

APPENDIX A | BREATH EXCERPTS

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Mechanical – Heat Recovery Systems

In conjunction with the heat recovery system designed to fit the AHU used in this project (Analysis IV), I will be performing mechanical calculations to help assess the design of the heat recovery system. Specifically, calculating the actual CFMs required for this facility and comparing it with the alternative design. Next, i will contact a heat recovery system manufacturer and used the appropriate software to design a heat recovery system according to the outside air supply required for NICoE. I will compare both systems regarding the energy recovery and cost savings made when using these heat recovery systems.

Structural – Precast Wall Panels to Insulated Metal Panels

The model-based cost estimating process (3D estimation) can also be used during the Value engineering process to evaluate the cost of design and construction alternatives as mentioned above. An alternative wall panel system will be investigated to compare the current 7" thick precast concrete panels used in conjunction with the curtain wall system on the northwest side of the building. Within this analysis I will be looking into the lateral and deal load changes on the structure and foundation of the building to the lighter loads applied.