relevant to siting issues because there have been many turbines sited around the world with restrictions more stringent than what we are talking about here. Beecham noted they had the noise level in sparsely populated areas listed as 44 dB. Something else that study said was that it was important when looking a noise level ranges was to take into account trade-offs between environmental and health impacts of different energy sources. We have talked about Sheldon Station. She wondered why those trade-offs were not considered, saying that while we look at annoyance, it should also be factored in that water and air quality are not being impacted the way they are with Sheldon Station. Again, it is that matrix of air quality versus water quality versus annoyance and how we look at them against each other. She stated she thinks that is relevant.

Holmes responded that the Mass study was a statewide panel that had expert members. Massachusetts is one of the most, if not the most, progressive state when it comes to energy policy. Nebraska does not have a statewide review of wind noise versus the potential economic benefits or the potential energy benefits. As you know, Nebraska is even in a lawsuit with the EPA over the carbon rule. So there is no statewide review of this. Health Department clearly tries to control air pollution and supports the concepts of wind energy from a large world view. However, this body and the County Board are looking at the health and safety of local residents and that is something that we as a department promote and protect. That is a key factor here, looking at what this would do to people in this county.

Lust said she went through Volkswind's proposed changes and she wanted to know Planning Department's position on them. She referred to the statement regarding avoidance of any impact to endangered species and wondered why that was rejected. Henrichsen said that there is a list of the exact species that are either on the State or Federal lists. Native prairies are not on either. The recommendation from staff is very similar in that any endangered or threatened species on the list cannot be impacted. It then says "rare" natural resources, such as native prairies and grasslands. Volkswind is saying just focus on the ones that are actually on the rare and endangered lists and Planning's recommendation goes one step further to include other areas to protect, as specified by the Comprehensive Plan. Lust said their sentence does end with native prairies and wetlands. Henrichsen stated that, as worded, Volkswind's proposed changed was taken to mean that it only included species actually on the lists.

Beecham asked what is in place to keep someone from claiming to have wetlands on the property. She wondered if areas were tracked somehow. Henrichsen said these areas have been identified on GIS maps. Again, this is something to take into consideration when an application comes forward. It is quite possible for a turbine and a wetlands to be on the same property, in the same area, but with no impact. This should be taken into account as a goal when an application comes forward, because they are an important part of the Comprehensive Plan.

Lust questioned the language on setbacks that states that the distance to any public right-of-way or roadway shall not be less than the height. Volkswind suggests to any public roadway, and the setback to any unpaved roadway, shall be no less than the rotor diameter. Henrichsen said the County Engineer specifically commented on this proposal because they felt the full height of the turbine should be the setback whether the road is paved or unpaved because if it were ever to fall over like a tree, they did not want it landing in the right-of-way.

Lust asked for explanation about the language on Page 4 - letter "h". Henrichsen replied that the goal of this language is to leave a substantial area outside of the 1,000-foot setback and 40 dB noise contours for potential future building. On the previous draft it said "significant'. In this iteration, that amount needed to be specific so at least three

acres of property was chosen. It is important to consider the potential impact to anyone who has not yet built on their property. This is not an item seen in most ordinances.

Hove noted that the three acres will not be decided by the landowners. Henrichsen replied that this is meant as guidance on special permit applications. If someone turned in an application and the setbacks and noise left zero acres on the property, we would ask that they be moved.

Weber reiterated that the landowner does not get to choose the three acres. Henrichsen said that was a criticism of this wording because what if the three acres is way at the back when a property owner wants to build by the road. It was difficult to craft something objective and measurable. Cornelius said that this is a special permit ordinance, so this body will see the applications come forward and will see the degree to which the land is impacted, including if the three acres is left in a terrible area, for example.

Corr said that a landowner can still build anywhere, it might just make a turbine nonconforming. She went on to say that there would be a period of delay between the special permit and the time it goes through the process, so a landowner could potentially submit a plan to build. Henrichsen said yes, hypothetically, if someone had a building permit in progress, that would need to be taken into consideration at that time. It would be a risk for someone to actually start their house based on that.

Harris whether anyone would realistically have time to apply for a building permit, and if they did and there were already an existing application for a wind farm, which permit would win in terms of who gets there first.

Behrens apologized that she could not specifically answer off the cuff. She said that with many of these issues, if one side has a vested right, then their interest trumps. There are situations where if the turbine is already located, they already have a vested right. If a house is located after the fact, the turbine becomes nonconforming. That situation may arise more commonly. The situation would depend on many factors such as what point in the special permit process they are at. If it was just an application, there would be minimum reliance because they do not yet know what the special conditions of the application will be so in that case, it is safe saying the building permit could move forward with little to no damage to the wind developers. But that weighing of factors is going to depend on how far along the special permit application is. Sunderman asked for the definition of nonconforming use. Behrens read the following definition from Chapter 2 of the County Zoning Regulations:

> 2.095. Nonconforming Use. Nonconforming use shall mean the use of any dwelling, building, structure, lot, land or premises, or part thereof, which was existing and lawful immediately prior to the effective date of this title and which does not conform with the provisions of this title and any amendments thereto.

Behrens continued, saying, clearly at the time that the turbine was located, they would have been in compliance if there was no dwelling unit. After this language changed and a house goes into effect, they were in compliance at the time they built, and there have been amendments thereto - that have essentially made them noncompliant with new regulations, so they become non conforming and have a vested property right remaining there.

The reason that discussion and that concept is difficult is because nonconforming use changes become much more important when we change the code to measure to the dwelling unit instead of the property line.

Beecham asked who gets notification of these applications. Henrichsen said it would be the standard distance a half mile out. Staff would post as many as possible, but some application areas cover 20 square miles, so there would not necessarily have a sign on every single property.

Weber asked for clarification about the decommissioning bond or equivalent enforceable resource and about the idea of not asking for that for 15 years. Henrichsen said there are other financial instruments available where a bank is saying, yes, these funds will be available though usually it is a bond or letter of credit. There may be some merit waiting until the 15th year. Weber wondered would happen if, after 10 years, the developer ran into financial difficulty and no bond had been collected. Henrichsen said you would have to rely on the fact that after ten years, there still enough value left in the materials of the wind turbine to salvage it so all that is left is the concrete in the ground. Some communities do not require that any the concrete be removed since it is below the soil. It is a lot of concrete, but it is not as much of a negative as a hulking, rusty turbine.

Weber asked who sets the baseline ambient noise level, and if it is a third party. Holmes answered that it would be done as part of the pre-construction and the developer would have to have a certified noise consultant confirm the levels. They are required to meet certain standards, similar to hiring a PE to do a soil survey, and it is accepted as part of the review process.

Corr asked how the preconstruction noise modeling differs from the preconstruction noise levels or the modeling differs from the monitoring. Holmes said modeling is done on computers based on many factors that are input as variables. Monitoring is done by actually measuring the noise levels under specific protocols.

Beecham asked for a response about the Volkswind proposal that says that in the case of a complaint, discretionary measurements are not taken unless a complaint has not been resolved after six months. Henrichsen said that in general, the practice is to see if the complaint is valid. There would probably have to be monitoring so, in general, there is no problem with that, although six months seems like a fairly long period. The greater

concern with their proposal is that there are two tests and if they are found to be invalid, any future complaints have to be paid for by the person making the complaint. That seems unfair to someone who buys the property five years after two complaints were found invalid.

Beecham asked if there is other wording that could be recommended that would address the issue of anyone who would file complaint after complaint. Henrichsen said that is why the language was chosen. There are so many hypotheticals and we ultimately decided to leave it up to elected officials where there would be a quorum, both sides could tell their story, and staff would be present as a third party. Corr said that in this case, being more generic covers more situations. Henrichsen agreed. Beecham asked if there should be language that includes a waiting period that gives them chance to fix a problem. Behrens said that from a legal standpoint, this language is broad and consistent with other language in Chapter 23 of the Nebraska Statutes with regard to zoning codes. Setting out time lines is not typical. The way it is drafted is consistent with other codes regarding revocation or suspension of special permits and zoning code violations.

BREAK: 10:53 P.M. **MEETING RESUMED:10:58 P.M.**

Corr asked about the decommissioning process. Henrichsen said that from what was read about other communities, there is some minimum soil level on top of the old base to help with farming or so that someone wouldn't hit the cement. We thought at the very least if someone goes out of business and the tower comes down and there is no money to do anything else, hopefully there would still be that amount of soil. We hear that to remove the whole thing would be more than the value of the entire turbine installation. Corr asked about the comment that Volskwind made on the proposed amendment where they said specifying a legal depth is not appropriate. Henrichsen said that is an extra measure of protection for the county, but it is not a key item of the regulations.

Corr asked whether, if a turbine is built first, and someone then comes in and builds a house, they can't come in after the fact and complain about the flicker. Henrichsen said they can certainly make the complaint. Staff might go to the point of identifying it is more than 30 hours, but nothing would be done about it because the tower was there first.

Corr went on to ask about the about the setbacks to private versus public roads. Her understanding is that the tower collapses in on itself. Henrichsen said yes, it is very rare for one to collapse anyway, but they tend to collapse in on themselves. In the county there are far fewer private roads than are in the city. But the thought was that if there was going to be one hypothetical for not blocking the roads in case of collapse, it should be same whether public or private. Corr said she wondered if it was due to concern about damage to public roads from heavy weight. Henrichsen said that is covered by a

different part or the regulations where they must work out an entire plan with the County Engineer as to what routes can be taken, what will be done to the roads.

Corr asked how the three times the height limit was reached for the setbacks and if it was based on other rules. Henrichsen said most counties have just a set number. There are more that are trying to have the amount times the height because it makes more sense as turbines get taller and taller. So it is looking at particular circumstances. It was a judgment call.

ACTION BY PLANNING COMMISSION: August 19, 2015

Members present: Beecham, Corr, Cornelius, Harris, Hove, Lust, Scheer, Sunderman, and Weber.

Cornelius moved approval. Scheer seconded. Scheer asked if the motion included the corrections that were received. Cornelius said yes, confirmed by Lust.

Cornelius made a motion to amend Section D referring to shadow to shadow flicker, to require the total shadow flicker effect duration for all proposed turbines within any one-half mile of any non-participating dwelling unit shall not exceed 30 hours per any calendar year, and strike “for more that 30 minutes in any one day”. Seconded by Beecham.

Cornelius said he made the amendment because it addresses his earlier question about shadow flickers from an array of turbines and their shadows falling on one dwelling unit over time.

Lust stated that given the seasonal nature of when you would have shadow flicker, the 30 hours seems more workable than any one day.

Weber wondered if the intent was indeed to limit it to 30 minutes per day because realistically, it is possible that for 2 or 3 months of the year and there might be flicker.

Cornelius said it couldn’t happen for more than 30 weeks.

Lust said she thinks the 30 hours per year solves the problem since there will be months with no flicker.

Weber agreed, but the 30 minutes is a figure they came up with because it is an annoyance. Henrichsen that type of language was present in other counties’ regulations and it was taken to mean how much one should have to put up on a given day.

Cornelius said he wanted to strike it because there was expert testimony that it is not long enough.

Beecham says it also doesn't take into account the time of day, so she prefers the cumulative calculation.

Cornelius said that Weber makes a good point that a house could get shadow flicker all day if things lined up right. It isn't that difficult to calculate how long per day the maximum amount would be and this amendment goes forward, it might be worthwhile to ask and astronomer to calculate the exact amount of flicker.

Corr said she support this amendment because of the expert testimony that said that 30 minutes per day would may any project hard to come to fruition.

Motion to amend carried 8-1; Weber dissenting.

Cornelius made a motion to amend Section I regarding noise to reflect a maximum level measured at the wall of a dwelling unit to be 50 dBA during the day, 7:00 a.m. to 10:00 p.m., and 42 dBA from 10:00 p.m. to 7:00 a.m., with the provision that it can be 3 dBA above ambient noise levels, if that is greater. Seconded by Beecham.

Corr asked for clarification if the hours of 7:00 a.m. to 10:00 p.m. would also include the 3 dBA above ambient levels. Cornelius confirmed.

Cornelius stated those numbers were not pulled out of the air. He took the 50 dB as being within a standard of deviation of the mean of the comparables provided, on the low side. It is in line with regional norms. 42 comes from the Mass report's "Promising Practices", which lists 42 dB as the recommendation for rural, sparsely populated, with light wind. Neither levels are particularly high.

Beecham asked if that level is for both participating and non-participating. Cornelius said it was particularly for non-participating, but he had not distinguished. Lust said that as it exists, says it is for both. He clarified that he is happy with that part of the text as written. Lust asked if this also includes whichever is greater? Cornelius said yes.

Hove asked for clarification about which numbers he used. Cornelius said that Commissioners were given a list of ordinances and their maximums. That is where he calculated a max from. For the minimum, he used the Mass report.

Harris asked the rationale for keeping it the same for participating and nonparticipating. Cornelius said the anticipation is that this is a health and safety related requirement.

Hove said asked for clarification that the amendment is suggesting going from 37 dB to 50 dB. Cornelius said 47 to 42 at night, and 40 to 50 during the day.

Cornelius said that part of his rationale is that this in not directly about the Hallam project, this is about the entire county. A key question being asked is, is wind energy

conversion an agricultural use. Under the conditions of a special permit, it is. We are trying to settle on parameters and a wind energy company is telling us they are not workable. This commission is establishing is a set of conditions for a special permit, that will help to guide this body in granting the permits.

Weber said that if he is reading correctly, the comparables were measured to the property lines and not the dwellings. Cornelius said that is fair, but he is sticking to his original amendment. Weber said that he would then have to disagree. If the levels are going to be changed, they should be measured at the property lines, not the dwelling unit.

Hove said that he is also going to vote against this amendment. There is not enough information about going from a 37 dB to a 42 dB in order to make a recommendation. Health experts made suggestions, and those should stick.

Lust said she supports this amendment because there is support for the dB levels that Cornelius has chosen in the studies and presentation materials. More importantly, she doesn't think Lancaster County should be the most restrictive in the State or even in the region. Setting at the Health Department levels would prevent any wind project in Lancaster Country from going forward. The other amendments we have in the ordinance provide protections for adjacent landowners and they are well though out. The setbacks have been based on standards that already exist. It seem the noise ordinance is driving the bus of the rest of the setback standards. If this body is going to say the setback should be three times height, it doesn't make any sense to make the noise level such that it would set the turbines back even farther. These projects are going to be difficult to place when considering the neighbors, landowners, and the wind developers. It is important and there is always going to be struggle when placing something new in the county. To regulate them out of existence is not appropriate.

Sunderman said he is not going to support the amendment for two reasons. First, he has faith in what staff have put forward in terms of recommendations. This process is just beginning and it is tougher to pull back from restrictions. It is easier to say, for example, 40 dB is too restrictive, maybe a higher number is more appropriate. But it is tough to come back from that, especially when there is already a huge project built. Second, the standard will be on the books for a long time and we don't know what technology will come, so the noise the turbines generate now is not necessarily what they will generate ten years down the line.

Weber stated that he is extremely uncomfortable with adjusting regulations to make something fit into a box. He does not want to jeopardize the health of citizens to make this work. Lancaster County is unique and very densely populated compared to many other counties. To adjust these noise levels to make it work is not the wisest thing to do.

Scheer stated that he is not going to support the amendment. The Health Department has done a great job in gauging what is best for the county. There is no intent by staff to not permit, or to inhibit the development of wind energy. It must be done within the parameters our experts have given us and to see how it fits.

Beecham will support the amendment based on the scientific evidence provided which shows that there is not statistical proof that turbines cause sleeplessness and high blood pressure, though they cause annoyance. It is important to consider annoyance, but also to look at what other states have done. Some are in very populous areas.

Harris said she will also support the amendment. She feels that this use is being singled out since there are other farm activities that do not have to abide by the same noise regulations. Sensitive to the nuisance that it will be to some land owners, but on principle, she has a problem for asking for something that is not workable, so in that sense, it would make more sense to say we are not going to do this at all if it is not workable. Otherwise, it is just there “on the books” and doesn’t mean much in the real world.

Corr said situations like this are a balancing act with many components including economic, neighbors, health, energy, climate, wildlife, and so many competing interests. It was hard to find a line to walk. She supports the 50 dB level because when looking at the rest of the state and the nation, the average is 50 dB. The Health Department’s recommendations remove the annoyance for 90% or the population. Some of the studies were looking at 80%. That factor is so subjective and goes away if the same sound level is on the property of a participant. This issue of fitting a project into a box is done all the time by this body. Another important consideration is this is an AG use and what the Comp Plan suggests for this area – it is agriculture. This could help many farmers struggling with property taxes, so the economic opportunities are very present.

Motion carried 5-4; Hove, Scheer, Sunderman, and Weber dissenting.

Corr made a motion to amend that the word “occupied” be added every time “dwelling unit” is used. Seconded by Beecham.

Corr explained that in the core of the city, there are many vacant houses for a variety of reasons. It is important to distinguish that just because there is a dwelling unit, but it isn’t occupied, then things like the flicker do not harm anyone.

Lust said she supports the intent, but that it seems unworkable. To have something that is permanent, like a special permit, allows the building of things based on the presence of the dwelling unit. The fact that it might be unoccupied for six months, but then sells, makes it too difficult to enforce. If it were only applying to the sections on shadow flicker, that might make sense.

Beecham agreed with Lust. If a home is for sale, you don't want consequences to fall on the next owners.

Sunderman asked for staff input. Henrichsen said this was brought up numerous times. The concern was whether a structure was "habitable" because if it seems uninhabitable, it is possible it should not get special consideration. There were similar concerns about "occupied" because there could be a home for sale for a year due to a tough market. It would also be difficult for anyone coming in to figure out when something is occupied. If the point is to address if the house is a wreck and no one has lived there for 20 years, maybe the term "habitable " would work. Staff did not think it was worth adding because it would be such a rare circumstance, and also, the applicant can make the case that a particular structure is not really a house. It would be better to consider case-by-case rather than attempting to predict every alternative.

Corr said she would be willing to change to "habitable" or to add the amendment only to appropriate sections like flicker. Henrichsen clarified that the motion would be to change where it says "dwelling" to "habitable" in the sections relating to noise and shadow. Beecham seconded.

Behrens said that in the typical process for complaints, it would be difficult for Building and Safety to monitor that type of standard. Corr asked if that were true if the word "habitable" instead of "occupied". Behrens replied "habitable" is better, but it is still difficult.

Beecham said that people rehabilitate houses. Lust said there is a way to address that through the special permit process. Henrichsen agreed.

Behrens said that was a large portion of the discussion. Dwelling unit is a relatively defined terms. Once the adjectives are added, it becomes very difficult and more arguable as to what that means.

Corr asked if dwelling unit basically means habitable. Henrichsen said if a house is out there and it is just a pile of boards, the applicant can make that case that it is not a dwelling unit. Behrens said it is so the argument would have to go to an established definition of dwelling unit, which is specific.

Sunderman stated his preference is that dwelling unit be used throughout. To change it could have the opposite effect from what was intended.

Henrichsen said the definition for a dwelling unit is one or more rooms in a dwelling occupied, or intended to be occupied, as a living quarters by a single family as defined therein. Lust stated one could claim it is not intended to be occupied. Henrichsen agreed, saying that if has been unoccupied for thirty years, and there is no intention on the part of the property owner to occupy it.

Motion failed, 0-9.

Harris made a motion to correct a clerical error on Page 11, under G-2, to insert the article “a” in front of “nonparticipating lot” so it reads “for a nonparticipating lot...”. Henrichsen said that for that type of clerical correction, staff is comfortable making the correction without a motion.

Cornelius reiterated that this in not directly about the Hallam project, but about the entire county. He stated he would go back on his amendment about the measurement being taken at the dwelling unit and urge the County Board to consider the option of the property line, in appreciation of the arguments made by Weber earlier in discussion. On the whole, he supports this as he supports the idea of wind energy. It will likely have some adverse impacts on some and positive impacts on others. This is a very complex issue. He appreciates all of the information.

Beecham expressed her appreciation to staff. Everyone has tried to balance the new, potentially great economic industry with citizen concerns. She bases her decision on looking at surrounding areas and finding that the proposed regulations are in line with what has been found acceptable. The scientific research said wind turbine noise is a cause of annoyance, but not causal of health problems.

Lust thanked staff and the task force that aided in this process. It is an important decision and Commission always struggles with these types of changes because it is always a balancing act between neighbors and developers. In this case, she is swayed because wind energy is important for the economic development of the county, and for the planet, and this type of development needs to move forward even though it creates difficult decisions.

Weber stated that he feels that he is the rural representative for the group as an acreage and farm owner. He sees both sides of the issue. Property taxes are high for all. Wind power is a good thing. Many who testified in opposition also agreed it was positive. He does not agree with the dB levels. In terms of existing sounds, yes, they are there, however, they are already there. Large buildings and grain elevator are there. But they are not 400-500 feet tall. If turbines were there now, I would say that people who move out there know what they are getting into. When people testify, there are several items to consider. Among them are design standards, scenic corridors, and historic preservation. These are to protect the local area from things happening that do not belong. With health and safety, we must consider, is this a fit in this area? There may be areas that are sparse enough to allow development. If it is too dense, then the regulations have done their job. There will be less demand for housing near turbines. The amendment to raise the dB levels causes great concern. Health made recommendations and we did not even seen what the annoyance levels are at 50 and at the dwelling units, as opposed to the property line. We do not know how these factors

affect health. We should err on the side of caution. He stated he would to see it go back to 40 dB at the most, and in five years, maybe there will be quieter turbines.

Sunderman stated he is not going to support this. He agrees with most of the amendment, but that the sound levels should be measured to the property line, not the dwelling unit. If people asked the normal aspects of farming 20 years ago, the answer would be totally different from today. The idea that rural area will stay as they are is not realistic. At some point, wind farms will be out there. He is pro wind and it is part of the future. But it needs to be done carefully and a step process into this would be better than going so high on the dB levels.

Hove said these decisions are looking 20 or 30 years out. This county will change vastly in that time. Lincoln is in the middle of the county and is fortunate to be able to continue to grow in all directions. Wind is very viable here, but Lancaster County has a higher, better use for these properties and there are a lot of other places where wind energy is more viable.

Scheer said he is also pro-wind but his comments are for the Board. For him, this comes down to approving parameters for land use under the special permit process to determine and mold land use. It is less about wind energy and he separates those things. It is about setting the parameters of land use as to how the property is developed.

Harris said she would like to reiterate that Planning Commission is not the final decision making body and the amendment will go on to Bounty Board. The reason she voted for the higher noise limit was to put before the final deciding body something that will spark discussion about whether we want wind energy in Lancaster county and if it is a viable investment. It has to be a higher noise level to make it work. She encourages those who disagree to speak again before County Board.

Corr said that tonight restores her faith in the democratic process that so many people spoke. That helps Commissioners make decision. This is just a recommendation so people can still participate and make feelings known. No matter what happens, she suggests that those who could be affected to stay in touch about how things are going because the text amendments can be modified. This is not set in stone forever. She prefers measuring at the dwelling unit rather than at the property line since that is where the sound will have the most impact.

Motion carried 5-4, Hove, Scheer, Sunderman, and Weber dissenting.

There being no further business to come before the Commission, the meeting was adjourned at 11:59 p.m.

Note: These minutes will not be formally approved by the Planning Commission until their next regular meeting on September 2, 2015.

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