

JOINT MEETING OF THE  
COMMUNITY DEVELOPMENT AND PUBLIC SAFETY COMMITTEES

November 1, 2000

Chairman of the Public Safety Committee Thomas C. "Tim" Owens called the joint meeting of the Community Development and Public Safety Committees to order at 6:30 p.m. The following members were present, constituting a quorum:

Mr. Michael J. Lally, Chairman, Community Development Committee;  
Mr. David G. Belpedio; Dr. Jack Halligan; Mr. George Kandt; Dr. Kris Kobach;  
Mr. Greg L. Musil; and Mr. Neil S. Sader. Mr. David G. Belpedio arrived at  
7 p.m. Mr. Carl R. Gerlach was absent. (excused)

Also present were: Mr. Byron C. Loudon, Councilmember; Mr. John Nachbar, City Manager; Mr. John Douglass, Chief of Police; Mr. Bob Watson, City Attorney; Mr. Roger Peterson, Director of Planning and Development Services; Mr. Bart Budetti, Senior Assistant City Attorney; Mr. Mike Santos, Senior Assistant City Attorney; Mr. Keith Faddis, Deputy Chief of Police; Mr. Dennis Baldwin, Mr. Steve Smith, Mrs. Rita Porter, Police Captains; Mr. John Rod, Administrator, Long-Range Planning; Mr. Brian Shields, City Traffic Engineer; Mr. Skip Moon, Supervisor, Neighborhood Preservation; Mr. Anthony Bernal, Supervising Communications Officer; Ms. Tammy Williams, Administrative Prosecutor; Mr. Sean Reilly, Manager, Communications; Ms. Dee Lock, Senior Executive Secretary; Ms. Susan Waters, Communications Assistant; and Ms. Pamela Blaszyk, Senior Recording Secretary. Approximately 25 persons were in the audience.

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MUNICIPAL REGULATION OF NOISE AND THE DEVELOPMENT OF EFFECTIVE NOISE REGULATIONS – Professor Eric Zwerling

Dr. Kobach introduced a team of law students from the University of Missouri in Kansas City including Jenny Heideman, Annie Wehagezickwolf, Ryan Redman, and Tiffany McKenzie. He explained that the students are assisting the City in this endeavor by conducting some legal research on how other cities throughout the country are regulating noise.

Senior Assistant City Attorney Mike Santos introduced Ms. Michele Stackhouse, who is the City's law clerk and a student at the University of Kansas. Ms. Stackhouse is assisting Dr. Kobach and his students in the development of this ordinance. Mr. Santos acknowledged a number of citizens who were present and had expressed an interest in this issue. He noted that the regulation of noise is a complex issue to address because of the diversity in the types of noises that can be regulated. Loud noise comes from a variety of sources such as barking dogs, loud stereos, or loud parties in the middle of the night. Staff is attempting to provide information to the elected officials to help them develop a comprehensive ordinance that can be used by the Police Department, the code enforcement officers, and other enforcement officers throughout the City. Mr. Santos anticipated that a drafted ordinance would be presented to the elected officials in December 2000 or January 2001.

Mr. Santos commented that Mr. Eric Zwerling was present to speak on this issue. He explained that Mr. Zwerling is the director of the Rutgers University Noise Technical

Assistance Center, and he offers training for noise enforcement officers through the court recognized certification course entitled, Community Noise Enforcement. Mr. Zwerling has offered this course in cities ranging from Seattle to Gainesville and Anchorage to Philadelphia. As the president of Noise Consultancy, Mr. Zwerling assists municipalities in drafting noise ordinances and in addressing contentious noise issues. He recently helped the cities of Lafayette, Louisiana, and St. Augustine, Florida, to draft and adopt new ordinances. He is currently assisting the city of Lansing, Michigan, to resolve a long-standing problem. Mr. Zwerling serves as an expert witness for the City of New York Law Department, for which he recently prevailed in a federal court case involving the regulation of noise. Mr. Santos noted that Mr. Zwerling recently made a presentation to the International Municipal Lawyers Association. Through the City's contract with that group, staff was able to arrange this presentation with Mr. Zwerling.

Mr. Eric Zwerling stated that he would provide an overview regarding noise as an issue and discuss some of the various options in regulating noise. He also wanted to learn about the problems with noise in Overland Park.

Mr. Zwerling indicated that he would begin by addressing the impacts of noise on people. Noise produces elevated blood pressure, faster heart rates, and increased neuroendocrine hormonal levels. Noise causes stress. It is possible to draw blood on someone who is stressed and find some of these neuroendocrine hormone markers of stress in the blood. Noise is so reliable in causing stress that the pharmaceutical industry uses noise when testing stress relief drugs. They do this by first testing the hormonal levels in the blood of a healthy subject. They then expose the healthy subject to noise, expose them to the stress relief drugs, and see whether or not the drug reduces the stress level in their blood. If someone feels that they have no hope over a noise source, this whole syndrome is exacerbated to where they go into a downward spiral that is caused by the stress of tension fatigue of being exposed to the noise. Noise affects the quantity and quality of sleep. It is possible to be awakened by noise. If sleep is disturbed by noise, work efficiency and health may suffer. When people are awakened at night by noise, their productivity is reduced the next day. Also, the next day they will have a reduced tolerance level for difficult situations that may arise and they become more disagreeable at work.

One difficult component of being a noise researcher is that noise does not leave a residue for study. One study recently showed that 90,000 deaths are annually caused in American hospitals as a result of accidents. Mr. Zwerling questioned what percentage of those accidents was caused by medical personnel who were sleep deprived. Medical workers who are tired may misread a label and administer the wrong medicine. Sleep deprivation is not written down as the reason for the accident. It is easy to determine the cause of a car accident if it is discovered that the driver was under the influence of a substance. If someone falls asleep at the wheel because there was some party or transportation noise that woke them up during the night, the death certificate will never indicate that the operator accident was caused by sleep deprivation.

Worker productivity is reduced because of sleep deprivation. Perhaps a worker that is supposed to manufacture 100 widgets per day on the factory line only manufactures 98 widgets that day because of sleep deprivation. A sleep deprived worker may make two or three faulty widgets that are incorporated into larger pieces of equipment and

eventually returned back to the distribution chain. Mr. Zwerling suggested that there is a significant loss to the United States economy because of sleep deprivation caused by noise. If the financial loss equals one half of 1 percent of the economy, that means that billions of dollars are lost to the American economy.

The sick and elderly are more sensitive to disruptive noise. People with post traumatic stress syndrome, such as the military or police personnel, or women who have been assaulted, have a greater reaction to noise. The human fetus is not fully protected from noise and will react to loud sounds.

Noise can disrupt the educational process. Studies have shown that schools near a highway or under an aircraft flyway have significantly reduced standardized test scores. When the building is insulated for noise or the students are moved from one side of the building to another, the test scores even out again. There is a clear connection with disruptive noise harming the learning process.

Noise can obscure warning signals and cause accidents to happen. There was a case in southern New Jersey where they wanted to cite a race track with a noise violation as the back stretch of the track is located 300 feet away from a row of condominiums. The argument was made that with 85 decibels of noise from the track, a child who had wandered onto a side street would not hear his mother calling him to get out of the way of a speeding car.

Noise interferes with conversation and social interaction. Noise disrupts the peaceful enjoyment of one's private property. Homeowners pay taxes on their property and have a right to enjoy their property. Other people have rights to do what they want on their property until it starts to infringe on the peaceful enjoyment of their neighbors. Noise can cause extreme emotions and behavior. Antisocial behavior caused by noise may be more prevalent than what is realized and there are documented cases of noise induced arson, assault, murder, and suicide.

Mr. Zwerling proceeded to discuss the properties of sound. He explained that sound is a vibrating body causing compressions through a medium. For example, if someone is thumping on the ceiling, the vibrations go through the structure and into the air so it can be heard. The sound only becomes noise when it reaches someone who complains about the noise. Sound is a function of physics. Noise is a function of whether or not there has been a complaint filed. Noise enforcement is uniformly based on complaints. There may be a number of situations where there would be a noise violation at a property line. However, if there is no complaint, there is no enforcement.

There are two different components of noise. Intensity is one component. The more energy that is put into a sound, the bigger the amplitude will be. The unit of measurement for intensity is a decibel. Decibels are based on a logarithmic function. Small increases in decibels mean large increases in sound levels. If two alarm clocks rang at 70 decibels each with a sound meter in between, the measurement would be 73 decibels rather than 140 decibels. The 3 decibels would indicate a doubling of intensity. When the peak height is doubled, it is just 3 decibels louder. When there are small increases in decibels, it means major increases in intensity as it is a logarithmic function. It is similar to the Richter scale registering a 5 when buildings are standing and registering a small increase of a 6 when the ground is heaving.

If a noise code is adopted in Overland Park, it must be determined what level should be included in the code and what is to be achieved with the code. Some jurisdictions adopt a code based on precedent. The neighboring jurisdiction may have a precedent set at certain levels. However, certain levels may not be protected. Often bad codes are propagated from border to border within a state. It is important to determine what is to be protected. There could be a protection of speech, sleep, or the personal enjoyment of private property. If those are the goals, then noise levels must be set to achieve those goals. For example, 35 decibels is the level at which individuals start to wake up. By the time noise travels through buildings with sheet rock, shingles, and insulation, approximately 15 decibels are filtered out. If the sound levels are kept at 50 decibels or below at the property line, the sound must be 35 decibels or below within the house to protect sleep. Several jurisdictions are adopting 50 decibels as a residential property line standard as sleep would be protected at that level. Speech is protected at a distance of 2 meters with a sound level of 60 decibels. For example, two individuals in a backyard that are 2 meters apart could carry on a conversation with a sound level of 60 decibels. If the noise was above 60 decibels, they would have to either raise their voices or hear only 95 percent of the words. However, human speech is redundant enough to understand the content of the conversation by hearing only 95 percent of the words. Some jurisdictions adopt a property line standard of 60 decibels to protect speech at 2 meters. Conversation is protected at a distance of 1 meter when there is a sound level of 65 decibels. Some people feel that when they are talking to someone who is standing only 1 meter away, their private space is being invaded. Therefore, some jurisdictions prefer the 60 decibel standard. Throughout New Jersey, they have the 65 decibel standard. Mr. Zwerling felt that level is too high. They tried to have a decibel standard that would fit in the City and in the country. Some other common decibel levels include 80 decibels next to a highway. A loud dance floor would have a sound level of 95 to 100 decibels. A concert may have a sound level up to 110 decibels or higher. The human threshold of pain from noise is between 130 to 140 decibels.

Another component of sound is the frequency, or how many cycles there are per second. People hear various sounds differently. Mr. Zwerling proceeded to use a calibrator to produce various frequencies. He demonstrated that people can easily hear a frequency of 2000 hertz, which means that the sound waves are produced at a rate of 2000 cycles per second. Mr. Zwerling produced a frequency of 1000 hertz and noted that humans also easily hear this frequency. Although he was using the same intensity for both frequencies, the 1000 hertz sounds quieter to people. He demonstrated a frequency of 500 hertz and noted that some people can barely hear the sound at the same intensity. At 250 hertz, it is more difficult for people to hear the sound. Dr. Zwerling held the calibrator 6 inches away from a member of the audience before it was heard by that individual. Humans are relatively insensitive to low intensity/low frequency. That is why most codes are written on the DV(A) scale. The A-scale is weighted to approximate human hearing. As people do not hear low frequency/low intensity well, the A-scale slopes off at the low frequencies. The problem is that while humans are relatively insensitive to low intense/low frequencies, they are very sensitive to high intensity/low frequency. Amplified music is not well read by the A-scale. Therefore, for a number of jurisdictions, Mr. Zwerling has started to suggest regulating amplified music with the C-scale as it does not drop with low frequencies. St. Augustine, Florida, has adopted the C-scale standard. Lafayette, Louisiana, is about to adopt the C-scale standard.

An unidentified member of the audience asked a question regarding the decibels of music played inside cars past 10 p.m. Mr. Zwerling explained that some of the car stereos available today can be injurious to the health of the operator. Some of the stereos can reach volumes of 140 to 170 decibels. He doubted that it is physically possible for them to reach levels of 200 decibels. He has heard that during some of the competitions, if there is a nick in the glass, the glass can be shattered by noise. The noise from the stereos can clearly also injure an individual's ear drums. Hearing car stereos in a residence is another issue.

If there was a permissible property sound level limit of 60 decibels, and the noise was being measured at 63 decibels, someone may question why these people are bothered with the sound level since it is only 4 to 5 percent above the permissible limit. However, an increase of 3 decibels reflects a doubling of intensity. Intensity and loudness are not the same thing. While 3 decibels is a doubling of intensity, it takes an increase of 10 decibels to have a doubling of perceived loudness by humans. It also has to be 10 decibels quieter before someone can discern a decrease in the sound. The owner of a facility may indicate that the modification of the building will result in a decrease in the sound intensity by one half because the sound will be decreased by 3 decibels. However, to the human ear, that would not be a perceived decrease in sound.

Mr. Lally asked what was the intensity of the frequencies produced by the calibrator. Mr. Zwerling replied that the intensity was 114 decibels near the machine. Near Mr. Lally, the intensity was likely 55 to 60 decibels. Mr. Zwerling indicated that he would demonstrate decibels of 65, 60, and 55. He noted that if the consideration regards only scientific data, most jurisdictions will adopt a level of 65 or 60 to protect speech. When most jurisdictions hear 65 or 60 decibels, they will determine that a level of 55 decibels is acceptable for a residential area.

Dr. Kobach asked what is the logarithm for the decreasing perceived loudness. Mr. Zwerling explained that the doubling of distance from a single entity point source will decrease the sound level by 6 decibels. However, the calculation must begin past the air field and the first couple of wave notes and should begin approximately 20 feet beyond the sound source. Mr. Zwerling knew of one consultant who was trying to indicate that the sound from a race track in southern New Jersey would be 50 decibels at a distance of 300 feet. The consultant came up with that conclusion by starting to measure the effect at 3 inches and continued calculations at 6 inches, 12 inches, and 24 inches. To have an accurate conclusion, it is necessary to start calculations at approximately 20 feet. From a line source, such as a highway or a train, the doubling of distance results in a reduction of 3 decibels.

To have a successful noise enforcement program, the ordinance must be relatively simple. Yet it must be specific enough to be clearly understood by both the enforcement and regulating teams. Everyone must understand what is expected of them. The enforcement agents must be comfortable with the technology and tactics of sound level measurement. It is necessary to make sure that the person testing the decibels understands how to use the meter. The commanding prosecution must support the program. A judicial system must be educated about the validity of the methods and the issue of noise. They must understand that it is a significant issue. They must also understand the validity of the issue. It is important to purchase a high quality meter that would cost from \$800 to \$1,000 rather than purchasing a

meter for \$50. The higher priced meter is built according to the standards of the American National Standards Institute (ANSI). Mr. Zwerling was contacted by representatives of a jurisdiction who indicated that they were about to buy 40 RadioShack meters. He advised them against making that purchase as they could not enforce a RadioShack meter. He explained to them that RadioShack meters are supposedly fairly accurate. However, no one has done the research to confirm that belief. If someone is fined for producing noise at 67 decibels in an area where the standard is 65 decibels, and the code is criminal rather than civil, it is necessary to be sure of the accuracy of the meter. When Mr. Zwerling was helping St. Augustine, Florida, staff to develop their noise ordinance, he was informed that someone in the state lab changed the standard of stock solutions for the breathalyzer and did not tell anyone about the change. When the change was discovered, every drunk driving case during that period of time was thrown out because they did not know the accuracy of the test.

The regulated community must be aware that there is a credible and motivating enforcement program. One of the greatest outcomes of having a good noise code along with regular, predictable, and reliable enforcement is that the community will self police. If the fine structure is set as a deterrent, then people can go to the property line and determine whether or not they are in compliance by using a RadioShack meter (which is good enough for internal purposes but not for enforcement purposes). They can determine compliance and resolve the problem without the involvement of a police officer. It is necessary to have a simple and objective code to allow citizens to self police. If there is a subjective standard in the noise ordinance such as the standard that people should not annoy others with noise, it is not possible for individuals to self police.

There are basically two types of ordinances used to regulate noise. One type of ordinance is a nuisance code. The other type of ordinance is a performance code. There are distinct differences between the two types of codes. Nuisance codes are flexible. However, adjudication with nuisance codes is unpredictable due to the subjective nature of the determinations. Individual cases may be thrown out and the code itself may be found to be vague and over flawed. An officer may determine that a noise is annoying and write a ticket. The judge may then accept or not accept that determination. For example, if it is a barking dog case, and the judge is partial to dogs, the judge may never find the dog to be in violation. A judge who was bitten by a dog as a child and has never liked dogs since, may always find the dog to be in violation. A nuisance ordinance is subjective. That is why it is necessary to have objective standards that the judge can follow. Performance codes are inflexible. However, adjudication with performance codes is more certain. Investigations can be precise and content neutral. A sound level meter does not know what it is measuring. A sound level meter is totally content neutral and no one can complain that it is subjective enforcement. Challenges are less likely with a performance code. If there is a properly conducted investigation, most people will pay the fine and it will not be necessary to go to court.

Mr. Zwerling indicated that with one case, he was prepared to go to federal court. The prosecutor of the chief legal counsel for the City of New York was preparing Mr. Zwerling for the testimony and assumed he had been to court several times to testify on cases. Mr. Zwerling informed him that he had never been to court. He explained that when he writes the report, people relent and he has never had to go to

court. The better prepared one is to go to court, the less likely it will be necessary to go to court.

Field enforcement of a nuisance code is relatively quick and easy. Performance code investigations take more time and require training and the purchase of sound level measurement equipment. It takes longer to use a performance code and it is a more cumbersome endeavor. Performance code violations may result in higher fines than nuisance code violations and result in providing greater deterrents.

The noise ordinance must be technically easy to enforce. Deterrents are achieved only if the enforcement actions are fairly regular. Mr. Zwerling indicated that he has seen written codes that were so complicated, the only person who understood the code was the one who wrote the code. If the ordinance is that complicated and the regulating community knows that the code is rarely enforced, there will be no deterrent factor with the ordinance. It is important for the ordinance to be simple.

Ordinances based on statistical averaging methods are unwieldy. Some jurisdictions require samples of noise to be taken over an hour to determine an average sound level during that period of time. Few commanders would assign an officer to take sound tests for two hours. The test has to be something that can be taken relatively quickly and easily. Also, when the focus is on statistical averaging methods, they are not talking about the \$800 meter but the \$2000 meter. If statistical averaging is required in the code, the jurisdiction may purchase one meter. If it is a complicated process and there is just one meter, the response time is much slower.

Ordinances based on specific duration are difficult to enforce and are not meaningfully protective. Mr. Zwerling noted that Seattle, Washington, had a code that set a standard of 65 decibels. The code also indicated that if the sound level is less than 10 minutes in any hour, it is necessary to allow an additional 5 decibels. If it is less than 5 minutes in any hour, it is necessary to allow an additional 10 decibels. If the sound is less than 1.5 minutes in any hour, it is necessary to allow an additional 15 decibels. That meant that the officer would have to be conducting readings for too many hours to figure out the average.

Permissible sound level limits must be meaningfully protective and not simply precedent driven. The ordinance must have a fine structure that would gain compliance. Close-ended grace periods may be granted for not penalizing people. If someone is not in compliance, they should not be fined with the first offense. They should be given a 30- to 90-day period to come into compliance. They could be informed that as long as they show a good faith effort to come into compliance, they will not be fined. The goal is to gain compliance rather than fines or criminal penalties.

Mr. Musil commented that throughout this process when there is an attempt to measure the sound level, there is usually one irritating source of noise. However, background noise may also impact a measurement. He asked how the background noise can be separated when measuring noise. Some restaurant owners have indicated that the noise level from their establishment cannot be accurately measured at the property line as they are next to a busy street. Mr. Zwerling replied that he just taught on this issue in Traverse City, Michigan. There is a measurement of neighborhood residual sound. For example, if there is a bar and there is a highway

between the measurement point and the bar, he would measure the noise from the bar and highway at 15 feet away from the highway. He would then go down 100 yards on the highway at 15 feet away from the highway and measure the sound from the highway. He would compare the two results and subtract out the noise from the highway at 15 feet without the bar to determine the noise coming from the bar. The result would be the corrected source level. If the bar operates until 2 a.m., the officer would measure the noise from the bar at 1:45 a.m. to 2 a.m. at the property line. After the parking lot is emptied out, the officer would come back and measure the noise again at the same point. The number taken when the bar is closed is subtracted from the number taken when the bar is open. That is a mathematically provable number to indicate the sound level of the noise from the bar.

Part of the training of an officer is to show them how to isolate the source of the irritating noise. It is first necessary to make sure that the alleged source is the actual source of the noise. For example, if there is a bar and a music outlet, it may be difficult to determine which facility is the source of the complaint. That is why it may be necessary to walk around the facilities to isolate the source of irritating noise. It is also necessary to isolate the source of noise with a mobile source. When an officer in his car hears the mobile source passing by him, he should first establish visual contact with the source. As the source comes next to him and the sound reaches the highest level when it is next to him, he would have then established that the alleged source is the actual source. He would then allow the source to go four car lengths in front of him at which point he would know the car is 50 feet ahead of him. The next step would be to allow the source to go an additional car length ahead to five car lengths, or approximately 70 feet. He would then stop the source. It is necessary to establish with certainty that the alleged source is the actual source. This is part of what the training of an officer involves.

Regarding the sound level measurement equipment, the meter must meet ANSI standards. There are meter companies that will sell a more powerful meter than what is needed. They will offer a \$15,000 product that is so hopelessly complicated it ends up not being used. One jurisdiction was sold an expensive meter. They determined to use a performance code rather than a nuisance code. They then purchased a \$15,000 low frequency analyzer and gave it to the officer without any training. He could not figure out how to use the meter. They subsequently went back to using a nuisance code. It is possible to hamstring an enforcement program by purchasing the wrong meter.

Training of the enforcement officers must be geared towards practical field enforcement rather than acoustical modeling studies. The emphasis should be on practical hands on experience with the meter and the measurement report form. There must be an attempt to help the officer to embrace this as a powerful new tool rather than a cumbersome chore.

Dr. Kobach asked if Mr. Zwierling had any thoughts on mobile sources versus engine noises. He explained that the City is intersected with a state highway and bordered with an interstate highway. Semi trucks, motorcycles, and cars are mobile sources of noise. He suggested that if a police officer was driving beside the vehicles with a sound meter, they would be able to measure a high level of noise. Mr. Zwierling replied that is a difficult question because tractor trailers are clearly involved in interstate commerce. It is necessary to be careful with anything that can interfere with

interstate commerce because of federal laws. Years ago, the Federal Highway Administration promulgated some standards to allow 86 decibels at a distance of 50 feet from vehicles above a certain weight going above a certain speed. For that type of enforcement, there must be specific criteria for how the measurements are taken. For example, they must indicate whether they are near reflective surfaces, and if the reflective surfaces are between the patrol car and the mobile source of noise. That type of enforcement is possible, however, it is relatively complex. He asked if the City has unmuffled provisions. Mr. Santos replied in the affirmative. Mr. Zwerling added that it is possible to use that provision. The question is if the vehicle is unmuffled or improperly muffled. He was told that people buy straight pipes as opposed to a proper muffler for some tractor trailers.

Mr. Musil commented that loud parties have historically created noise problems. However, most of the noise complaints received by the City regard loud motorcycles or sound systems in cars. These disturbances have a temporary effect. At 11 p.m. every night, one loud motorcycle is driven past his house. He asked if the ordinance would address these types of circumstances. If an officer identifies and captures the source, could the driver be found in violation. Mr. Zwerling replied in the affirmative. The paper that he is presenting next month addresses that issue directly. That particular problem is a different issue in that it is a transient and mobile source of noise. Therefore it is more difficult to enforce the ordinance against the vehicle with a sound level. To address this issue, New Rochelle, New York, and Anchorage, Alaska, personnel set up sweeps where they would stand on a street corner with the meter. That is effective for that road at that time. However, the officer has to have the meter ready and know he is going to be involved with that particular stakeout. It is a less effective method as the cruisers will likely move to another area. He suggested that the City adopt a plainly audible standard. It is objective without requiring a meter and is neither vague nor over broad. Mr. Zwerling researched the plainly audible standard versus vague and over broad standards. There are several court cases, particularly one in Hawaii, that have held that a plainly audible standard is acceptable. He suggested that the code indicate that no vehicular sound system may be plainly audible at a distance of 100 feet during the day or 50 feet at night. If the sound is audible past 100 feet, they are clearly broadcasting. They are no longer listening to the music for personal enjoyment. They are making a statement at that noise level. The enforcement community has a right to make a statement in response, which is to indicate that level of noise is unacceptable. The officer need not have to be able to recognize the words to the song, the artist of the song, or the title of the song. This ordinance must be content neutral. The loudness of the music is the factor rather than the type of music. If the rhythmic base component of the sound is recognized at a distance and the vehicle is behind the police car, the officer in a police car should establish eye contact with the suspect vehicle and slow down. If the music becomes louder as the car comes nearer to the police car and then diminishes as the car passes the police car, the source of the music has been established with certainty. The police officer should allow the car to get 70 feet away (or approximately five car lengths). If the rhythmic component of the music can be heard at that distance, the officer should then stop the vehicle.

Mr. Musil asked if the ordinances differentiate between daytime and nighttime activities. Mr. Zwerling replied in the affirmative. He noticed that the Overland Park code does not currently differentiate between daytime and nighttime activities. He observed that in some cases, the levels are overly protective and in some cases, under

protective because of that fact. He felt that the daytime 50 decibels standard is over protective. The nighttime standard of 50 decibels would be protective of sleep. During the day he did not believe that 50 decibels is a reasonable standard. It is unfortunate that the ordinances must be discriminatory against people who work at night.

Mr. Musil asked if there are exceptions. For example, lawn mowing would violate the noise ordinance. Mr. Zwerling replied that exemptions can be crafted. Noise from public celebrations or aircraft are generally exempted. He was informed that a member of the audience had talked to someone from the Federal Aviation Administration (FAA) about the noise caused by aircraft going over her house. The FAA representative indicated that the local jurisdiction should write a code addressing that issue. Mr. Zwerling noted that is the first time he has heard anyone from the FAA say anything other than that the aircraft noise is preempted from regulation. He asked the audience member to follow up on that possibility. Construction may receive a limited exemption during daytime hours. Emergency work on a gas main may be exempt from the noise ordinance during daytime hours. The exemptions must be specifically crafted for the jurisdiction. In Lafayette, Louisiana, they had to write an exemption for the pouring of cement at nighttime because during the summer it is too hot to pour cement during the day. In Traverse City, Michigan, they had to write an exemption for snow removal equipment.

Mr. Musil noted that there are sometimes packs of motorcyclists. He asked if all of the motorcyclists in a group should be ticketed or if one should be singled out. Mr. Zwerling replied that this problem has been generally addressed by setting up an objective standard that is identified to individual motorcyclists at an inspection station. For example, they flag everyone over and check the vehicle. A standard is set such as 85 decibels. All of the motorcycles are brought into a parking lot and tested at half throttle to determine their sound levels. The question is where should the level be set. There were some federal standards that were put forth years ago that have lain dormant. Those standards may be applied or the state may have some regulations about sound levels. Another approach could be to find out the average sound level of a stock Harley, allow 5 decibels above that level for equipment deterioration, and set the standard at that level. A sound level that would put stock Harley motorcycles out of compliance would be difficult to enforce.

Dr. Halligan indicated that the most common complaint that he has heard regards loud music from cars with a penetrating bass. He asked Mr. Zwerling to elaborate on what makes a good ordinance in terms of loud noise from cars and some practical strategies for enforcing the ordinance. Mr. Zwerling replied that the A-scale is inadequate for this type of enforcement. If the sound system in a vehicle is plainly audible at a distance of 100 feet during the day or plainly audible at a distance of 50 feet at night, then there would be a violation of the code if the police officer can say that they heard the sound at that distance. The attempt should be to develop a deterrent response to the problem. The City may choose to have a fine of \$50 for the first offense, a fine of \$150 for the second offense, and an escalating fine of up to \$500 or to seize the equipment. Rochester, New York, solved their problem very quickly by towing the vehicles that were in noncompliance. Their neighborhood empowerment team was getting calls from citizens indicating that they could not sleep because of the loud noise from car stereos. Previously, when people with the loud car stereos were stopped and fined, they did not care. Now that this code has been adopted and they are towing the vehicles in noncompliance, they are paying attention. He noted that

loud car stereos are not used just to enjoy the fine audio sound. As Mr. Zwerling was flying up to Rochester, he picked up a copy of Car Stereo Review at the airport. On the first page they had a picture of an individual sticking his tongue out at the camera. The caption indicated that research shows that loud car stereos are the No. 1 annoyance to people who are 40 years old. This advertisement did not indicate that the listener would enjoy a fine audio experience with the use of this stereo. This was a common type of advertisement in this magazine. Some individuals use loud car audio systems to mark their territory. They are using the noise to enter into another individual's personal space to control their environment. It is a statement they are making. It is perfectly reasonable to make a statement back to them. Free speech, religious speech, and artistic speech can be regulated. Mr. Zwerling has been involved in cases regarding amplified music being played on the streets of New York. It is possible to place time and restrictions on amplified free speech.

Chairman Owens asked for a definition of plainly audible and how cases using that standard could be taken to court. Mr. Zwerling replied that the plainly audible standard includes hearing the rhythmic bass component. It is helpful if the officer can use descriptive terms such as the noise was causing the window to rattle or the noise was causing vibrations. Plainly audible is a relatively subjective standard. The City code indicates that nuisance shall be defined as any act which is unreasonably annoying or vexatious to another or substantially interferes with the rights of others and shall include, but not be limited to obnoxious odors and excessive noise. The standard is that the sound is plainly audible. Using officers to make the determination will be favorable to the violator as police are likely more hearing impaired than the general population because of the use of weapons and sirens.

Dr. Kobach noted that he has heard a few complaints from a couple of the neighborhoods where there are several dogs. One barking dog will incite another until several dogs are barking. He asked what decibel levels barking dogs generate and if municipalities make a distinction between a dog barking once a day when the postman comes by versus barking for several hours. Mr. Zwerling replied that he does not know of any jurisdiction that regulates the barking of dogs on the basis of decibel levels. Several jurisdictions base the regulation on the basis of duration. The code may indicate that no dog can bark continuously for five minutes or intermittently for 15 minutes. He would recommend the duration standard rather than a decibel level standard.

An unidentified member of the audience noted that she observed a court session on television where an individual was awarded \$3,500 because they sued their neighbors who had allowed three dogs to bark intermittently for two years.

Mr. Zwerling agreed that barking dogs can make people miserable. He knew of a case in Tennessee where a retired Nassau guard purchased and moved to a farm to enjoy his retirement. A couple of individuals moved to the adjacent site in a trailer. They took 40, 50-gallon drums and staked 40 blue tick hounds on those drums. The retired individual listened to the barking of the dogs resounding in the steel drums all night. He asked his neighbors to have the barking stopped. The brothers replied that they can allow their dogs to bark as long as they are not running around. The retired guard asked them to be reasonable. One of the brothers responded by going into the trailer and getting a gun. The retired individual pulled his weapon. The brothers wrestled him to the ground and took his gun away. They turned their backs on him.

The retired guard pulled a second concealed weapon. He killed one brother, wounded the other brother, and is facing charges for first degree murder. Mr. Zwerling was asked to take sound level measurements of the blue tick hounds to show that the noise could drive someone insane. However, the dogs had been moved before he could check the sound levels.

Chairman Owens asked Mr. Zwerling to address the issue of there being an unusual sound that is outside the norm. They are beginning to experience a constant hum of highway noises around the community. Once in awhile there is a noise that is outside the norm that may not rise to the level of excessive noise from a decibel standpoint. However, it becomes an annoyance because people are not used to hearing that noise. Mr. Zwerling replied that the world is becoming a noisier place. Hearing tests have illustrated that the average hearing of individuals is decreasing. Unfortunately, an unusual noise may not be an enforcement issue. The federal government has completely abdicated its responsibility for regulating noise emissions from consumer products. In the 1970s, many states were going to start regulating the noise from different products. The manufacturers indicated that they needed to have one federal standard and asked the Environmental Protection Agency (EPA) to regulate sound emissions under one national standard. The EPA had an Office of Noise Control and decided to federally preempt the states and local municipalities from regulating any of those items as they would be regulating the items themselves. Then they started regulating all various noise sources including air compressors and construction equipment. Shortly after that time, the administration determined that there was no problem with noise and disbanded the EPA Office of Noise Control. While the federal preemption still exists, the EPA is currently doing nothing about noise. The point is that the City could be regulating any number of noises from various sources such as construction equipment or vehicles. Just as the EPA required fuel efficiency standards for vehicles to gradually increase from 14 miles per gallon to 24 miles per gallon, they were going to require a gradual decrease in the noise from vehicles. Instead, the federal government is spending money on noise barriers at the cost of \$1 million to \$3 million per mile. The people living next to the wall are helped by the barrier. The people who live a couple of blocks in from the barrier are not being helped as the barrier does not diminish the sound for them.

Most Americans do not like regulations. However, some toys emit noise at the level of 105 to 120 decibels in sound. If one child would surprise another child with a toy that creates that level of sound, damage can be done to the hearing. Europe has noise regulations. America produces toys that are too noisy to be sold in Europe. Also, the Harley motorcycles that are sold in Europe make less noise.

Chairman Owens commented that Mr. Zwerling discussed regulation issues versus enforcement issues. That is one of the issues that the Governing Body should consider. He questioned the value of a regulation that cannot be enforced. Mr. Zwerling replied that one example of a regulation issue is that most jurisdictions exempt emergency vehicles with sirens from the noise ordinance. An attempt to give people peace from that noise is not an issue of enforcement. It involves the jurisdiction deciding that they are no longer going to allow that noise. He agreed that it is important to make sure that whatever regulations are created are enforceable.

Mr. Sader said that he is not on the Public Safety Committee and has not participated in previous discussions on this issue. He asked how it can be determined if an

ordinance is needed and if Mr. Zwerling was advocating that noise ordinances are automatically advisable for communities. Mr. Zwerling replied that he was attempting to inform people of their options. For example, last year he was asked to determine if a new noise code was needed in a particular jurisdiction. The standard for that jurisdiction was loud and raucous noise. Mr. Zwerling asked if there had been any trouble with enforcing that law or if that law had ever been successfully challenged in court. The response was negative to both questions. He advised that the jurisdiction should retain the same code as it works. Mr. Sader asked if Mr. Zwerling was aware of a noise ordinance not working in a particular community as a result of public outcry. Mr. Zwerling replied that he is aware of some cities that have changed their noise ordinance and of other cities that have retained their noise ordinance for a long period of time. In some instances, a case will not be upheld in court as there is a poorly drafted code although the officers take the time and effort to take the measurements. They eventually do not bother to attempt to enforce a code that is not workable. If the code works and they are successful in their enforcement efforts, they will continue to use the same code.

Dr. Kobach expressed concern about over inclusiveness and under inclusiveness from a legal point of view. He did not want to set a threshold that is easily surpassed by all kinds of noise sources and then to add several exemptions. He asked if there is a decibel level that would allow necessary noise, such as lawnmower noise, but would not allow the undesirable noise that is more annoying. Mr. Zwerling replied that if lawn mowing is to be allowed up to the property line within the code, it would be necessary to set the standard at 80 or 90 decibels. That would make it difficult to have any enforcement. Mr. Zwerling suggested that a jurisdiction should determine that yard maintenance equipment can be at 80 decibels at 50 feet for the years 2000 through 2003. For the years 2003 to 2006, the yard maintenance equipment would have a standard of 78 decibels at 50 feet. With this type of a code, it may force the manufacturers to start making quieter equipment. Some jurisdictions ban particular pieces of equipment for a certain period of time. In Highland Park, Illinois, leaf blowers are banned during the summer. They allow the leaf blowers during a three-month cleanup period in the fall and the spring. It is almost unavoidable to exempt some sounds.

Chairman Owens provided an opportunity for people in the audience to ask questions.

An unidentified speaker, wanted to respond to the complaints about barking dogs. He noted that dogs can be a deterrent to crime. He questioned if additional police officers would have to be hired to enforce the noise code. He has lived in the City for over 50 years and is proud of Overland Park. This is a place where people love to live. He wanted to be sure that the noise ordinance was not too stringent and felt that the issues could be reasonably addressed. In response, Mr. Zwerling noted that a sound only becomes noise if there is a complaint. If this individual and his neighbor are happy with each other, then they will not have a problem with the sound. If someone moves into the neighborhood and decides that they want to have a carpentry business in their home and they use a saw 12 hours per day, there may be a different reaction to the sound. This code would allow the neighbors to have protection against that type of circumstance. He also noted that there are ways to quiet dogs. Dogs that are kept outside are often barking because they want attention.

Another unidentified speaker, expressed concern about noises which cause a commotion in her neighborhood. She asked if the study would be conducted according to different categories such as single housing, multi-family housing or if the study would be conducted per complaints that are presented. She questioned how a noise would be investigated when it is no longer occurring by the time the officer arrives. She has lived in this area for 20 years. The past three years she has been miserable because of noise. Overland Park City ordinances are in place. She asked what they can do to enforce the current noise codes and what they need to address further noise. Mr. Zwerling asked for specific sources of annoying noise. The unidentified speaker replied that cars are causing noise at night. In multifamily housing areas, some of the residents will have parties that last later than 2 a.m. The music can be heard from two or three houses away. She was told when she called to complain that it takes a long time to respond and the determination of the issue is made by the officer who responds. Mr. Zwerling replied that some jurisdictions have determined that if the music from a party is plainly audible at a distance of 50 to 150 feet, that is a violation. There are some instances when it may be more desirable to use a meter to check the sound coming from certain facilities, such as a bar. Only officers who have been trained can enforce that determination. If the noise from a factory is being tested, it is important to be sure that a meter is being used to check the decibel level. If a party is being investigated, any officer can enforce the plainly audible determination that noise is heard from 150 feet away without a meter. The unidentified speaker noted that one option to avoid the noise is to move away. Mr. Zwerling replied that if an individual has lived for years in one location and someone moves next door who makes noise, it may be necessary to use the noise code to address this issue.

Ms. Lynn Wieggers, indicated that her question involves an ordinance that has been crafted to include low flying aircraft over her neighborhood. She is thoroughly stressed out in a downward spiral as a result of the noise from the aircraft. She was told by a representative of the FAA that the way to deal with the noise is to have it included in a City ordinance. She was happy to hear that suggestion. Mr. Zwerling stated that he gave Ms. Wieggers his card and was pleased to hear that this comment had been made. He would research the issue. Chairman Owens added that the City could also research this issue.

Another unidentified speaker asked if it is prudent for the City to define certain levels of noise or sound to be allowed for different categories at certain times of the day. Mr. Zwerling replied that they have a model ordinance in the State of New Jersey that allows limited permissible uses. They operate from a point where they carefully allow exemptions such as the use of residential power equipment that is properly muffled from 8 a.m. to 9 p.m. on week days. The ordinance must be crafted as tightly as possible. In Illinois they had the plainly audible standard for vehicular sound systems. However, they exempted vehicles engaged in advertising. Someone with a private vehicle was stopped and he challenged the fine. The Supreme Court of Illinois found the code to provide unequal protection. It was likely that someone from the ice cream truck industry was exempted. If the audible standard is applied to personal vehicle sound systems and not to commercial vehicle sound systems, it may be found to be unequal.

Another unidentified speaker asked Mr. Zwerling if it is more effective to use criminal or civil penalties in the enforcement of a noise ordinance. She noticed that in some

instances the judges imposed their own penalties. She also asked if it is almost impossible for a person to rebut the charge when the police officer has measured the level of noise. In response to the first question, Mr. Zwerling indicated that he prefers to use civil penalties to enforce a noise ordinance. The level of evidence that is required for a criminal conviction is greater than what is required for a civil conviction. The fine structure can be punitive enough to serve the purpose of enforcing the ordinance. For example, the first violation could result in a fine between \$100 and \$250. By the third violation, there could be a seizure of equipment or some action that would cause the noise to cease. Civil penalties are likely sufficient. He recommended that the code refer to each day the offense occurs as a separate and distinct offense. The second issue of rebutting a charge in court would be best addressed by a lawyer.

Mr. Zwerling proceeded to demonstrate various levels of sound at 65, 60, and 55 decibels. He explained that at 65 decibels it is possible to converse with someone at a distance of 1 meter. A standard should be set for daytime hours to protect an individual's peaceable enjoyment of their private property. For example, if someone is having a barbecue, they should be able to talk. With a sound level of 65 decibels, it is difficult to carry on a conversation. With a sound level of 60 decibels, it is possible to have a conversation, and the level is not as intrusive. With a sound level of 55 decibels, individuals can enjoy their private property while their neighbors are enjoying their music. Many communities will set 55 decibels as their daytime permissible standard in a residentially zoned area and 60 decibels for areas that have mixed uses of commercial and residential. He would recommend 50 decibels as the property line standard for all areas at night because people should be allowed to sleep even if they live near a commercial area. Areas that are industrial may have a daytime standard of 65 decibels. He would not recommend allowing a standard of 70 decibels. The state of New Jersey has an overall standard of 65 decibels during the day. If a factory has been there for several years and it is demolished and replaced with condominiums, as soon as the certificate of occupancy is issued, the standard of 65 decibels is automatically applied. This sound level is enforced.

Mr. Musil noted that there is a problem with mobile transient sounds with motorcycles. An officer will likely not be there when they are needed. Can an ordinance be effective that would allow a citizen to complain, provide the license number of the motorcycle, and indicate how far away they heard the noise. Mr. Zwerling replied that in some jurisdictions, that evidence would be sufficient. That is one of the few times when a plainly audible standard has not been sufficient. In a town in Florida, a plainly audible standard was used by a citizen to make a complaint against a bar. The judge threw out the case claiming that a plainly audible standard was vague and over broad. The judge ruled that loud and raucous would be acceptable.

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At 8:30 p.m., Chairman Owens declared the Joint Meeting of the Community Development and Public Safety Committees adjourned. Minutes transcribed by Pamela Blaszyk.

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Thomas C. "Tim" Owens, Chairman  
Public Safety Committee

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Michael J. Lally, Chairman  
Community Development Committee