CAN YOU GIVE ME SOME SPACE?

Surge Strategies During Renovation of Intensely Used Science Buildings

JULY 18, 2019
“Can You Give Me Some Space?”: Phased Renovations of Occupied Intensely used Science Buildings

Course Number – ERO300
Provider Number – G500

About This Course
Occupied science buildings are renovated probably every day; however any given campus is likely to undergo this type of project about once every 30 years. The initial reaction from users is usually not in favor of the renovation. “it’s impossible”, “we have no where to go”, “my research cannot be interrupted”, etc. And yet these buildings do get renovated. How does this happen? How have campuses achieve success in getting these projects done? This presentation looks at several case studies of renovations of occupied science buildings and reports on key factors between the design team, owner, and building stakeholders that made these projects work.
Learning Objective 1:
Recognize opportunities to find or create swing space on a campus by comparing to real world examples.

Learning Objective 2:
Illustrate to building users that moving is not impossible and is often necessary in helping a design and contractor team achieve the campus’ renovation objectives.

Learning Objective 3:
Demonstrate that with logical phasing plans, a renovation strategy that clearly progresses toward an end result, and effective communication the stakeholders can be more supportive.

Learning Objective 4:
Assess the pros and cons of using modular leased space such as trailers for swing space to accomplish renovation goals.
WELCOME

Pamela Gibbons-Mahler, RA, LEED
Capital Program Manager
State University Construction Fund
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WELCOME

Pamela Gibbons-Mahler, RA, LEED
Capital Program Manager
State University Construction Fund
They say…

“Campus science buildings get renovated every day!”
But we know…

YOUR campus science building might undergo a renovation just ONCE in 30 years.
Obsolete or Non-Functioning Laboratories and Equipment
Reconsideration

**RELOCATION POSSIBILITIES**
- Campus Relocation
- Off-Campus Relocation
- Operate while under Construction/Renovation
- Build New Facility

**ACADEMIC IMPERATIVES**
- Teaching
- Business Operations
- Research
- Recovery

**SPACE NEEDS**
- Offices
- Classrooms
- Wet Lab Research
- Dry Lab Research

**FEASIBILITY CHALLENGES**
- Economies
- Environment
- Society
- Political
And there are capital funding challenges to meet...
And we hear…
The logistics seem impossible!

There is nowhere to go. 😞

My research cannot be interrupted.

A new building is cheaper.

I only want to move ONCE.
This presentation will look at several case studies of successful occupied and/or surged science building renovations, and discuss the key factors for making such renovations a reality,

...EVEN IN THE MOST CHALLENGING CIRCUMSTANCES.
DEFINITIONS
Surge space? OR Swing space?

SAME THING.

SURGE or SWING spaces are environments that are used temporarily while an existing space is being renovated or built.
SYNERGY
1 + 1 > 2
It's essential.
SOURCES
SUNY Sources

Sally Oaks, Director of Business Affairs  
Binghamton University

Ellen Chase, M.L.A., SUCF Administrator  
Brian Fish, Project Manager  
Cornell University

Juanita Larrabee, Director of Facilities Planning, Design & Construction  
SUNY Cortland

Gary Scott Peden, A.I.A., Director of Facilities Planning, Design, and Construction  
Rex R. Giardine, Architect, Project Manager  
SUNY College of Environmental Science and Forestry

John Shupe, Assistant Vice President for Facilities Management  
SUNY New Paltz
CUNY and Private University Sources

Meghan Moore-Wilk, Director of Space Planning
City University of New York

Matt Lane, Vice Dean for Finance and Administration of Arts and Sciences
University of Pennsylvania

Illona Beresford, Design Project Senior Manager, Planning
University of Pittsburgh

Scott Mabury, Vice President of University Operations
University of Toronto

Michelle Maheu AIA, LEED AP, Director of Facilities Management and Planning
Wellesley College
Private Industry Sources

David Liberatore, AIA, REFP, LEED AP DC+C, Director of Learning, Raleigh BSA Life Structures

Melissa Burns, AIA, LEED AP BD+C , Academic Planning & Design EYP Architecture & Engineering

Roger Goldstein and Bernard Dooley/ Architecture/ Planning/ Preservation Goody Clancy

Tom Jenkins BA(Hons) PGDip ARB RIBA, Partner Hopkins Architects Partnership LLP

Tradeline, Inc.

Nick Masci, Lean Black Belt Triumph Modular
## Construction Fund Sources

<table>
<thead>
<tr>
<th>Annette Barnes</th>
<th>Amanda Keenan</th>
</tr>
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<tbody>
<tr>
<td>Jeffrey Bittner</td>
<td>Lindon Paul</td>
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<tr>
<td>Kimberly Conant</td>
<td>Chuck Rodriguez</td>
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<td>John Inman</td>
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</table>
CAMPUS STORIES
UNIVERSITY OF TORONTO

• 17 Buildings
• 592,000+ SF
FOR EACH PROJECT, CHECKBOXES WILL HIGHLIGHT PROJECT DETAILS AND USE OF SURGE SPACE.

Whiskey

What types of whiskey do you prefer?

- [x] Scotch
- [x] Bourbon
- [x] Irish
- [x] Tennessee
- [x] Rye
SYNERGY  Did you create partnership?

PRIOR PLANNING  Did you discuss where to put people?

OWNERSHIP  Does your team agree?

COMMUNICATION  How are you keeping all informed? Are you communicating early and often?

MAXIMIZE EXISTING SPACE  Are you ‘fully utilized’?

EXIT PLAN FOR TEMPORARY SPACE  Will the trailers stay or go? Lease v. buy?
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE

Project Champion
University of Toronto
UNIVERSITY OF PENNSYLVANIA

- Chemistry Laboratories
- 140,000 SF
“Open heart surgery on a living, breathing building”
University of Pennsylvania

- Synergy
- Prior Planning
- Ownership
- Communication
- Maximize Existing Space
- Exit Plan for Temporary Space
CORNELL UNIVERSITY

- Warren Hall
- 130,794 SF
- AG Quad Surge 22 modulars, 15,840 SF
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
SUNY CORTLAND

- Bowers/Dowd Halls and Moffett Center
- 238,000 total (153,922 & 84,448) SF
SUNY Cortland

- SYNERGY
- PRIOR PLANNING
- OWNERSHIP
- COMMUNICATION
- MAXIMIZE EXISTING SPACE
- EXIT PLAN FOR TEMPORARY SPACE
UNIVERSITY OF PITTSBURGH

- Crawford Hall (Historic District)
- A lot of SF
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
BINGHAMTON UNIVERSITY

- Science II
- 145,215 SF
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
UNIVERSITY OF CONNECTICUT

- Gant Science Complex
- 281,333 SF

Credits:

Goody Clancy, Architect
Mitchell Giurgola Architects, LLP, Associate Architect
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
SUNY ESF

- Marshall Hall
- 90,061 SF
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<tbody>
<tr>
<td>A.1</td>
<td>Illick</td>
<td>Sub Bsmt</td>
<td>TNRM Field Sample Intake: HD lab tables, workbenches, grinder, drying ovens, etc. South room needs sawdust coll.</td>
<td>Jan. 2020</td>
<td>N</td>
<td>N</td>
<td>Med-High.</td>
<td>1,342</td>
<td>$300</td>
<td>$402,600</td>
<td>1,555</td>
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<tr>
<td>A.2</td>
<td>Illick</td>
<td>Sub Bsmt</td>
<td>FNRM Field Sample Intake: Field eqpt. storage, loading dock upgrades. Build CMU partitions</td>
<td>Jan. 2020</td>
<td>N</td>
<td>N</td>
<td>Low</td>
<td>127</td>
<td>$300</td>
<td>$38,100</td>
<td>121</td>
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<tr>
<td>A.3</td>
<td>Illick</td>
<td>Sub Bsmt</td>
<td>Ext. ADA access: Cutout &amp; add door, conc pad, railing, move radiator, etc.</td>
<td>Aug. 2020?</td>
<td>N</td>
<td>N</td>
<td>pipe Fittings</td>
<td>N/A</td>
<td>LS</td>
<td>$75,000</td>
<td>145</td>
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<td>B.1</td>
<td>Illick</td>
<td>3rd Flr West</td>
<td>TERF: Dendrochronology &amp; Geospatial Lab, Conf. Rm., Offices. incl built in casework.</td>
<td>Apr. 2020</td>
<td>Y</td>
<td>PTAC</td>
<td>High</td>
<td>2,022</td>
<td>$400</td>
<td>$808,800</td>
<td>2,052</td>
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<tr>
<td>B.2</td>
<td>Illick</td>
<td>2nd Flr West, North Side</td>
<td>Faculty &amp; Grad students to office suite, vicinity of exist. Conf. rm 334.. CONSTN</td>
<td>Apr. 2020</td>
<td>Y</td>
<td>PTAC</td>
<td>pipe Fittings</td>
<td>Low</td>
<td>968</td>
<td>$175</td>
<td>$169,400</td>
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<td>B.3</td>
<td>Illick</td>
<td>3rd Flr West, North Side</td>
<td>Faculty &amp; Grad students to office suite near exist. Conf. rm 334.. FURNISHINGS $16k + $18k</td>
<td>Apr. 2020</td>
<td>N/A</td>
<td>N/A</td>
<td>Low</td>
<td>LS</td>
<td>$34,000</td>
<td>0</td>
<td>$0</td>
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<tr>
<td>B.4</td>
<td>Illick</td>
<td>3rd Flr West, South Side</td>
<td>Office Area shown as abatement Add alternate</td>
<td>Apr. 2020</td>
<td>N/A</td>
<td>N/A</td>
<td>Low</td>
<td>LS</td>
<td>$34,000</td>
<td>0</td>
<td>$0</td>
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<tr>
<td>C.1</td>
<td>Illick</td>
<td>4th Flr: B76, B77, B78</td>
<td>TERF: Team Rooms, Mycology Intake Lab. Related to 3rd flr reno below</td>
<td>Oct. 2019</td>
<td>Y</td>
<td>extend</td>
<td>Chem, 9x9 tile, pipe</td>
<td>High</td>
<td>371</td>
<td>$400</td>
<td>$148,400</td>
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<td></td>
<td>Illick</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,476</td>
<td></td>
<td></td>
<td>5,865</td>
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ILLICK $2,394,000 SUCF Building total
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<td>Aug. 2020</td>
<td>N</td>
<td>N</td>
<td>pipe</td>
<td>N/A</td>
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<td>Illick</td>
<td>3rd Flr West</td>
<td>TERF: Dendrochronology &amp; Geospatial Lab, Conf. Rm., Offices. Incl built in casework.</td>
<td>Apr. 2020</td>
<td>Y, PTAC</td>
<td>N</td>
<td>Y+30' benches</td>
<td>High</td>
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<td>2nd Flr West, North Side</td>
<td>Faculty &amp; Grad students to office suite, vicinity of exist. Conf. rm 334.</td>
<td>Apr. 2020</td>
<td>Y, PTAC</td>
<td>N</td>
<td>pipe</td>
<td>Fittings</td>
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<td>Exh. vent</td>
<td>Cham, 9x9 tile, pipe</td>
<td>High</td>
</tr>
</tbody>
</table>

**Illick Const Budgets**

- **Illick $1,754,000**
- **TOTALS** $640,000
- **Illick Soft Costs**

**SUCF Building total** $2,394,000
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

• Dreyfus Chemistry Laboratories
• 130,000 SF
Massachusetts Institute of Technology

- SYNERGY
- PRIOR PLANNING
- OWNERSHIP
- COMMUNICATION
- MAXIMIZE EXISTING SPACE
- EXIT PLAN FOR TEMPORARY SPACE
CITY UNIVERSITY OF NEW YORK

- Various Buildings. Powdermaker Hall at Queens College
- Various SF
CUNY

- Synergy
- Prior Planning
- Ownership
- Communication
- Maximize Existing Space
- Exit Plan for Temporary Space
WELLESLEY

• Wellesley Science Center
• 200,000+ SF
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
ROLLINS COLLEGE

- Bush Science Center
- 91,519 SF

Credits: EYP Architecture and Engineering
EXISTING BUILDING

SCIENCE VILLAGE

TEMP OFFICES IN RES HALL

Credits:
EYP Architecture and Engineering
SYNERGY
PRIOR PLANNING
OWNERSHIP
COMMUNICATION
MAXIMIZE EXISTING SPACE
EXIT PLAN FOR TEMPORARY SPACE
SUNY NEW PALTZ

- Multiple Projects
- Various SF
PARKING AND A POND
Trailers Pros & Cons: Leasing

Pros
• Generally intended for short term/defined time period
• Can budget for cost
• Do not have to maintain them, replace roofs, etc.

Cons
• Usually ends up on site at least 2x as long as you planned
• Pay way more than if just bought them outright
• Sneaky charges when turning them in
• Pay for utilities, foundations, fit out of labs, etc.
Trailers Pros & Cons: Buying

Pros
• Long term use could be more cost effective than leasing
• Although up front planning is considerable, could help expedite several renovation projects

Cons
• You maintain it
• Hard to budget for complete cost
• More money you spend on them, harder it is to get rid of them
• Become part of campus fabric, people love them
Trailers Pros & Cons: Challenges For Both

- Must be fully code compliant, just like new building
- Design & Engineering services required for labs
- They are cozy, convenient, one floor
- People love them and don’t want to leave
- Hard sell if student will be there entire college career
Simply for Your Information (Not an Endorsement…)

- Axis Construction Group
- Design Space Modular Buildings
- Mobile Modular Express Inc.
- Mobilelease Modular Space
- Modular Space Corporation (ModSpace)
- Triumph
- William Scotsman (Willscot)
CONCLUSIONS
Debunked the belief that occupied science buildings cannot be renovated due to lack of, or complete absence of, swing space.

Reminded you of the very real time and energy required when planning for renovations and moving people and programs.

Provided you with some good, current examples of campuses who have been able to make this happen.

Offered some food for thought about temporary spaces and important considerations when choosing to surge using such spaces.

Inspired some creativity for brainstorming how you might make your science building renovation dreams a reality.
Campuses who have successfully renovated science buildings teach us that:

“Everything is figureoutable”