



Feasibility and Planning Studies – Avoiding Problems Before They Happen

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INTRODUCTION

During master planning and preliminary feasibility study phases of projects, design team decisions often have far-reaching consequences on the acoustical quality of the finished building or campus, and on the financial resources required during design and construction to achieve a given project's acoustical goals. Recently, Acentech had the opportunity to play a significant role in a number of such studies, saving clients' money and headaches as the designs developed.

Using a recent case study to illustrate the important role that acoustics plays in the feasibility study and master planning process, this brief article outlines the process Acentech uses – and the pitfalls we avoid – when we have an opportunity to work with clients at a project's conception and initial planning.

MASTER PLAN – UNIVERSITY OF SOUTHERN MAINE ARTS CAMPUS

Working with Gund Partnership (design architects), Scott Simons Architects (local architects), Robert Long of Theater Consultants Collaborative (theater consultants), Becker (structural engineers), Allied (MEP), and members of the faculty and staff, Acentech helped to develop a new master plan for the University of Southern Maine's *arts campus* in Gorham, ME. The existing arts facilities at USM Gorham – music, theater, dance, and visual arts – are scattered among a range of structures around the University, and school officials recognized that many of the facilities were inadequate to serve their current and future needs.

Consistent with our typical approach on such projects, we began our involvement with a visit to campus to meet with the faculty to understand their needs and their concerns, observe and make acoustical measurements of existing facilities, and attend performances and rehearsals in the spaces they use now. Our initial visit led to many important discoveries. To name a few:

- The music, theater, and arts faculty had very specific goals and concepts for how their new facilities should (and should not) function acoustically – in terms of sound isolation, background noise, and the acoustics of the rooms themselves.
- After attending a rehearsal in an existing instrumental rehearsal room, Acentech observed firsthand how they use their spaces, and how new replacement facilities could be better designed to meet their needs.
- We identified a number of sound isolation concerns in addition to other concerns raised by members of our team, after a walk-through of the visual art facilities.
- After collaborating on-site with the structural engineer, we identified which spaces could support improved (but heavy) sound isolating floor constructions, and which could not.
- We observed firsthand, at a performance of *The Pajama Game*, the wonderful intimacy of the existing theater space – a quality we would preserve in new facilities. We also observed the ways in which the performers and faculty were held back by the existing theater's limitations.

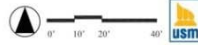
After the initial visit, Acentech spent several months planning, passing sketches back and forth with the architects, marking up concept plans, researching precedents at other facilities, and developing an existing conditions assessment. During the planning process, we worked with the architects to avoid many problems that would have otherwise been expensive or difficult to address; we repositioned sensitive adjacencies that might have required expensive constructions to isolate from one another; we put in place a concept mechanical strategy to successfully and sufficiently quiet background noise levels; we developed room sizes, shapes, and volumes consistent with the needs of the growing faculty and student body. A follow-up meeting

with faculty and staff was extremely helpful to identify the budget implications of these designs and to work through potential conflicts and priorities. As participants, we advocated for the faculty and their needs in a meeting with University staff and helped the staff understand how budget limitations would affect acoustical quality. We also helped the faculty understand the acoustical and budgetary implications of their aspirations.

Through this process and working with Gund and Theater Consultants Collaborative, we developed a master plan that represented an enormous step forward for all arts departments at USM, which put the University in a positive position to raise funds and move forward with a well thought out, thoroughly vetted design for improved – *and acoustically excellent* – facilities.



ARTS MASTER PLAN - VIEW 8



Credit: Gund Partnership