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“Tall-wall-in-the-woods” built in 10' wide corridor

How do you build a rather large sound barrier wall in a protected woodland without cutting down too many trees? You choose nimble, lightweight and easy-to-install AIL Sound Walls, that’s how.

Grosvenor Heights is a 153-townhome community built in a wooded enclave along a major interchange between I-495 and I-270 near Bethesda, Maryland. The development, encompassing the historic Grosvenor Mansion and protected woodlands, had very strict environmental restrictions from three agencies, but needed a sound barrier constructed in those woods.



Project at a glance:

Name: Grosvenor Heights

Location: Bethesda, MD

Owner: EYA

Architect: VIK A

Acoustic Engineer: Phoenix Noise & Vibration

Contractor: GeoStructures

Product: Tuf-Barrier (Reflective)

Sector: Residential Development

Application: Highway sound barrier

Dimensions: Height 24-32', Length 756'

Installation time: Four weeks

By selecting AIL Sound Walls, they were able to construct the 756' wall, with heights of up to 32' – all within a 10' wide working area and from only one access point near one end.

Value engineered design, well-planned installation

Due to the uneven topography, the highway interchange heights and the taller, four-storey elevator townhomes, our wall heights varied from 24' to 32'. We worked very closely with the owner, the acoustic consultant, the architect and the contractor to come up with a workable design with customized footings. We also had to work very closely with Montgomery County to get our design approved, as this was the first sound wall of this type, size and complexity they had encountered.

Speed of production and staged delivery

With limited lay-down space and such a snug, linear work site, deliveries had to be staged with the posts coming in the exact order of how they would be installed with the panels following. To protect overhanging branches, a low headroom drill rig was used to install the footings. Once those were complete, steel posts were bolted onto them and the lightweight PVC panels were manually laid in between the post flanges.

Post-project follow-ups with the owner confirm that they are very happy with the finished barrier from both an aesthetic and acoustic performance. The earthy Adobe color panels and painted posts blend in well with the relatively undisturbed woodland and they do a great job of quieting the neighborhood. Home sales continue to be strong, as the sound barrier has helped put new customers at ease.

Sound barriers like this are becoming a frequent occurrence for residential developers, as prime land becomes scarce and they need to turn to locations adjacent to transportation corridors. Local municipalities require sound barriers as part of their site plans to keep noise level within local ordinances. The acoustic consultant on the project, Phoenix Noise & Vibration, recommended us for this job, as well as others in the surrounding area.



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