

Vibration Concerns

Project Name

Traditions II

1883 Stittsville Main Street



Who Am I

- Stephanie Boisvenue, P.Eng.
- Sr. Geotechnical Engineer at Paterson Group and Group Manager of the Noise and Vibrations Team
- 15+ years in the consulting industry, 10+ years overseeing construction projects reviewing vibrations and neighbourhood concerns



What is My Role

- Contracted by Mattamy Homes as the Vibration Monitoring Consultant
- The Vibration Monitoring Consultant is responsible for measuring and reviewing all vibrations caused by the construction and determining if they are below the levels for structural damage
- We will be overseeing the pre-blast/pre-construction survey and monitoring the vibrations caused by blasting and other construction related activities

Vibration Concerns

- All construction sites will cause vibrations to some extent.
- We will be utilizing blasting for bedrock removal, as well as hoe ramming.
- Blasting is a heavily regulated practice, and all protection measures will be utilized:
 - A pre-blast survey will be offered to every property within 75 m of 1883 Stittsville main street.
 - A blast notice indicating that blasting will commence in the next 3 weeks will be distributed to all properties within 150 m of 1883 Stittsville Main Street.
 - A vibration monitoring program will be implemented to ensure that vibrations stay within acceptable levels.

Pre-Blast Surveys

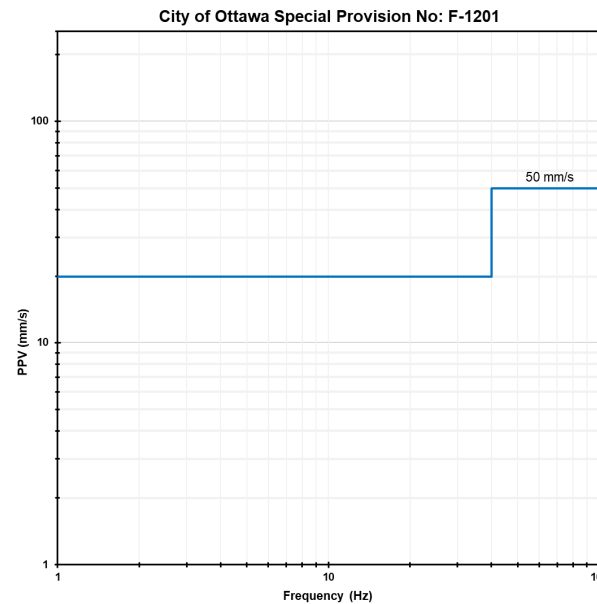
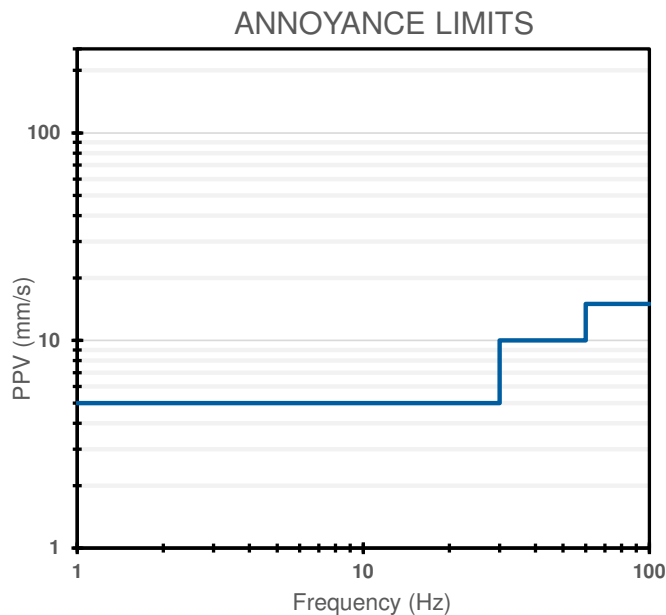
- A photographic survey of the existing condition of the house.
- Photographs can be used for comparison in the unlikely event that damage does occur (a before and after situation).
- We photograph and note the existing condition of walls/ceilings/floors of the ground floor and basement level prior to the start of construction.

Vibrations and How They Travel

- Moving equipment causes vibrations through the ground
 - Cars, Busses, Garbage Trucks, Construction Vehicles
- Bedrock removal, by blasting or hoe ramming may be noticeable.
- Vibrations are measured in velocity (mm/s) and frequency (Hz) Vibrations caused by construction activities are generally low velocity and low frequency
- Lower frequency vibrations will travel further through the ground than higher frequency vibrations, meaning you will notice it even when you are not adjacent to the construction activities

Vibrational Limits

- There are 2 limits that are to be utilized on this project: Annoyance and Structural Damage.
- Our duty is to protect the structures (and your investments), so the F-1201 limits are what will govern for this project.



What does that mean to me?

- If you are living near the area, you **WILL** feel vibrations.
- Feeling vibrations and/or noticing shaking is not an indication of damage occurring to your home.
- We are continuously monitoring and reviewing every recorded vibration.
- All vibrations will be downloaded instantly to our internal server then forwarded to all necessary construction parties. This means that if there are any concerns with vibrations, they will be addressed immediately.

How are we monitoring?

- We will be installing Vibration Monitors surrounding the proposed construction. We ask that residents refrain from touching the equipment.
- Each monitor will be installed with a modem for instantaneous download and review of all vibrations.

