BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

MAREK KRUK Plaintiff, v. NEW TRIER HIGH SCHOOL DISTRICT NO. 203, Defendants.	)	PCB 2020-010

NOTICE OF ELECTRONIC FILING

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the **STIPULATION AND SETTLEMENT AGREEMENT**, copies of which are herewith served upon you.

Respectfully Submitted,

NEW TRIER HIGH SCHOOL
DISTRICT NO. 203,

By: /s/ Kenneth M. Florey
One of Its Attorneys

Kenneth M. Florey (kflorey@robbins-schwartz.com)
Katie DiPiero (KDiPiero@robbins-schwartz.com)
ROBBINS SCHWARTZ
190 S. LaSalle Street, Suite 2550
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312-332-7760 (phone)
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CERTIFICATE OF SERVICE

I, **Kenneth M. Florey**, an attorney, certify that I caused a copy of this Notice of Filing and the documents referenced therein to be served upon the below named individuals by electronic mail, this 9th day of July 2025.

By: /s/ Kenneth M. Florey

Service List

Marek Kruk
124 Woodland Ave
Winnetka, IL 60093
MarekKruk@hotmail.com

Illinois Pollution Control Board
Attn: Don Brown – Clerk of the Board
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601
don.brown@illinois.gov

Brad Halloran
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601
Brad.Halloran@illinois.gov

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

MAREK KRUK	)	
	)	
Complainant,	)	
	)	
v.	)	**PCB 2020-010**
	)	
NEW TRIER HIGH SCHOOL	)	
DISTRICT NO. 203,	)	
	)	
Respondent.	)	

STIPULATION AND SETTLEMENT AGREEMENT

This Stipulation and Settlement Agreement (the "Agreement") is made and entered into as of the date last written below, by and between the Board of Education of NEW TRIER HIGH SCHOOL DISTRICT NO. 203 (the "District") and MAREK KRUK ("Mr. Kruk"). The District and Mr. Kruk may each be referred to as a "Party" and also may be collectively referred to as the "Parties" in this Agreement.

WHEREAS, on August 23, 2019, Mr. Kruk filed a complaint with the Illinois Pollution Control Board (Docket No. PCB 2020-010, the "Complaint") alleging a violation of Illinois noise limits from the District's dust collector and Mr. Kruk also raised noise concerns with other District equipment (collectively "Equipment") used within its newly built service dock to include garbage/recycling compactors and from the rooftop equipment on the District's campus located at 385 Winnetka Avenue, Winnetka, Illinois (the "Campus");

WHEREAS, the dust collector is a new piece of equipment replacing a prior 1934 unit which is used for a selection of elective classes that students may choose to enroll in to satisfy mandatory credits in the District's STEM curriculum and which serves extracurricular activities including the drama program, and has been in operation in its current location since 2017;

WHEREAS, Mr. Kruk's property located at 124 Woodland Ave, in Winnetka was shielded from the old dust collector noise by the old Music Building that was demolished prior to 2017.

WHEREAS, on June 20, 2023, Shiner Acoustics performed noise measurements in compliance with the Illinois Administrative Code at the property line of Mr. Kruk's residence at 124 Woodland Avenue,

Winnetka, Illinois, measuring daytime Equipment, nighttime Equipment, and the dust collector (See "Shiner Report" attached as Exhibit A);

WHEREAS, the district did not perform noise measurements in front of other homes, residential properties on Woodland Avenue located in closer proximity to the dust collector citing absence of formal complaints from those property owners at this time;

WHEREAS, non-compliance may be discovered in the future;

WHEREAS, Mr. Kruk retains all rights to institute another proceeding if the District's noise emissions are found to be in violation of the applicable noise standard;

WHEREAS, the Parties intend that the purpose of the settlement is to avoid potential expense and inconvenience of further proceedings; and

WHEREAS, the Parties request relief from the hearing requirement of 415 ILCS 5/31(c)(1).

WHEREFORE, in consideration of the covenants contained herein, the Parties agree as follows:

Article I. Facts and Circumstances

Section 33(c) of the Act, 415 ILCS 5/33(c) provides:

Facts and circumstances bearing upon the reasonableness of the emissions, discharges, or deposits involved, including:

a. the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;

b. the social and economic value of the pollution source;

c. the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved;

d. the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source; and

e. any subsequent compliance. [415 ILCS 5/33(c)]

The parties hereby Stipulate to the following facts for purposes of supporting the Settlement Agreement only and for no other purpose:

Pursuant to the Shiner Report dated October 10, 2023, regarding the measurements taken June 20, 2023, the District's measured Equipment was in compliance with Illinois noise limits. Mr. Kruk has not performed any testing to confirm the District's claims.

a. **The character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people:**

The District hired experts who conducted noise measurements in 2018, and advised the District that the school dust collector produced noise emissions that exceeded limits established by Illinois Pollution Control Board Regulations, Sections 901.102(a) and (b) (35 Ill. Admin. Code 901.102(a), (b)). On August 15, 2018, Shiner Acoustics, LLC concluded that the "noise from rooftop ventilating equipment normally operating during nighttime hours likely does not exceed the nighttime Illinois standards. . .", and that the "rooftop equipment operating during the daytime likely does not exceed the daytime Illinois limits" established by Illinois Pollution Control Board Regulations, Sections 901.102(a) and (b) (35 Ill. Admin. Code 901.102(a), (b)). The same report also concluded that the "Operation of the dust collector can exceed the daytime Illinois noise standards in the 2000, 4000, and 8000 Hz bands." See attached as Exhibit B.

Mr. Kruk alleged that prior to the Equipment modifications, the noise emissions produced by the school dust collector constituted a nuisance and interfered with the Complainant's welfare and use and enjoyment of his property.

The District denied that the emissions violated any applicable Regulations.

b. **The social and economic value of the pollution source:**

The dust collector is used for a woodworking shop that supports elective classes, including several classes which if elected, can satisfy mandatory requirements as part of the District's STEM curriculum, and extracurricular activities. The dust collector has been in operation since 2017. The parties agree that the operation of the new Campus Equipment has social and economic value which does not justify operating the Equipment above allowable Illinois noise standards.

c. **The suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved:**

The District installed a noise barrier wall and shroud around the motor to reduce the noise produced by the dust collector. Subsequently, the noise emitted by the District's Equipment, to include the dust collector, is suitable to the area in which it is located based on testing conducted by Shiner Acoustics on October 10, 2023 (Exhibit A)

d. **The technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source:**

The technical practicability of further reducing or eliminating the emissions is limited and District's acoustical engineers have advised that additional noise reduction shields would be minimally effective.

e. **Demonstrated and subsequent compliance:**

According to the October 10, 2023, Shiner Report, the noise measurements performed on June 20, 2023, reflected that (i) for Campus Equipment that operates at night, including cafeteria fans, dock condensing unit, rooftop energy recovery units, and rooftop exhaust fans, "property line sound levels complied with the Illinois nighttime limits" (See Exhibit A); and (ii) for all measured Equipment operating at the same time, including the nighttime Equipment as well as rooftop fume hoods and the dust collector, "property line sound levels complied with the Illinois daytime limits (See Exhibit A). Mr. Kruk has not performed sound testing to confirm the District's above claims.

The District has erected a noise barrier wall and a shroud around the motor to reduce the noise produced by the dust collector. The subject noise barrier wall was installed 2 years after the dust collector started operating in 2017. The District's Equipment is in compliance with the Illinois nighttime and daytime sound limits, according to the October 10, 2023, Shiner Report at Exhibit A, and the District intends to remain in compliance with all relevant Illinois noise limits. In the event that the District's Equipment on the Campus is found to be in violation of the applicable noise standards the District will take all reasonable steps to correct the violations promptly and in a timely manner. The District agrees to not operate equipment that is found to be in violation of the Illinois Pollution Control Board's applicable noise standards. Under this Agreement, Mr. Kruk retains all rights to institute another proceeding if the District does not remain in compliance. In the event that Mr. Kruk demonstrates noncompliance with applicable noise standards, the Illinois Pollution Control Board retains jurisdiction to enforce the terms of this Agreement, including the District's promise to take all reasonable steps to correct the violations in a reasonably timely manner.

This Agreement shall, in no way, be construed to obligate the District to conduct its own noise testing, and the burden of establishing a noise violation will remain with any potential future claimant.

Article II. General Terms

1. **Request for Relief.** The Parties request relief from the hearing requirement of Section 31(c)(1) of the Illinois Environmental Protection Act. See 415 ILCS 5/31(c)(1); 5/31(d)(2); and 35 Ill. Admin Code 103.301(a).

2. **Dust Collector Operation.** The District shall maintain the current dust collector operation status quo based on the current scheduled hours and look to further minimize the dust collector operation. However, during theater productions, especially with the rehearsal week prior to the opening of the performance, set crews may need to work, and use the dust collector, on the weekends including the occasional Sunday. Therefore, primarily for that purpose, the District reserves the right to operate the dust collector between the hours of 7:30 a.m. and 8:00 p.m. on weekdays, 8:30 a.m. and 6:00 p.m. on Saturdays and 9:00 a.m. and 4:00 p.m. on Sundays. Should the District choose to deviate from the above listed dust collector operating schedule, the District shall notify the Complainant by email as soon as practical and possible. Any such deviations may prompt further testing by the Complainant as soon as possible. The dust collector is strictly prohibited from operating after 10:00 p.m.

3. **Dismissal of Litigation**. In consideration of the terms and conditions of this Agreement, and within fourteen (14) days of the execution of this Agreement, the Parties will jointly file the Agreed Dismissal Order, attached as Exhibit C, dismissing all claims in the Litigation, with each party to bear their own costs and fees in connection with the Litigation.

3. **Designated Representative**. The District shall provide Mr. Kruk with the name of the current director of physical plant services as representative for the purposes of this Agreement.

4. **Modification and Waiver**. This Agreement or any of its provisions may only be modified or waived when such modification is in writing and signed by both Parties.

5. **Recitals and Captions**. The introductory recitals of this Agreement are an integral part of this Agreement. The captions of the paragraphs of this Agreement are for convenience only, and will not be construed as impacting the terms and provisions of the Agreement.

6. **Future Cooperation**. The Parties agree to fully cooperate and to take all additional actions that may be necessary or appropriate to enforce this Agreement and dismiss the Litigation.

7. **No Third-Party Beneficiary**. This Agreement is not intended to confer any rights upon any third party who is not a Party to this Agreement.

8. **Governing Law.** This Agreement will be interpreted in accordance with and governed by the laws of the state of Illinois.

9. **Term of Agreement.** This Agreement shall remain in effect for a period of three (3) years after the Effective Date (the "Initial Term"). Following the expiration of the Initial Term, the Agreement will renew automatically annually (the "Renewal Period") unless one of the Parties gives the other party ninety (90) days written notice of intent not to renew. During any subsequent Renewal Period, one of the Parties may terminate this Agreement with ninety (90) days written notice to the other Party.

10. **Enforcement of Agreement.** This agreement shall be filed with the Illinois Pollution Control Board as soon as practicable after execution. In the event that Mr. Kruk demonstrates that a breach of this Agreement has occurred, he will notify the district of the alleged breach in writing, specifying the nature of the alleged breach and the date and time that it occurred. The District will respond to Mr. Kruk's allegations in writing within five (5) business days and will subsequently meet with the complainant at a mutually agreeable date and time to discuss complainant's allegations. It is understood that if these exchanges and meeting do not suffice to resolve any dispute surrounding the alleged breach, Mr. Kruk may pursue an appropriate action to enforce the Agreement.

11. **Warranty/Covenant not to assert claim.** Mr. Kruk warrants that, other than the Complaint, he has no claims pending against the District with any court, governmental or administrative agency. Nothing in this Agreement shall prevent Mr. Kruk from instituting a proper proceeding, or otherwise seeking relief from the Illinois Pollution Control Board or the courts, in the event that in the future the District's noise emissions exceed Illinois Environmental Protection Agency limits with respect to

the dust collector that was the subject of this dispute or any other equipment installed on the school property.

12. **Severability**. The parties acknowledge and agree that the provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity and enforceability of other provisions herein. If any provision of this Agreement is deemed unenforceable for any reason whatsoever, such provision shall be appropriately limited and given effect to the extent that it may be enforceable and all other provisions of this Agreement shall remain fully enforceable.

13. **Counterparts.** This Agreement may be executed in counterparts by the Parties.

14. **Effective date**. This Agreement shall be effective on the date it is signed by the last party hereto.

15. **Entire Agreement**. The Parties state that this Agreement contains the entire agreement between the Parties.

16. **No Admission of Liability**. The Parties by entering into this Agreement do not admit to any liability or damages.

MAREK KRUK

By: _____

Name (Printed): MAREK KRUK

Date: 07/03/2025

NEW TRIER HIGH SCHOOL DISTRICT NO. 203

By: _____

Name (Printed): Chris Johnson

Title: Deputy Superintendent

Date: 7/3/2025

Shiner Acoustics, LLC
Acoustical Engineers
225 W Washington St - Suite 1625 Chicago Illinois 60606
Phone 312 849 3340 Fax 312 849 3344 www.shineracoustics.com

Robbins Schwartz
55 W. Monroe Street, Suite 800
Chicago, IL 60603

October 10, 2023

Attn: Mr. Kenneth Florey

Re: New Trier Township High School Noise Measurements

Dear Mr. Florey:

On Thursday, July 20, 2023, we returned to the school to conduct observations and additional acoustical testing. The purpose of this testing was to document property line sound levels due to New Trier mechanical equipment and determine compliance with the Illinois noise code.

Introduction

Previous measurements in 2018, 2019, and 2020 were performed prior to the completion of noise mitigation. Previous measurements in June, 2020 with ventilation silencers and a new acoustical enclosure around the dust collector showed compliance in all nine octave bands of the Illinois code. The intent of the most recent measurements was to perform measurements in compliance with the procedures in the Illinois code and determine compliance with the code.

Measurement Location

The measurements were taken on the public sidewalk at the northeast corner of the property line of 124 Woodland Ave. Fig. 1 shows the site plan with the 124 Woodland Ave. property, measurement location, and New Trier High School. Fig. 2 shows the measurement location in relation to 124 Woodland Ave. and Fig. 3 shows the measurement location in relation to New Trier HS.

The measurement location was the closest point on the property line to the dominant New Trier noise source: the dust collector located on the west side of the building, in the loading dock. The dust collector was located about 140 ft northeast of the measurement point. Other sound sources include rooftop mechanical equipment, such as fans and fume hoods. The measurement location was at least 25 ft from the dust collector and all other noise sources.

None of the noise sources had audible discrete tones, so the microphone was positioned at least 25 feet from any reflective surface. The microphone was positioned at least 5 ft from small objects (trees, posts, bushes, etc.).

The terrain was flat between the 124 Woodland Ave. property, measurement point, and New Trier property. The ground cover was pavement or concrete sidewalks, with a grass strip about 30 ft wide running on the east side of Woodland Ave., parallel to the sidewalk and adjacent to the New Trier structure.

Instrumentation and Setup

We used a Brüel & Kjær 2270 integrating sound level meter and real time analyzer and a Norsonic 1251 calibrator for the measurements. Instrumentation details and laboratory calibration dates are shown in Table 1; all instrumentation was calibrated in a laboratory within

EXHIBIT A

a year of the measurement date, as shown in the calibration certificates in Fig. 4.

The instrumentation complies with the ANSI-ASA and IEC requirements contained in 900.103(b), 900.106, and 910.102.

Table 1. Instrumentation

Instrument	Laboratory Calibration Date
Brüel & Kjær 2270 sound level meter, sn 3005814, with pre-amplifier ZC 0032, sn 20173, microphone 4189, sn 2887723	May 17, 2023
Brüel & Kjær extension cable and windscreen	n/a
Norsonic 1255 calibrator, sn 125526403	March 2, 2023

The calibrator battery level was measured at 3.03 V on July 20, prior to the measurements, and on July 21, after the measurements, as shown in Figs. 5 and 6.

Field calibration was performed at 8:56 p.m., prior to the measurements. The calibration level was 114.0 dB and the sensitivity was 49.21 mV/Pa, as shown in Fig. 7. Field calibration was performed at 11:42 p.m., following the measurements. The deviation from the last calibration (at 8:56 p.m.) was -0.02 dB, the calibration level was 114.0 dB, and the sensitivity was 49.11 mV/Pa, as shown in Fig. 8.

The sound level meter and microphone were both mounted on tripods and separated to minimize any influence on the measurements, as shown in Figs. 2 and 3. The sound level meter and microphone were connected by a cable, which was at least five ft long.

The microphone was positioned at 4'9" above ground level, which is within the requirements of 3'8" and 4'10", as shown in Figs. 9 and 10. The microphone was adjusted to have normal angle of incidence (i.e. it was positioned horizontally toward the school), since it is a free-field microphone.

Weather

Conditions were a temperature 74-75°F, relative humidity 46 to 62%, and calm to light wind speeds, as shown in Table 2.

Table 2. Weather Conditions

Metric	Before Measurements (9:03pm)	After Measurements (11:38pm)	Instrument/Source
Temperature (°F)	75	74	Extech RH300 digital thermometer and psychrometer
Humidity (%)	46	62	Extech RH300 digital thermometer and psychrometer
Barometric pressure (in)	30	30	Wunderground weather station ~3,000 ft from NTHS
Wind speed/gusts (mph)	0.0/6.0 from NE	2.0/7.0 from NE	Dwyer wind meter

Measurements

The measurements were taken on Thursday, June 20, 2023 starting at about 9:00 p.m. and ending at about 11:30 p.m.

Illinois requires a minimum measurement duration of 10 minutes because all equipment is steady-state (i.e. it does not vary with time). The meter was paused for transient noise events, such as passing vehicles, aircraft overflights, trains, and pedestrians, for all measurements. The measurement time was extended for the duration of pauses, if any, to meet the minimum measurement time. All measurements were taken in 1/3 octave bands and converted to 1/1 octave bands. All measurements presented in this report are 10-minute L_{eq}, or $L_{eq,10\text{-}min}$.

All measurements were taken and all calculations were performed in compliance with the Illinois code, specifically sections 900.103(a) and (b), section 910.105, and section 910.106.

There were five measurement scenarios:

A. Background (ambient) sound level;

C*. Nighttime equipment with cafeteria fans operating at 50% speed:
- Dock condensing unit (insignificant noise source, operates intermittently);
- Rooftop energy recovery units (ERUs) (two of four); and
- Rooftop exhaust fans (four total: cafeteria (3), arts kiln exhaust).

C. Nighttime equipment with cafeteria fans operating at 100% speed;

E. All nighttime equipment, including cafeteria fans operating at 100% speed, and all daytime equipment, as follows:
- Dock condensing unit (insignificant noise source, operates intermittently);
- Rooftop energy recovery units (ERUs) (four total);
- Rooftop exhaust fans (11 total: cafeteria (3), science lab (3), arts (2));
- Rooftop fume hoods (three total); and
- Dust collector.

F. Dust collector.

The Illinois code requires determination of source sound levels, i.e. sound levels due to New Trier equipment alone and not including background suburban noise. Background sound levels were measured as scenario A above. The measured raw sound levels for scenarios C*, C, E, and F include both background sound levels and source (New Trier) sound levels. Therefore, the raw sound levels must be corrected for background sound levels, as required in code sections 900.103(b)(2) and 910.106(a)(4). If the raw sound level and background sound level were within three dB, they were indistinguishable and section 910.106(a)(4)(A)(ii) of the code requires setting the source sound level to 0 dB.

The measurements and calculations are documented in Tables 3 through 6, as follows:

- Table 3. Scenario C* with nighttime equipment at reduced speed;
- Table 4. Scenario C with nighttime equipment at rated speed;
- Table 5. Scenario E with all nighttime and daytime equipment at rated speed;
- Table 6. Scenario F with dust collector;

For scenario C*, sound levels with and without the equipment operating were indistinguishable in all nine octave bands. Therefore, the source noise levels were 0 dB and the measurements complied with the Illinois nighttime limits.

For scenario C, sound levels with and without the equipment operating were indistinguishable in eight of nine octave bands, so the source noise levels were 0 dB. In the other band (8 kHz), the source sound level was 19 dB. All measurements complied with the Illinois nighttime limits.

For scenarios E and F, sound levels with and without the equipment operating were indistinguishable in three octave bands (500 Hz, 1 kHz, and 2 kHz), so the source noise levels were 0 dB. In the other six octave bands, there were valid source sound levels. All measurements complied with the Illinois daytime limits.

Conclusion

Measurements of the New Trier Township High School's mechanical equipment sound levels were conducted on July 20, 2023 at the property line of 124 Woodland Ave in compliance with the Illinois noise code. For equipment that operates at night, property line sound levels complied with the Illinois nighttime limits. With all (nighttime and daytime) equipment operating, property line sound levels complied with the Illinois daytime limits.

If you have questions concerning this report, please do not hesitate to contact us.

Respectfully submitted,
Shiner Acoustics, LLC

Cameron J. Baillie, P.Eng.
CJB/mm/20
1180514

Table 3. Measurements – Scenario C* (Nighttime Equipment at 50%)

	Sound Pressure Level ($L_{eq,10\text{-}min}$, dB re 20 µPa)									
	Octave Band Center Frequency (Hz)									Awt
	31.5	63	125	250	500	1k	2k	4k	8k	
Scenario C* raw data	53.6	52.8	47.3	45.4	38.3	37.5	31.2	23.7	18.0	42.2
All equipment off (background sound, scenario A)	54.5	53.3	48.5	44.0	39.3	39.5	32.5	24.0	18.6	43.1
Δ (difference between equipment and background)	-0.9	-0.5	-1.2	1.4	-1.1	-1.9	-1.3	-0.4	-0.6	
Correction	ind	ind	ind	ind	ind	ind	ind	ind	ind	
Source sound level (corrected for background sound)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Illinois nighttime limit	63.0	61.0	55.0	47.0	40.0	35.0	30.0	25.0	25.0	44.4
Exceedance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note a: 'ind' – indeterminate - see text concerning correction for background sound

Table 4. Measurements – Scenario C (Nighttime Equipment at 100%)

	Sound Pressure Level ($L_{eq,10\text{-}min}$, dB re 20 µPa)									
	Octave Band Center Frequency (Hz)									Awt
	31.5	63	125	250	500	1k	2k	4k	8k	
Scenario C raw data	53.2	51.3	48.2	46.6	40.9	37.6	31.6	26.0	22.0	43.4
All equipment off (background sound, scenario A)	54.5	53.3	48.5	44.0	39.3	39.5	32.5	24.0	18.6	43.1
Δ (difference between equipment and background)	-1.3	-2.0	-0.4	2.6	1.6	-1.9	-0.9	2.0	3.4	
Correction	ind	ind	ind	ind	ind	ind	ind	ind	3.0	
Source sound level (corrected for background sound)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	18.2
Illinois nighttime limit	63.0	61.0	55.0	47.0	40.0	35.0	30.0	25.0	25.0	44.4
Exceedance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note a: 'ind' – indeterminate - see text concerning correction for background sound

Table 5. Measurements – Scenario E (Nighttime Plus Daytime Equipment)

	Sound Pressure Level ($L_{eq,10\text{-}min}$, dB re 20 µPa)									
	Octave Band Center Frequency (Hz)									Awt
	31.5	63	125	250	500	1k	2k	4k	8k	
Scenario E raw data	59.9	66.7	59.2	49.3	42.1	38.4	33.4	28.8	24.1	47.9
All equipment off (background sound, scenario A)	54.5	53.3	48.5	44.0	39.3	39.5	32.5	24.0	18.6	43.1
Δ (difference between equipment and background)	5.3	13.4	10.7	5.3	2.8	-1.1	0.9	4.8	5.5	
Correction	1.7	0.0	0.0	1.7	ind	ind	ind	1.7	1.3	
Source sound level (corrected for background sound)	58.2	66.7	59.2	47.6	0.0	0.0	0.0	27.1	22.8	46.1
Illinois daytime limit	72.0	71.0	65.0	57.0	51.0	45.0	39.0	34.0	32.0	55.0
Exceedance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note a: 'ind' – indeterminate - see text concerning correction for background sound

Table 6. Measurements – Scenario F (Dust Collector)

	Sound Pressure Level ($L_{eq,10\text{-}min}$, dB re 20 µPa)									
	Octave Band Center Frequency (Hz)									Awt
	31.5	63	125	250	500	1k	2k	4k	8k	
Scenario F raw data	59.7	66.6	59.1	47.1	39.2	36.1	32.3	28.8	23.8	46.9
All equipment off (background sound, scenario A)	54.5	53.3	48.5	44.0	39.3	39.5	32.5	24.0	18.6	43.1
Δ (difference between equipment and background)	5.2	13.3	10.6	3.1	-0.2	-3.4	-0.3	4.7	5.2	
Correction	1.7	0.0	0.0	3.0	ind	ind	ind	1.7	1.7	
Source sound level (corrected for background sound)	58.0	66.6	59.1	44.1	0.0	0.0	0.0	27.1	22.1	45.5
Illinois daytime limit	72.0	71.0	65.0	57.0	51.0	45.0	39.0	34.0	32.0	55.0
Exceedance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note a: 'ind' – indeterminate - see text concerning correction for background sound

Fig. 1. Site Plan

Fig. 2. View Toward 124 Woodland Ave.

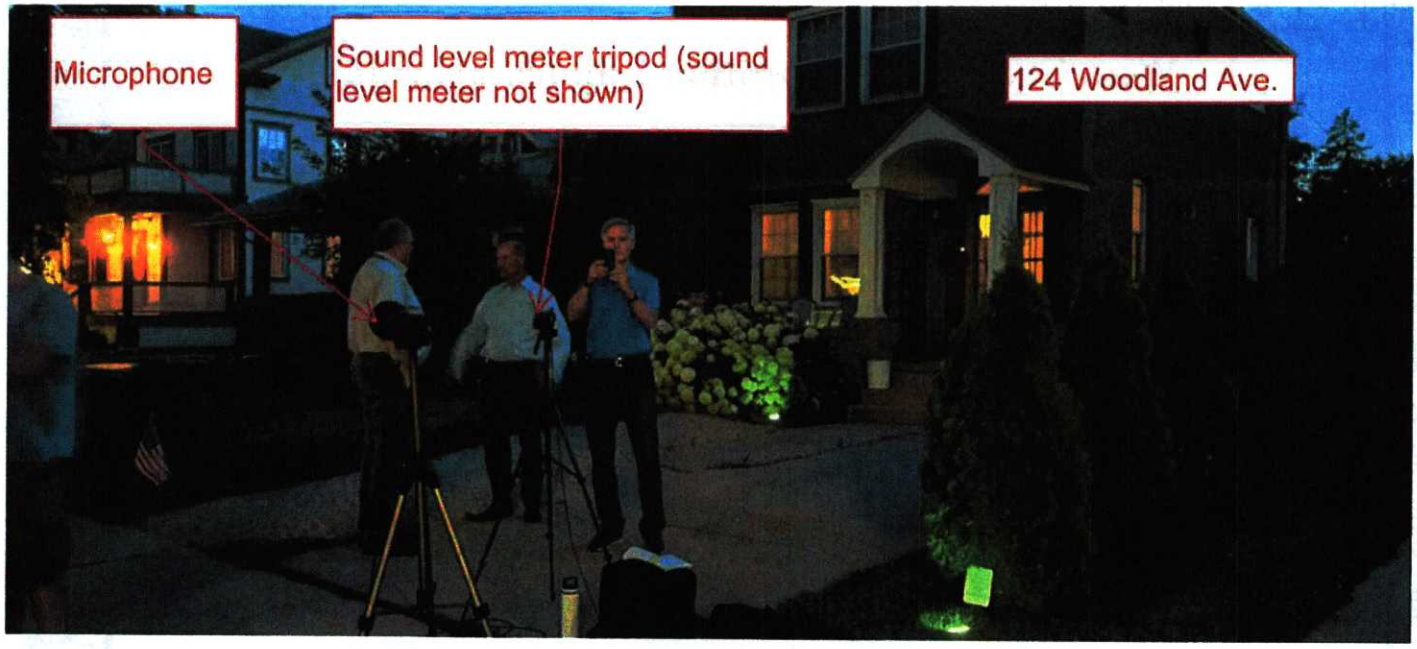

Fig. 3. View Toward New Trier HS

Fig. 4 Calibration Certificates

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

HANDHELD ANALYZER

Manufactured by:	BRUEL & KJAER
Model No:	2270
Serial No:	3005814
Calibration Recall No:	34084

Submitted By:

Customer:	RYAN GARDNER
Company:	SHINER ACOUSTICS LLC
Address:	225 W. WASHINGTON STREET
	CHICAGO IL 60606

The subject instrument was calibrated to the indicated specification using standards traceable to the SI through the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 2270 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.
The information supplied certifies that the item listed above meets acceptance criteria under the decision rule: A=(L-(U95)), where A is the acceptance criteria, L is manufacturer specifications, and U95 is confidence level of 95% at k=2. The decision rule has been communicated and approved by customer during contract review. Measurements marked with (*) are not covered by the scope of current A2LA accreditation.

West Caldwell Calibration Laboratories' calibration control system meets the following requirements: ANSI/NCSL Z540-1, ISO 9001, and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

James Zhu

Quality Manager

Calibration Date:	17-May-23
Certificate Issue Date:	13-Jun-23 Rev.2
Certificate No:	34084 - 1

QA Doc. #1051 Rev. 3.0 5/29/20

ISO/IEC 17025

ACCREDITED

Calibration Lab. Cert. # 1533.01

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE

Manufactured by:	BRUEL & KJAER
Model No:	4189
Serial No:	2887723
Calibration Recall No:	34084

Submitted By:

Customer:	RYAN GARDNER
Company:	SHINER ACOUSTICS LLC
Address:	225 W. WASHINGTON STREET
	CHICAGO IL 60606

The subject instrument was calibrated to the indicated specification using standards traceable to the SI through the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 4189 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.
The information supplied certifies that the item listed above meets acceptance criteria under the decision rule: A=(L-(U95)), where A is the acceptance criteria, L is manufacturer specifications, and U95 is confidence level of 95% at k=2. The decision rule has been communicated and approved by customer during contract review. Measurements marked with (*) are not covered by the scope of current A2LA accreditation.

West Caldwell Calibration Laboratories' calibration control system meets the following requirements: ANSI/NCSL Z540-1, ISO 9001, and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

James Zhu
Quality Manager

Calibration Date:	17-May-23
Certificate Issue Date:	13-Jun-23 Rev.2
Certificate No:	34084 - 2

QA Doc. #1051 Rev. 3.0 5/29/20

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Calibration Lab. Cert. # 1533.01

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

Norsonic

Certificate of Calibration

Certificate No.: Cal 022-2023-16914

Test object:	Sound calibrator Class 1
Manufacturer:	Norsonic
Type:	1255
Serial No.:	125526403
Customer:	Scantek stock
Address:	USA
Order No.:	SO2309024

Calibration and verification performed:
The tests are performed according to IEC 60942:2017, Annex B. A detailed description of the calibration procedure is available separately. The equipment was preconditioned for more than 12 hours at the specified calibration temperature and humidity. The calibrator was placed on top of the reference microphone, only held in place by gravity. No adapter ring was needed to obtain half inch configuration. The customer submitted an instruction manual for this test object.

Statement of Conformity: (Decision rule: IEC 60942:2017)
As public evidence was available, from a testing organization responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2017, the sound calibrator tested is considered to conform to all the class 1 requirements of IEC 60942:2017.

Date of calibration:	2023-03-02
Date of issue:	2023-03-02

Environmental conditions	Pressure:	Temperature:	Relative humidity:
Reference conditions:	101,325 kPa	23,0 °C	50 %RH
Measurement conditions:	99.18 ± 0.00 kPa	23.7 ± 1.0 °C	49.1 ± 3.0 %RH

Operator:	Supervisor:
Fredrik Pettersen	Daniela Toledo Helboe

This document is electronically signed, hence there are no handwritten signatures.

Norsonic

NORWEGIAN ACCREDITATION CAL 022

Certificate No.: Cal 022-2023-16914

The stated levels are relative to 20µPa.
The distortion measure is a "total distortion and noise to signal" ratio.
The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA publication EA-4/02.

Instrumentation:		Traceability:	Expire date:
WSM11	GRAS 40AG / 267776	DFM	2023-07-05
MA14	Norsonic 1203 / 138531	Norsonic	2023-12-20
DAC3	National Instruments 4461 / 19D0B2F	Norsonic	2024-06-30
U7	Norsonic Nor484 / 48431304	Norsonic	2023-06-30
BAR3	Vaisala PTU300 / F1230002	Justervesenet	2023-11-09

Results

1 kHz 114 dB	Exact	Measured	Uncertainty
Frequency	1 kHz	1000.00 Hz	1.00 %
Level	114 dB	114.01 dB	0.14 dB
Level stability		0.01 dB	0.02 dB
Distortion		0.03 %	0.30 %

Measurements performed by NCL NORSONIC CALIBRATION LABORATORY

Street address: Gunnersbråtan 2, N-3409 Tranby, Norway
Tel.: +47 32858900 email: ncl@norsonic.com
Certificate version 7

Fig. 5 Calibrator Battery Level, July 20

Fig. 6 Calibrator Battery Voltage, July 21

Fig. 7 Field Calibration, July 20, 8:56 p.m.

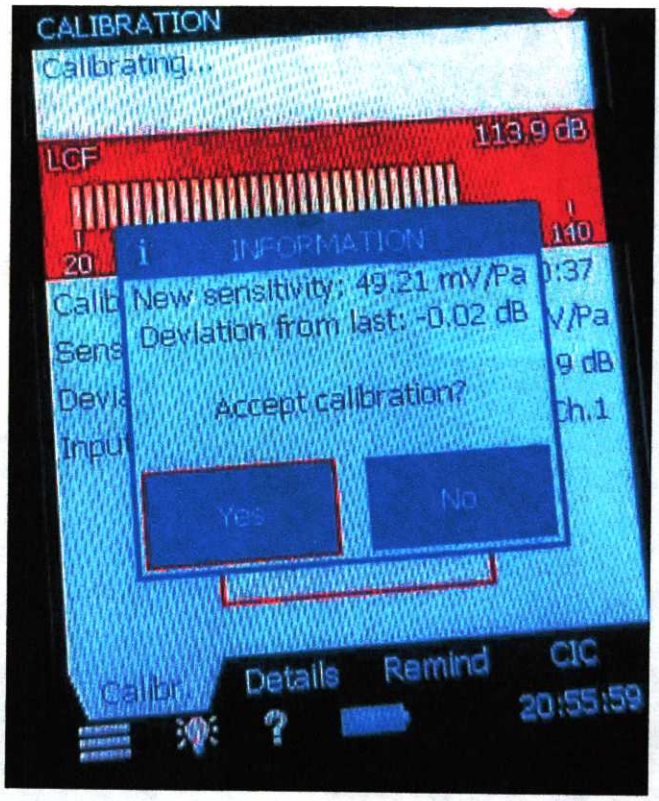


Fig. 8 Field Calibration, July 20, 11:43 p.m.

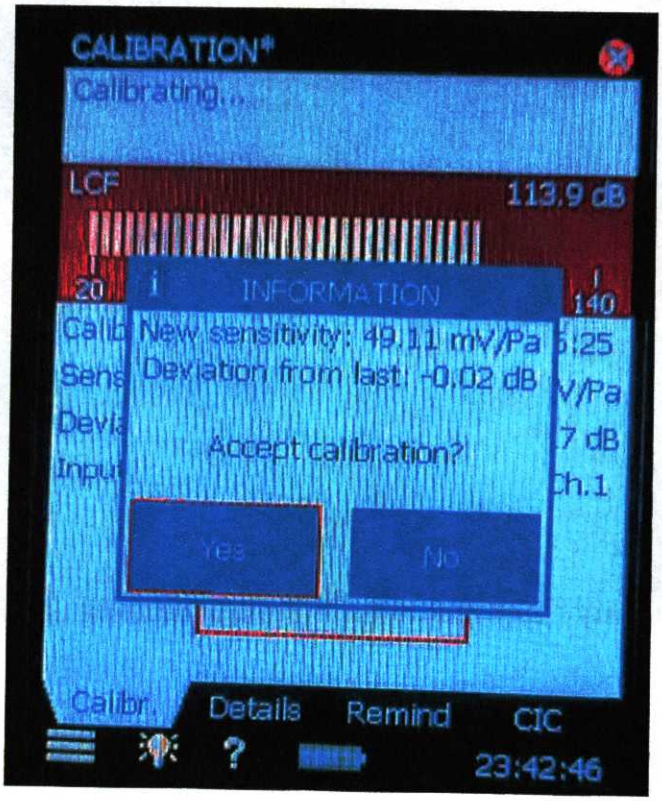


Fig. 9 Microphone Height Above Sidewalk

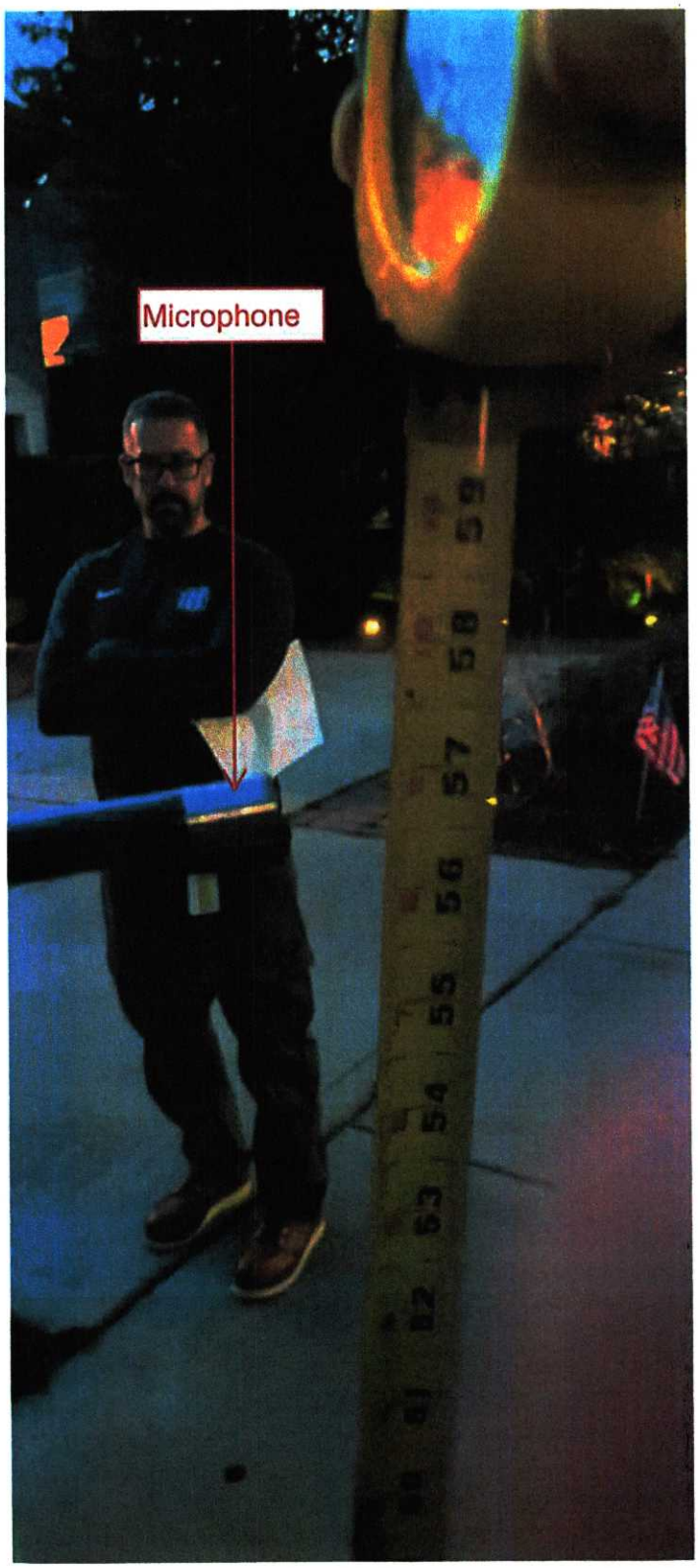
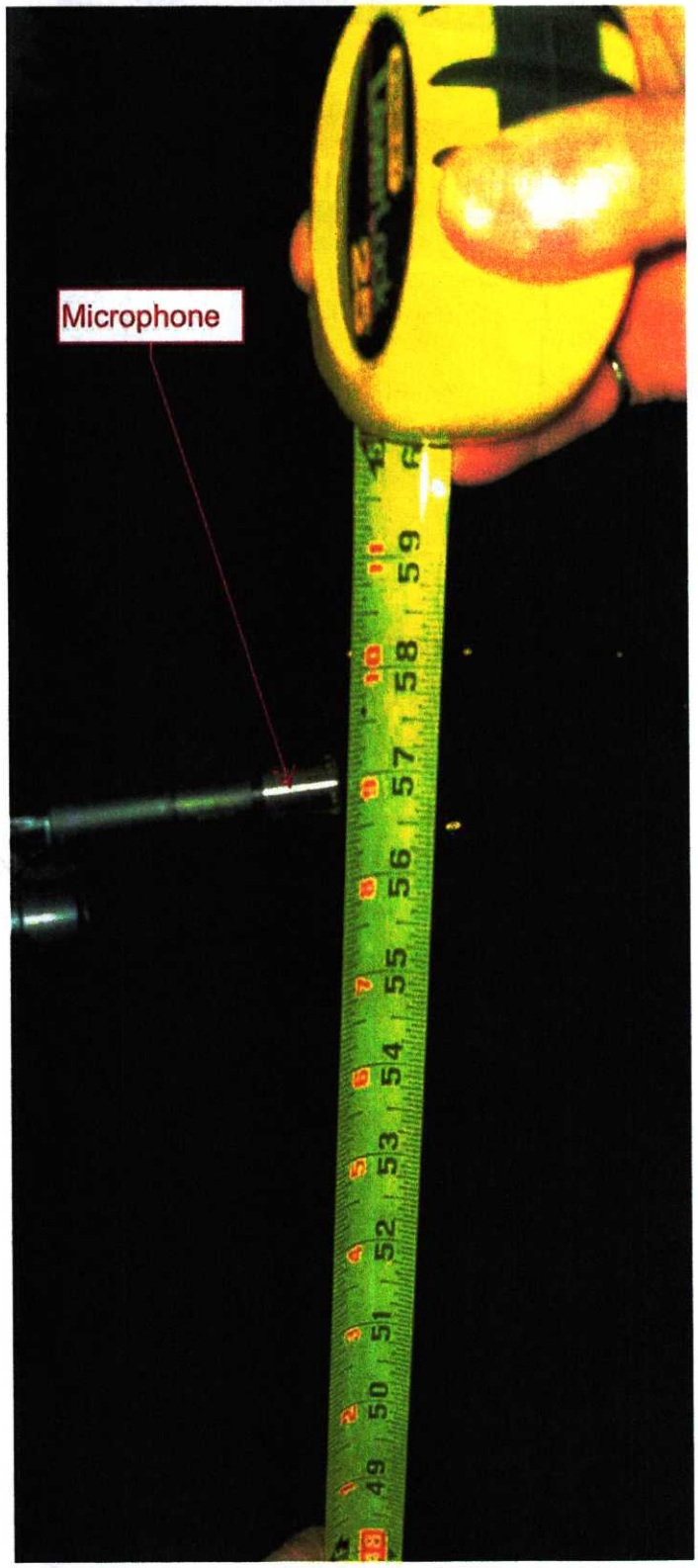


Fig. 10 Microphone Height Above Sidewalk



Shiner Acoustics, LLC Acoustical Engineers
225 W Washington St. - Suite 1625, Chicago, Illinois 60606
Phone 312 849-3340 Fax 312 849-3344 www.shineracoustics.com

New Trier High School
385 Winnetka Avenue
Winnetka, IL 60093

August 15, 2018

Attn: Mr. Steve Linke

Re: Measurement of Environmental Noise
New Building Rooftop Mechanical Equipment and Dock Dust Collector

Dear Steve:

We conducted environmental noise measurements on the early mornings of Thursday, May 31 and July 25, 2018. The purpose of these measurements was to quantify sound levels due to operation of mechanical equipment located on the roof and loading dock of the new building.

A new building was constructed on Winnetka Avenue that replaced the Music/Performing Arts Building, Cafeteria and Tech Arts Building. Demolition of the previous buildings started in June 2015 and the new building was completed in late 2017. Mechanical equipment installed on the roof of the four story building provides building ventilation and exhaust for kitchen, science, art, tech and other services. Additionally, dust collection equipment located in the loading dock area is used for a few hours each day.

Complaints have been received from a resident along Woodland Avenue regarding excessive noise. Winnetka addresses noise from mechanical equipment in the village code in section 15.44.050 (Freestanding Heating or Cooling Devices) and refers to the standards administered by the Pollution Control Board as set forth in the Illinois Administrative Code, Title 35, Subtitle H, Chapter I, Sections 901.102(a) and (b).

Acoustical Criteria

For commercial and residential land uses, Illinois permits the equivalent of 55 dBA during the day (7:00 a.m. to 10:00 p.m.) and 44 dBA at night (10:00 p.m. to 7:00 a.m.) The regulations apply at the residential property line, require readings energy-averaged over a one hour time period and call for sound level readings in each of nine octave (frequency) bands. The ambient (or background) sound level must be established, through measurement at the site. In the case where the Illinois limits are exceeded by the ambient environment, the limits do not have to be met.

The Illinois limits are stated in terms of octave band sound levels. Thus, for daytime and nighttime, the limits must be met in each of nine frequency bands. Octave band sound level measurements were conducted by Shiner in one-third octave bands which were converted to octave bands and A-weighted sound levels.

Acoustical Measurements

We conducted sound level readings at the west edge of the public sidewalk at the north property line of 124 Woodland Ave. on Thursday, May 31, 2018 between 4:20 a.m. and 4:36 a.m. These hours were chosen since noise from environmental sources (cars, trains, planes, etc.) is minimized and the Illinois Noise Regulations are most restrictive before 7:00 a.m.

EXHIBIT B

We returned to the same location on Wednesday July 25, 2018 between 6:29 a.m. and approximately 7:00 a.m. to repeat dust collector measurements.

Figure 1 is an aerial photograph showing the microphone location. The photo has been cropped at the east edge since a current aerial photograph showing the new school building is not yet available.

Figure 1. Aerial Photo of Measurement Location – 124 Woodland Ave., Winnetka, IL

The following instrumentation was used on both dates:

- Norsonic 140 integrating sound level meter/real time analyzer
- Nor 1225 1/2 inch condenser microphone
- Nor preamplifier 1209/13239
- Nor 1251 Sound Calibrator
- Tripod, extension cable, windscreen

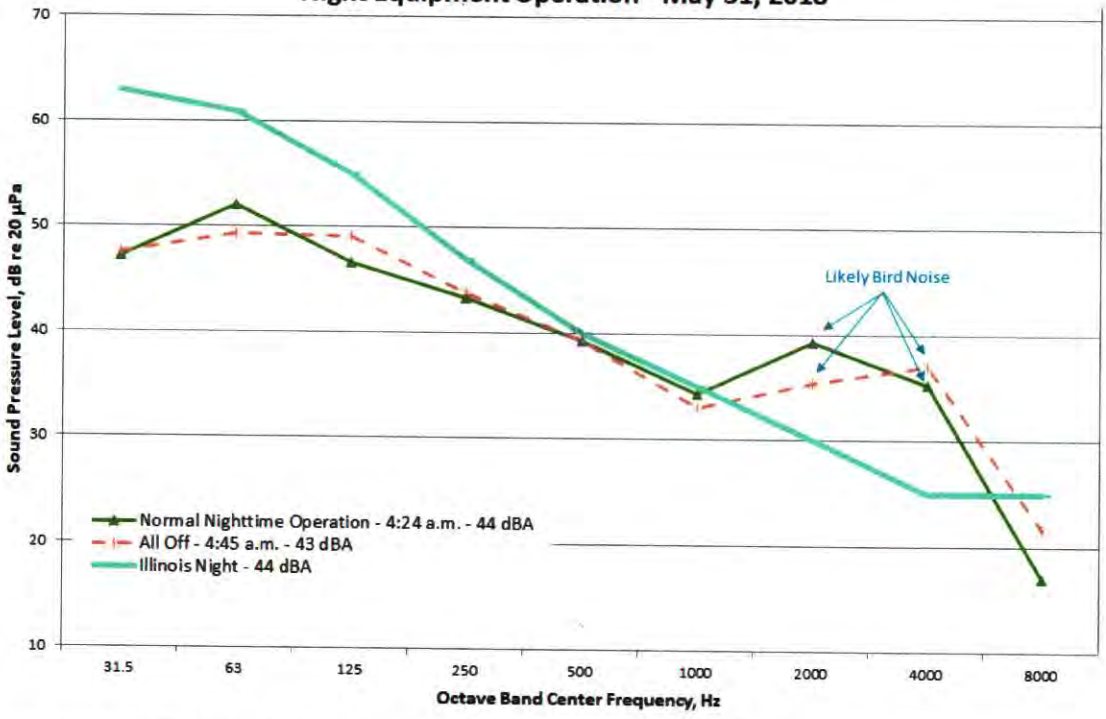
Rooftop Mechanical Equipment

On May 31, 2018, we used a fiberglass mast attached to a heavy duty tripod to elevate the microphone to a height of 18 feet above ground level in order to simulate noise heard at the second floor of residences. Conditions were dry on the night of Thursday, May 31, 2018 with no precipitation. Roadways were dry. The temperature remained constant at 71° F and the wind was calm. As the study progressed, noise from traffic and birds increased.

Since noise from fans and other rooftop mechanical sources is steady-state (does not vary with time), we conducted a series of 20 second-long readings under various equipment operating conditions in order to determine the energy average sound level (Leq). We conducted measurements when transportation noise was at its lowest. Readings were initially taken with equipment in normal nighttime operation and then then with all equipment briefly shut off. For reporting purposes, we chose the 20 second reading with the lowest overall sound level. In this way, the chosen reading was least influenced by transportation noise. It should be noted that readings taken with New Trier equipment operating also include contribution from transportation noise sources.

Figure 2 shows the results of our readings taken with equipment that normally operates during nighttime hours (ERU units 1, 3 and 4), the ambient or background (all equipment off) and the Illinois nighttime standards. The graph is plotted in terms of octave band sound level versus sound level. With equipment operating, the graph shows compliance with the Illinois standards except in the 2000 and 4000 Hz frequency bands. We believe that energy in these frequency bands is due to awakening birds. It should also be noted that noise from the ambient environment also exceeds the Illinois standards in these frequency bands. In fact in the 4000 Hz frequency band, measured environmental noise exceeds that taken with New Trier equipment on. We have found that this is a common occurrence when source sound levels are low.

Figure 2. New Trier Hight School - New Building Night Equipment Operation - May 31, 2018

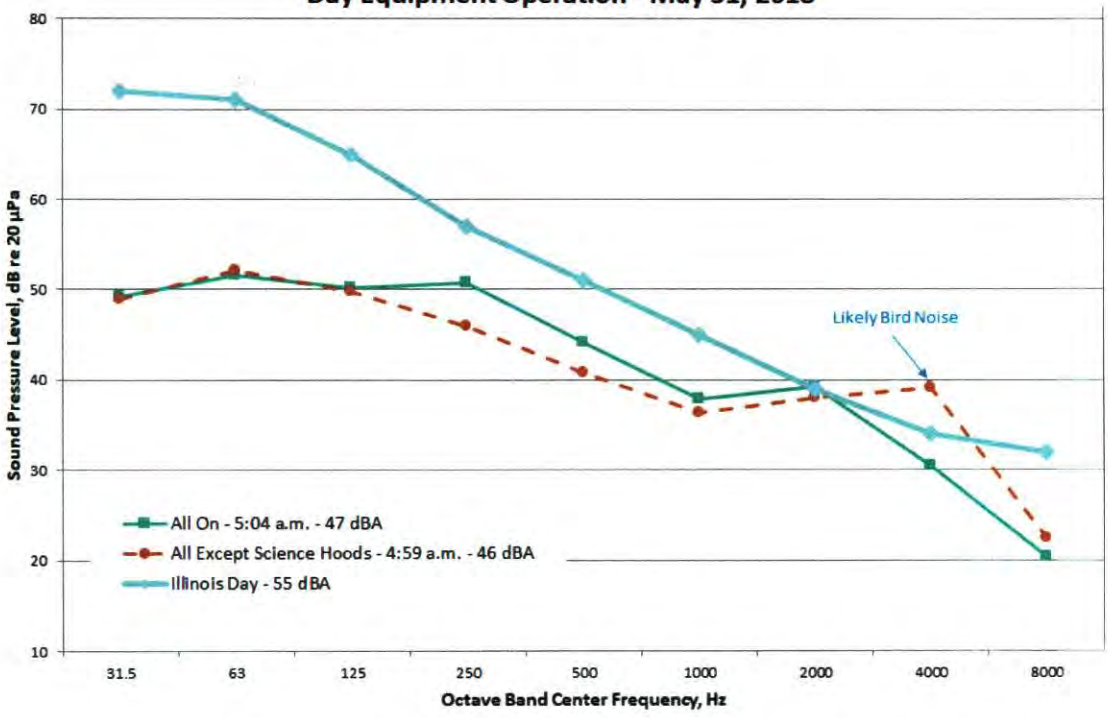


In order to investigate noise from equipment operating during the day, building personnel manually started rooftop mechanical equipment. Readings were taken during the early morning hours in order to minimize transportation noise, which would have made assessment of mechanical noise difficult or impossible during daytime hours.

Because the science fume exhaust fans (EF-FH1, FH2 and FH3) are located near the west edge of the building, separate readings were taken with all equipment operating (except these fans) and all equipment operating (including the science hoods). Figure 3 shows this comparison plotted against the daytime Illinois limits. Note that Illinois permits greater levels of noise during daytime hours.

Figure 3 shows substantial compliance with the Illinois standards when all equipment was operating. In the 2000 Hz band, noise with all equipment operating (including the science fans) is equal to the Illinois limit. Noise with all equipment except the science exhaust fans was lower than the standards in the 2000 Hz band and higher in the 4000 Hz band. Again, we believe that energy in this band is due to birds and is a common occurrence in environmental noise measurements when mechanical equipment level are low. Results of the studies are summarized in Table 1.

Figure 3. New Trier High School - New Building Day Equipment Operation - May 31, 2018



Dock Dust Collector

The dust collector is presently operated on as as-needed basis, three to four times per day for periods up to 40 minutes. Following our rooftop mechanical equipment noise testing at 124 Woodland Ave. on May 31, 2018, the microphone was positioned at a height of 4-1/2 ft above ground level and the dust collector was operated for a short period of time at 5:08 a.m. Figure 4 below is a plot of the measured 30 second average sound level versus octave band frequency. The figure indicates that Illinois daytime limits are exceeded in the 250 Hz and upper frequency bands. Results are summarized in Table 2.

On July 25, 2018, we returned to the school specifically to measure dust collector noise following installation of additional inlet ductwork inside the school. Readings were conducted at the same location as on May 31, 2018 but at 6:29 a.m. Results show a decrease noise at the blade pass frequency (250 Hz), upper frequency bands (4000 and 8000 Hz) and in the low frequencies. When compared to the Illinois standards, compliance was reached at 250 Hz, however noise in the 2000, 4000 and 8000 Hz bands is still in exceedance by several decibels.

Figure 4. New Trier High School - New Building
Dust Collector Operation - May 31 vs July 25, 2018

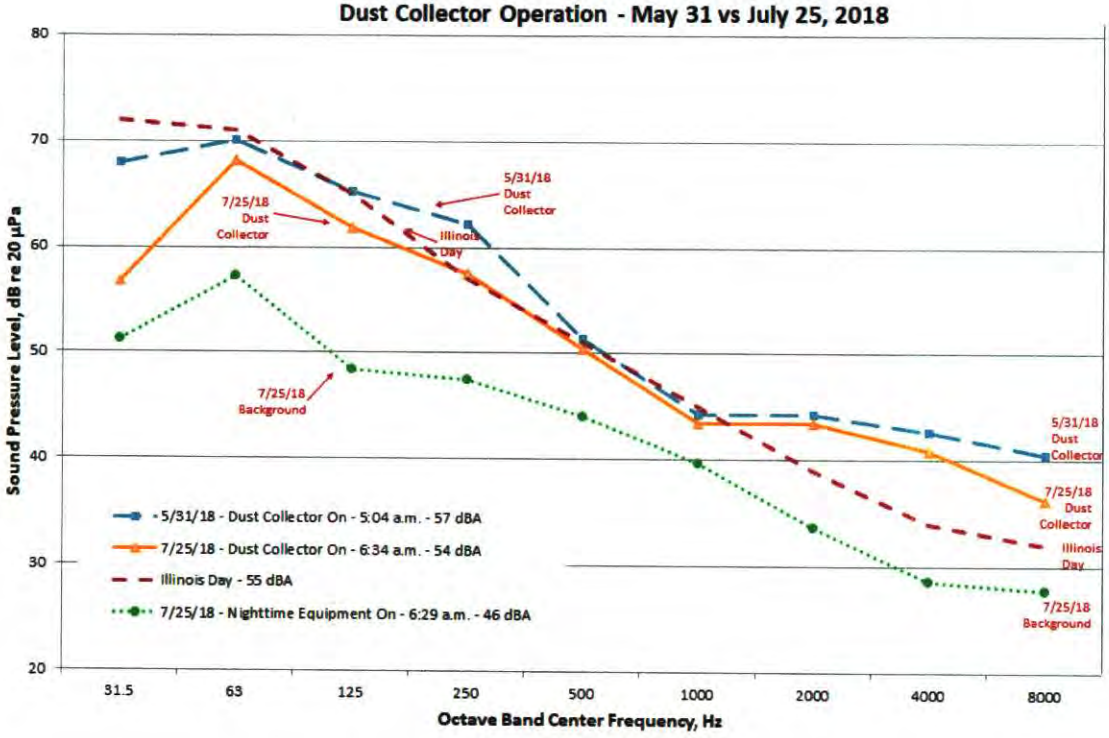


Table 1. Results of Study – New Trier High School New Building – Rooftop Equipment
124 Woodland Ave. – May 31, 2018

Octave Band Sound Pressure Level, dB re 20 µPa

	31.5	63	125	250	500	1000	2000	4000	8000	Awt
Normal Nighttime Operation	47	52	47	43	39	34	39*	35*	17	44
All Off	48	49	49	44	39	33	35*	37*	22	43
Illinois Nighttime Limit	63	61	55	47	40	35	30	25	25	44
Rooftop Equipment										
All Daytime Except Fume Exh	49	52	50	46	41	36	38	39*	22	46
Normal Daytime Operation	49	52	50	51	44	38	39	30	20	47
Illinois Daytime Limit	72	71	65	57	51	45	39	34	32	55

* Includes noise from birds

Table 2. Results of Study – New Trier High School New Building – Dust Collector
124 Woodland Ave. – May 31 and July 25, 2018

Octave Band Sound Pressure Level, dB re 20 µPa

	31.5	63	125	250	500	1000	2000	4000	8000	Awt
5/31/18 Dust Collector	68	70	65	62	51	44	44	43	41	57
7/25/18 Dust Collector	57	68	62	57	50	44	44	41	36	54
7/25/18 Nighttime Operation	51	57	49	48	44	40	34	29	28	46
Illinois Daytime Limit	72	71	65	57	51	45	39	34	32	55

Conclusions

Figure 2 shows that noise from rooftop ventilating equipment normally operating during nighttime hours likely does not exceed the nighttime Illinois standards which are administered by the Illinois Pollution Control Board. Since readings taken with equipment running also include noise from transportation noise sources, we expect that noise generated by the school's mechanical equipment is lower than was measured.

In the same fashion, Figure 3 shows that rooftop equipment operating during the daytime likely does not exceed the daytime Illinois limits. Based on near field sound level measurements later taken on the building roof, we expect that noise from the science exhaust fans may be identifiable from time to time during the day because of the character and frequency content of this noise.

Operation of the dust collector can exceed the daytime Illinois noise standards in the 2000, 4000 and 8000 Hz bands.

Recommendations

The school has already treated the dust collector motor with a 1-1/2" thick insulated sheet metal enclosure. Since only high frequency attenuation is now required, lagging of the motor enclosure and inlet/discharge may yield compliance. However, it should be realized that 7 dB of attenuation in the 4000 Hz band is required.

To address radiated noise from the motor and associated ductwork, we recommend lagging inlet and discharge round and rectangular ducts for a distance of 15-20 ft on each side of the motor enclosure. Wrap duct with 2" thick 5 pcf fiberglass and lag with 2 psf mass loaded vinyl (e.g., Kinetics KNM-200AL). Follow the manufacturer's instructions and tape or band all seams. The baghouse should also be treated in a similar manner.

Should lagging not provide the required reduction, then an L-shaped barrier wall should be constructed that shields Woodland Ave. from the dust collector and associated ductwork. At the west end of the generator, the barrier wall should extend south from the brick wall and then east to a point 3 ft beyond the dust collector motor housing and baghouse. The wall should exceed the highest point by 2 feet. The barrier wall should have a minimum sound transmission class of STC 30 and be sound absorptive on the inner face meeting NRC 0.85.

If you have questions concerning this report, please do not hesitate to contact us.

Respectfully submitted,

Shiner + Associates, Inc.

Brian L. Homans

BLH/mo/07
1180514

Metal Noise Barrier and Lagging Manufacturers

Koch Acoustical Barriers
The Imbert Corporation
7030 N. Austin Av.
Niles, IL 60714
John Grzeskowsi
johng@imbertcorp.com
847-647-2393
www.kochllc.com/acoustical/barriers1/

Semco, Inc.
Hatchell & Associates, Inc.
414 Fullerton Av.
Elmhurst, IL 60126
Attn: Rob
630-833-3838
www.semcohvac.com/products/dap/acoustic/barriers/index.php

Noise Barriers, LLC
2845 Ashley Circle – Suite 103
Libertyville, IL 60048
847-362-7440
Todd Mitchell
tmitchell@soundcontrol.com
www.noisebarriers.com/barriersystems/

Kinetics Noise Control
Ketchum & Walton
37 Sherwood Terrace, Suite 102
Lake Bluff, IL 60044
847-362-7440
tmichchell@soundcontrol.com
http://kineticsnoise.com/industrial/pdf/knm-100al.pdf

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

MAREK KRUK	)	
	)	
Complainant,	)	
	)	
v.	)	PCB 2020-010
	)	
NEW TRIER HIGH SCHOOL DISTRICT NO. 203,	)	
	)	
Respondent.	)	

AGREED DISMISSAL ORDER

This matter coming on before the Illinois Pollution Control Board by agreement of the Parties, the Court being advised that (a) all claims and matters at issue between the Parties have been compromised and settled, (b) pursuant to the Parties' Settlement and Stipulation Agreement, Marek Kruk's claims against New Trier High School District No. 203 are to be dismissed, **IT IS HEREBY ORDERED THAT:**

Marek Kruk's claims against New Trier High School District No. 203 are dismissed, each Party to pay its own costs and fees. This Board retains jurisdiction to enforce the terms of the Parties' Settlement and Stipulation Agreement.

ENTERED:

_____
Board Member

Dated: _____

Order Prepared By:
Kenneth M. Florey (kflorey@robbins-schwartz.com)
Katie N. DiPiero (kdipiero@robbins-schwartz.com)
ROBBINS, SCHWARTZ
190 S. LaSalle Street, Suite 2550
Chicago, Illinois 60603
312-332-7760 (ph)
312-332-7768 (fax)
Cook County No. 91219

EXHIBIT C