



FINAL CONCLUSION

ROOF SYSTEM ANALYSIS

The analysis of the roof systems compared two different roof systems: a 4-ply built-up roof system and a green roof system. The analysis compared the structural load requirements and the potential mechanical systems savings. Installation costs and material costs are an important part of the comparison. As shown in the final report, the structural and mechanical requirements of the two systems are too similar to result in any significant financial savings. However, the installation costs of the built-up roof are substantially less than the green roof system. The final recommendation is to construct the AHIB with a traditional 4-ply built-up roof. From material and installation costs, \$45,417 will be saved if the built-up roof system is chosen. This amount represents only the difference when comparing a small portion of the roof area. The total difference would be larger, approximately \$316,748, if the costs are compared for the entire roof.

FAÇADE SEQUENCING

The complex shape of the AHIB and the multiple materials of the façade make coordination and planning especially important when constructing the façade. After analysis, it is concluded that the sequencing of the façade installation can be improved. Several alternatives are explored, each with their own advantages and disadvantages. Ultimately, one sequence is chosen above the others based on the efficiency and the continuous work flow it provides. Although only one week of construction is saved in using an alternative schedule, the sequence will provide more flexibility for the installer of the curtain wall. The final conclusion and recommendation based on the analysis is to select Alternative C.



WASTE MANAGEMENT

Waste management is becoming increasingly more important in the construction industry. This analysis demonstrated that when recycling even a small portion, only 50% of certain construction materials, an owner can expect to incur a financial savings. The waste management plan proposed for the AHIB recycled wood, concrete, and gypsum, and identified recycling centers to recycle the waste instead of taking it to a landfill. The savings for the AHIB is expected to be \$2,500 if the plan is followed. However, if a stricter recycling plan is adopted and a higher percentage of materials are recycled, the savings will increase. The waste management plan proposed would be effective and should be implemented in the AHIB project.