Feedback From a Sound Wall Designer

March 29, 2007

Dear Mayor, City Staff, and Members of the City Council,

Executive Summary

- Wal-Mart has responded to rigorous noise requirements in other cities by installing professionally designed absorptive sound walls (example: 16 foot absorptive sound wall in Lake Charles).
- The current noise study lacks sufficient detail for professionals to complete their own independent design.
- How much would an absorptive sound wall cost?
- Cedar Hills must take the time to address all noise issues before preliminary site plan approval.

Please permit me to supply additional information regarding absorptive sound walls. This is a follow-up to my letter dated March 27, 2007 on Noise Reflection.

On Wednesday, March 28, I spoke at length by telephone with Ben Burkett, Sales and Design Manager at Sound Fighter Systems (Phone 318.861.6640), the company that markets absorptive sound wall products. Here are some significant details from my phone call.

- Prior to the phone call, I directed Ben to the Cedar Hills web site where he could review the proposed site plan. On his own, he looked over the noise study. We talked about the noise study for some time. He mentioned that the noise studies he usually sees, even from Wal-Mart, are far more extensive and detailed. In order for him to design appropriate absorptive sound walls, he is accustomed to receiving far more detailed information. His descriptions were reminiscent of the kind of analysis that Robert Andres recommended to us, as I described on page 21 in my report *Preserving the Quality of Life in Cedar Hills*. Ben asked me to make it clear that he is not being critical of the current Wal-Mart noise study. Different reports are used for different purposes. All he is saying is that he would need more details from an acoustical engineer to properly design the right sound wall for Cedar Hills.
- Ben told me about additional Wal-Mart sites that have used their sound walls. In addition to the four sites I mentioned in my earlier letter, Ben added Citrus Heights, California, and Hemet, California to my list. He also said they installed a wall at a Wal-Mart in Missouri, although he could not recall the name of the city. He estimated that they have installed their system in 6-8 Wal-Mart locations.
- Ben mentioned that they installed a 16-foot absorptive sound wall at the Wal-Mart in Lake Charles, Louisiana. There is not a cookie-cutter absorptive sound wall. In other cities, a sound wall was installed that is carefully designed to meet a specific performance level. The important message for Cedar Hills is that there are many examples of Wal-Mart locations that conduct in-depth noise studies and design professional noise abatement solutions that meet rigorous noise criteria. I asked Ben if he had any idea why Wal-Mart installs these superior absorptive sound walls in certain locations. He does not speak for Wal-Mart. His opinion was that the local cities and residents require it, and Wal-Mart meets the cities’ requirements in order to open their stores.
A member of the city council asked me recently how much these superior sound walls cost. Ben helped me do a back-of-the-envelop calculation. The current wall proposed for the rear of the building is approximately 800 feet long and 8 feet high. This includes the wall immediately surrounding the building along the north and east sides where the trucks drive (marked in blue on the map on the following page). I am not including the wall from the building out to 4800 West along the parking lot. The absorptive sound wall costs approximately $21 per sq. ft., so the total cost for an 8 foot absorptive sound wall surrounding the Wal-Mart would be approximately $134,400.

\[(800 \text{ ft. long} \times 8 \text{ ft. high} \times $21 \text{ per sq. ft.} = $134,400)\]

This is the cost of the materials delivered to Cedar Hills. The installation costs typically run 50% to 75% the cost of the materials. If such a wall were installed in Cedar Hills, the additional cost to Wal-Mart could be much less than this, because it would replace the proposed concrete wall. The true added cost beyond the current proposal would be the actual cost of the absorptive sound wall minus the cost of the proposed concrete wall.

Ben is not suggesting that this wall is appropriate for Cedar Hills. We do know that such a wall would provide far superior performance compared to the proposed concrete wall. Ben said that his wall would be a significant improvement over a concrete wall in terms of noise reduction. The proper way to design the noise control is to establish a clear standard for noise, analyze all noise sources, and then design the proper barriers that are needed to meet the standard.

Please phone Ben at the number I listed above if you would like to ask him additional questions.

The more I study this issue, the more evidence I uncover demonstrating that projects in cities all over the county are using trained noise control experts to design quality noise control systems around large development projects. This includes Wal-Mart.

I remind the City Council that it has only been a little more than 30 days since we received the noise study. So far, I have seen much more time in the public meetings devoted to aesthetic issues like the size of the dormers on the building than on the issue of noise control. This is an important issue that deserves thorough analysis. We should not be pressured by Wal-Mart to prematurely approve this project with so many unanswered questions about noise. The burden of proof is on the applicant. Do not be afraid to require them to meet this burden.

The site plan must be sensitive to the nearby single-family housing. The nearby residents are depending on you to help preserve the peace and tranquility that is appropriate next to land that our guidelines have designated as medium density use. Wal-Mart is committed to being a good neighbor, and this is perhaps the most concrete way that they can demonstrate it. As we compromise on our guidelines to permit high intensity use next to the homes, Wal-Mart should be required to provide the strongest industry-standard noise abatement, and demonstrate that capability in their proposal, not with after-the-fact enforcement.

Thank you for your service and for listening to my concerns.

Respectfully,

Kent Seamons