



AGENDA
QUARRY COMMISSION REGULAR MEETING
MONDAY, SEPTEMBER 13, 2021, 6:00 P.M.

The Garden Ridge Quarry Commission will meet in a regular session on Monday, September 13, 2021, at 6:00 p.m. in the City Council Chambers, 9400 Municipal Parkway, Garden Ridge, Texas. This is an open meeting, open to the public, subject to the Open Meetings Law of the State of Texas, and as required by law, notice is hereby posted providing time, place, date, and agenda thereof. The meeting facility is wheelchair accessible and accessible parking spaces are provided. Requests for accommodations or interpretative services must be made to the City Secretary 48 hours prior to this meeting.

1. Call to Order

2. Roll Call

3. Pledge of Allegiance

4. Citizen Comment Period – limited to 30 minutes total

Rules for Citizens' Participation: The Commission welcomes citizen participation and comments at all Commission Meetings. The Commission offers citizens the opportunity to address them by signing up to speak prior to the meeting. If you speak, you must follow these guidelines:

a) Respect and courtesy:

1. Direct your comments to the entire Commission, not to an individual member, nor to the audience.
2. Show the Commission the same respect that you would like to be shown.
3. End your speaking at the time allotted below.

b) Speaking:

1. First citizen comment period.
 - i. You are required to sign up to speak and you are limited to one 3-minute period.
2. Second citizen comment period.
 - i. You are not required to sign up and you are limited to one 2-minute period.
3. State your name and address before your comments begin.
4. You are only allowed to speak once per topic, unless also speaking during a posted Public Hearing.

NOTE: The Texas Open Meetings Act permits a member of the public or a member of the governmental body to raise a subject that has not been included in the notice for the meeting. However, any discussion of the subject must be limited to a proposal to place the subject on the agenda for a future meeting and any response to a question posed to the Commission is limited to either a statement of specific factual information or a recitation of existing policy. TEX. GOV'T CODE § 551.042.

5. Business Items

The following items are for discussion, consideration, and action.

a) Approvals

1. Approval of Minutes for July 12, 2021, Quarry Commission Regular Meeting.

b) Discussions/Reports/Updates

1. Monthly Hanson Quarry blasting analysis data reported by Vibratex and recent quarry operations, including any unusual blasts that occurred during reported month/s and/or current month.
2. Review individual citizen blast reports received during reported month/s.
3. Location, placement, and number of monitors and other matters related to monitoring of blasts, including placement of roving monitor.

4. Items applicable to the Quarry Commission discussed at the August and September City Council Meetings.

5. Hanson Quarry Community Outreach in the City of Garden Ridge.

c) Recommendations

1. Ordinance No. 210-022018 An Ordinance of the City Council of the City of Garden Ridge adopting board and commission policy and procedures; providing that this Ordinance shall be cumulative of all Ordinances; providing a severability clause; providing a savings clause; and providing an effective date.
 - i. Receive recommendations and consideration of appointment of Quarry Commission Chair and Vice-Chair for a one-year term effective October 2021.
 - ii. Discuss and make recommendations related to application of ordinance provisions to commission members, if needed.

d) Education/Training

1. Review “Quarry Terminology”.
2. Discuss “Blasting Educational Materials” with Vibratech, Hanson representatives, blasting contractors, and the public.
3. Discuss future education/training sessions and Grapevine articles.

e) Future Agenda Items

1. Commissioners input on agenda items.
2. Announce the date, time, and location for next meeting (November 8, 2021, at 6pm in City Hall).

6. **Citizen Comment Period** – limited to 20 minutes total
See “Rules for Citizen’s Participation” under Item 4.

7. **Adjournment**

AGENDA NOTICES:

Decorum Required: Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

Action by Commission Authorized: The Commission may vote or act upon any item within this agenda.

Attendance by Other Elected or Appointed Officials: It is anticipated that members of the City Council, other city boards, commissions, and/or committees may attend the meeting in numbers that may constitute a quorum of the City Council, other city boards, commissions, and/or committees. Notice is hereby given that the meeting, to the extent required by law, is also noticed as a meeting of the City Council, other boards, commissions and/or committees of the City, whose members may be in attendance. The members of the boards, commissions, and/or committees may participate in discussions on the same items listed on the agenda, which occur at the meeting, but no action will be taken by such in attendance unless such item and action is specifically provided for on an agenda for that board, commission or committee subject to the Texas Open Meetings Act.

This is to certify that I, Kat Balbi, posted this Agenda at 9:00 a.m. on July 8, 2021, on the bulletin board located at the entrance to the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas.



Kat Balbi
Assistant City Secretary



MINUTES
QUARRY COMMISSION REGULAR MEETING
MONDAY, JULY 12, 2021, 6:00 P.M.

Commissioners Present:

Chair Johnell Holly
Vice-Chair Jerry Barucky
Commissioner Mike Shands
Commissioner Albert Haddad
Commissioner Wayne Mudge
Commissioner Armando Diaz
Councilmember John McCaw, Ex-officio (Arrived at 6:09pm)

Commissioners Absent:

Commissioner David Biersner (Excused Absence)

City Staff, City Councilmembers, or Other Commissioners Present:

Nancy Cain, City Administrator
Marisa Spencer, City Secretary
Kat Balbi, Assistant City Secretary

1. Call to Order

With a quorum of the Quarry Commissioners present, Chair Holly called the regular meeting of the Garden Ridge Quarry Commission to order at 6:00 p.m. on Monday, July 12, 2021, in the City Council Chambers of the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas, 78266.

2. Roll Call: See above.

3. Pledge of Allegiance: Chair Holly led the Pledge of Allegiance.

4. Citizen Comment Period: No one signed up to speak.

5. Business Items

The following items are for discussion, consideration and/or action.

a) Approvals

1. Approval of Minutes for March 18, 2021, Quarry Commission Regular Meeting.

Motion: A motion was made by Commissioner Mudge, seconded by Commissioner Shands, to approve the March 18, 2021, Quarry Commission Regular Meeting Minutes. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

b) Discussions/Reports/Updates

1. Review and discussion on the monthly Hanson Quarry blasting analysis data reported by Vibra-Tech. Discussion with Hanson Servtex and blasting contractors on recent quarry operations, including any unusual blasts that occurred during reported month/s and/or current month.

David Larner, Vibra-Tech, presented and discussed the March blast analysis. He stated that 11 shots occurred during the month of March and none of the blasts exceeded the limits of Ordinance No. 34. He reported the highest PPV reading of 0.135 occurred on March 30th at the Warden Residence and the highest Air Overpressure of 112 dB occurred on March 2nd at the Holly Residence.

David Larner, Vibra-Tech, presented and discussed the April blast analysis. He stated that 9 shots occurred during the month of April and none of the blasts exceeded the limits of Ordinance No. 34. He reported the highest PPV reading of 0.155 occurred on April 22nd at the Warden Residence and the highest Air Overpressure of 113 dB occurred on April 19th at the Warden Residence.

David Larner, Vibra-Tech, presented and discussed the May blast analysis. He stated that 12 shots occurred during the month of May and none of the blasts exceeded the limits of Ordinance No. 34. He reported the highest PPV reading of 0.163 occurred on May 14th at the Warden Residence and the highest Air Overpressure of 118 dB occurred on May 6th at the Warden Residence.

David Larner, Vibra-Tech, presented and discussed the June blast analysis. He stated that 10 shots occurred during the month of June and none of the blasts exceeded the limits of Ordinance No. 34. He reported the highest PPV reading of 0.203 occurred on June 18th at the Warden Residence and the highest Air Overpressure of 113 dB occurred on June 24th at the Warden Residence.

2. Review individual citizen blast report/s, follow up on citizen blast report/s and/or assign Quarry Commissioner contact with citizen/s, as necessary.

David Larner, Vibra-Tech, spoke regarding the four citizen blast reports received from March through June and answered questions from the Commission.

3. Discussion on number of, placement, and location of monitors and other matters related to monitoring of blasts by Vibra-Tech and notification to residents of monitor placements. Discuss placement of roving monitor which is currently at the Baker residence.

The Commission discussed moving the roving monitor to the Midla Residence.

4. Items applicable to the Quarry Commission discussed at the April, May, June, and July City Council Regular Meetings.

Chair Holly provided the Commission with an update on the items discussed at the April, May, June, and July City Council Regular Meetings.

c) Recommendations

1. Request from Buckley Powder Co., for a Partial Exemption Permit to conduct blasting activities at the Hanson Quarry for the period of October 1, 2021-September 30, 2022.

i. Review request and make recommendation to City Council.

Nancy Cain, City Administrator, presented the Partial Exemption Permit submitted by Buckley Powder Co. to conduct blasting activities at the Hanson Quarry.

Motion: A motion was made by Commissioner Haddad, seconded by Commissioner Shands, to recommend to City Council to approve the request from Buckley Powder Co., for a Partial Exemption Permit to conduct blasting activities at the Hanson Quarry for the period of October 1, 2021, to September 30, 2022. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

2. Ordinance No. 210-022018 An Ordinance of the City Council of the City of Garden Ridge adopting board and commission policy and procedures; providing that this Ordinance shall be cumulative of all Ordinances; providing a severability clause; providing a savings clause; and providing an effective date.

i. Discuss and accept the resignation of Commissioner Haddad.

ii. Interview possible candidates for Quarry Commission, Place 1 vacancy (term expiring September 30, 2021).

iii. Make recommendation to City Council for appointment of commissioner.

The Commission had no candidates to interview.

iv. Discuss expiring terms (September 30, 2021) of Commissioner Mudge, Commissioner Diaz and Commissioner Shands.

The Commission discussed the expiring terms of Commissioner Mudge, Commissioner Diaz, and Commissioner Shands and the Commissioners indicated their desire to serve another term on the Quarry Commission. The Commission discussed Terms of Office detailed in Ordinance No. 210 as it relates to Commissioner Shands and Commissioner Mudge due to them exceeding the term limits.

v. Make recommendation to City Council for consideration of reappointment.

Motion: A motion was made by Vice-Chair Barucky, seconded by Commissioner Shands, to recommend to City Council the reappointment of Commissioner Diaz to serve an additional two (2) year term on the Quarry Commission with the term expiring September 30, 2023. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

Motion: A motion was made by Vice-Chair Barucky, seconded by Commissioner Haddad, to recommend to City Council to grant a variance for good cause to the term limits of Ordinance 210 to allow Commissioner Shands and Commissioner Mudge to serve an additional two (2) year term on the Quarry Commission with terms expiring September 30, 2023. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously.

vi. Discuss and make recommendations related to application of ordinance provisions to commission members, if needed.

The Commission had none at this time.

d) Education/Training

1. Review “Quarry Terminology”.

Nicholas Reitinger, Vibra-Tech, spoke regarding presenting a glossary of terminology for the Commission at an upcoming meeting.

2. Discuss “Blasting Educational Materials” with Vibra-Tech, Hanson representatives, blasting contractors, and the public.

Nicholas Reitinger, Vibra-Tech, presented an updated “Blasting Educational Materials” and answered questions from the Commission.

3. Discuss future education/training sessions and Grapevine articles.

The Commission discussed a possible Grapevine article about the “Blasting Education Materials”.

e) Future Agenda Items

1. Commissioners input for items on upcoming agendas.

The Commission had none at this time.

2. Announcement of next Quarry Commission Regular Meeting.

Chair Holly announced the next Quarry Commission Regular Meeting will be held on Monday, September 13, 2021, at 6:00 p.m. at City Hall.

3. Citizen Comment Period:

Kay Bower, 8947 Garden Ridge Drive, spoke regarding a citizen blast impact report that she submitted.

4. Adjournment

Motion: A motion was made by Commissioner Shands, seconded by Commissioner Mudge, to adjourn. The Commission voted five (5) for and none (0) opposed. The motion carried unanimously. There being no further business, the Monday, July 12, 2021, Quarry Commission Regular Meeting was adjourned at 6:38p.m. by Chair Holly.

ATTEST:

Johnell Holly
Chair

Kat Balbi
Assistant City Secretary



August 5, 2021

Mr. Johnell Holly
Garden Ridge Quarry Commission
9400 Municipal Parkway
Garden Ridge, Texas 78266

4818 E. Ben White Blvd.
Suite 202
Austin, TX 78741

Phone 512.442.6464
Fax 512.442.6552

Dear Mr. Holly,

Enclosed is the analysis for the blasting conducted during the month of July 2021 at the Hanson Aggregates Quarry in Garden Ridge, Texas. Please place this information in your 2021 Blast Data Management Book.

At the request of the Garden Ridge Quarry Commission, Vibra-Tech, Inc. personnel conducted seismic monitoring at various locations for all blasting activities.

The attached report contains the original seismograph records obtained from the blasting along with a comparison of the recorded vibrations to the latest recommended U.S. Bureau of Mines (USBM) Variable Particle Velocity vs. Frequency Limits Report of Investigations (RI)-8507 (Nov. 1980).

The recorded ground vibrations **satisfy** the Variable Particle Velocity vs. Frequency Limits recommended by the USBM RI-8507 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

The recorded air-borne effects **satisfy** the recommended levels set forth in the USBM RI-8485 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

If there are any additional questions, please contact the Quarry Commission, Johnell Holly at (210) 651-7358, or attend the Quarry Commission meeting held every other month (odd months) at 6:00 PM.

Respectfully submitted,

VIBRA-TECH, INC.



Nicholas Reitinger
Area Manager

cc: Patrick Pieton, Hanson – Servtex



07/13/2021 Lower W. 3I

07/30/2021 Pond 4 N. A

07/27/2021 Lower W. 3H

07/01/2021 Lower W. 3G

07/15/2021 Pond 4 LVL 1 W. A

07/23/2021 Aggie Pit N. B

07/29/2021 Aggie W. B

07/12/2021 Aggie Pit E. B

Michels

Midla

Warden

Warden Property Line

07/22/2021 Base Pit N. A

07/08/2021 Base Pit N.E. A

City Property Line

Holly

07/02/2021 S. Wall B

07/14/2021 S. Wall B

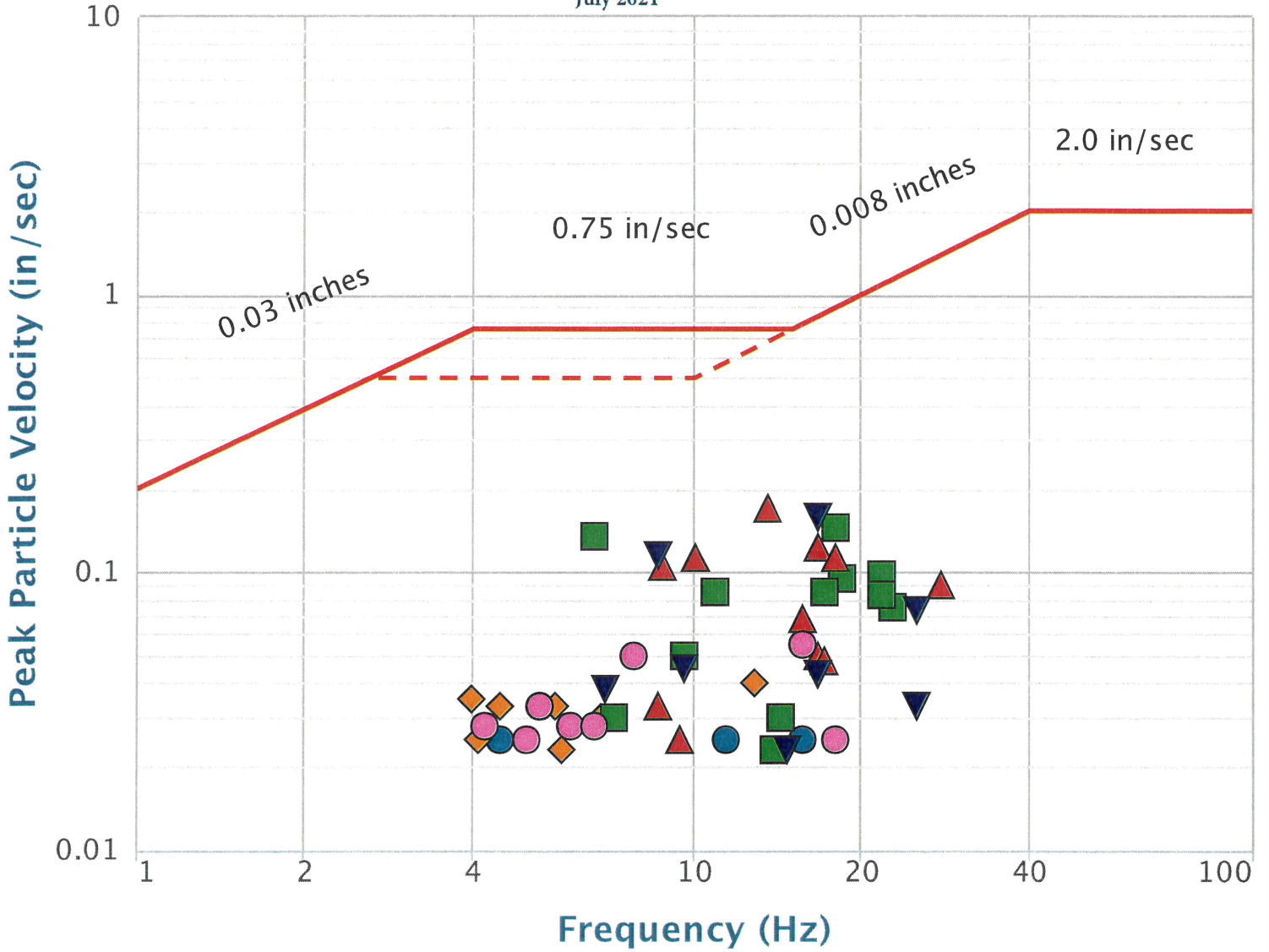
Bower

Google Earth

3000 ft

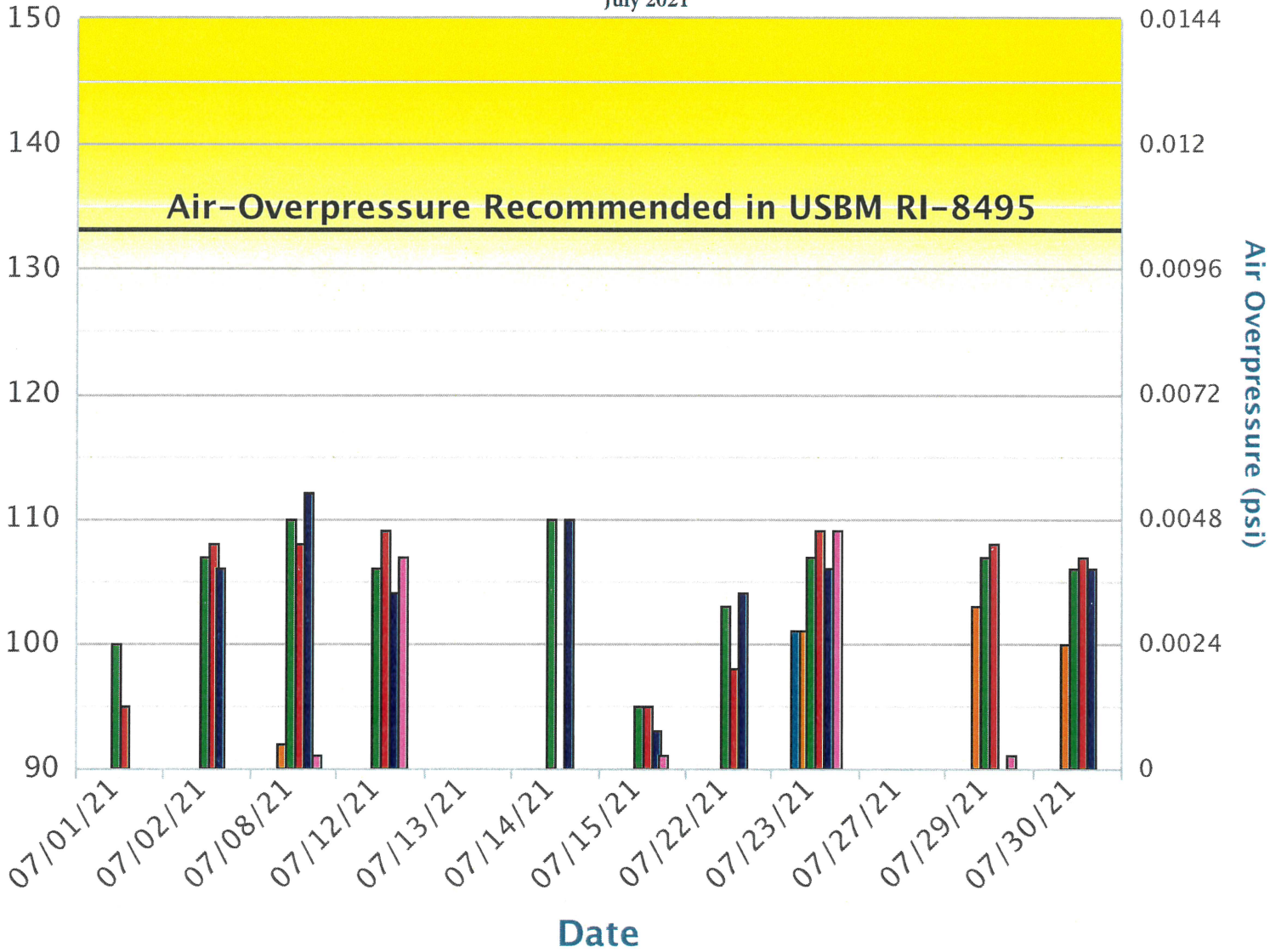


Garden Ridge Quarry Commission
Garden Ridge, Texas
USBM Graph
July 2021



- Midla Residence
- ◆ City Property Line
- Warden Residence
- ▲ Warden Prop Line
- ▼ Holly Residence
- Michels Residence

Garden Ridge Quarry Commission
 Garden Ridge, Texas
 AO Graph
 July 2021



- Midla Residence
- City Property Line
- Warden Residence
- Warden Prop Line
- Holly Residence
- Michels Residence

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
JULY 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
07/01/21	07/01/2021 Lower W. 3G	N 29° 38' 56.60" W 098° 17' 46.11"	SUNNY 91° S 5	13:31	NT	NT	NT	1124	157.00	9,183	Bower Residence
07/01/21	07/01/2021 Lower W. 3G	N 29° 38' 56.60" W 098° 17' 46.11"	SUNNY 91° S 5	13:31	NT	NT	NT	1124	157.00	3,574	City Property Line
07/01/21	07/01/2021 Lower W. 3G	N 29° 38' 56.60" W 098° 17' 46.11"	SUNNY 91° S 5	13:31	NT	NT	NT	1124	157.00	3,139	Michels - 9118 Tuscan Hills
07/01/21	07/01/2021 Lower W. 3G	N 29° 38' 56.60" W 098° 17' 46.11"	SUNNY 91° S 5	13:31	0.030	7.2	100.0	1124	157.00	3,447	Warden - 21375 Gunther Grove
07/01/21	07/01/2021 Lower W. 3G	N 29° 38' 56.60" W 098° 17' 46.11"	SUNNY 91° S 5	13:31	0.050	16.7	95.0	1124	157.00	3,185	Warden Property Line
07/02/21	07/02/2021 S. Wall B	N 29° 38' 4.53" W 098° 16' 28.69"	SUNNY 92° S 7	13:28	NT	NT	NT	1460	775.00	11,685	Bower Residence
07/02/21	07/02/2021 S. Wall B	N 29° 38' 4.53" W 098° 16' 28.69"	SUNNY 92° S 7	13:28	NT	NT	NT	1460	775.00	7,720	City Property Line
07/02/21	07/02/2021 S. Wall B	N 29° 38' 4.53" W 098° 16' 28.69"	SUNNY 92° S 7	13:28	0.033	25.0	106.0	1460	775.00	5,190	Holly - 9916 Trophy Oaks
07/02/21	07/02/2021 S. Wall B	N 29° 38' 4.53" W 098° 16' 28.69"	SUNNY 92° S 7	13:28	NT	NT	NT	1460	775.00	10,707	Michels - 9118 Tuscan Hills
07/02/21	07/02/2021 S. Wall B	N 29° 38' 4.53" W 098° 16' 28.69"	SUNNY 92° S 7	13:28	0.075	22.7	107.0	1460	775.00	6,554	Warden - 21375 Gunther Grove
07/08/21	07/08/2021 Base Pit N.E. A	N 29° 38' 26.38" W 098° 17' 4.51"	OVERCAST 79° NE 9	10:15	NT	NT	NT	1148	814.00	9,571	Bower Residence
07/08/21	07/08/2021 Base Pit N.E. A	N 29° 38' 26.38" W 098° 17' 4.51"	OVERCAST 79° NE 9	10:15	0.035	4.0	92.0	1148	814.00	4,381	City Property Line
07/08/21	07/08/2021 Base Pit N.E. A	N 29° 38' 26.38" W 098° 17' 4.51"	OVERCAST 79° NE 9	10:15	0.115	8.6	112.0	1148	814.00	2,240	Holly - 9916 Trophy Oaks
07/08/21	07/08/2021 Base Pit N.E. A	N 29° 38' 26.38" W 098° 17' 4.51"	OVERCAST 79° NE 9	10:15	0.025	5.0	91.0	1148	814.00	6,969	Michels - 9118 Tuscan Hills
07/08/21	07/08/2021 Base Pit N.E. A	N 29° 38' 26.38" W 098° 17' 4.51"	OVERCAST 79° NE 9	10:15	0.135	6.6	110.0	1148	814.00	3,145	Warden - 21375 Gunther Grove

NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by: 
Area Manager Wick Reitinger

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
JULY 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
07/12/21	07/12/2021 Aggie Pit E. B	N 29° 38' 48.49" W 098° 17' 35.51"	SUNNY 87° S 10	13:20	NT	NT	NT	799	609.00	9,014	Bower Residence
07/12/21	07/12/2021 Aggie Pit E. B	N 29° 38' 48.49" W 098° 17' 35.51"	SUNNY 87° S 10	13:20	0.030	6.8	89.0	799	609.00	3,140	City Property Line
07/12/21	07/12/2021 Aggie Pit E. B	N 29° 38' 48.49" W 098° 17' 35.51"	SUNNY 87° S 10	13:20	0.028	6.0	107.0	799	609.00	3,921	Michels - 9118 Tuscan Hills
07/12/21	07/12/2021 Aggie Pit E. B	N 29° 38' 48.49" W 098° 17' 35.51"	SUNNY 87° S 10	13:20	0.095	18.5	106.0	799	609.00	2,613	Warden - 21375 Gunther Grove
07/12/21	07/12/2021 Aggie Pit E. B	N 29° 38' 48.49" W 098° 17' 35.51"	SUNNY 87° S 10	13:20	0.090	27.8	109.0	799	609.00	2,317	Warden Property Line
07/13/21	07/13/2021 Lower W. 31	N 29° 39' 1.12" W 098° 17' 46.73"	PARTLY CLOUDY 87° SE 10	13:14	NT	NT	NT	1012	85.00	9,558	Bower Residence
07/13/21	07/13/2021 Lower W. 31	N 29° 39' 1.12" W 098° 17' 46.73"	PARTLY CLOUDY 87° SE 10	13:14	NT	NT	NT	1012	85.00	4,016	City Property Line
07/13/21	07/13/2021 Lower W. 31	N 29° 39' 1.12" W 098° 17' 46.73"	PARTLY CLOUDY 87° SE 10	13:14	NT	NT	NT	1012	85.00	3,261	Michels - 9118 Tuscan Hills
07/13/21	07/13/2021 Lower W. 31	N 29° 39' 1.12" W 098° 17' 46.73"	PARTLY CLOUDY 87° SE 10	13:14	0.023	13.9	87.0	1012	85.00	3,908	Warden - 21375 Gunther Grove
07/13/21	07/13/2021 Lower W. 31	N 29° 39' 1.12" W 098° 17' 46.73"	PARTLY CLOUDY 87° SE 10	13:14	NT	NT	NT	1012	85.00	3,645	Warden Property Line
07/14/21	07/14/2021 S. Wall B	N 29° 38' 2.67" W 098° 16' 33.80"	PARTLY CLOUDY 76° SE 8	13:15	NT	NT	NT	1270	829.00	7,331	City Property Line
07/14/21	07/14/2021 S. Wall B	N 29° 38' 2.67" W 098° 16' 33.80"	PARTLY CLOUDY 76° SE 8	13:15	0.073	25.0	110.0	1270	829.00	4,797	Holly - 9916 Trophy Oaks
07/14/21	07/14/2021 S. Wall B	N 29° 38' 2.67" W 098° 16' 33.80"	PARTLY CLOUDY 76° SE 8	13:15	NT	NT	NT	1270	829.00	10,377	Michels - 9118 Tuscan Hills
07/14/21	07/14/2021 S. Wall B	N 29° 38' 2.67" W 098° 16' 33.80"	PARTLY CLOUDY 76° SE 8	13:15	NT	NT	NT	1270	829.00	12,331	Midla Residence
07/14/21	07/14/2021 S. Wall B	N 29° 38' 2.67" W 098° 16' 33.80"	PARTLY CLOUDY 76° SE 8	13:15	0.085	17.2	110.0	1270	829.00	6,184	Warden - 21375 Gunther Grove

NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by 
Area Manager Nick Reittinger

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
JULY 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
07/15/21	07/15/2021 Pond 4 LVL 1 W. A	N 29° 38' 57.96" W 098° 17' 25.37"	SUNNY 85° S 11	13:34	0.025	4.1	79.0	1710	569.00	4,431	City Property Line
07/15/21	07/15/2021 Pond 4 LVL 1 W. A	N 29° 38' 57.96" W 098° 17' 25.37"	SUNNY 85° S 11	13:34	0.033	5.3	91.0	1710	569.00	4,938	Michels - 9118 Tuscan Hills
07/15/21	07/15/2021 Pond 4 LVL 1 W. A	N 29° 38' 57.96" W 098° 17' 25.37"	SUNNY 85° S 11	13:34	0.025	4.5	87.0	1710	569.00	7,827	Midla Residence
07/15/21	07/15/2021 Pond 4 LVL 1 W. A	N 29° 38' 57.96" W 098° 17' 25.37"	SUNNY 85° S 11	13:34	0.098	21.7	95.0	1710	569.00	3,770	Warden - 21375 Gunther Grove
07/15/21	07/15/2021 Pond 4 LVL 1 W. A	N 29° 38' 57.96" W 098° 17' 25.37"	SUNNY 85° S 11	13:34	0.113	10.0	95.0	1710	569.00	3,467	Warden Property Line
07/22/21	07/22/2021 Base Pit N. A	N 29° 38' 24.40" W 098° 17' 9.06"	PARTLY CLOUDY 84° SE 16	11:35	0.033	4.5	87.0	1288	366.00	3,966	City Property Line
07/22/21	07/22/2021 Base Pit N. A	N 29° 38' 24.40" W 098° 17' 9.06"	PARTLY CLOUDY 84° SE 16	11:35	0.158	16.7	104.0	1288	366.00	1,794	Holly - 9916 Trophy Oaks
07/22/21	07/22/2021 Base Pit N. A	N 29° 38' 24.40" W 098° 17' 9.06"	PARTLY CLOUDY 84° SE 16	11:35	0.028	6.6	85.0	1288	366.00	6,654	Michels - 9118 Tuscan Hills
07/22/21	07/22/2021 Base Pit N. A	N 29° 38' 24.40" W 098° 17' 9.06"	PARTLY CLOUDY 84° SE 16	11:35	NT	NT	NT	1288	366.00	8,881	Midla Residence
07/22/21	07/22/2021 Base Pit N. A	N 29° 38' 24.40" W 098° 17' 9.06"	PARTLY CLOUDY 84° SE 16	11:35	0.145	17.9	103.0	1288	366.00	2,729	Warden - 21375 Gunther Grove
07/23/21	07/23/2021 Aggie Pit N. B	N 29° 38' 52.60" W 098° 17' 39.63"	SUNNY 87° S 14	13:15	0.033	5.6	101.0	990	809.00	3,349	City Property Line
07/23/21	07/23/2021 Aggie Pit N. B	N 29° 38' 52.60" W 098° 17' 39.63"	SUNNY 87° S 14	13:15	0.055	15.6	109.0	990	809.00	3,600	Michels - 9118 Tuscan Hills
07/23/21	07/23/2021 Aggie Pit N. B	N 29° 38' 52.60" W 098° 17' 39.63"	SUNNY 87° S 14	13:15	0.025	11.4	101.0	990	809.00	6,464	Midla Residence
07/23/21	07/23/2021 Aggie Pit N. B	N 29° 38' 52.60" W 098° 17' 39.63"	SUNNY 87° S 14	13:15	0.085	10.9	107.0	990	809.00	3,000	Warden - 21375 Gunther Grove
07/23/21	07/23/2021 Aggie Pit N. B	N 29° 38' 52.60" W 098° 17' 39.63"	SUNNY 87° S 14	13:15	0.113	17.9	109.0	990	809.00	2,716	Warden Property Line

NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by: 
Area Manager Nick Reitinger

GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
JULY 2021

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
07/27/21	07/27/2021 Lower W. 3H	N 29° 38' 59.22" W 098° 17' 46.75"	SUNNY 91° SW 11	13:38	NT	NT	NT	1160	126.00	3,825	City Property Line
07/27/21	07/27/2021 Lower W. 3H	N 29° 38' 59.22" W 098° 17' 46.75"	SUNNY 91° SW 11	13:38	0.025	17.9	87.0	1160	126.00	3,179	Michels - 9118 Tuscan Hills
07/27/21	07/27/2021 Lower W. 3H	N 29° 38' 59.22" W 098° 17' 46.75"	SUNNY 91° SW 11	13:38	NT	NT	NT	1160	126.00	6,132	Midla Residence
07/27/21	07/27/2021 Lower W. 3H	N 29° 38' 59.22" W 098° 17' 46.75"	SUNNY 91° SW 11	13:38	0.030	14.3	89.0	1160	126.00	3,718	Warden - 21375 Gunther Grove
07/27/21	07/27/2021 Lower W. 3H	N 29° 38' 59.22" W 098° 17' 46.75"	SUNNY 91° SW 11	13:38	0.025	9.4	88.0	1160	126.00	3,457	Warden Property Line
07/29/21	07/29/2021 Aggie W. B	N 29° 38' 49.28" W 098° 17' 44.60"	PARTLY CLOUDY 92° E 5	13:24	0.040	12.8	103.0	908	768.00	2,886	City Property Line
07/29/21	07/29/2021 Aggie W. B	N 29° 38' 49.28" W 098° 17' 44.60"	PARTLY CLOUDY 92° E 5	13:24	0.050	7.8	91.0	908	768.00	3,126	Michels - 9118 Tuscan Hills
07/29/21	07/29/2021 Aggie W. B	N 29° 38' 49.28" W 098° 17' 44.60"	PARTLY CLOUDY 92° E 5	13:24	0.025	15.6	85.0	908	768.00	5,946	Midla Residence
07/29/21	07/29/2021 Aggie W. B	N 29° 38' 49.28" W 098° 17' 44.60"	PARTLY CLOUDY 92° E 5	13:24	0.083	21.7	107.0	908	768.00	2,694	Warden - 21375 Gunther Grove
07/29/21	07/29/2021 Aggie W. B	N 29° 38' 49.28" W 098° 17' 44.60"	PARTLY CLOUDY 92° E 5	13:24	0.065	15.6	108.0	908	768.00	2,432	Warden Property Line
07/30/21	07/30/2021 Pond 4 N. A	N 29° 39' 3.12" W 098° 17' 22.41"	PARTLY CLOUDY 92° E 5	13:15	0.023	5.8	100.0	1224	634.00	5,010	City Property Line
07/30/21	07/30/2021 Pond 4 N. A	N 29° 39' 3.12" W 098° 17' 22.41"	PARTLY CLOUDY 92° E 5	13:15	0.023	14.7	106.0	1224	634.00	4,883	Holly - 9916 Trophy Oaks
07/30/21	07/30/2021 Pond 4 N. A	N 29° 39' 3.12" W 098° 17' 22.41"	PARTLY CLOUDY 92° E 5	13:15	0.028	4.2	90.0	1224	634.00	5,328	Michels - 9118 Tuscan Hills
07/30/21	07/30/2021 Pond 4 N. A	N 29° 39' 3.12" W 098° 17' 22.41"	PARTLY CLOUDY 92° E 5	13:15	NT	NT	NT	1224	634.00	8,254	Midla Residence
07/30/21	07/30/2021 Pond 4 N. A	N 29° 39' 3.12" W 098° 17' 22.41"	PARTLY CLOUDY 92° E 5	13:15	0.050	9.6	106.0	1224	634.00	4,351	Warden - 21375 Gunther Grove

NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by: 
Area Manager Nick Reitinger



September 3, 2021

Mr. Johnell Holly
Garden Ridge Quarry Commission
9400 Municipal Parkway
Garden Ridge, Texas 78266

4818 E. Ben White Blvd.
Suite 202
Austin, TX 78741

Phone 512.442.6464
Fax 512.442.6552

Dear Mr. Holly,

Enclosed is the analysis for the blasting conducted during the month of August 2021 at the Hanson Aggregates Quarry in Garden Ridge, Texas. Please place this information in your 2021 Blast Data Management Book.

At the request of the Garden Ridge Quarry Commission, Vibra-Tech, Inc. personnel conducted seismic monitoring at various locations for all blasting activities.

The attached report contains the original seismograph records obtained from the blasting along with a comparison of the recorded vibrations to the latest recommended U.S. Bureau of Mines (USBM) Variable Particle Velocity vs. Frequency Limits Report of Investigations (RI)-8507 (Nov. 1980).

The recorded ground vibrations **satisfy** the Variable Particle Velocity vs. Frequency Limits recommended by the USBM RI-8507 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

The recorded air-borne effects **satisfy** the recommended levels set forth in the USBM RI-8485 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

If there are any additional questions, please contact the Quarry Commission, Johnell Holly at (210) 651-7358, or attend the Quarry Commission meeting held every other month (odd months) at 6:00 PM.

Respectfully submitted,

VIBRA-TECH, INC.



Nicholas Reitinger
Area Manager

cc: Patrick Pieton, Hanson – Servtex



- 08/25/2021 Lower W. 3I
- 08/11/2021 Lower W. 3C
- 08/19/2021 Upper W. C
- 08/20/2021 Pond 4 LVL 1 N. B
- 08/12/2021 Aggte Pit W. C
- 08/24/2021 Aggte Pit E. A
- 08/04/2021 Base Pit N.E
- 08/17/2021 Base Pit North
- 08/26/2021 S. Wall A

Michels

Midla

Senoenthal Rd

Warden Property Line
City Property Line

Warden

Holly

Garden Ridge

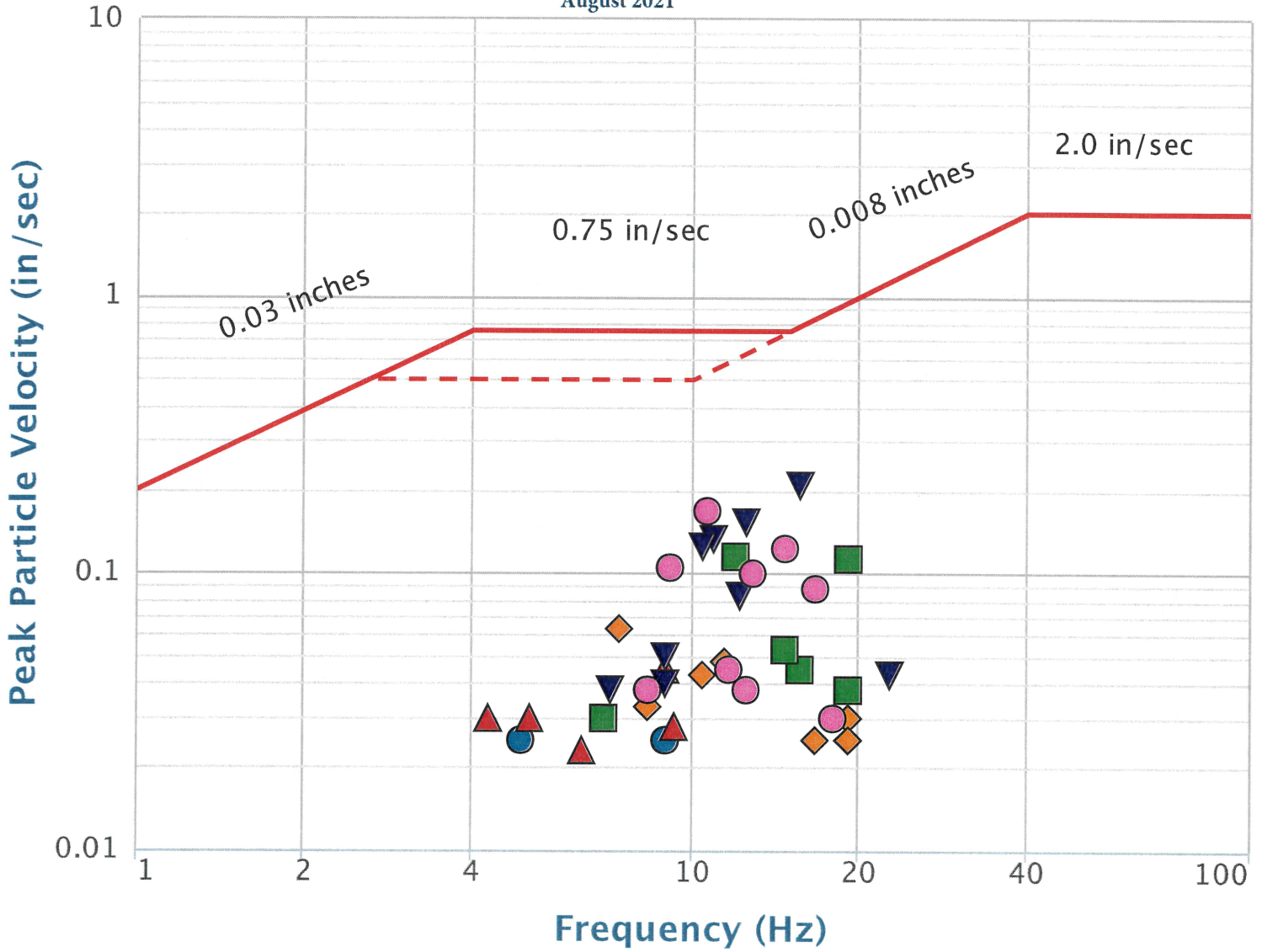
Nacogdoches Rd

Google Earth

2000 ft

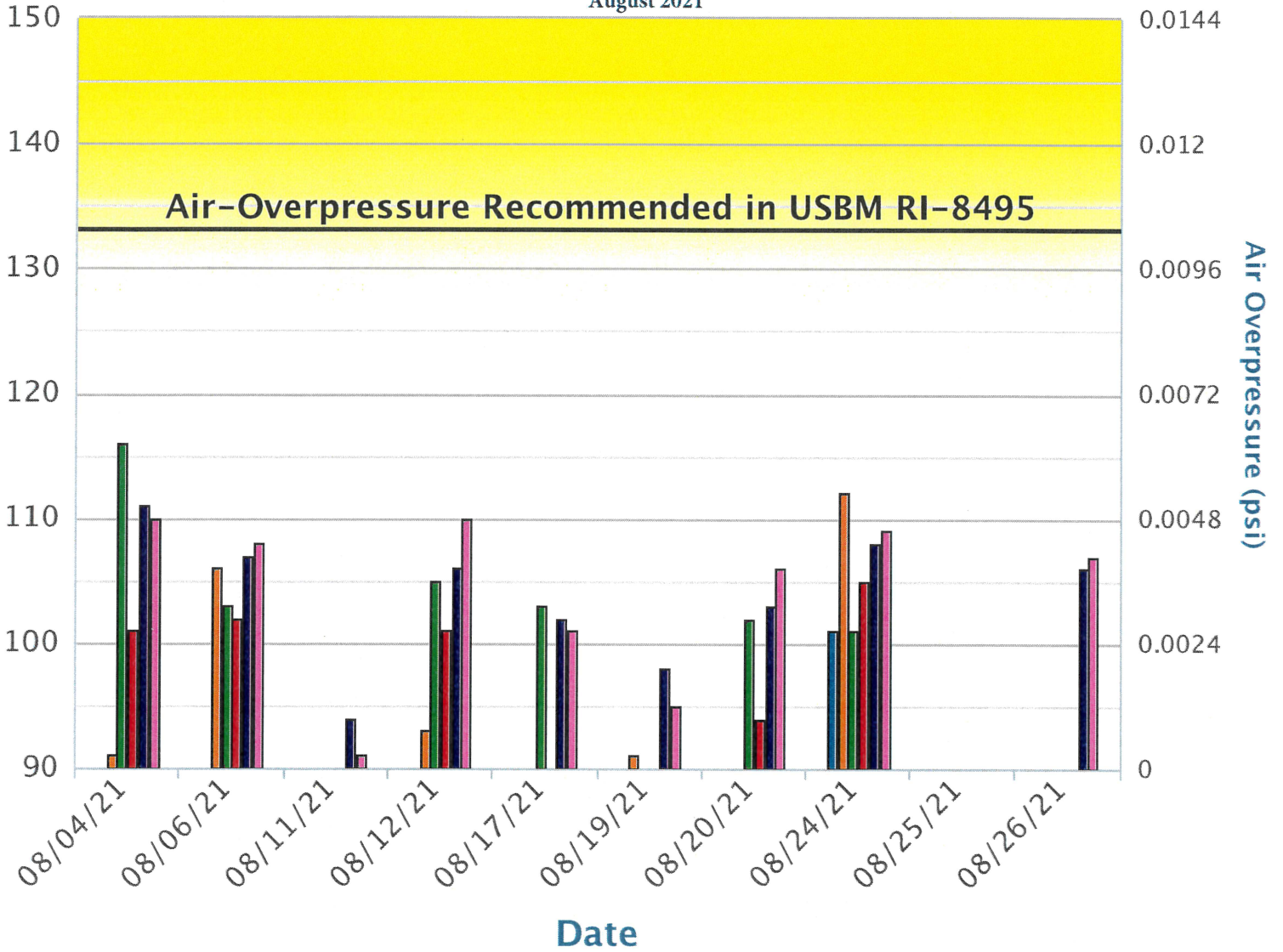


Garden Ridge Quarry Commission
Garden Ridge, Texas
USBM Graph
August 2021



- Midla Residence
- ◆ Michels Residence
- Holly Residence
- ▲ City Property Line
- ▼ Warden Residence
- Warden Prop Line

Garden Ridge Quarry Commission
 Garden Ridge, Texas
 AO Graph
 August 2021




- Midla Residence
- Michels Residence
- Holly Residence
- City Property Line
- Warden Residence
- Warden Prop Line

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
AUGUST 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
08/04/21	08/04/2021 Base Pit N.E.	N 29° 38' 26.59" W 098° 17' 2.82"	PARTLY CLOUDY 90° E 8	13:19	0.030	4.3	101.0	958	797.00	4,532	City Property Line
08/04/21	08/04/2021 Base Pit N.E.	N 29° 38' 26.59" W 098° 17' 2.82"	PARTLY CLOUDY 90° E 8	13:19	0.115	11.9	116.0	958	797.00	2,380	Holly - 9916 Trophy Oaks
08/04/21	08/04/2021 Base Pit N.E.	N 29° 38' 26.59" W 098° 17' 2.82"	PARTLY CLOUDY 90° E 8	13:19	0.030	19.2	91.0	958	797.00	7,105	Michels - 9118 Tuscan Hills
08/04/21	08/04/2021 Base Pit N.E.	N 29° 38' 26.59" W 098° 17' 2.82"	PARTLY CLOUDY 90° E 8	13:19	NT	NT	NT	958	797.00	9,410	Midla Residence
08/04/21	08/04/2021 Base Pit N.E.	N 29° 38' 26.59" W 098° 17' 2.82"	PARTLY CLOUDY 90° E 8	13:19	0.133	10.9	111.0	958	797.00	3,295	Warden - 21375 Gunther Grove
08/06/21	08/06/2021 Aggie W. C	N 29° 38' 51.08" W 098° 17' 34.45"	PARTLY CLOUDY 89° S 7	13:13	0.028	9.3	102.0	951	616.00	3,413	City Property Line
08/06/21	08/06/2021 Aggie W. C	N 29° 38' 51.08" W 098° 17' 34.45"	PARTLY CLOUDY 89° S 7	13:13	0.048	11.4	106.0	951	616.00	4,033	Michels - 9118 Tuscan Hills
08/06/21	08/06/2021 Aggie W. C	N 29° 38' 51.08" W 098° 17' 34.45"	PARTLY CLOUDY 89° S 7	13:13	NT	NT	NT	951	616.00	6,856	Midla Residence
08/06/21	08/06/2021 Aggie W. C	N 29° 38' 51.08" W 098° 17' 34.45"	PARTLY CLOUDY 89° S 7	13:13	0.125	10.4	107.0	951	616.00	2,887	Warden - 21375 Gunther Grove
08/06/21	08/06/2021 Aggie W. C	N 29° 38' 51.08" W 098° 17' 34.45"	PARTLY CLOUDY 89° S 7	13:13	0.105	9.1	108.0	951	616.00	2,590	Warden Property Line
08/11/21	08/11/2021 Lower W. 3G	N 29° 38' 56.62" W 098° 17' 46.53"	PARTLY CLOUDY 93° SE 14	14:20	NT	NT	NT	1012	146.00	3,569	City Property Line
08/11/21	08/11/2021 Lower W. 3G	N 29° 38' 56.62" W 098° 17' 46.53"	PARTLY CLOUDY 93° SE 14	14:20	0.025	19.2	88.0	1012	146.00	3,105	Michels - 9118 Tuscan Hills
08/11/21	08/11/2021 Lower W. 3G	N 29° 38' 56.62" W 098° 17' 46.53"	PARTLY CLOUDY 93° SE 14	14:20	NT	NT	NT	1012	146.00	6,040	Midla Residence
08/11/21	08/11/2021 Lower W. 3G	N 29° 38' 56.62" W 098° 17' 46.53"	PARTLY CLOUDY 93° SE 14	14:20	0.050	8.9	94.0	1012	146.00	3,455	Warden - 21375 Gunther Grove
08/11/21	08/11/2021 Lower W. 3G	N 29° 38' 56.62" W 098° 17' 46.53"	PARTLY CLOUDY 93° SE 14	14:20	0.038	8.3	91.0	1012	146.00	3,195	Warden Property Line


NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by: 
Area Manager, Nick Reitinger

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
AUGUST 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
08/12/21	08/12/2021 Aggie Pit W. C	N 29° 38' 50.98" W 098° 17' 44.25"	SUNNY 92° SE 8	13:22	0.030	5.1	101.0	1027	704.00	3,060	City Property Line
08/12/21	08/12/2021 Aggie Pit W. C	N 29° 38' 50.98" W 098° 17' 44.25"	SUNNY 92° SE 8	13:22	0.063	7.4	93.0	1027	704.00	3,174	Michels - 9118 Tuscan Hills
08/12/21	08/12/2021 Aggie Pit W. C	N 29° 38' 50.98" W 098° 17' 44.25"	SUNNY 92° SE 8	13:22	0.025	8.9	87.0	1027	704.00	6,026	Midla Residence
08/12/21	08/12/2021 Aggie Pit W. C	N 29° 38' 50.98" W 098° 17' 44.25"	SUNNY 92° SE 8	13:22	0.083	12.2	106.0	1027	704.00	2,860	Warden - 21375 Gunther Grove
08/12/21	08/12/2021 Aggie Pit W. C	N 29° 38' 50.98" W 098° 17' 44.25"	SUNNY 92° SE 8	13:22	0.088	16.7	110.0	1027	704.00	2,595	Warden Property Line
08/17/21	08/17/2021 Base Pit North	N 29° 38' 24.59" W 098° 17' 8.84"	SUNNY 89° S 12	13:21	0.030	4.3	86.0	1088	357.00	3,986	City Property Line
08/17/21	08/17/2021 Base Pit North	N 29° 38' 24.59" W 098° 17' 8.84"	SUNNY 89° S 12	13:21	0.113	19.2	103.0	1088	357.00	1,820	Holly - 9916 Trophy Oaks
08/17/21	08/17/2021 Base Pit North	N 29° 38' 24.59" W 098° 17' 8.84"	SUNNY 89° S 12	13:21	0.025	16.7	87.0	1088	357.00	6,666	Michels - 9118 Tuscan Hills
08/17/21	08/17/2021 Base Pit North	N 29° 38' 24.59" W 098° 17' 8.84"	SUNNY 89° S 12	13:21	NT	NT	NT	1088	357.00	8,898	Midla Residence
08/17/21	08/17/2021 Base Pit North	N 29° 38' 24.59" W 098° 17' 8.84"	SUNNY 89° S 12	13:21	0.153	12.5	102.0	1088	357.00	2,749	Warden - 21375 Gunther Grove
08/19/21	08/19/2021 Upper W. G	N 29° 38' 56.38" W 098° 17' 50.11"	PARTLY CLOUDY 93° S 25	13:19	NT	NT	NT	988	169.00	3,501	City Property Line
08/19/21	08/19/2021 Upper W. G	N 29° 38' 56.38" W 098° 17' 50.11"	PARTLY CLOUDY 93° S 25	13:19	0.033	8.3	91.0	988	169.00	2,799	Michels - 9118 Tuscan Hills
08/19/21	08/19/2021 Upper W. G	N 29° 38' 56.38" W 098° 17' 50.11"	PARTLY CLOUDY 93° S 25	13:19	NT	NT	NT	988	169.00	5,742	Midla Residence
08/19/21	08/19/2021 Upper W. G	N 29° 38' 56.38" W 098° 17' 50.11"	PARTLY CLOUDY 93° S 25	13:19	0.038	7.1	98.0	988	169.00	3,498	Warden - 21375 Gunther Grove
08/19/21	08/19/2021 Upper W. G	N 29° 38' 56.38" W 098° 17' 50.11"	PARTLY CLOUDY 93° S 25	13:19	0.045	11.6	95.0	988	169.00	3,253	Warden Property Line


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Approved by: 
Area Manager Nick Reittinger

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
AUGUST 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
08/20/21	08/20/2021 Pond 4 LVL 1 N. B	N 29° 38' 58.26" W 098° 17' 25.99"	SUNNY 95° SE 24	13:56	0.023	6.3	94.0	1134	754.00	4,426	City Property Line
08/20/21	08/20/2021 Pond 4 LVL 1 N. B	N 29° 38' 58.26" W 098° 17' 25.99"	SUNNY 95° SE 24	13:56	NT	NT	NT	1134	754.00	4,892	Michels - 9118 Tuscan Hills
08/20/21	08/20/2021 Pond 4 LVL 1 N. B	N 29° 38' 58.26" W 098° 17' 25.99"	SUNNY 95° SE 24	13:56	NT	NT	NT	1134	754.00	7,786	Midla Residence
08/20/21	08/20/2021 Pond 4 LVL 1 N. B	N 29° 38' 58.26" W 098° 17' 25.99"	SUNNY 95° SE 24	13:56	0.040	8.9	103.0	1134	754.00	3,780	Warden - 21375 Gunther Grove
08/20/21	08/20/2021 Pond 4 LVL 1 N. B	N 29° 38' 58.26" W 098° 17' 25.99"	SUNNY 95° SE 24	13:56	0.038	12.5	106.0	1134	754.00	3,477	Warden Property Line
08/24/21	08/24/2021 Aggie Pit E. A	N 29° 38' 45.67" W 098° 17' 35.96"	SUNNY 90° SE 14	13:50	0.045	8.9	105.0	985	663.00	2,877	City Property Line
08/24/21	08/24/2021 Aggie Pit E. A	N 29° 38' 45.67" W 098° 17' 35.96"	SUNNY 90° SE 14	13:50	0.043	10.4	112.0	985	663.00	3,881	Michels - 9118 Tuscan Hills
08/24/21	08/24/2021 Aggie Pit E. A	N 29° 38' 45.67" W 098° 17' 35.96"	SUNNY 90° SE 14	13:50	0.025	4.9	101.0	985	663.00	6,599	Midla Residence
08/24/21	08/24/2021 Aggie Pit E. A	N 29° 38' 45.67" W 098° 17' 35.96"	SUNNY 90° SE 14	13:50	0.208	15.6	108.0	985	663.00	2,325	Warden - 21375 Gunther Grove
08/24/21	08/24/2021 Aggie Pit E. A	N 29° 38' 45.67" W 098° 17' 35.96"	SUNNY 90° SE 14	13:50	0.168	10.6	109.0	985	663.00	2,028	Warden Property Line
08/25/21	08/25/2021 Lower W. 3I	N 29° 39' 1.02" W 098° 17' 47.02"	PARTLY CLOUDY 95° SE 9	13:23	NT	NT	NT	1048	68.00	4,002	City Property Line
08/25/21	08/25/2021 Lower W. 3I	N 29° 39' 1.02" W 098° 17' 47.02"	PARTLY CLOUDY 95° SE 9	13:23	NT	NT	NT	1048	68.00	3,233	Michels - 9118 Tuscan Hills
08/25/21	08/25/2021 Lower W. 3I	N 29° 39' 1.02" W 098° 17' 47.02"	PARTLY CLOUDY 95° SE 9	13:23	NT	NT	NT	1048	68.00	6,192	Midla Residence
08/25/21	08/25/2021 Lower W. 3I	N 29° 39' 1.02" W 098° 17' 47.02"	PARTLY CLOUDY 95° SE 9	13:23	NT	NT	NT	1048	68.00	3,902	Warden - 21375 Gunther Grove
08/25/21	08/25/2021 Lower W. 3I	N 29° 39' 1.02" W 098° 17' 47.02"	PARTLY CLOUDY 95° SE 9	13:23	NT	NT	NT	1048	68.00	3,640	Warden Property Line


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Approved by: 
Area Manager Nick Reisinger

**GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
AUGUST 2021**

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
08/26/21	08/26/2021 S. Wall A	N 29° 38' 3.59" W 098° 16' 29.62"	SUNNY 93° NE 10	15:09	NT	NT	NT	1346	873.00	7,663	City Property Line
08/26/21	08/26/2021 S. Wall A	N 29° 38' 3.59" W 098° 16' 29.62"	SUNNY 93° NE 10	15:09	NT	NT	NT	1346	873.00	5,131	Holly - 9916 Trophy Oaks
08/26/21	08/26/2021 S. Wall A	N 29° 38' 3.59" W 098° 16' 29.62"	SUNNY 93° NE 10	15:09	NT	NT	NT	1346	873.00	10,671	Michels - 9118 Tuscan Hills
08/26/21	08/26/2021 S. Wall A	N 29° 38' 3.59" W 098° 16' 29.62"	SUNNY 93° NE 10	15:09	NT	NT	NT	1346	873.00	12,666	Midla Residence
08/26/21	08/26/2021 S. Wall A	N 29° 38' 3.59" W 098° 16' 29.62"	SUNNY 93° NE 10	15:09	0.043	22.7	106.0	1346	873.00	6,504	Warden - 21375 Gunther Grove

NT = No Trigger, <0.020ips.
NT = No Trigger, <122dB

Approved by: 
Area Manager Nick Reittinger



Tracking # 2021-190

Citizen Quarry Blast Impact Report

Date Submitted:

First Name

KARL

Last Name

SCHOLZE

Report Date

Phone Number:

210-656-6560

E-Mail Address

[REDACTED]

Address

9349 GARDEN RIDGE DR

Blast Date/Time:

1:20 P.M.

Please describe the event.

My wife & I both felt the blast at the same time.

How did this blast compare to other blasts?

IDENTICAL

On a 1 to 5 scale, please rate the blast intensity. (1=minor, 5 = major)

2

What was your activity at the time of blast?

in my home office

In what general direction does you house face? (N,E,S or W)

S

What is the approximate square footage of your home?

3,000 +

Is your home a 1 story, 1 1/2 , or 2 story or large?

1 1/2

Would you like a Quarry Representative to contact you regarding your report?*

YOU DECIDE

We encourage you to attend the next meeting of the Quarry Commission.

Representatives of the monitoring company and the blasting contractor as well as the Quarry Manager normally attend every meeting and are available to answer questions. The Commission meets the second Monday of every other month at 6:00 PM in the City Council Chambers in City Hall.

By filing this report, you consent to the public release of this information.

#	Month	Blast Date	Blast time	Date Received	Name	Address	Phone #	Rating	# stories	sq footage	Request contact	Misc	Date sent to VibraTech
2021-19Q	August	8/17/2021	1:20	8/18/2021	Karl Scholze	9349 Garden Ridge Dr.	210-651-6560	2	1 1/2	3000	N/A	My wife and I both felt the blast at the same time.	9/9/2021

DRAFT AS OF 01/13/2020 MEETING

- The following presentation is for review and input by Quarry Commission. The related agenda item can be carried forward to the next agenda to allow the Commission ample opportunity to review, discussion and make recommendations.



Blasting Educational Materials

City of Garden Ridge, TX



ISEE Video - Understanding Vibrations from Blasting

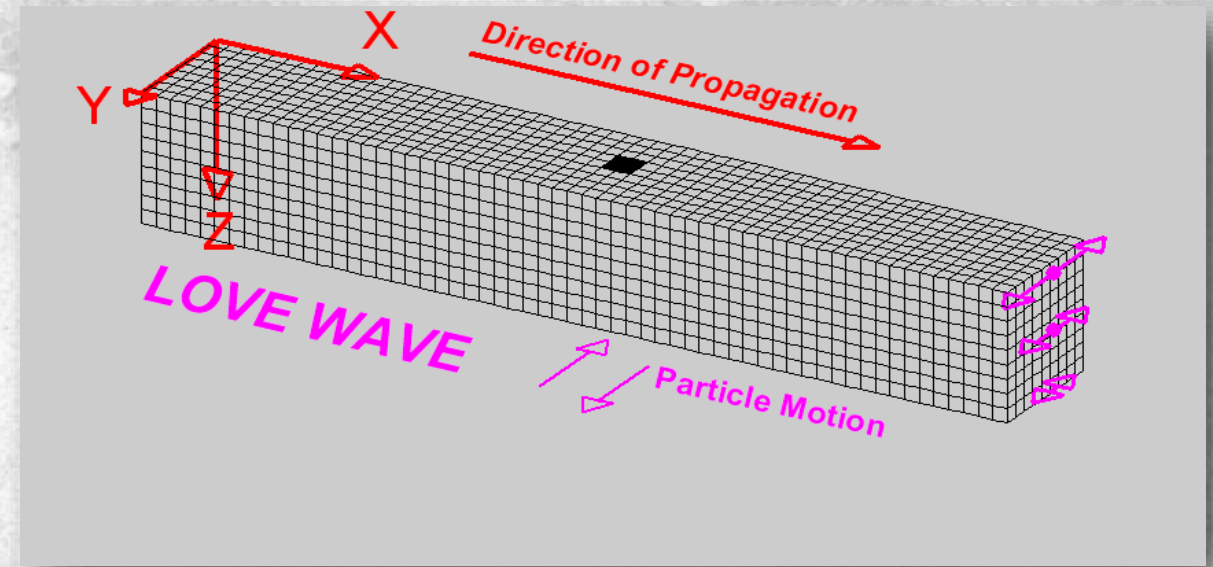
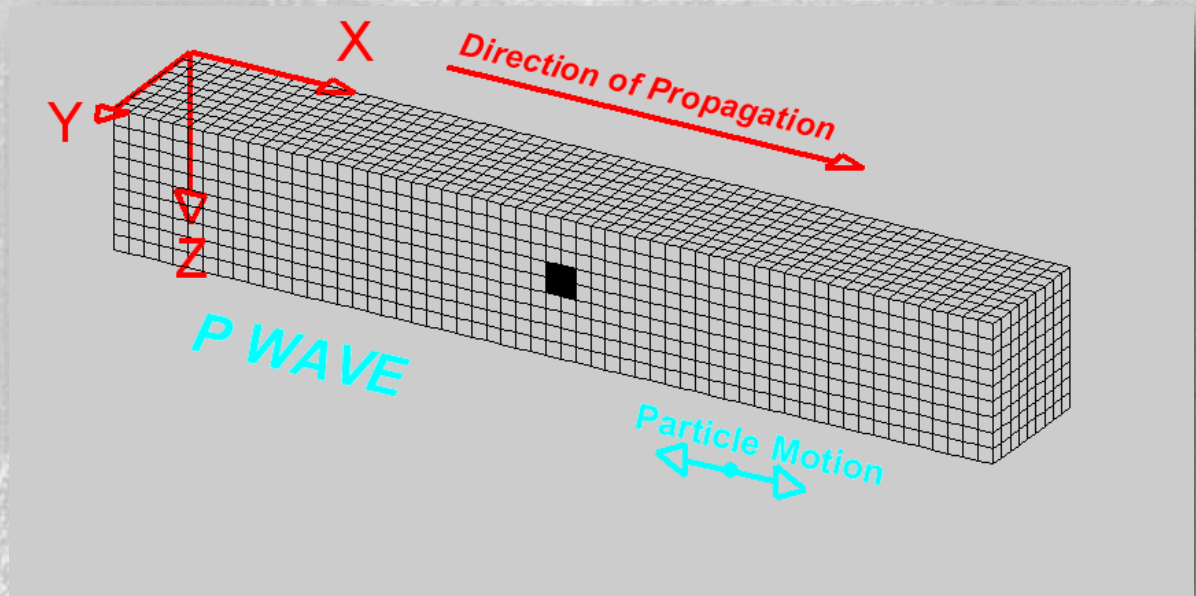
Please watch this 22-minute video on YouTube here:
<https://www.youtube.com/watch?v=EM3mDpVoYz4>

Why do I feel the Blasting?

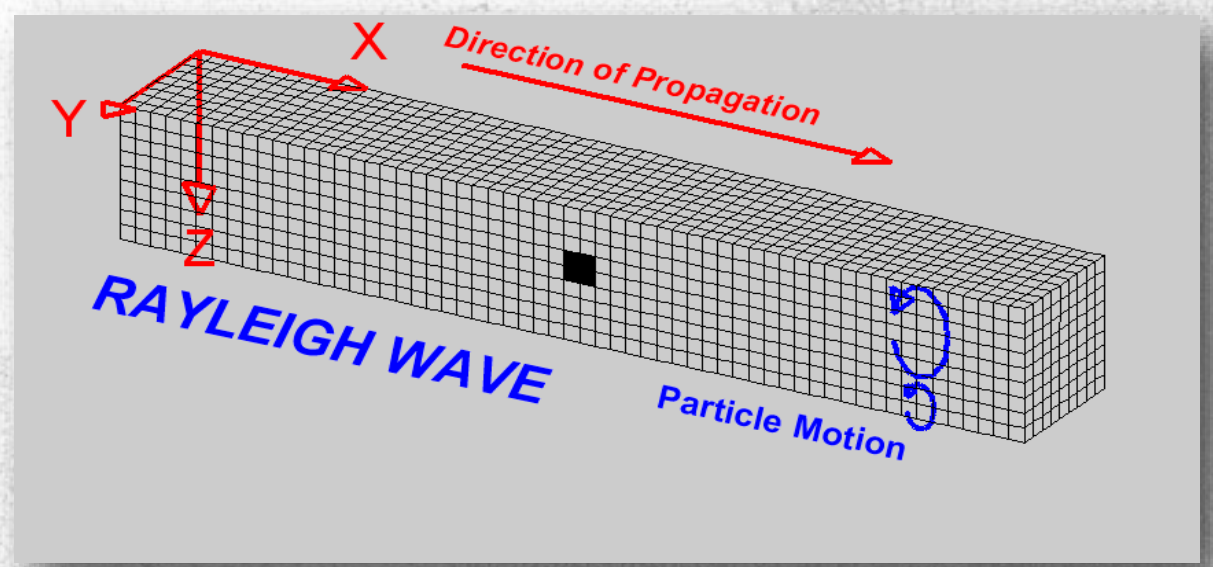
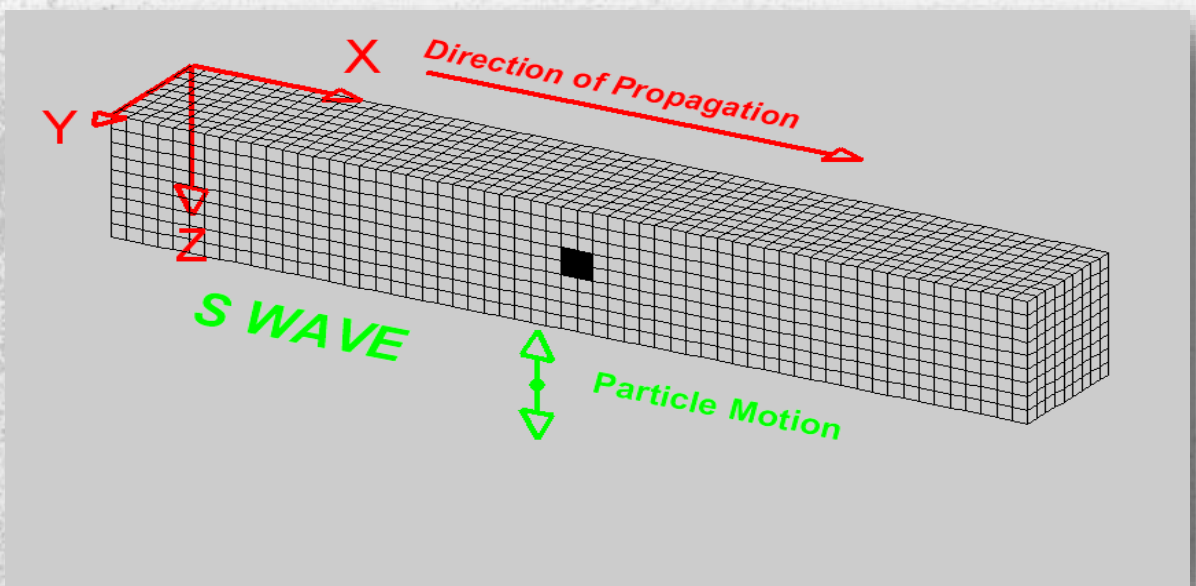
- Although most of the energy from a blast is used to break the rock, some of the energy will travel away from the blast site in the form of ground and airwaves.
- Each of these ground and airwaves can cause your house to vibrate or shake.
- Because humans are very sensitive to all vibrations, it is possible that you will feel or hear these vibrations from the blast at even very low levels.

Why do some Blasts feel stronger than others?

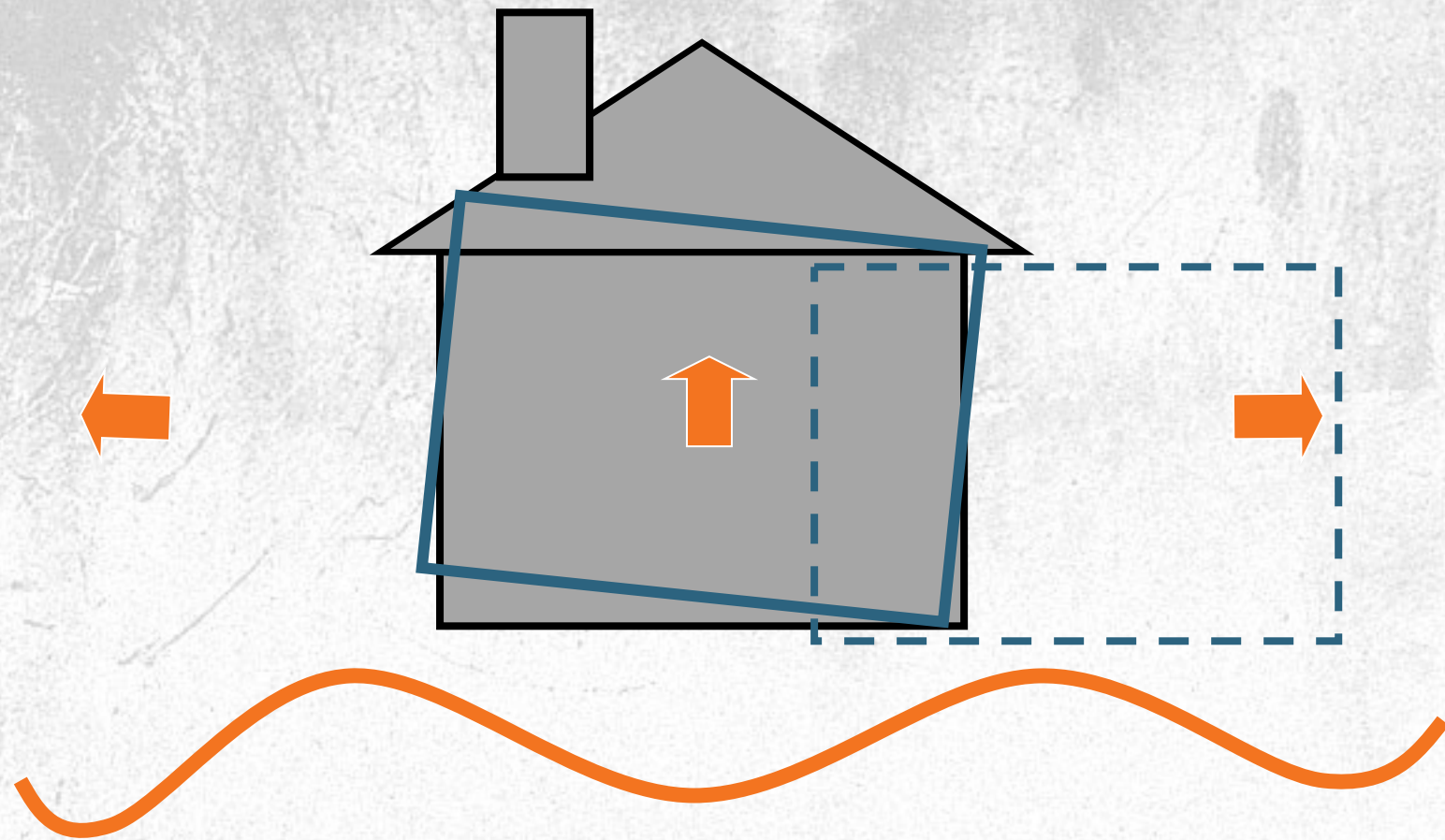
- How a blast feels depends on the ground or airwaves that reach your house. The airwaves are influenced by the type of blast, the distance from the blast and the amount of explosives used in the blast. All blasting is designed and conducted by professionals with years of hands-on experience.
- Where you are on the property also affects your perception of the blast. If you are outside your house, you will tend to feel the ground vibrations in your feet and legs. If you are inside your house, you will sense both the structure and objects in your house responding to the vibrations. Because location affects your perception of the blast, you and your neighbors may feel or describe the same blast differently.



When a blast is detonated, the vibration energy travels through the ground as wave fronts. These waves travel at different speeds, amplitude and direction, depending on the geology of the area. When these waves reach residences, structural response will be noticed.



*Ground Response = Structural Response
= Human Response*



Structural response is
directly and linearly proportional to ground
vibration amplitude

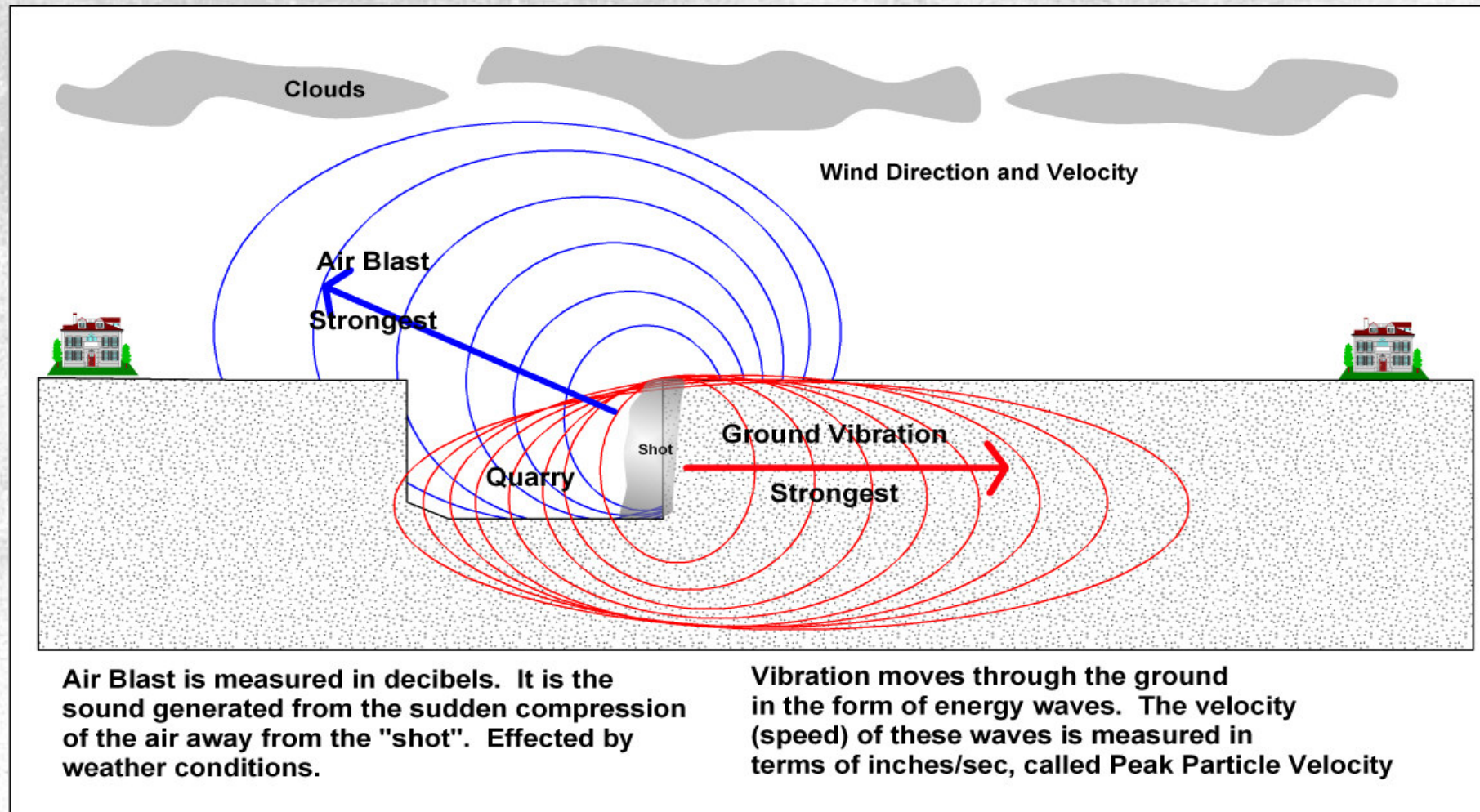
Reduce ground vibration by half and you reduce
house
vibration by half

Amplitude, Duration, and Frequency are
all factors that effect structural
response.

All homes respond differently.

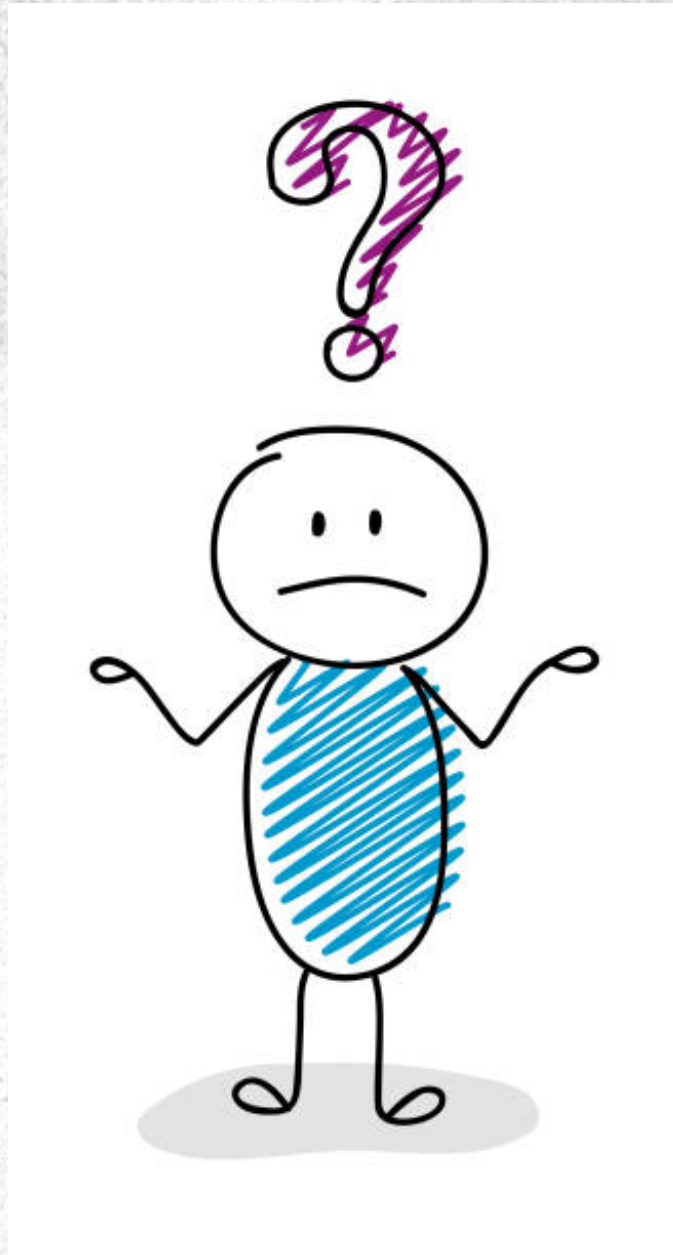
Measuring these factors helps us
determine safe structural response.

Self-triggering seismographs
automatically measure these factors.



Air overpressure is a compression wave measured as a change in atmospheric pressure. It is generated by the movement of the rock from the blast. The air overpressure can make your home feel two separate vibrations.

Can these vibrations damage my home?



Humans feel vibrations at very low levels. Although we are very good at detecting vibrations, we are not very good at determining their intensity.

- How we measure
- Foundation response
- Vibration and Air comparisons



Modern homes are built to specific municipality regulation

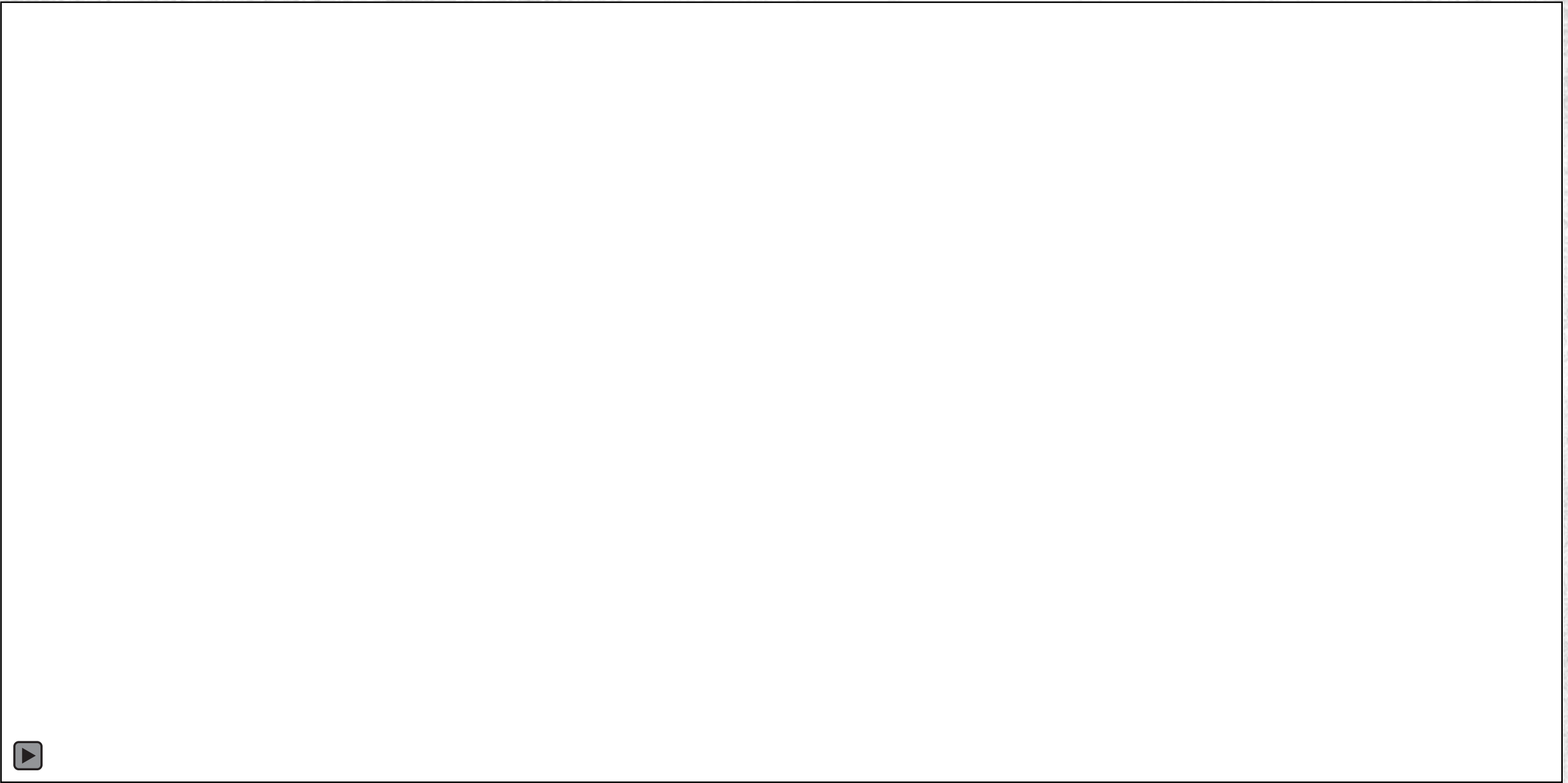
The design of each home and its building materials can make the response feel greater or less.

The natural frequency response of a home affects its response to vibration.

The mass, stiffness, and height of an object greatly effects its frequency.



Natural Frequency





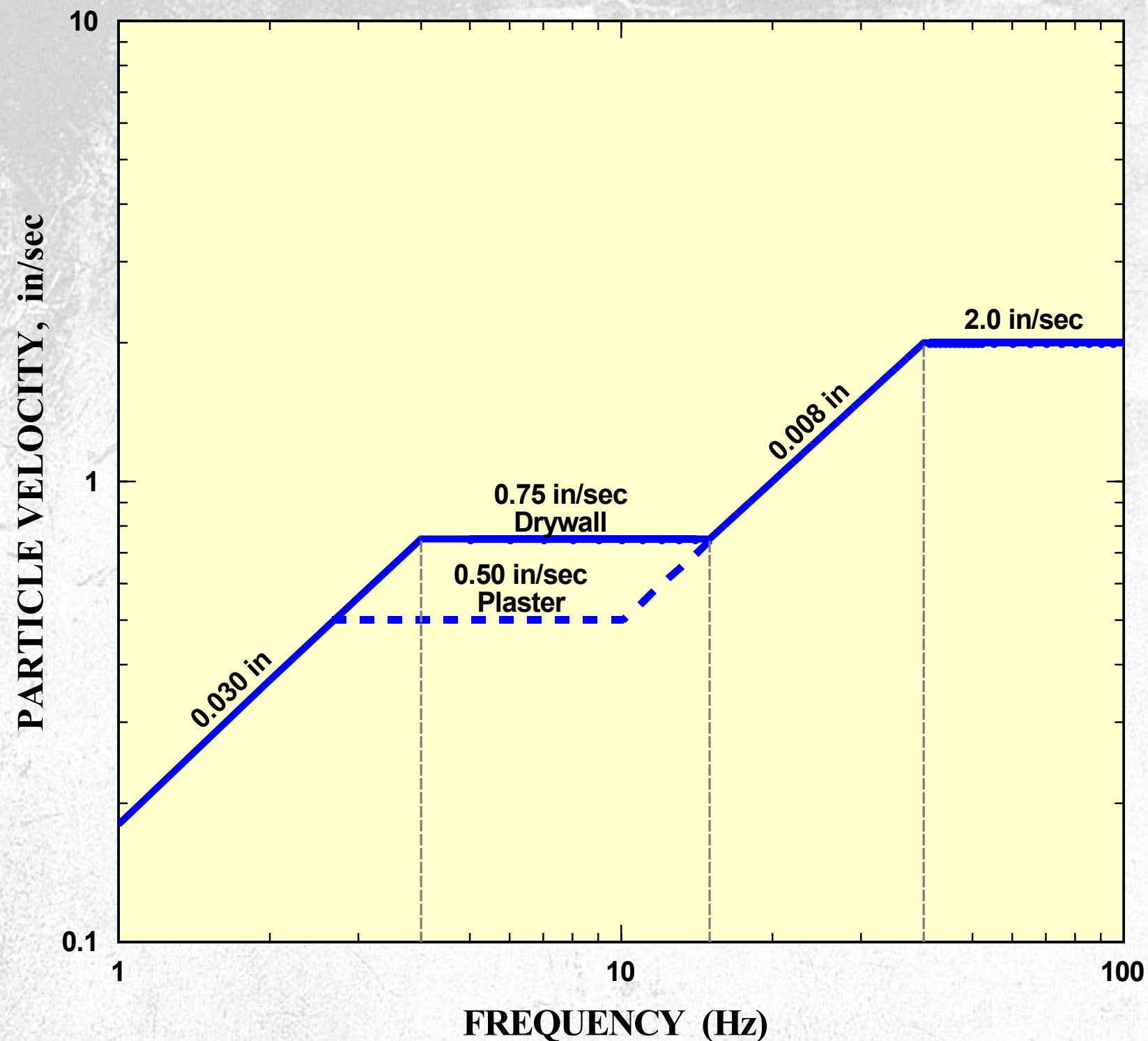
Natural Frequency





Natural Frequency



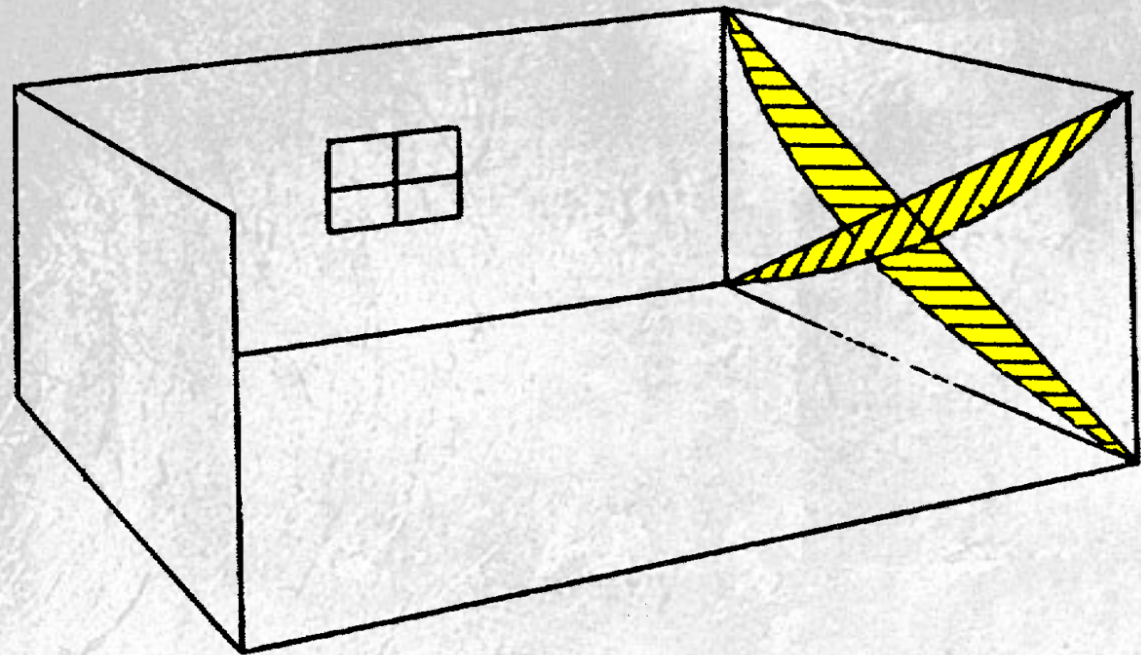


The USBM (U.S. Bureau of Mines) Z-curve is the standard used to assess safe ground vibration.

Drywall is the most common building material used in new residential construction.

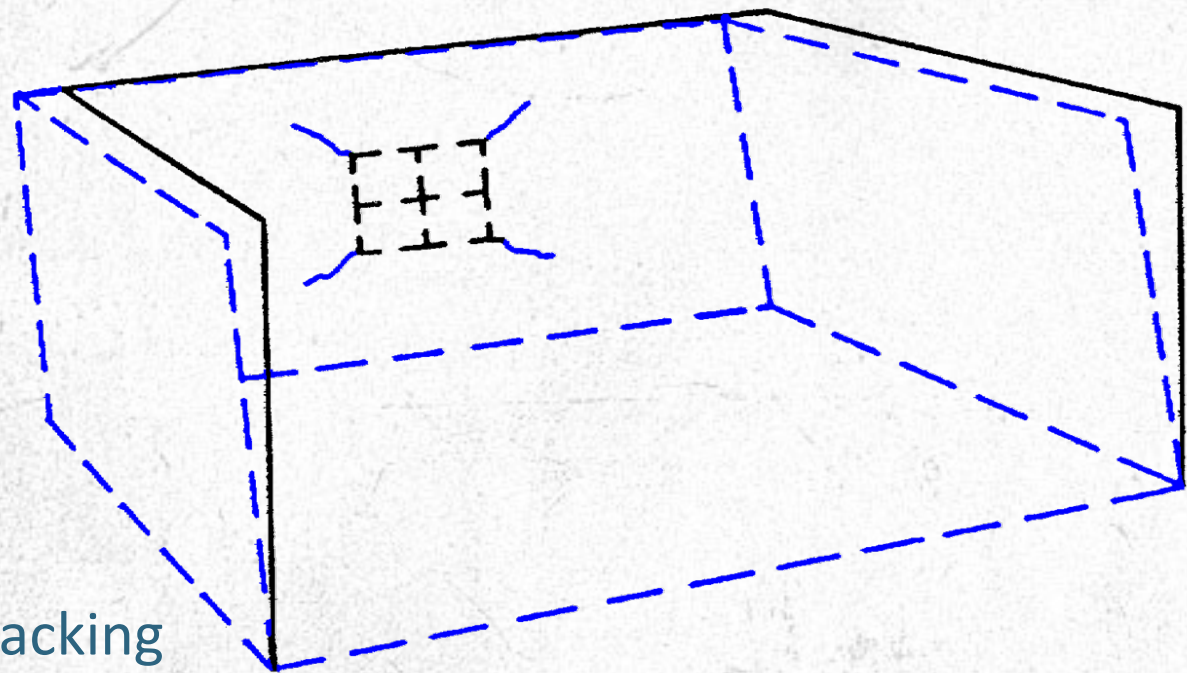
Each particle velocity must correspond with a frequency to accurately plot on this graph.

The higher the frequency, the higher allowance of peak particle velocity.



Midwall
Response

Bending



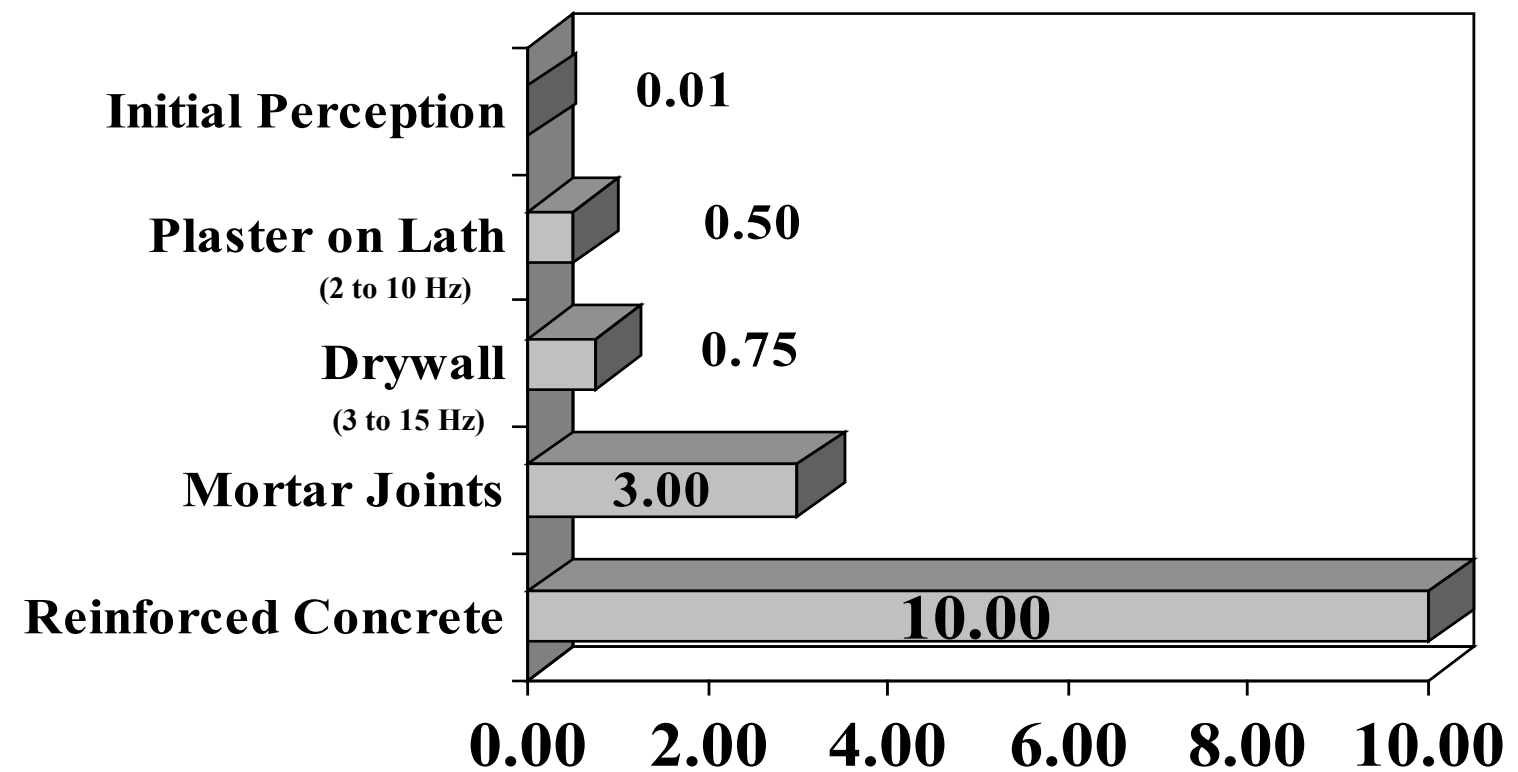
Racking
Response

Shear

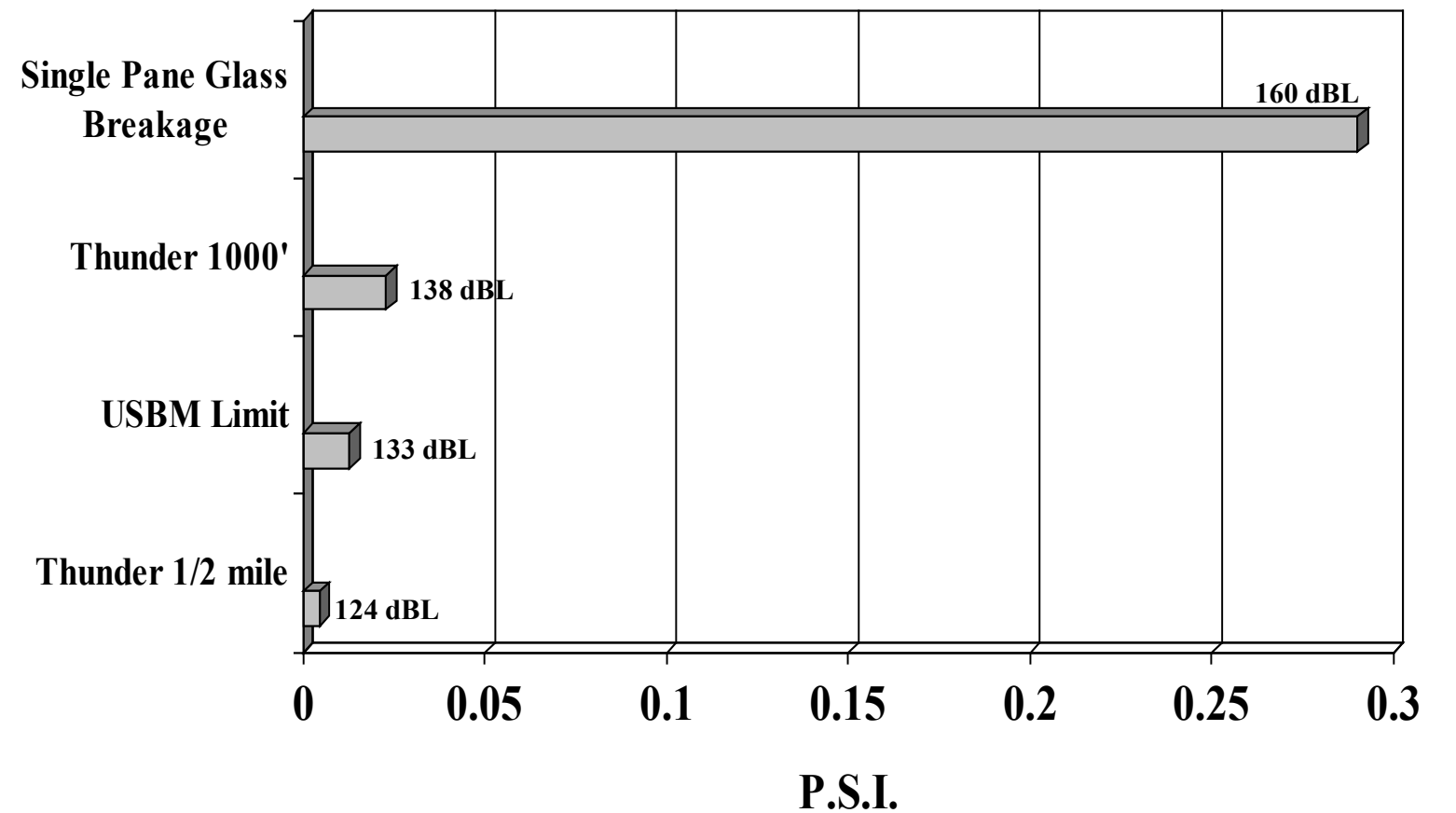
In the state of Texas, foundation settling is a common occurrence. Soils expand and contract due to the weather and other environmental factors.

Foundational cracking resulting from blasting ground vibration without wall damage is almost unheard of.

Vibration Standards



Air Overpressure Level Comparisons



The graphics above show some comparison data for ground vibration and air overpressure.

What are safe vibration standards for blasting near homes?



- USBM study – Best Science & Data
- Ordinance 34
- Seismic monitoring and data collection

USBM RI-8507

“Structure Response and Damage Produced by Ground Vibration from Surface Mine Blasting”

The United States Bureau of Mines (USBM) studied the repeated effects of vibration on structures. They concluded that as long as the vibration levels were below regulated limits, cumulative or repeated effects that produce fatigue were not seen.

Their conclusions summarized that a home could withstand blasting twice per day at 0.50 inch per second for 28 years before the first crack would be expected to be extended, let alone a new crack created.

USBM RI-8507

“Structure Response and Damage Produced by Ground Vibration from Surface Mine Blasting”

In the same study, they found that there were forces acting on the structures that were greater than the levels from the blasting operation. These factors were changes in temperature and changes in humidity. These forces occur every day and are constantly putting strain on the structure in excess of the vibration. Since these occur over many years daily during the life of the structure, with greater effect there is little vibration will do within the regulatory limits.

USBM RI-8507

“Structure Response and Damage Produced by Ground Vibration from Surface Mine Blasting”

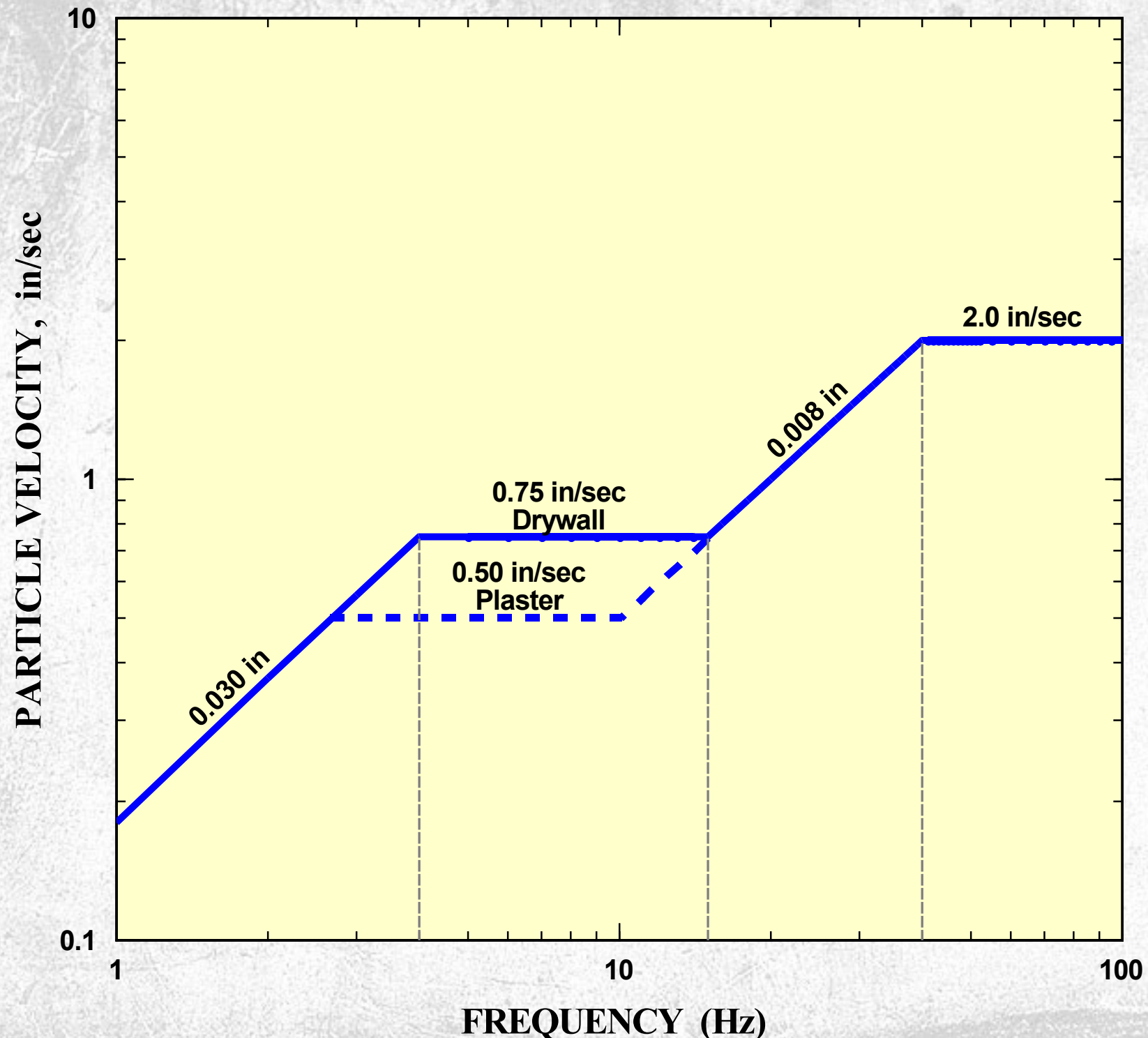
In this study, damage from actual surface-mine production blasting was observed in 76 residences for 219 production blasts. This data along with damage data from six additional studies were combined with the historical data from Bulletin 656.

Ordinance 34 Limits

In North America, safe vibration standards are based on scientific studies conducted by the U.S. Bureau of Mines (USBM). These ground and air vibration limits are based on scaled distance, peak particle velocity, air pressure and frequency, and are derived from the best science available.

Complying with these standards will prevent even cosmetic cracking in structures. Furthermore, slightly exceeding these standards does not necessarily mean that a structure will be harmed.

Ordinance 34 Limits



For ground vibrations, the standard is a function of frequency and peak particle velocity. At low frequencies, the limit is 0.75 inches per second (in./sec.). At high frequencies, the limit is up to 2.0 in./sec.

For air vibrations, the standard is a function of pressure that is most often reported as decibels with a limit of 134 decibels (dB).

Vibration Monitoring



- Vibra-Tech is the independent third-party technical expert retained by the City of Garden Ridge to monitor all blasting activity.
- The monitoring involves a minimum of six (6) and a maximum of nine (9) seismographs that surround the Hanson Servtex Quarry. The City of Garden Ridge determines where the monitors will be located.
- Each seismograph measures peak particle velocity, frequency, and air overpressure for every production blast.

Vibration Monitoring

- Each seismograph is calibrated annually to ensure they are operating within the required specifications.
- Air particulate monitor(s) and noise monitor(s) are used at the discretion of the City of Garden Ridge.
- All monitoring data is available for public inspection at City Hall, and is available on the City of Garden Ridge's website.

Citizen Blasting Complaints – Alternative Dispute Resolution (ADR) Process Summary

- There is a voluntary non-binding dispute resolution process available for property owners within the City of Garden Ridge to address certain blasting damage concerns.
- Claims of property damage are reviewed by an independent technical panel.
- Claims are limited to physical property damage <\$10,000
- The process is administered and paid for by Hanson.
- Please refer to Attachment B of [Ordinance 34](#) (link) for further details

ADR Process Summary

- Step 1 – Initiation of a claim
 - Submit an on-line claim form describing the alleged damage, when it occurred, and the claimed compensation amount.
- Step 2 – Preliminary process
 - Hanson will meet with the property owner to inspect and discuss the alleged damage and amount of compensation sought.
 - A technical damage claim assessment may be completed as warranted.
 - Hanson will attempt to resolve the issue with the property owner, and if the property owner, if not satisfied, may request a hearing.

ADR Process Summary

- Step 3 – Hearing
 - Within 15 days of the request for a hearing, the independent panel of experts will determine whether the complaint meets the minimum scientific requirements and thereby qualifies for a hearing.
 - The minimum scientific requirements are specified in Ordinance 34.
 - The hearing will be conducted within 30 days of the complaint and conducted by a panel of three independent industry technical experts.
 - The panel will meet quarterly to hear qualified complaints.
- Step 4 – Resolution
 - The panel will make their determination on the merits of the claim based solely on its scientific merits.
 - Hanson and the property owner may resolve the complaint at any time during this ADR process.

Who can I contact for further information?



Vibra-Tech Inc.

texas@vibratechinc.com

512-442-6464

Hanson Aggregates LLC – Servtex Quarry

Lalit.Bhatnagar@lehighhanson.com

972-814-4122

Future Agenda Items

Quarry Commission

November 8, 2021

Regular Meeting

- 12 days before Meeting (10/27/21) Commission and Staff items are due
- 10 days before Meeting (10/29/21) City Administrator and Chair review agenda. City Attorney is sent the agenda for approval.
- 7 days before Meeting (11/1/21) Post Agenda on bulletin board and Commission will receive packet.
(allowing a day and half for corrections and to request additional information to be added)
- 4 days before Meeting 11/4/21 Post Agenda Packet to CivicClerk
- 3 days before Meeting (11/5/21) (72 hours) – Local Government Code requirement for posting

City Council = Red

Impact Fee Committee = Pink

Quarry Commission = Purple

Planning & Zoning = Green

Water Commission = Blue

Wildlife Management Advisory Commission = Brown

City Holiday = Orange

Sun	Mon	Tues	Wed	Thur	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Approvals

1. Minutes 7/12/21

Public Hearings/Recommendations

Discussion/Reports

1. Monthly Blasting Analysis Data and Monitoring of Blasts
2. Citizen Blast Impact Reports
3. City Council Update
4. Ordinance No. 210-022018
5. Future Agenda Items
 - a. Commissioners' input

Education/Training Session

Executive Session

PENDING FUTURE AGENDA ITEMS

QUARRY COMMISSION TERMS OF OFFICE

Name	Place	Appointment & Expiration	Appointment & Expiration	Appointment & Expiration	Appointment & Expiration	Appointment & Expiration	Appointment & Expiration	Appointment & Expiration
Albert Haddad	1	Oct 2015 Sept 2017	Oct 2017 Sept 2019	Oct 2019 Sept 2021				
Johnell Holly <i>(Appointed Chair October 2019-current)</i>	2	Oct 2008 Sept 2010	Oct 2010 Sept 2012	Oct 2012 Sept 2014	Oct 2014 Sept 2016	Oct 2016 Sept 2018	Oct 2018 Sept 2020	Oct 2020 Sept 2022
Jerry Barucky <i>(Appointed Vice- Chair October 2019-current)</i>	3	Oct 2014 Sept 2016	Oct 2016 Sept 2018	Oct 2018 Sept 2020	Oct 2020 Sept 2022			
Wayne Mudge	4	Oct 2007 Sept 2009	Oct 2009 Sept 2011	Oct 2011 Sept 2013	Oct 2013 Sept 2015	Oct 2015 Sept 2017	Oct 2017 Sept 2019	Oct 2019 Sept 2021
Armando Diaz	5	Oct 2019 Sept 2021 (P)						
Mike Shands	6	Jan 2014 Sept 2015	Oct 2015 Sept 2017	Oct 2017 Sept 2019	Oct 2019 Sept 2021			
David Biersner	7	Feb 2021 Sept 2022						

(P)= Partial term of less than ½ the term remaining