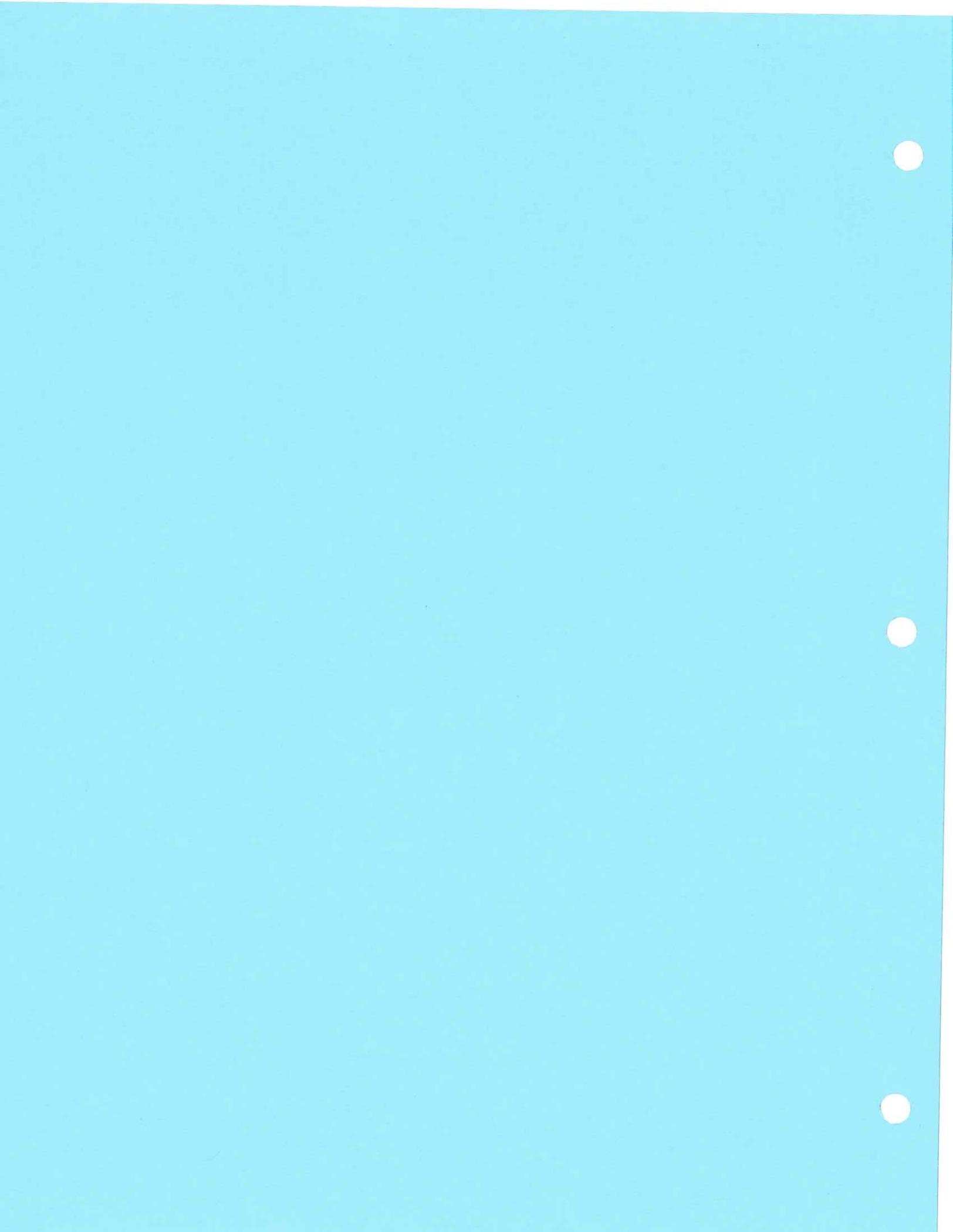


NOISE STUDY

PALMER TRINITY PRIVATE SCHOOL, INC.

VPB-14-001



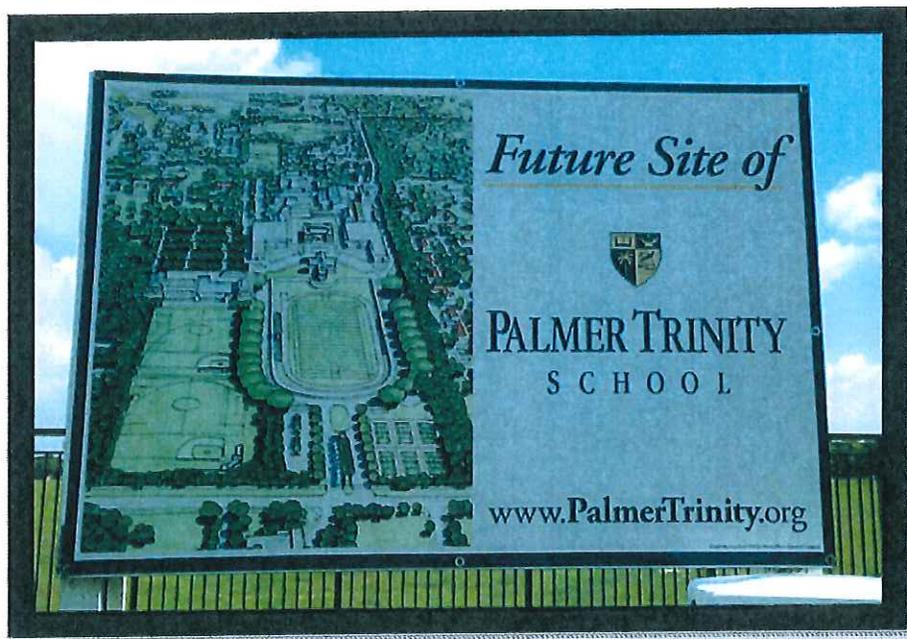
ROSS ENGINEERING INC



Peer Review

Palmer Trinity School Acoustical Study
for the Village of Palmetto Bay

6/24/2014



Performed by Cesar Quiroz, P.E., Checked by Robert Ross, P.E

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FINDINGS

Based on a site visit of the Palmer Trinity School , Review of the *Acoustical Study of the Current Master Plan* conducted by Siebein Associates, Inc. (dated January 28, 2014), Review of *Community Noise Study* conducted by Audio Bug (dated May 2, 2010) and Village of Palmetto Bay Ordinances, a peer review has been performed. A key map and the photographs of the locations visited have been compiled in the Appendix. The following observations were made:

1. The *Community Noise Study* conducted in 2010 has made conclusions about the sound levels at the school and substantiated them by extensive measurements at 19 locations.
 - i) At 5 locations the equivalent sound level was exceeding the allowable limit as per Village ordinance for reasons of lawn services (at 3 locations) and Fedex truck sound (1 location) and sound of dog barking and peacock (1 location). None of these were produced within the school premises.
2. The current master plan (dated January 22, 2014) includes maintenance of existing landscapes and noise attenuating walls. We concur with the recommendation of maintaining the existing noise attenuating walls and landscape buffer already in place around the perimeter of the school.
3. The mitigation strategies pertaining to the setback, location of future main road and distance from property boundaries are all in accordance with the Village ordinances. The football field and running track locations also meet the setback distance criteria.
4. Mitigation strategies for compactors:
 - i) During the site visit it was observed that currently there is one compactor at the dumpster location and the master plan shows a total of two compactors in future planning, thus suggesting possible increased source of sound.
 - ii) From the *Community Noise Study*, sound level recorded closest to the current compactor location is at location "L" (i.e. east side of school at end of SW 179th Terrace.) Here dog and peacock sounds along with ambient levels were observed with an equivalent sound level of 69.6 dbA (from Table 2 of *Community Noise Study*), thus recorded increased levels are not attributed to be originating in school premises.
 - iii) Given that there is increased ambient noise near dumpster section of school, planning of another compactor plus increased operations of trucks around this area, the recommendations by the *Acoustical Study of the Current Master Plan* to construct a barrier wall with suggested dimensions and sound absorbing materials / panels should be further supported by sound measurements at actual location. We strongly recommend performing sound measurements near the existing compactor location to understand actual sound

contribution of compactor/truck operations and to evaluate the potential of future sound levels with two compactors in place. If already done so, support the recommendations with the measurements and analysis.

5. Regarding small seating areas adjoining football, baseball and soccer fields:
 - i) The *Community Noise Study* stated that sounds of sports activities held on schools campus never exceeded the Village ordinance limits at any time during their testing, thus the sound levels are within limits.
 - ii) These proposed fields have been assigned optimum setback distances resulting in efficient sound absorption.
 - iii) The mitigation strategy of constructing the small seating areas as partial acoustical enclosures will significantly result in further reduction of sound distributing to adjoining property but may not be a mandatory requirement as the sound level is already within the limits and setback distances are favorably set up.
6. We concur that noise mitigation analysis should be performed for mechanical equipment in future buildings specially those near property lines to be compliant with the Village ordinances.
7. We suggest performing the sound measurements near the existing central chiller plant as it can be used as a reference in estimating potential noise levels of a similar plant at new location. This can be used to understand the need for future noise analysis and requirement of newer technology in cooling with lesser noise to be within the acceptable sound limits.
8. In general, we concur with the noise mitigation strategies by the *Acoustical Study of the Current Master Plan* as they will significantly reduce the sound distributing to surrounding residential neighborhood.

APPENDIX – SUMMARY OF SITE PHOTOGRAPHS



KEY MAP

1. At the school entrance



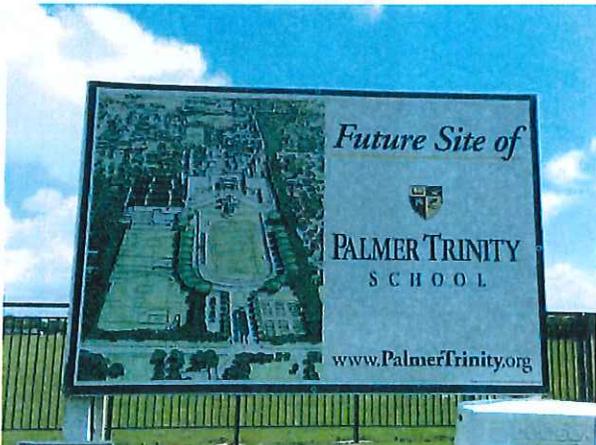
2. Towards school from SW 180th Street



3. Towards school from SW 78th Plaza



4. Towards school from SW 184th Street



5. Towards school from SW 183rd Street



6. Towards school from SW 180th Street



7. Towards school from SW 80th Ave.



8. Towards school from junction of SW 80th Ave and SW 180th Street



9. Towards school from SW 176th Street



10. Inside school at Compactor/dumpster location



