

**Meeting of
December 17, 2012**

Record of the proceedings of the Boyne City Planning Commission meeting held at Boyne City Hall, 319 North Lake Street, on Monday, December 17, 2012 at 5:00 pm.

Call to Order

Chair MacKenzie called the meeting to order at 5:00 p.m.

Roll Call

Present: Gretchen Crum, George Ellwanger, Chris Frasz, Jane MacKenzie, John McCahan, Tom Neidhamer and Joe St, Dennis
Absent: Jim Kozlowski and Lori Meeder

Meeting Attendance

City Officials/Staff: Planning Director Scott McPherson, City Manager Mike Cain, City Attorney Jim Murray and Recording Secretary Pat Haver
Public Present: Twenty eight, including representatives from the press

**Consent Agenda
MOTION**

2012-12-17-3
Crum moved, Ellwanger seconded, PASSED UNANIMOUSLY a motion to approve the consent agenda. Approval of the November 19, 2012 Planning Commission minutes as presented.

**Comments on
Non-Agenda Items**

None

**Reports of Officers, Boards and
Standing Committees**

None

Unfinished Business

Planning Director McPherson reviewed the request of the Planning Commission from last month, of which they gave direction to Kirtland to prepare a proposal to bring back for consideration. It was received at noon today, and was forwarded via email to the commissioners, along with hard copies made for the meeting tonight (received and filed as Appendix A).

**Kirtland Products
follow-up**

Joe Quandt: Council for Kirtland – Apologized for the lateness in delivering of the reports. They are presenting (3) different proposals for consideration.
Tom Monley: President of Kirtland Products – Reviewed their understanding from the commission, as they understood it; it was to come up with a reasonable standard on the C scale in order to amend the conditional use permit. They have spoken with two different sound engineering firms, Kolano & Saha Engineering and Soundscape Engineering. Kirtland believes that Proposal 3 is the most appropriate proposal to work towards, but will consider which one the Planning Commission feels is the best and will take that path forward. Monley went through each of the proposals submitted stating the pros and cons as listed, and also went through each of the exhibits during this time. Three pieces of equipment identified by the RSG report, page 30, that are highlighted on the 250 Hz at 42 dB, and one that is at 40 dB those are the three noise producing machines that will be mitigated, Kirtland’s remedy in reduction of noise levels rather than doing a sound study. If further mitigation needs to be done, or not, they would like to go ahead and do this as the fastest path to move forward, mutually deciding on an A scale standard, and fixing those machines that are the most annoying in the RSG report at the 125/250 Hz level. The Kodiak exhibit on sound absorption co-efficient (exhibit #3), recommends the 703 FRK as the best for noise absorption on the 125/250 octave band scales, and fiberglass boards at 100 mm 4” thick which is best for low frequency octave bands. In the RSG report, the concrete walls at 8” on the STC (Sound Transmission Co-efficient) scale come in at 45, and these other materials

come in at 51, higher in sound absorption. We would like to come to a mutually agreeable solution to put the noise issue to rest.

McCahan – Will these two materials be used together?

Monley – Not certain, that is what was sent to me on Friday that they recommend.

McCahan – Would it be a wooden structure, with studded walls that would enclose the equipment, and the sound would be further mitigated than what was indicated in the RSG report?

Monley – Unknown, they would need to come out and design it, and give us further information. Until the design is done, don't know what the costs will be.

McPherson – the Planning Commission asked for three items for this meeting:

- 1) a proposal for the noise
- 2) status of stack testing results
- 3) landscape plan

Quandt – The stack testing preliminary report came back on Friday; we are getting a final report available for the DEQ, expect to have later this week. Preliminary results came back as no VOC emissions exceeding standards.

Monley – Talked to DEQ this morning that they had a draft report, indicated they did not want any reports until they are finalized, and then they will review.

Public Comment opened at 5:26 pm

Lisa Liebgott on M-75 – Are the enclosures just walls with no ceilings, will it funnel the sound up and out?

Monley – They are fully enclosed, all of the equipment identified in the RSG report. The three pieces.

Liebgott – It has been loud and constant again, my husband is still having problems with losing his voice.

Mike Hausler: 450 Cozy Nook – We don't need a noise study. Before Kirtland came in there was not any sound from the Industrial Park, what do we have to accept? The Planning Commission was proposed no noise.

Tim Arner: 701 Alice St - I agree with Mike, I have been in my house for over 30 years, I have never heard any noise of any business in Boyne City that has been troublesome for my family until Kirtland started to operate. There are a number of families in town suffering from the noise, we did not ask for it, however, must tolerate it. I don't always hear it, but at times I do, it is still evident. I encourage you to continue to work diligently; Mr. Cain's comments from last month were appropriate regarding the original Kirtland presentation to resolve the issue.

Don Nessen: Boice St. - Last Wednesday was terrible all night really bad, walking home from downtown, when I hit E. Main St. It has been going on for over a year. How long until they are told to fix, every month they come here with an excuse to run one more month, it is going on the second year. When is that going to be it? We have had all kinds of meetings and tests.

Deb Ferris: Brockway St. – Last Wednesday, I did hear it, and smelled a very foul smell that penetrated my house. It's not just the sound, but the smell. Is it due to the wood type? Sometimes it does have the smell, sometimes it does not.

Public Comments closed at 5:33 pm

Board Discussion

MacKenzie – Do we want to go onto the landscape plan, or discuss the proposals first?

Crum – Lets go through the proposals first

Neidhamer – I would like to stay on this and hear the advice from staff, city

council's advice, and Mike Cain's advice. I would like to stay on this topic.

St. Dennis – I have never seen a decision made by this board, when information is presented at 4:58 pm that we were happy with. I have a problem with only 2 minutes to go over a packet like this. It was poor planning, how long is this going to go on? Getting the packet when I walk in the door is not good planning.

MacKenzie – If we are interested in the 3rd option would like more information about the materials.

McCahan – It was tough for it to come so late in the day. The equipment in proposal 3 you are going to put in the enclosure, are they all of the equipment called out in the RSG report above 40bB?

Monley – One is at 40, and the other two are above 40.

McCahan – There are no other pieces of equipment outside that are above 40?

Monley – Not according to the RSG report.

McCahan – Something needs to be done to enclose this equipment. RSG said it would reduce the sound. Why not just go ahead and proceed with that, and get it done? Need to determine which matrix best identifies low and mid noises. Fair and reasonable is what we are all looking for. You need to get moving with a design and construction for the noise pieces of equipment enclosure. I feel the Kolano proposal was better when I read it. Your KVA report shows that 170 is a ball park number for usage.

Monley – That is when Arete' is running. We use 1600 KVA when the plant is fully running. The average 300 KVA usage is when Kirtland's lights were also on, and the pallet machines were running, trying to keep people busy.

Ellwanger – Each of the proposals will take 6 weeks or more, we have to do something now, I'm sympathetic to you, however, we need to get started with something.

Frasz – Our expectations were clear, we identified them on September 17th, the applicant was not in compliance with the issued conditional use permit, based on 4 points

- Sound produced by the plant exceeds levels represented to the Planning Commission,
- The sound abatement and landscaping measures as proposed by Kirtland and approved for the conditional use final site plan have not been completed as all equipment exceeding 40dB was not placed inside the building,
- Landscaping as shown and described in the final approved development plan has not been installed,
- Concerns for public health, safety or welfare by reason of excessive production of traffic, noise, smoke, odors or other such nuisance.

It has been 90 days, our expectations were very clear. We don't have the confirmation on the stack test, we don't have the equipment exceeding 40dB inside a building, I think the applicant is working hard to address the issues, but it has been 90 days, we as a commission have to say at some time, have they met the criteria that was presented by them to comply with the permit, and we would have to say no. The last two meetings we did not make it our final decision in hopes they would make efforts to get something going to be in compliance with the conditional use permit. We could make it final, and see what happens, based on what was proposed to us.

Crum – Are you saying enforce the conditional use permit at 40dB? We did find them non compliant, and did not take action.

Frasz – In the September 17th meeting, found non-compliance, and they have not addressed those issues. Nothing different or new since then.

Ellwanger – I agree with Chris 100%, I hope something new has started or getting

done at each meeting.

MacKenzie – Making the decision final, doesn't solve the problem any faster than continuing to work with them. Making it final could make it go to court, and it could drag out a lot longer.

Ellwanger – to remain viable, they need to meet the criteria.

MacKenzie – Things have been done the Traverse City Ordinance officer was here, we have had RSG in also.

Frasz – Things have been happening, I was speaking to the non-compliance, we have known that for 90 days, it was spelled out clearly, for that reason, I don't believe we should have this conditional use permit active. Maybe making it final will instigate something to happen.

Neidhamer – Chris, I agree with you, and I agree with Joe that we got the packets way too late, they were suppose to be in so that staff could review and send out, I also agree with Jane's comments, the process of finding the solution would work better if we work together, rather than in court. I would like to hear council's opinion.

Jim Murray: Legal council for the City – From the legal perspective, nothing has changed from the last meeting. The recent materials, I have read. If you make the decision final it will probably head to court, the court may order them to put the equipment indoors but will that alleviate the problem? An amended conditional use permit may get to the heart of the problem. If you go to court it will be out of your hands, they may agree as it is clear in the conditional use permit, however, it won't address the smell or environmental issues. The best interest of the city may be to continue working towards a solution with Kirtland. We know time has lapsed, we know it has taken longer, but you still have things to balance, is there more out there or a better option, than making it final. I do see a need for resolution.

Joe Quandt – In November you asked us for a proposal, and we have given you three, that is what was asked for, the first couple of proposals look at what you may want. Now that it has been identified that it is C scale or octave band noises, you sent us out to come up with a reasonable standard. It is difficult to get things done in a short time frame, to get information and noise analyzed. We are trying to be responsive, but knee jerk reaction of throwing us off a cliff to see what remains is not an appropriate response.

Frasz – Comments are not knee jerk reactions; this has been on the table a lot.

Quandt – I would encourage you to take a look at the conditional use permit, it has none of the things that have been identified, yes there were findings of fact and conclusions, there is not a single condition attached to the permit. You identify four things, with two not having objective criteria established for the basis. We are looking for objective criteria in proposals # 1 & 2. Stack emissions, you have no jurisdiction, it is a DEQ matter. Equipment over 40dB not being in the building: equipment identified as likely being over 40dB was put in the building. We believe the generalization and promise that all equipment over 40dB would not be outside the plant is not accurate. If you look at what was promised on the application to be inside the building, it was put inside. The landscape issues, a plan will be implemented; most of the consultants tell us that it will not have an impact on the noise issues. Proposal 3 is to try to provide immediate relief, getting an enclosure around the equipment that is appropriate for the equipment and sound abatement. Bottom line, we are trying to get to an amended conditional use permit that we both can agree on, type of enclosure and sound suppression and we have to agree that it will be enough. We don't want to push off to another meeting, but also don't want my clients to invest money if it is not adequate without objective standards. We know we can't satisfy everyone, we are trying to get to what objective standards are, agree on what it is, agree on what corrective actions needs to be

done.

Murray – The DEQ jurisdiction is correct, in the Kirtland application form dated 11-16-2009 page 12 of 12, it was stated “we have placed all loud (over 40dB) equipment inside the building.” This was part of the application, and discussed at the Planning Commission. When you are balancing things, this will be at the heart of the matter. We all agree that was the objective standard brought before the Planning Commission in 2009. I have heard the term “production equipment”; I don’t know what that is. In your findings perhaps you want to or should make it clear on equipment or production equipment.

Mike Lange: Kirtland Products – There was a question last time about production equipment vs. non production equipment. “All equipment which exceeds 40dB will be inside” that is Tom’s proposal. To enclose all equipment over 40dB, essentially it will be inside. The sound transmission co-efficient of 8” concrete walls is only 45, the Kodiak Group recommended panels which has the co-efficient of 51. These are Owens Corning dense fiberglass panels, which will be off-set in a decoupled fashion. There is some equipment and pile of chips that can not go inside; truck tipper, wood chips, front end loader. The cyclone is a piece of steel shaped like a cone is outdoors; it has no motor and does not make any noise. All equipment identified at the proposal, all of that equipment that makes noise is inside. What is outside are the blowers that move the material from one piece of equipment to another, we did not realize that those pieces of equipment would exceed 40dB. Tom has proposed, based on RSG findings which identified which pieces are over the 125/250 bands, to move forward and enclose those pieces of equipment. That is what is proposed tonight.

Neidhamer - I’m in favor with moving ahead with proposal 3, because its action, but do not agree with locking into 60dB or 55 dB, which is part of proposal 3.

McCahan – I agree with Tom, 3 months ago we should have enclosed the materials. I’m in favor of that part of proposal 3, but not the A scale limits from Traverse City. We need to hire someone to come up with a good limit, so you can modify your conditional use permit. I’m concerned about who will pay for this. Need to figure out what is a reasonable limit on the octave band or C scale limits. Do not want proposal 3 to be locked into Traverse City A scale.

Monley – We need a standard to mitigate to.

Murray – We have closed the public comment, and are in board deliberation.

Mackenzie – We have three proposals that we have had 5 minutes prior to the meeting to review. It has been 90 days so far, this is what we asked them to bring back to us, but I don’t feel comfortable picking one without significant time to review. I would like more information about the third one.

Quandt – We wanted to get before the Planning Commission, three proposals as a template to move forward. You want us to come up with a standard, and modify to meet those standards, that are proposal # 1 & 2, or what is most difficult is the output of money putting in one patch over another patch. We need to have a predictable pathway that is good for the community as well as the company. If we do proposal 3, we want to have reassurances that if we have taken the corrective action and done the work that the conditional use permit is modified to the objective that everyone has agreed to. My suggestion is if you need more time, apologized again for the lateness of the reports, but they were given to the commission when they were available, we will have one of the representatives from Kodiak here at the next meeting, the time between now and January’s meeting, we will have materials available, and if the Planning Commission is prepared to move forward on proposal 3 or some modification of proposal 3, tell us what it is to make the commission and the community satisfied. We need to have something scientific, objective, measurable and achievable. If you want to take the

time to review, we can bring someone from Kodiak with a mindset that proposal 3 is what you want, then we will be prepared to make sure proposal 3 is implemented as quickly as construction allows it to be.

Crum – Predictability goes both ways. We do have citizens who have over a year or two, attended meetings and have been involved in exchanges and expect a resolution. I think we were pretty clear, and the citizens are telling us what has been proposed is predictable and not a solution. We determined that it was not in compliance, and have tried to give guidance.

Murray – Months ago was the desire to work with staff and ultimately bring to you something to review, and at some proper time ask you to amend the conditional use permit to incorporate either proposal 1, 2, or 3. You don't have to do anything, you can act to make it your decision final, or give direction to staff; Scott, Mike Cain, and myself.

Neidhamer – We have the World Health Organization 40/45/50 dB on the A scale, we don't know if that can still be heard at the neighbor's houses.

McCahan – Recognition from Kirtland that they have equipment outside that was above 40dB, we are going to enclose it right away, as soon as we can, and we are interested in modifying the conditional use permit with some type of metric, C scale, octave, and hire acoustic professionals to come up with reasonable and fair standards for the community. That is what they ought to be doing.

McPherson – Proposal 3 moves in the direction that is closest in compliance to the original approval. It is very clear in the approved site plan that they indicated all equipment over 40dB would be inside. They admitted that they made an incorrect statement, and they are trying to correct by putting enclosures around some of the equipment identified in the RSG report. My concern, by enclosing the 3 pieces identified, when it is done and there is still a disturbing noise that can be heard, what position does that put us in? Reluctant to say that is an acceptable solution without knowing what the mitigated results would be. Also disappointed in the lateness of the report, and it does put the planning commission in a bind to make a decision based on limited review.

Frasz – On the conditional use permit we didn't clearly identify what the final noise level should be, only to have equipment over 40dB enclosed.

McPherson – Based on the enclosure, they could enclose with a little fiberglass shack and meet the conditional use. Going this direction, by being specific about putting up adequate enclosures around the most disruptive machines, what happens if they do 3, and afterwards find that a piece of equipment at 39dB is a problem.

Neidhamer – Another possibility is after enclosing the 3 pieces and the outcome does not change, maybe the noise is coming from the big building itself. A possible solution, can we encourage them to proceed with proposal 3 and enclose the 3 identified pieces in good faith, and not lock into a decibel range. Would appreciate them moving forward right away, in good faith, and in compliance with the permit, to maybe solve the problem. Is that a way to move onto the next month?

Ellwanger – Would they be willing to break ground and start with some of the noise suppression measures?

Leon Tupper: Kirtland Products - From day one we have been aware of noises emitting from the facility, and have been very open, transparent and aggressive in terms of addressing without benefits of scientific support. We were in sound mitigation action within 30 days. The non-scientific approach taken did not bring about the results we would have liked, however, did take into consideration the community feed back about acceptable sound or not. The City recognized our dilemma and thought there was value in pursuing services from RSG and their analysis and guidelines and direction. We have been waiting for the studies to be

completed before we started sound mitigation. RSG studies concluded with recommendations in their best judgment, to address those pieces of equipment which could resolve the matter. We have been asked to work towards an undefined goal. I don't believe we can achieve 100% community support, maybe 75% community satisfaction, what level is acceptable to the Planning Commission? What standards are you looking for so that we can direct our sources or experts to assist us in working towards those goals.

Neidhamer - I agree and appreciate your dilemma, however, you are asking us to set a city ordinance dB scale tonight, we can't do that.

Murray - You don't have the authority to do an ordinance change tonight; you can make the decision final, or elect to do nothing. You can encourage them to go in one of the directions. Seek an amended conditional use permit based on the submitted proposals 1, 2, or 3.

Frasz - On the application 40dB was submitted, is there strong enough evidence to say that what was in the application which was used to approve the conditional use permit, 40 dB equipment be encased, be a logical step that the sound at the edge of the property be at 40dB or lower?

Murray - It was in their proposal, and that is what the court would consider.

MacKenzie - We are not sound engineers, but if you have 5 pieces of equipment running at the same time, all at 40dB, it will be louder than 40dB.

Murray - they would like you not to make the decision final, as it would force their hand. Ultimately, you can make it final or not. Do you want to give them more additional time or not? One gets to the heart of the application, and one addresses the C scale noises, which is not indicated in the application.

McCahan - The proposed construction with the fiberglass panel is equal to, or better than what is in the RSG report. I think that it would solve a lot of problems if they enclosed the equipment.

City Council Murray was excused at 6:45 pm, due to a prior conflict

MacKenzie - We have a few options:

- Take no action
- Take action to make it a final decision
- Direct staff to continue to work with the applicant
- Encourage Kirtland to take some action

Neidhamer - Some of my thoughts towards completion

- Encourage Kirtland to start construction of the enclosure with sound abatement for the outside machinery, ASAP, with a construction schedule to be published,
- Encourage Kirtland to work with staff to analyze the direction of the three proposals for the best community outcome,
- Kirtland come to the next meeting with or without Kodiak, have a design for the building enclosure for the equipment over 40dB and proceed with construction with a detailed time line.

St. Dennis - If we do ever have winter, construction could be held up.

McPherson - To make it clear, your proposal for the 3 pieces of equipment to be enclosed is the cooler fan model FC19 is that correct?

Monley - No

McPherson - So the bag house fan model FC 21 (40dB), dry hammer mill vacuum pump (42 dB), and enclosure of the air power unit model M-D5009 (42 dB) will be enclosed. We do have one that is at 40dB that will not be enclosed.

Monley - That is correct, there is one enclosure that needs to be re-done.

Neidhamer – The motion will address the most obvious, to get the machinery in an enclosure, however it does not address city wide dB standard levels, which could take months, and we don't want to set a specific standard for Kirtland, and have to change it later for the entire city.

Frasz – We need to do what is best for the community in the best time frame. I want the applicant and the community to succeed. Things need to get done quickly.

****MOTION**

With no further discussion, **motion by Neidhamer, seconded by McCahan** to

- Encourage Kirtland to start designing and construction of the enclosure for the three identified machines,
- Staff and Kirtland continue to communicate and work closely on the three proposals,
- Come back in one month to the Planning Commission with a time line if construction begins within the month, staff report updating findings with Kirtland communications on the proposals.

2012-12-17-6A

Roll Call:

Aye: Ellwanger, Frasz, MacKenzie, McCahan and Neidhamer

Nay: Crum and St. Dennis

Absent: Kozlowski and Meeder

Motion Carries

****MOTION**

St. Dennis moved, seconded by Ellwanger, PASSED UNANIMOUSLY to postpone the submitted landscape plan until next month.

**Water Street Center Plan
Amendment**

Chair MacKenzie recused herself due to a continued conflict of interest; she left at 7:02 pm and turned the meeting over to Vice Chair Crum.

Planning Director McPherson reviewed the staff report that was included in the agenda packet. In October, Mr. Kruzel came before the board with a request to amend the site plan for the Water Street Center, in order to purchase parking spaces that were adjacent to his building from the center. He did not have a site plan for his building, and the Planning Commission wanted to see one prior to approval. The proposal is to purchase a 20 ft x 165 ft strip of parking lot to be added to his building, which would require an amendment for Water Street. Site plan amendment was submitted for his building, which would add (2) more units, for a total of 7 units, (4) two bedroom, and (3) one bedrooms. Previously this plan received a variance to allow the building to be constructed, and gave a variance of 8 parking spaces in total. One additional amendment was reviewed which would require an additional parking space, and a variance was granted for that space. By transferring this property, it would give him 14 parking spaces, which is more than a total required of 13 spaces.

Public Comment opened at 7:09 pm

Jim Baumann: Boyne City Chamber of Commerce Director – Love the idea of more affordable housing, especially in the downtown area, I would encourage you to have parking for the building limited to the back of the unit, and not on the street, taking up parking for businesses in the area.

Hugh Conklin: Main Street Manager – The Main Street Design committee has not formally reviewed the plans, and has no input on it at this time.

Public comment closed at 7:10 pm

Board Discussion

Ellwanger – Extra spaces have been picked up for the tenants in the back, *parking meets our formula, and I have no objections.*

St. Dennis – This does not affect the mall *parking*; however, *would encourage tenants parking in back to take some of the parking off of the street.*

Kruzel – I will have assigned parking spaces for the tenants, so they know where to park.

McPherson – I would recommend that the Main Street Design committee have a chance to look at the plans and elevations for the buildings.

Frasz – The property has designated specifically for parking and not buildable for the future?

McPherson – That is the proposal made to staff and this commission, that it would be used for parking only, no other plans has been submitted.

Frasz – What about dumpsters placed in the parking area?

Kruzel – American Legion dumpster is enclosed, and will be used in exchange for parking.

St. Dennis – What about the containers at the end?

Kruzel – They are mine, 4 are recycling and 1 is trash. With winter coming, they may be moved into the garage.

With no further board discussion, **motion by Neidhamer, seconded by St. Dennis**, to amend the development plan to the Water Street Center, survey completed by Ferguson and Chamberlain, dated November 20, 2012 with the 20 ft. x 165 ft piece of parking lot being separated from the Water Street Mall, with the easement to remain in effect.

****MOTION**

2012-12-17-6B(1)

Roll Call:

Aye: Crum, Ellwanger, Frasz, McCahan, Neidhamer and St. Dennis

Nay: None

Absent: Kozlowski, MacKenzie and Meeder

Motion Carries

Motion by St. Dennis, seconded by Ellwanger, to approve the site plan amendment to 310 S. Lake Street with the following conditions:

- Main Street Design committee review and input,
- Dumpsters removal

This amendment approval is for 2 additional 2 bedroom units for a total of 7 units, adding the 20 ft. x 165 ft. parking only area to the property, *which now would meet ordinance requirements of 13 parking spaces.*

2012-12-17-6B(2)

Roll Call:

Aye: Crum, Ellwanger, Frasz, McCahan, Neidhamer and St. Dennis

Nay: None

Absent: Kozlowski, MacKenzie and Meeder

Motion Carries

New Business

Included in the agenda packet is the 2013 meeting calendar, for your review and consideration. **Motion by Neidhamer, seconded by McCahan, PASSED UNANIMOUSLY**, to adopt the 2013 calendar as proposed.

Adoption of the 2013 Calendar

****MOTION**

Staff Report

Leslie Meyers will be starting on Wednesday, December 19th, as the Assistant Planning Director. She brings many years of experience with her, and will be an asset to the Planning Department.

Good of the Order

Is the city looking at equipment that is easier on the curbs while snowplowing? Kovolski is aware and investing materials.

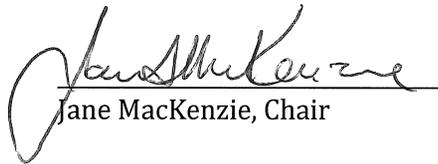
Adjournment

The next meeting of the Boyne City Planning Commission is scheduled for January 21, 2013 at 5:00 pm in the Auditorium.

2012-12-17-10

Neidhamer moved, Frasz seconded, PASSED UNANIMOUSLY a motion to adjourn the meeting at 7:29 p.m.

****MOTION**


Jane MacKenzie, Chair


Gretchen Crum, Vice Chair


Pat Haver, Recording Secretary

Memorandum

Date: December 13, 2012
To: Boyne City Planning Commission
From: Tom Monley
Re: Proposal on addressing noise concerns in the community

Introduction

Although no motion was made at the Planning Commission meeting on November 17, 2012 regarding what the expectation of the planning commission was in regards to Kirtland Products developing a plan to present at the December 17, 2012 meeting, we believe the expectation (1) was to have a proposal to establish a dB (C) scale standard that was quantifiable, reasonable and could be applied to our amended conditional use permit that included timelines. We have explored three different proposals for the planning commission to consider. They are listed below. In addition, timing for each proposal is identified. Although we believe that Proposal 3 is the most appropriate proposal, we are willing to take whatever path the commission finds appropriate.

Proposal 1

Hire a sound engineering firm to evaluate noise levels within the community while various businesses within the Industrial Park are running and while they are not to develop a reasonable dB (C) scale standard that can be applied to Kirtland's amended conditional use permit. We have received proposals from Kolano and Saha Engineering in Waterford Michigan and Soundscape Engineering in Chicago Illinois. (See exhibits 1 and 2)

Pros

- Sound evaluation study could be done relatively quickly.
- The city would have a dB (C) standard to address low frequency noise.
- The standard could easily be enforceable by the city.

Cons

- Kolano & Saha, RSG and Soundscape do not recommend using a dB (C) scale standard.
- If the study does find that mitigation of equipment is necessary, mitigation work would extend the timeline to an unspecified time period.
- The study may show that a reasonable standard would conclude that nothing further would need to be done (see exhibits #4, 5 and 6) by Kirtland Products.
- Some in the Community may not be satisfied with the end result.

Timing - 3 weeks from scheduled visit for study. Mitigation of equipment, if required, is unknown.

(1) Taken from the minutes of November 17, 2012

McPherson-"When a noise standard or ordinance is identified as our own, we need to make sure the C scale is looked at."

Murray-"...do we think Kirtland should propose a C scale of an established number to be reasonable?"

Ellwanger-"If the C scale is the way to go, what is an acceptable C scale level?"

Murray-"Kirtland...make proposals to address the A scale and C scale noises that both sides could agree to make work..."

McPherson-"The 125/250 frequencies are the most prominent...which translates to the C scale, per RSG."

McCahan-"Can you get audio engineers in to make recommendations on...what a reasonable C scale metric would be?"

Proposal 2

Hire a sound engineering firm to evaluate noise levels within the community while various businesses within the Industrial Park are running and while they are not to develop a reasonable Octave band scale standard that would focus on the 125 Hz and 250 Hz that can be applied to Kirtland's amended conditional use permit. We have received proposals from Kolano and Saha Engineering in Waterford Michigan and Soundscape Engineering in Chicago Illinois. (See exhibits 1 and 2)

Pros

- The study may identify, (using the RSG report), what needs to be mitigated to meet the standard.
- The city would have an octave band standard to address low frequency noise.
- This method was recommended by Kolano & Saha, RSG and Soundscape as a more appropriate standard.

Cons

- Specialized octave band sound measuring equipment would need to be purchased.
- Training would be required on the use of said equipment.
- If the study does find that mitigation of equipment is necessary, mitigation work would extend the timeline to an unspecified time period.
- The study may show that a reasonable standard would conclude that nothing further would need to be done (see exhibits #4, 5 and 6) by Kirtland Products.
- Some in the Community may not be satisfied with the end result.

Timing - 3 weeks from scheduled visit for study. Mitigation of equipment, if required, is unknown.

Proposal 3

Use the dB (A) scale standard of 60 dB (A) during the day and 55 dB (A) during the night at receiving residential properties that can be applied to Kirtland's amended conditional use permit and in addition mitigate the 3 pieces of equipment that were identified in the RSG report as being the equipment that was emitting the most egregious noise on the 125 Hz and 250 Hz octave band scale (See exhibit #7). We have received a quote from The Kodiak Group in Grayling Michigan for mitigating the equipment as indicated. (See exhibit 3)

Pros

- The standard could easily be enforceable by the city.
- It would provide that the equipment identified in the RSG report as emitting the most egregious noise on the 125 Hz and 250 Hz octave band scale be mitigated.
- The timeline would be shortened by not having to wait for a study before mitigation would begin.

Cons

- Some in the Community may not be satisfied with the end result.

Timing – Design is 4 weeks from receipt of purchase order. Installation is 3 weeks from design completion.



1 Altair Drive
Boyne City, MI 49712

Conclusion

Kirtland Products has submitted three alternative proposals, with each designed to form the basis for an amended conditional use permit. It is our hope that a path forward can be agreed to so that all parties can finally put this noise issue to rest.

Soundscape Engineering

Providing Solutions from Professional Engineers

December 14, 2012

Tom Johnson
Manager, Quality Assurance
Kirtland Products, LLC
1 Altair Drive
Boyne City, MI 49712
tjohnson@kirtlandproducts.com

Subject: Scope-of-Services Proposal to provide acoustical measurement services to document sound levels in Boyne City, Michigan

Dear Mr. Johnson:

Thank you for contacting Soundscape Engineering to request this proposal. The scope-of-services described herein is based upon our phone conversation last week and our company experience with similar projects.

Soundscape Engineering LLC is an engineering firm that provides sound and vibration measurement, assessment, and design consulting services. We do not sell any products or have affiliations with any product manufacturers, allowing us to provide an unbiased service to our clients. Our principal consultants hold engineering licenses in four States, including Michigan, and are Board Certified by the Institute of Noise Control Engineering.

Project Description

To support an application to Boyne City, Kirtland would like to present a sample of the sound levels in the community, with the Kirtland plant operating but not other nearby plants, with other nearby plants operating but not the Kirtland plant, and with none of these plants operating. As requested, these measurements would be made at six locations in the community and at several different times during the day.

As we discussed during our phone conversation, it does not necessarily make sense to present A-weighted and C-weighted sound levels. The sound pressure level can be measured and documented in octave bands. Doing so would provide a more thorough assessment of the sound in the community and more thoroughly address concerns about low frequency noise. A-weighted sound levels are most typically used in the assessment of environmental noise and in community noise ordinances, but some ordinances (usually those that are more thorough) set criteria in terms of the octave band sound pressure levels.

You also asked me about the use of C-weighting, which does not deemphasize lower frequency noise the way A-weighting deemphasizes it. Use of C-weighting is very rare in environmental noise assessment and community noise ordinances. However, if the octave band sound pressure levels are measured, then both A-weighted (dBA) and C-weighted (dBC) levels can be calculated. The advantage of A-weighting and C-weighting is that it provides a single number, rather than a value at every octave band frequency. Never-the-less, I recommend that the levels be presented in octave bands rather than in terms of dBA or

Soundscape Engineering LLC
35 E. Wacker Drive, 9th Floor · Chicago, IL 60601 · (312) 436-0032
317 S. Division St. #170 · Ann Arbor, MI 48104 · (734) 418-8663
www.SoundscapeEngineering.com

dBC as I believe it will avoid the confusion that sometime results when people try to comprehend the meaning of A-weighting or C-weighting.

Scope-of Services

Soundscape Engineering LLC proposes the following specific scope-of-services.

1. Travel to Boyne City.
2. Measure the octave band sound pressure levels at six locations.
3. Measure at each of these locations with (a) none of the plants operating, (b) with just the Kirtland plant operating, and (c) with just the other plants operating.
4. We will measure at each location for a duration of 30 to 60 minutes during the daytime and 30 to 60 minutes during the nighttime.

Please note that this is a total of as many as 36 measurements.

5. Issue a report documenting the results of our measurements.
6. Over the phone or via email, provide any requested clarification of the report contents.

It will be the responsibility of the Client to arrange for plants to be operating or not operating so that we may make our measurements. In writing this proposal we have assumed that we will need to make measurements on several different days and nights in order to capture the conditions of plants operating and not operating. We have also assumed that all of these operating conditions can be captured during a single three to five day long trip to Boyne City.

Fee

Soundscape Engineering LLC proposes to perform the Scope-of-Services on a Fixed Fee Basis, plus Reimbursable Expenses. The fee and estimated reimbursable expenses are provided in the table accompanying this proposal.

Schedule

Be aware that these measurements should not be made when there is substantial snow on the ground. Over long distances, snow can absorb a significant amount of sound and thereby reduce the distance that it travels.

Please allow us two weeks, after completion of the measurements, to write and issue our report.

Personnel

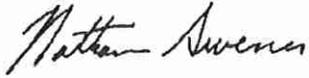
I will be responsible for all work on this project. My staff may help as needed. My resume is attached for your consideration.

Soundscape Engineering LLC's standard Additional Terms and Conditions are considered applicable to this proposal and have been appended to this letter. Please review them to confirm their acceptability. If you have any questions regarding this proposal, please call or send an email to me. Otherwise, if this proposal is acceptable, please sign in the location provided below and return to my office by email, fax, or postal service.

Thank you for contacting us.

Sincerely,

Soundscape Engineering LLC
Per:



Nathan Sevens, Principal Consultant
PE, LEED AP, INCE Bd. Cert.

nsevens@SoundscapeEngineering.com
(312) 436-0032

Enc: Additional Terms and Conditions, Soundscape Engineering company literature

Authorization to Proceed – Sign below to accept this contract, including all terms and conditions. Please return a copy to us via email or mail.

Client (Print Entity Name): _____

Approved by (Print Name): _____

Approved by (Signature): _____

Date: _____

Additional Terms and Conditions

1. Offers are valid for 60 days from the date of proposal issue.
2. Fees are invoiced monthly. For fixed-fee basis contracts, the amount billed is based on the approximate percentage of Soundscape Engineering LLC's scope-of-services that has been completed. For time basis fee contracts, the amount billed is based on the number of hours expended and our hourly rates.
3. Accounts are payable upon receipt of invoice. Interest of 1.5% per month will be charged on accounts overdue 30 days or more. Accounts overdue 120 days or more may be sold to a collection agency.
4. Where Soundscape Engineering LLC is retained as a sub-consultant by a prime consultant (i.e., where the prime consultant signs the acceptance copy of the Soundscape Engineering proposal) the prime consultant accepts full responsibility for timely payment of Soundscape Engineering LLC's invoices.
5. Where a fee retainer has been requested, that retainer shall be received before any work is undertaken on the project. The retainer will be applied to the final invoice for the project.
6. Soundscape Engineering LLC's hourly charge out rates are reviewed annually, typically in January, and, at that time, may be increased without notice. Generally, the annual hourly rate increase is a nominal amount to correspond with our estimate of increases in the cost of doing business and inflation in the local or national economy.
7. Any project extensions which result in the date of project design completion being later than the dates established in the proposal will necessitate a negotiated increase in the acoustical consulting fee.
8. *Soundscape Engineering LLC carries professional liability coverage with an annual and per claim limit of \$1,000,000. Soundscape Engineering LLC's Client hereby agrees that to the fullest extent permitted by law, Soundscape Engineering LLC's total liability to Client for any and all injuries, claims losses, expenses or damages whatsoever arising out of or in any way related to the project or this Agreement from any cause or causes including but not limited to Soundscape Engineering LLC's negligence, errors, omissions, strict liability, breach of contract or breach of warranty (hereafter "Client's claims") shall not exceed the total sum paid on behalf of or to Soundscape Engineering LLC by Soundscape Engineering LLC's insurers in settlement or satisfaction of Client's claims under the terms and conditions of Soundscape Engineering LLC's insurance policies applicable thereto. If no such insurance coverage is provided with respect to Client's claims, then Soundscape Engineering LLC's total liability to Client for any and all such uninsured Client's claims shall not exceed the compensation paid to Soundscape Engineering LLC under this Agreement.*
9. *If Soundscape Engineering LLC's Client is the Owner, then Owner hereby agrees that to the fullest extent permitted by law, Soundscape Engineering LLC shall not be liable to Owner for any special, indirect or consequential damages whatsoever, whether caused by Soundscape Engineering LLC's negligence, errors, omissions, strict liability, breach of contract, breach of warranty or other cause or causes whatsoever, including but not limited to, loss of use of equipment or facility, and loss of profits or revenue.*

Soundscape Engineering

Industrial Sound/Low-Frequency Professional Engineers

Company Profile

Acoustical design has a direct impact on people's perception and interaction with the built-environment. Functional success of a building includes providing the best acoustical environment for owners and occupants, whether that means speech privacy, ability to clearly hear the spoken word and music, or providing a quiet healthcare environment conducive to patient healing.

Soundscape Engineering LLC is a national engineering consulting firm specializing in acoustics, noise, and vibration control. Our team has consulted on a broad range of project types - engineering practical solutions that respect project budgets, aesthetics, and design constraints.

We utilize electronic communications and computer software to work seamlessly with clients all over North America. And whenever a physical presence is needed, our nationally central locations in Chicago and Detroit allow us to quickly travel to client meetings and perform site visits whether those sites are in Los Angeles, New York City, Atlanta, Vancouver or points in between.

We work closely with architects and engineers to ensure that projects have an acoustical environment that supports the facility programming and creates the impression of a quality space in which people want to work, live, or play.

When you require world-class, experienced and credentialed consultants, call in Soundscape Engineering. All of our consultants have degrees in engineering. Our Principal Consultants hold state engineering licenses and have been Board Certified by the Institute of Noise Control Engineering. They are involved with every project, ensuring that clients receive responsive service, attention to detail, and practical recommendations.

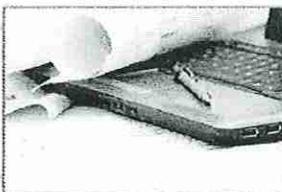
Service Quality

- Proactive approach
- Responsive service
- Extensive experience
- All consultants have engineering degrees
- Senior consultants have professional certifications
- Company owner involved with every project

If you want us to help you avoid or correct noise problems, we're ready with our practical approaches and solutions. If you want a soundscape that is carefully engineered to enhance your project, we're equipped with advanced engineering tools and are eager to assist. Contact us today and ensure that your project receives the attention to acoustics that it deserves.

Services

- Sound Isolation
- Room Shaping and Finishes Selection
- Mechanical and Electrical Systems Noise Control
- Design for Speech Privacy
- Vibration Assessment and Control
- Community Noise Impact
- Acoustical Measurements
- Vibration Measurements



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Chicago, IL 60601
(312) 436-0032

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317 S. Division St., #170
Ann Arbor, MI 48104
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Soundscape Engineering

Division of Acoustics & Vibration from Professional Engineers

Project Experience - Environmental Noise & Vibration Assessment

The following is a sample of the many projects that constitute the career experience of our staff.

Rs-FUELS

Measurement of car wash noise at several facilities and prediction of noise at residential property adjacent to proposed new car wash. Submission of report and presentation to Village Board of Trustees
Wilmette, Illinois

A. Finkl & Sons Co.

Ground vibration assessment for forging operations adjacent to residential community
Chicago, Illinois

The Chapman House

Prediction and assessment of noise impact by a proposed outdoor event's venue located near residences. Preparation of report and presentation to City Planning Commission,
Royal Oak, MI

The Woodmont Two Condominiums Inc.

Assessment of noise produced by air-cooled chiller on adjacent commercial property and submission of report with options for noise mitigation.
Indianapolis, Indiana

Stratosphere Hotel and Casino¹

Acoustical Analysis of Proposed Rollercoaster Type Attraction
Las Vegas, Nevada

Universal Studios¹

Acoustical assessment to support Master Plan Environmental Noise Impact Report and Noise Mitigation Measures for Theme Park and Studios
Universal City, California

Animal Samaritans SPCA

Animal Shelter
Thousand Palms, California

J Paul Getty Villa¹

Construction & operational noise prediction
Malibu, California

J. Paul Getty Center¹

Tram Noise Assessment & Mitigation
Brentwood, California

Greek Theater¹

Peer review of proposed community noise impact mitigation for large outdoor amphitheater
Los Angeles, California

Constellation Place¹

Noise impact assessment and mitigation for bus and auto traffic associated with proposed new commercial tower
Century City, California

West Pico Drill Site Modernization¹

BrietBurn Energy Company
Oil drilling facility located in residential community
Beverly Hills, California

UCLA Santa Monica Medical Center¹

Environmental Impact Report
Santa Monica, California

Avalon Del Rey¹

EIR for large residential development
Marina Del Rey, California

DuPont Fabros Technology Inc.²

Data center noise control
Elk Grove Village, Illinois

City of Elkhart²

Noise and Vibration Assessment for "Mega-Shredder"
Elkhart, Indiana

Weatherford International²

Rotaflex Oil Pump
Carlsbad, New Mexico

Randy's Metal Recycling²

Environmental noise assessment for proposed metal shredder
Benton Charter Township, Michigan

Hayes Properties Inc.²

Ravenswood Billboard Factory - Event Space
Chicago, Illinois

DaimlerChrysler AG³

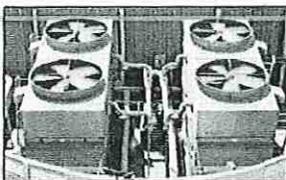
Kenosha Engine Plant
Kenosha, Wisconsin

¹ Work performed by firm Partner while employed by Ove Arup & Partners, Ltd.

² Work performed by firm Partner while employed by Acoustics By Design, Inc.

³ Work performed by firm Partner while employed by Albert Kahn Associates, Inc.

⁴ Work performed by Soundscape Engineering as sub consultant to Canadian partner firm, Daniel Lyzun & Associates Ltd.



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Soundscape Engineering

Acoustical Solutions from Professionals Engineers

Curriculum Vitae

Nathan Sevenser has been working in acoustical engineering since 1994. He started his career at the London based engineering giant Ove Arup & Partners, where he became a Senior Consultant and Project Manager. Prior to founding Soundscape Engineering, he headed the Chicago area office of the Grand Rapids Michigan based Acoustics By Design, Inc. He has applied his expertise in acoustics and vibration to a range of project types involving vibration assessment for laboratory buildings, building sound isolation and room acoustics, overhead paging and sound reinforcement system design, building services noise control, industrial noise control, and prediction of community noise impact.

Nathan has consulted on over 300 international and domestic projects. His work has encompassed university buildings, K-12 schools, corporate offices, courthouses, international airport terminals, hotel and residential buildings, hospitals and research institutes, performing arts and recording spaces, museums, and industrial facilities.

These projects include the \$768 million UCLA Westwood Replacement Hospital, for which he was recognized by AIA Los Angeles as a member of their Project Team of the Year in 2002 (architect: Perkins & Will), the renovation of the United States Courthouse and Federal Building in Phoenix, for which he was recognized as the project acoustical consultant in the 2004 GSA citation for Design Excellence (architects: Thomas Phifer & Partners and Gould Evans Assoc.), the \$90 million Frederick C. Hamilton wing of the Denver Art Museum

(architect: Daniel Libeskind), and all buildings for the \$220 million Soka University of America campus which opened in 2001 (architects: Pfeiffer Partners and Summit Architects).

Nathan has taught at the Southern California Institute of Architecture in Los Angeles and in the College of Engineering at Valparaiso University in Indiana. He has been published and has presented technical papers for Sound & Vibration Magazine, the Acoustical Society of America, and the Institute of Noise Control Engineering.



Nathan Sevenser
Principal Consultant
PE, INCE Bd. Cert., LEED AP

Professional History

2010-present – Soundscape Engineering LLC, Chicago, Illinois

2006-2010 – Senior Consultant, Acoustics By Design, Inc., Valparaiso, Indiana

2003-2006 – Principal Consultant, Accent Acoustics LLC, Los Angeles, California

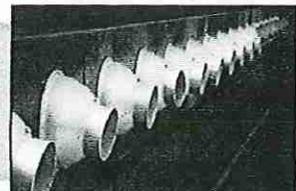
1996-2003 – Senior Consultant and Project Manager, Ove Arup & Partners, Los Angeles, California

1994 – Work-Study Position, Mining Engineering Dept., Michigan Technological University



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Soundscape Engineering

PROFESSIONAL ENGINEERS AND PROFESSIONAL LEADERS

Education

M.B.A. Emphasis in Entrepreneurship, Pepperdine University, 2004

B.S. Mechanical Engineering, Michigan Technological University, 1995

B.S. Engineering Management, Michigan Technological University, 1995

Credentials

Board Certified, Institute of Noise Control Engineering

LEED Accredited Professional, U.S. Green Building Council

Licensed Professional Engineer, State of Illinois, #062.063002

Licensed Mechanical Engineer, State of California, #M 31972

Licensed Professional Engineer, State of Indiana, #PE 10606985

Professional Associations

Acoustical Society of America

American Society of Mechanical Engineers

Institute of Noise Control Engineering

ASHRAE

Publications & Presentations

"Acoustics in Healthcare Environments: What's New and Why It's Important," presentation to AIA Chicago Chapter, 2012

"Studies of Noise and Related Events in Neonatal and Adult Nursing Units," Midwest Healthcare Engineering Conference and Trade Show (presentation), 2009

"Neonatal Intensive Care Unit Observations: Noise, Light and Satisfaction," Healthcare Facilities Symposium and Expo (presentation), 2009

"Impact of Patient Density and Room Layout on the Noise Field in Neonatal Intensive Care Units," Institute of Noise Control Engineering, Proceedings of Internoise 2009

"48-Hour Patient Room Noise Level Survey at Regional Medical Center," Institute of Noise Control Engineering, Proceedings of Noise-Con 2007

"Remodeling of a Lecture Hall to Support Multi-Media Functions," Sound & Vibration Magazine, December 2000

"USC Annenberge Lecture Hall Acoustic Design," Acoustical Society of America, Atlanta Meeting (presentation), June 2000

"A Case Study of Noise Generation by an Outdoor, Cable Driven Tram," Institute of Noise Control Engineering, Proceedings of Inter-noise 1999

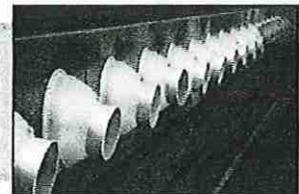
"Integration of Acoustics and Interior Design," Invited presentation to Dallas/Ft. Worth interior design architects, 2000

"Integration of Acoustics and Interior Design," Invited presentation to The American Institute of Architects - Los Angeles Chapter, 1998 & 1999



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2012P272
 December 14, 2012

Mr. Tom Johnson
 Manager, Quality Assurance
 Kirtland Products, LLC
 1 Altair Drive
 Boyne City, MI 49712

Subject: **Fee Proposal for Acoustical Engineering Services**

re: Developing a Noise Ordinance Limit
 Boyne City, MI

Dear Mr. Johnson:

Thank you for contacting us for assistance in developing a proposal for a property line noise ordinance for Boyne City, MI. This letter offers our proposed scope of work and estimate of charges for conducting outdoor noise measurements at select positions in the community near your wood pellet manufacturing facility during its operation and in the absence of its operation. The purpose of these measurements is to determine which sounds heard in the community are produced by operations related to the Kirtland Products operation and which may be associated with other industrial noise operations in that general vicinity. This information is expected to aid in the development of noise ordinance metrics and provisions which allow for the protection of the community while identifying fair and reasonable means for making such determinations.

Proposed Scope-of-Work

The work we propose is outlined as follows:

1. Plan the on-site measurements including selecting measurement positions expected to provide a representative sampling of noise contributions from both Kirtland Products and other commercial/industrial operation in the area
2. Visit the jobsite in Boyne City, MI to conduct community noise measurements under three scenarios:
 - a. Kirtland Products operating under normal production including all normally operated equipment, and with other nearby commercial/industrial facilities operating
 - b. At a time when Kirtland Products is shut-down for a day, while the other commercial/industrial facilities are operating
 - c. On a day Kirtland Products is operating normally while the nearby commercial/industrial facilities are expected to be shut down

The above are anticipated to be captured during a single measurement visit to Boyne City that allows condition 'a' to be captured on a Thursday afternoon, condition 'b' to be captured on a Friday, and condition 'c' to be captured on a Saturday morning. Travel to and from the jobsite is envisioned on Thursday morning (ahead of the measurements), and Saturday afternoon (following measurements).

3. Reduce and analyses the measurements for the three conditions captured and evaluate that data to gain an understanding as to what is causing contribution to the noise measured at various positions, including the facility responsible for each noise contributor
4. Conduct additional analysis of measurements to evaluate various noise measuring metrics (including, but not limited to, A-weighting, C-weighting, C minus A criteria, and octave band analysis) and determine which metric or metrics may work best to quantify low and mid frequency noise source contributions
5. Research and review municipal noise ordinances specifically with provisions beyond simple overall A-weighted sound level limits
6. Compare the measured noise levels using various metrics against selected municipal noise ordinances limits
7. Determine which noise metrics and limits may provide fair and reasonable assessment of noise in the Boyne City situation
8. Present the results graphically or in other appropriate fashion
9. Prepare a written report that provides the results of noise level measurements, lists the various contributing noise sources and the facilities from which they originate, the results of applying various noise metrics, comparison against other municipal noise ordinance limits, and our recommendations for metrics and level limits that would be fair and reasonable to adopt for a property line noise ordinance in Boyne City.

Estimated Charges

Our charges for the work described above are estimated and based upon an allowance of **64 hours** of Kolano & Saha Engineers, Inc. technical staff time. At a composite hourly rate of **\$135/hour** (see our Charge Rates, enclosed as **Exhibit 1**), plus **\$1060** in charges for sound measuring and analysis instrument charges, and expenses related to travel, overnight stay, and sustenance, this work is estimated to accrue charges of about **\$9700**.

Scope Exclusions

The proposed work does not include evaluation of potential equipment noise controls, or meetings to present the results of this work. We can provide these services for additional charges as an extension to the proposed work.

We appreciate your calling us about this project and look forward to being of service to Kirtland Products. For your convenience we have provided an authorization statement below. To proceed, kindly sign it and return it to us, or provide us with your Purchase Order.

Sincerely,

KOLANO AND SAHA ENGINEERS, INC.



Richard A. Kolano, P.E.
INCE - Board Certified
Principal Consultant

PROPOSAL ACCEPTANCE AND AUTHORIZATION TO PROCEED

The undersigned, a corporate officer or duly authorized representative of Kirtland Products, LLC hereby accepts on behalf of Kirtland Products, LLC the scope-of-work and terms as detailed in K&SE Proposal No. 2012P272 dated December 14, 2012 for acoustical engineering services.

Name and Corporate Title

Signature

Date



ENVIRONMENTAL

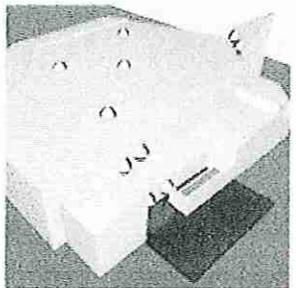
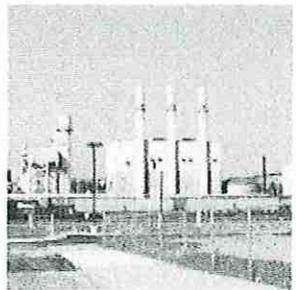
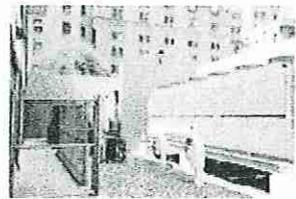
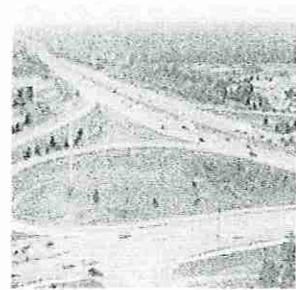
K&SE provides services pertaining to environmental noise activities where outdoor noise and vibration issues impact the community and cause annoyance. Through the use of sophisticated modeling programs and precision measurements, K&SE can evaluate noise impact for existing conditions as well as predict the impact of future projects.

K&SE provides consulting, predictive modeling and noise and vibration measurement and analysis services for many issues including:

- Mechanical Systems Noise and Vibration
- Property Line Noise and Vibration
- Municipal Ordinance Development
- Noise Control Feasibility Studies
- Noise Control Design/Optimization
- Transportation Noise Assessment
- Ground Vibration Measurement & Diagnostic Studies
- Expert Testimony

CLIENT BASE

Architectural/Engineering Firms
 Commercial/Residential Developers
 Corporations
 Educational Facilities
 Government Agencies
 Hospitals
 Industrial Facilities
 Municipalities
 Planning Firms/Consultants
 Public Institutions
 Utility Companies





RICHARD A. KOLANO, P.E.
INCE - BOARD CERTIFIED

EDUCATION:

M.S. in Engineering Acoustics
Pennsylvania State University, Awarded November 1978

B.S. in Electrical Engineering
Rochester Institute of Technology, Awarded June 1976

PROFESSIONAL LICENSING AND CERTIFICATION:

Licensed Professional Engineer - State of Michigan
Board Certified Noise Control Engineer - Institute of Noise Control Engineering (INCE)

CURRENT RESPONSIBILITIES:

President/ Principal Consultant 1986 - Present

Co-Founder of Kolano and Saha Engineers, Inc.

Waterford, MI

Responsibilities include both administrative and technical.

Mr. Kolano is in charge of architectural acoustics and community noise related programs and serves as the direct link between the client and company's staff/resources. He is continuously involved on projects for diagnosing and finding corrective measures for acoustics and noise/vibration related problems within and around buildings, and for designing new facilities to properly address room acoustics, sound isolation, sound reinforcement, and mechanical equipment noise control.

PREVIOUS EMPLOYMENT:

Consultant 1982 - 1986

Blachford Engineers, PC

Pontiac, MI

Developed and directed all architecture acoustics and community noise related projects within a noise control consulting engineering practice.

Project Engineer; Senior Project Engineer

H.L. Blachford, Inc. 1978 - 1982

Troy, MI

Conducted several studies involving community and building mechanical equipment related noise in commercial, healthcare, and school/university facilities; also consulted on projects in architectural acoustics for architects and owners. Assisted on several heavy industrial noise control studies including a comprehensive, 5-year study of 22 different steel making and processing operations for the American Iron and Steel Institute.

PROFESSIONAL MEMBERSHIP:

Acoustical Society of America (ASA)

Audio Engineering Society (AEC)

American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

INCE - Currently Vice President - Board Certification

National Society of Professional Engineers (NSPE)

PROFESSIONAL PUBLICATIONS:

Mr. Kolano has published and presented numerous technical papers in the publications and conferences of SAE (Society of Automotive Engineers), Sound and Vibration Magazine, Construction Association of Michigan, ASHRAE, INCE, and ASA.

EXPERT TESTIMONY:

Provided in U.S. District Courts (Detroit and Port Huron) and State of Michigan Circuit Courts (Counties of Berrien, Lapeer, Livingston, Oakland, Ottawa, Otsego, St. Clair, and Wayne)

From: James Kiefer [mailto:jkiefer@kodiakgroup.us]
Sent: Friday, December 14, 2012 5:04 PM
To: Tom Monley (tmonley@kirtlandproducts.com)
Cc: Howard Wood
Subject: Acoustical Enclosures

Tom,

Attached are the data sheets referencing sound absorption and transmission coefficients for the type of construction we are proposing.

The 4" fiberglass board absorption is .99 and the STC is 51. Both are very good numbers.

We will require 4 weeks for design of the enclosures. Let me know if you need anything else.

Best Regards

Jim Kiefer
Kodiak Group

Please note that my email address has changed and is now jkiefer@kodiakgroup.us. Please update your contact lists and spam filters accordingly. Our website also has a new address: <http://www.kodiakgroup.us>

Sound Absorption Coefficients, ASTM C 423

Mounting: Type A – Material placed against a solid backing.

Product Type	Thickness,		Octave Band Center Frequencies				
	in.	(mm)	125	250	500	1000	2000
701, plain	1	(25)	.17	.33	.64	.83	.90
	2	(51)	.22	.67	.98	1.02	.98
703, plain	1	(25)	.11	.28	.68	.90	.93
	2	(51)	.17	.86	1.14	1.07	1.02
705, plain	1	(25)	.02	.27	.63	.85	.93
	2	(51)	.16	.71	1.02	1.01	.99
703, FRK	1	(25)	.18	.75	.58	.72	.62
	2	(51)	.63	.56	.95	.79	.60
705, FRK	1	(25)	.27	.66	.33	.66	.51
	2	(51)	.60	.50	.63	.82	.45
703, ASJ	1	(25)	.17	.71	.59	.68	.54
	2	(51)	.47	.62	1.01	.81	.51
705, ASJ	1	(25)	.20	.64	.33	.56	.54
	2	(51)	.58	.49	.73	.76	.55

Values given are for design approximations only; production and test variabilities will alter results. Specific evaluated in end-use configurations.

Plywood (5mm(3/16")) panel, 25mm(1") fiberglass in 50mm(2") airspace)	0.42	0.36	0.19	0.1	0.08	0.05
Plywood (6mm(1/4")) paneling, airspace, light bracing)	0.3	0.25	0.15	0.1	0.1	0.1
Plywood (10mm(3/8")) paneling, airspace, light bracing)	0.28	0.22	0.17	0.09	0.1	0.11
Plywood (19mm(3/4")) paneling, airspace, light bracing)	0.2	0.18	0.15	0.12	0.1	0.1
Absorptive wall materials						
Drapery (10 oz/yd2, 340 g/m2, flat against wall)	0.04	0.05	0.11	0.18	0.3	0.35
Drapery (14 oz/yd2, 476 g/m2, flat against wall)	0.05	0.07	0.13	0.22	0.32	0.35
Drapery (18 oz/yd2, 612 g/m2, flat against wall)	0.05	0.12	0.35	0.48	0.38	0.36
Drapery (14 oz/yd2, 476 g/m2, pleated 50%)	0.07	0.31	0.49	0.75	0.7	0.6
Drapery (18 oz/yd2, 612 g/m2, pleated 50%)	0.14	0.35	0.53	0.75	0.7	0.6
Fiberglass board (25mm(1")) thick)	0.06	0.2	0.65	0.9	0.95	0.98
Fiberglass board (50mm(2")) thick)	0.18	0.76	0.99	0.99	0.99	0.99
Fiberglass board (75mm(3")) thick)	0.53	0.99	0.99	0.99	0.99	0.99
Fiberglass board (100mm(4")) thick)	0.99	0.99	0.99	0.99	0.99	0.97
Open brick pattern over 75mm(3") fiberglass	0.4	0.65	0.85	0.75	0.65	0.6

KVA ANALYSIS REPORT FROM GLE

MV-90XI KVA ANALYSIS REPORT DEC 3, 2012 3:31 PM PAGE 12
 SUMMARY ID: KIRTLAND GROUP: PSDS2 START TIME: 11/01/12 00:01
 CUST NAME: *** NO MASTER *** CLOCK: 60 MINS STOP TIME: 11/30/12 24:00

This report indicates the amount of power that is being consumed on an hourly basis in KVA. What exhibit #4 shows is that between the hours of 06:00 and 07:00, Arete Industries started up operations and between the hours 14:00 and 15:00 operations were shut down. KVA contributing to the overall usage is approximately 150 to 180 when Arete is in operation. Arete typically operates 5 days a week from 6:30 a.m. to 2:30 p.m.

DATE	TIME	KVA
11/12/12	01:00	32.8
	02:00	32.2
	03:00	31.3
	04:00	33.1
	05:00	33.4
	06:00	39.2
	07:00	172.0
	08:00	176.3
	09:00	153.8
	10:00	151.1
	11:00	151.7
	12:00	155.5
	13:00	150.0
	14:00	148.9
	15:00	95.8
	16:00	41.7
	17:00	42.6
	18:00	41.2
	19:00	39.2
	20:00	39.8
	21:00	39.4
	22:00	39.1
	23:00	39.2
	24:00	37.6
DAILY HIGH		176.28
DAILY LOW		31.26
DAILY TOTAL		1917.06

What exhibit #5 shows is that when Kirtland is in full operation, the amount of KVA that is being consumed is typically 1550 to 1600. This page shows the times that Traverse City was measuring sound levels in the community. Locations are indicated by map # as referenced in exhibit #6 which was provided by Scott McPherson. The numbers below each location are the decibel readings in dB(A) - dB(C) that were recorded by Officer Maxon. It is interesting to note that there is little difference in both the A scale and C scale readings taken at the 2:00 hour when our KVA was at 1576 and the readings at the 5:00 hour when our KVA was at 178.5 (Indicating that little more than lights were on at Kirtland) but there is a significant drop in both the A scale and C scale readings from the 5:00 readings to the 7:00 readings when the only change at our facility was that Arete started up. Also interesting to note is that when the 7:40 reading was taken at our property line the KVA readings were between 300-400. Lastly it should be noted that at the 7:00 hour (as stated in the minutes of 11-17) "...at 6:00 am and you could hear noise in the house" at Location #13, yet we were not running.

DATE	TIME	KVA	Map #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
11/08/12	08:00	1617.6															
	09:00	1605.8															
	10:00	1017.3															
	11:00	459.8															
	12:00	1464.5															
	13:00	1604.0															
	14:00	1570.9															
	15:00	1588.9															
	16:00	1589.4															
	17:00	1594.2															
	18:00	1589.3															
	19:00	1588.4		66-81	56-71	56-71	46-60	43-47									
	20:00	1587.9								46-60	48-60	46-57	46-57	43-46	53-65	47-65	46-57
	21:00	1585.7															
22:00	1579.0																
23:00	1576.2																
24:00	1582.8									45-61	44-55					41-58 42-56	
11/09/12	01:00	1560.2															
	02:00	735.2															
	03:00	330.3															
	04:00	337.0															
	05:00	178.5															40-58
	06:00	180.3															41-54
	07:00	301.1															37-51 36-49
	08:00	401.0															
	09:00	486.8															
	10:00	1031.0															

Mitigation is required to shift the noise threshold goal range to within 1,000 feet of the Kirtland site. Of particular interest are the partial levels at the nearest zoned residential areas which helps to determine the equipment that requires mitigation. The residence at the corner of Boyne Summit Road and East Division Street is the nearest zoned residential house within a range of approximately 1,000 feet. The partial levels of the Kirtland plant at this residence are shown in Table 3. Assuming the pulsation effect can be remedied the noise threshold goal at the nearest zoned residential house Upon quick inspection, we can see that the top six sources (shown in light blue) in Table 3 must be mitigated to meet the noise threshold goal of 40 dBA¹ since those sources exceed the goal individually. In addition the three sources shown in green will also require mitigation because their contribution to the sum of all the sources causes an exceedence of the 40 dBA noise threshold goal. Table 3 also shows that the primary contributors to the 125 Hz octave band (shown in orange) at this receiver is the baghouse fan (140-010) and the baghouse air power unit (140-020), but the primary contributors to the 250 Hz octave band (shown in grey) at this receiver is the dry mill vacuum pump (115-020) and the already enclosed air power unit on the south side of the plant (115-045).

The primary takeaway from the model results which is supported by the on-site monitoring is that all of the primary outdoor sources included in the model and the two already enclosed air power units require mitigation to achieve a noise threshold goal of 40 dBA at the nearest zoned residential area. The model also shows that breakout noise from the building does not currently appear to be a primary contributor to the sound level at neighboring residential areas.

Table 3: Partial Levels from the Kirtland Plant at the Nearest Zoned Residential House

Noise Source	Sound Pressure Level		
	Overall (dBA)	125 Hz (dB)	250 Hz (dB)
Baghouse Air Power Unit (140-020)	49	36	33
Cooler Fan Model FC19 (125-050)	47	28	40
Baghouse Fan Model FC21 (140-010)	47	40	35
Dry Hammer Mill Vacuum Pump (115-035)	45	22	42
Hot Pellet Cyclones Fan Model FC13 (125-030)	44	26	38
Enclosure of the Air Power Unit M-D5009 (115-045)	44	22	42
Cyclone Fan FC26 (105-030)	41	33	38
Dryer ID Fan (110-020)	38	28	34
Enclosure of the Air Power Unit 6" (125-025)	37	15	35
Enclosure of the Air Power Unit M-D5009 (115-045)	37	14	34
Enclosure of the Air Power Unit 6" (125-025)	34	33	22
Dry Room Breakout Metal Siding Lower M	34	30	30
Green Mill Opening	33	26	25
Dryer Room Roof Breakout	33	32	27
Dry Room Breakout Upper M	26	25	20
Dry Mill Conveyor Opening	24	12	15
Dryer Room Breakout Upper W	23	21	16
Dry Room Breakout Upper East	19	18	10
Dry Room Breakout Metal Siding Upper M	14	13	7
Pellet Room Roof Breakout	11	7	7
Pellet Room Breakout Upper	9	6	5
Dry Room Breakout Lower M	3	-1	0
Pellet Room Louver	0	-4	-13
Dryer Room Breakout Lower W	-1	-5	-4
Dry Room Breakout Lower E	-7	-9	-10
Pellet Room Breakout Lower	-17	-23	-19

¹ This assumes that the pulsation effect is first remedied, otherwise the penalized noise threshold goal is 35 dBA.



Kirtland Products Landscaping Plan

Kirtland Property:

The below described property is owned by Tupper Enterprises, LLC, which is solely owned by Leon Tupper:

Tax ID: 015-336-165-15; Legal Description: LDFA PA 281 OF 1986 89SP1188 FROM 336-165-00 & 336-166-00 COM AT S 1/4 COR SEC 36 T33N R6W TH N89 DEG36'51"W AL S LI SEC 36, 335.78FT TH N1DEG19'49"E 621.00FT TO POB TH N89DEG 36'43"W 618.49FT TH N1DEG09'08"E 727.15 FT TO C/L OF EARTH BERM TH S87DEG39'56"EAL SD C/L 620.76FT TH S1DEG19'49"W 706.10FT TO POB PART OF SE 1/4 OF SW 1/4SEC 36 T33N R6W REF: IFT 051-990-008-00/051-995-008-00

An illustration of this property with lot lines and dimensions is included as Figure A.

Visual Zones:

Kirtland Products, LLC addressed landscaping with the City of Boyne City Zoning and Planning Commission to address two factors; noise abatement, and aesthetics. In regards to noise abatement, RSG's Eddie Duncan indicated that foliage provides negligible noise abatement qualities unless it is dense and of significant depth. Landscaping was therefore not considered in RSG's report as a noise abatement technique. In regards to aesthetics, Kirtland will plant evergreen trees in zones identified as visual zones in compliance with Article XXIII, Section 23.35 Waste Receptacle and Mechanical Equipment Screening. Areas between these zones are subject to Article XXIII, Section 23.15 Special Provisions for Existing Sites. Visual zones are identified as areas where equipment is visible from M-75. Figure B illustrates the visual zones and associated sections of M-75 where these areas block the view of mechanical equipment from a passerby. Landscaping between these zones has been requested by the City of Boyne City Planning Commission.

Location, Species, Size and Spacing:

Article XXIII, Section 23.40, Paragraph F, indicates evergreen trees are required to be between 10' and 20' apart. All of the species selected have mature spread diameters of greater than 20'. Figures C and D illustrate the species, size, and spacing of the landscaping. In these illustrations, the trees are represented by 20' diameter circles. The overlap indicates compliance with the table in Section 23.40, Paragraph F of the landscaping standard. The trees will be staggered, to a level appropriate to accommodate emergency vehicle access required by Article XIX, Section 19.40, Paragraph F. All trees will be a minimum of eight foot in height, with a branch spread of at least three feet. If species indicated are not available at time of planting, substitutions will be communicated to the Zoning Administrator prior to planting.

Planting and Care of Trees

Planting will occur during the period of time while the trees are in a dormant state. The root balls will be a minimum of 10 times the caliper diameter of the tree. Holes will be dug to a depth equal to the height of the root ball, and a minimum of two times the diameter of the root ball in accordance with MSU Tree and Shrub Planting Guidelines. Topsoil will be mixed with peat moss to promote proper aeration and drainage. Plants will be mulched using hardwood chips. Watering will occur every seven days or as conditions dictate otherwise, using drip irrigation and a separate valve at each landscape zone.

Figure A: Kirtland Products' Property (Owned by Altair Leasing)

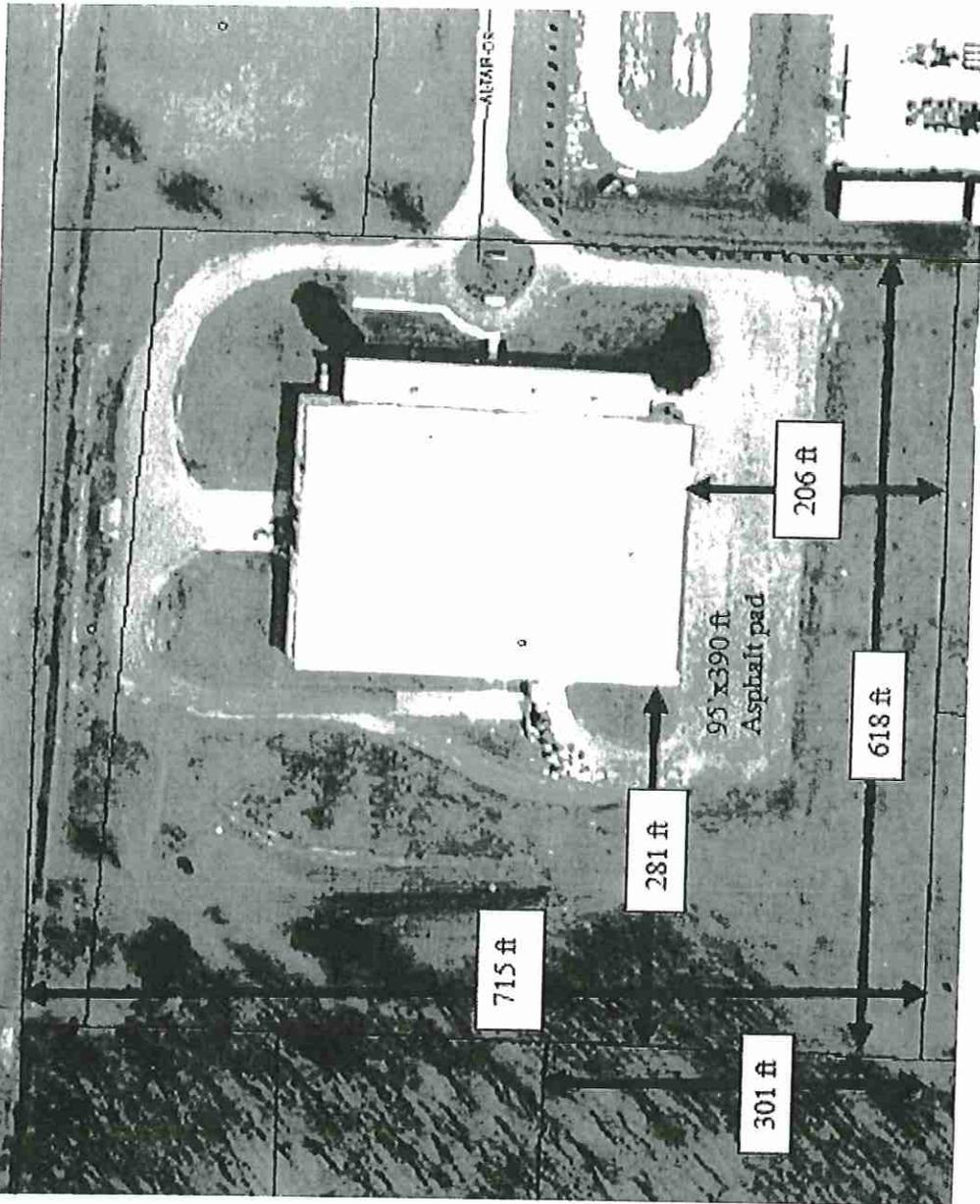
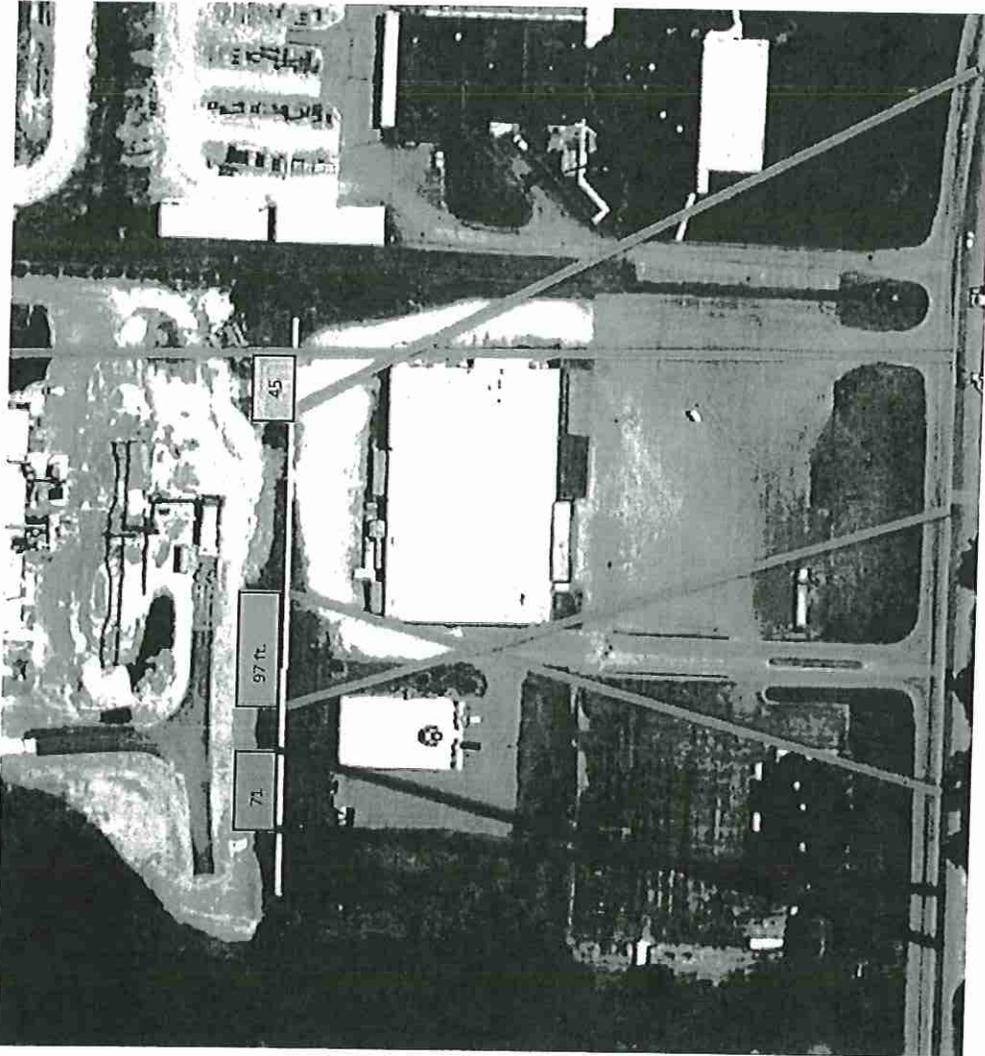


Figure B: Kirtland Products Landscaping Zones



71

Zone A: 71 feet long at property line

97 ft.

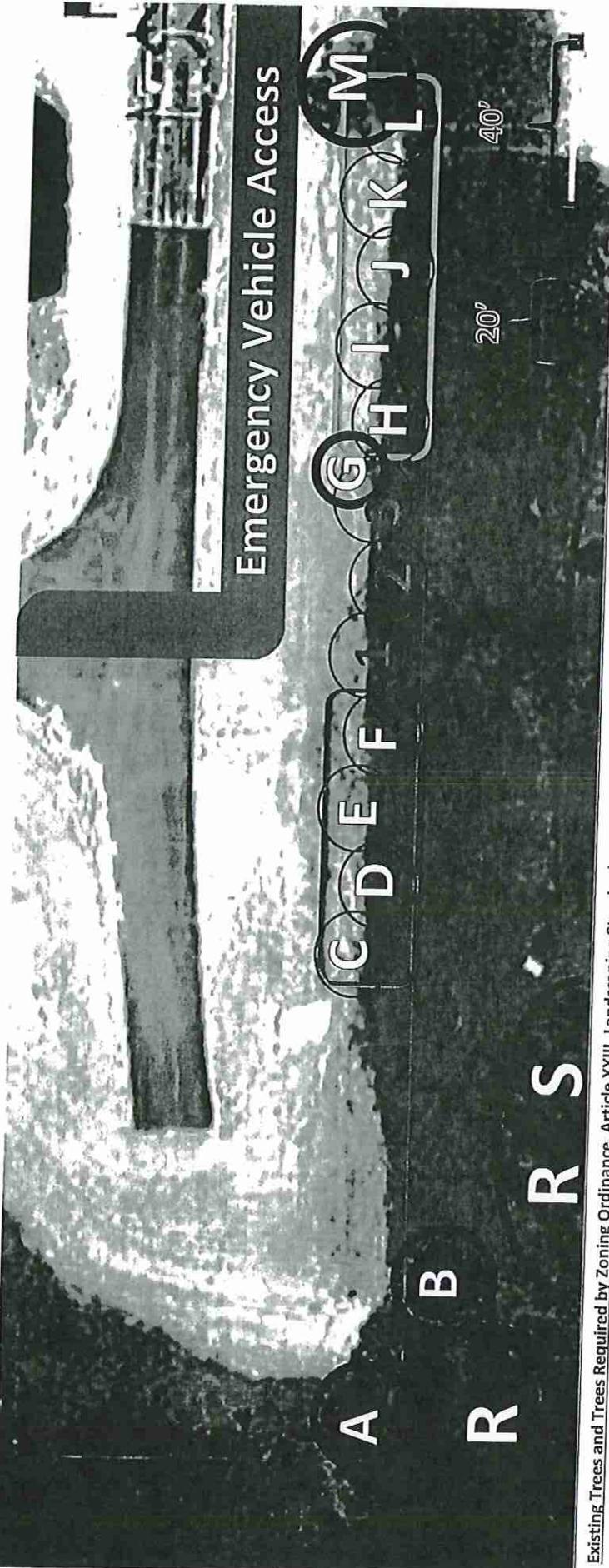
Zone B: 97 feet long at property line

45

Zone C: 45 feet long at property line

Areas between these zones are subject to Boyne City's Zoning Ordinance, Article XXIII, Landscaping Standards, Section 23.15, Paragraph A. The Planning Commission has requested trees also be planted in these areas.

Figure C: Kirtland Products (SW Corner)



Existing Trees and Trees Required by Zoning Ordinance, Article XXIII, Landscaping Standards

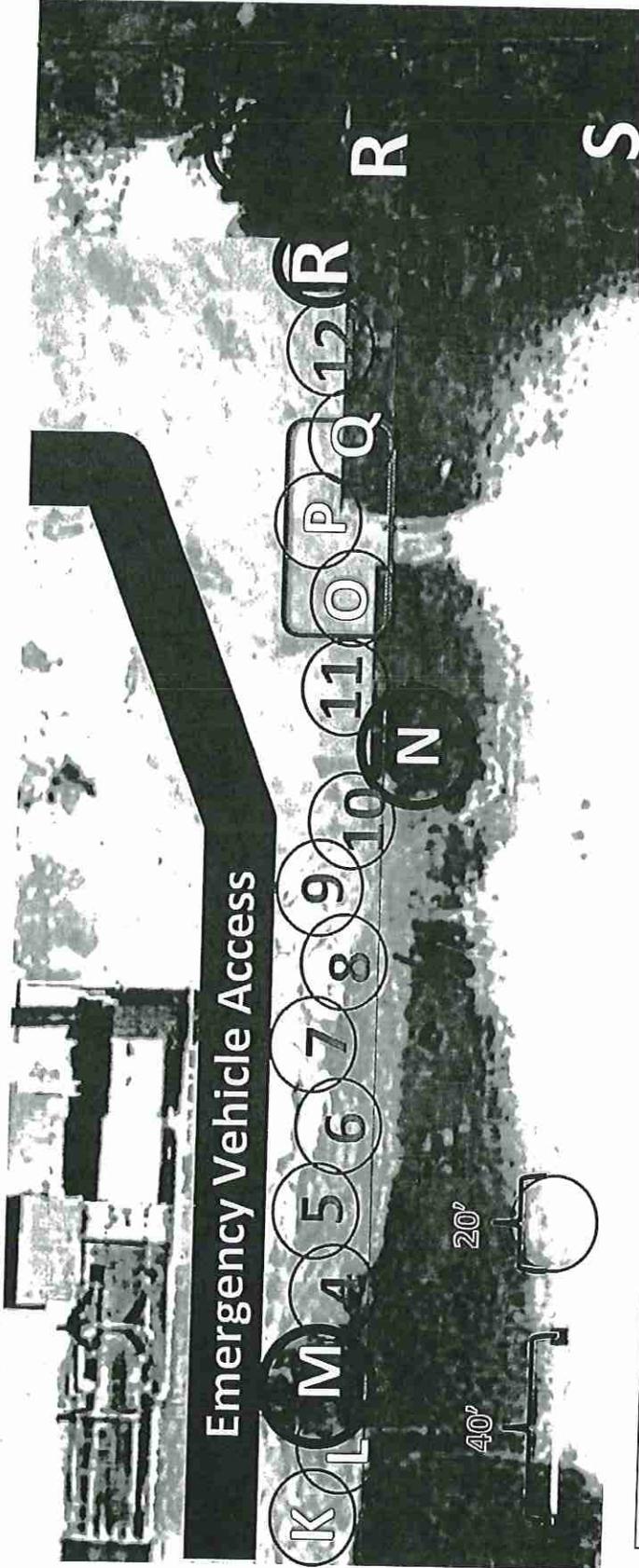
- B = existing tree (pinus resinosa) red pine - 8.5" caliper
- C = new tree (pinus resinosa) red pine - 8' min height, 3' min spread
- D = new tree (picea pungens) blue spruce - 8' min height, 3' min spread
- E = new tree (picea abies) Norway spruce - 8' min height, 3' min spread
- F = new tree (pinus sylvestris) Scotch Pine - 8' min height, 3' min spread
- G = existing tree (pinus resinosa) red pine 2.5" caliper
- R = existing trees (populus tremulooides) existing quaking aspen - various caliper

Additional Trees Requested by Zoning Planning Commission

- 1 = red pine - 8' min ht, 3' min spread
- 2 = Norway spruce - 8' min ht, 3' min spread
- 3 = blue spruce - 8' min ht, 3' min spread

- A = existing trees (populus tremulooides) existing quaking aspen - various caliper size
- H = new tree (pinus sylvestris) Scotch Pine - 8' min height, 3' min spread
- I = new tree (picea abies) Norway spruce - 8' min height, 3' min spread
- J = new tree (picea pungens) blue spruce - 8' min height, 3' min spread
- K = new tree (pinus resinosa) red pine - 8' min height, 3' min spread
- L = new tree (picea abies) Norway spruce - 8' min height, 3' min spread
- M = existing trees (ulmas Americana or parvifolia) elm - 17" caliper
- S = existing trees (pinus sylvestris) Scotch Pine - various caliper

Figure D: Kirtland Products (SE Corner)



<u>Existing Trees and Trees Required by Zoning Ordinance, Article XXIII, Landscaping Standards</u>	
M = existing trees (ulmas Americana or parvifolia) elm - 17" caliper	N = existing tree (fraxinus americana) white ash - 11.5" caliper
O = new tree (pinus sylvestris) Scotch Pine - 8' min height, 3' min spread	P = new tree (pinus resinosa) red pine - 8' min height, 3' min spread
Q = new tree (picea pungens) blue spruce - 8' min height, 3' min spread	R = existing trees (populus tremuloides) existing quaking aspen - various caliper
S = existing trees (pinus sylvestris) Scotch Pine - various caliper	
<u>Additional Trees Requested by Zoning Planning Commission</u>	
6 = red pine - 8' min ht, 3' min spread	5 = blue spruce - 8' min ht, 3' min spread
10 = red pine - 8' min ht, 3' min spread	8 = Scotch Pine - 8' min height, 3' min spread
11 = Norway spruce - 8' min ht, 3' min spread	9 = blue spruce - 8' min ht, 3' min spread
12 = Norway spruce - 8' min ht, 3' min spread	