

CAN YOU GIVE ME SOME SPACE?

Surge Strategies During Renovation of Intensely Used Science Buildings

JULY 18, 2019



State University
Construction Fund

“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.

I love u

WELCOME

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

I love u

I need space

Delivered

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

I love u

I need space

Delivered

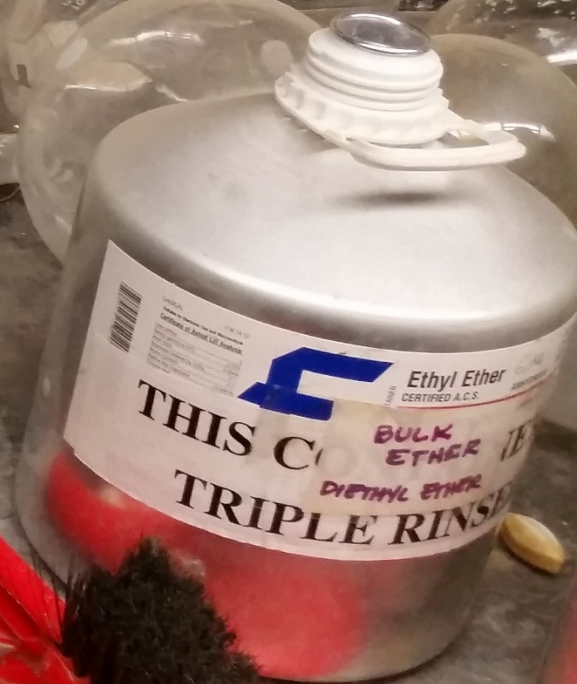
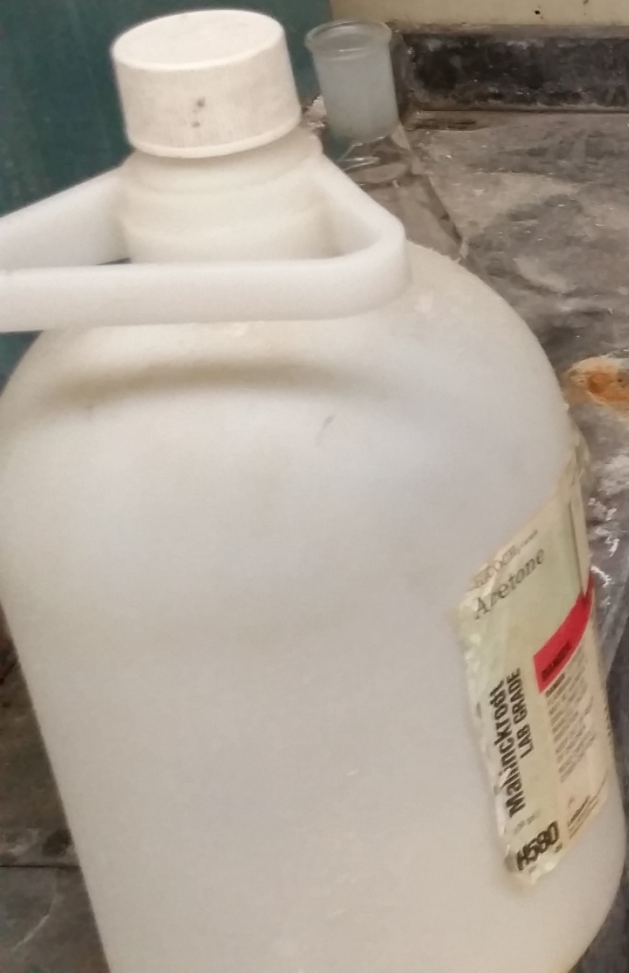
I love u

WELCOME

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



INSPIRATION





They say...

**“Campus science buildings
get renovated every day!”**





BOWLING GREEN



UNIVERSITY AT BUFFALO



CORNELL



But we know...

YOUR
campus science building might
undergo a renovation just
ONCE
in 30 years.



Antiquated Laboratories



Obsolete or Non-Functioning Laboratories and Equipment







And we consider...

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

A modern office interior with several desks, each equipped with a computer monitor and a black office chair. The desks are arranged in a row, and the office has large windows in the background, letting in natural light. The floor is a light-colored, reflective material.

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

Annette Barnes

Jeffrey Bittner

Kimberly Conant

John Inman

Amanda Keenan

Lindon Paul

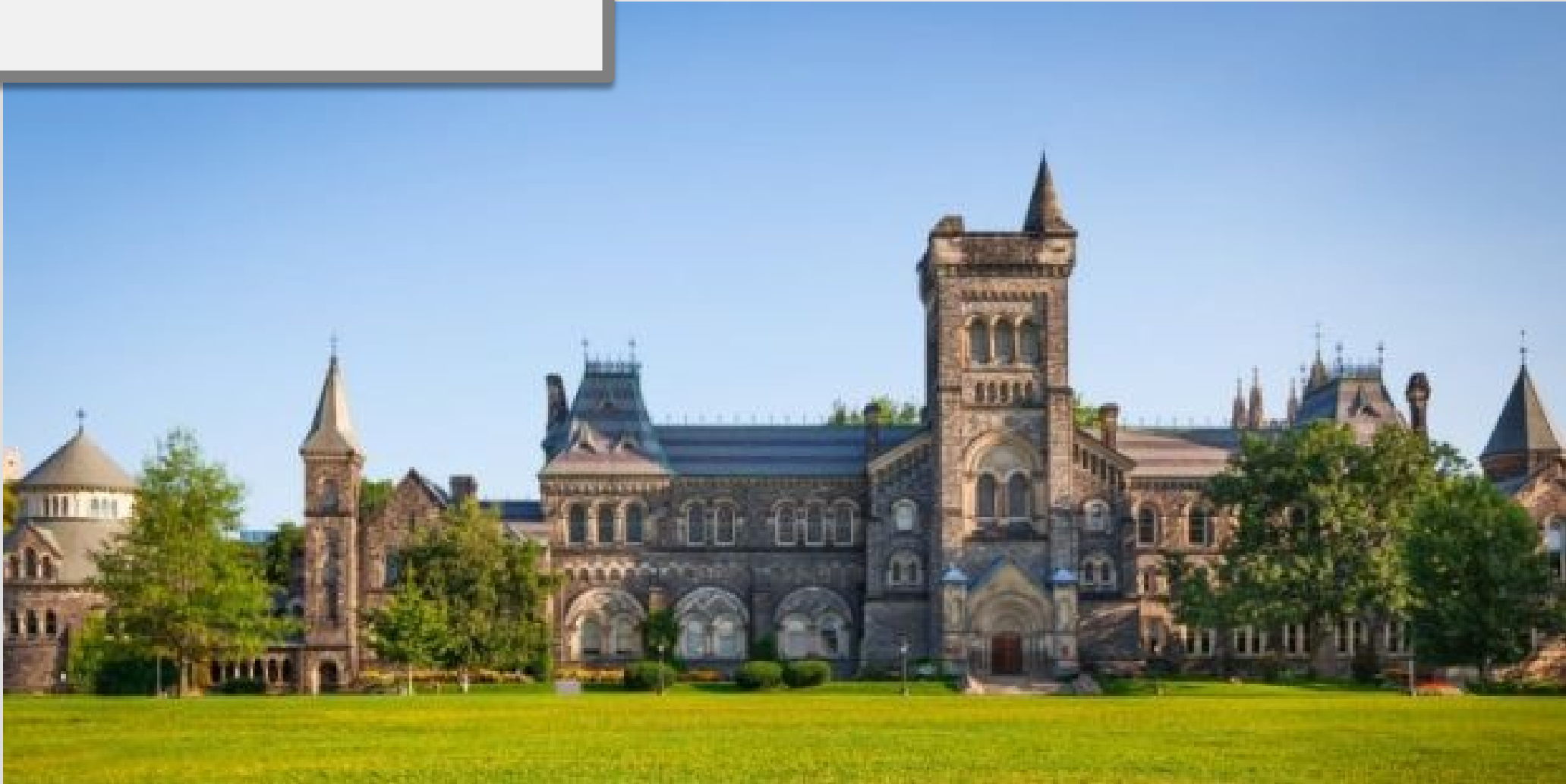
Chuck Rodriguez

CAMPUS STORIES

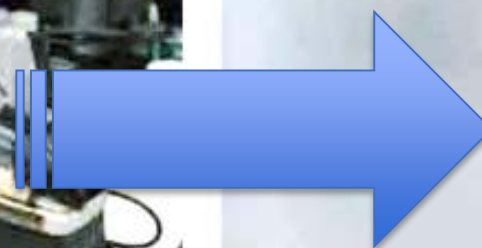


UNIVERSITY OF TORONTO

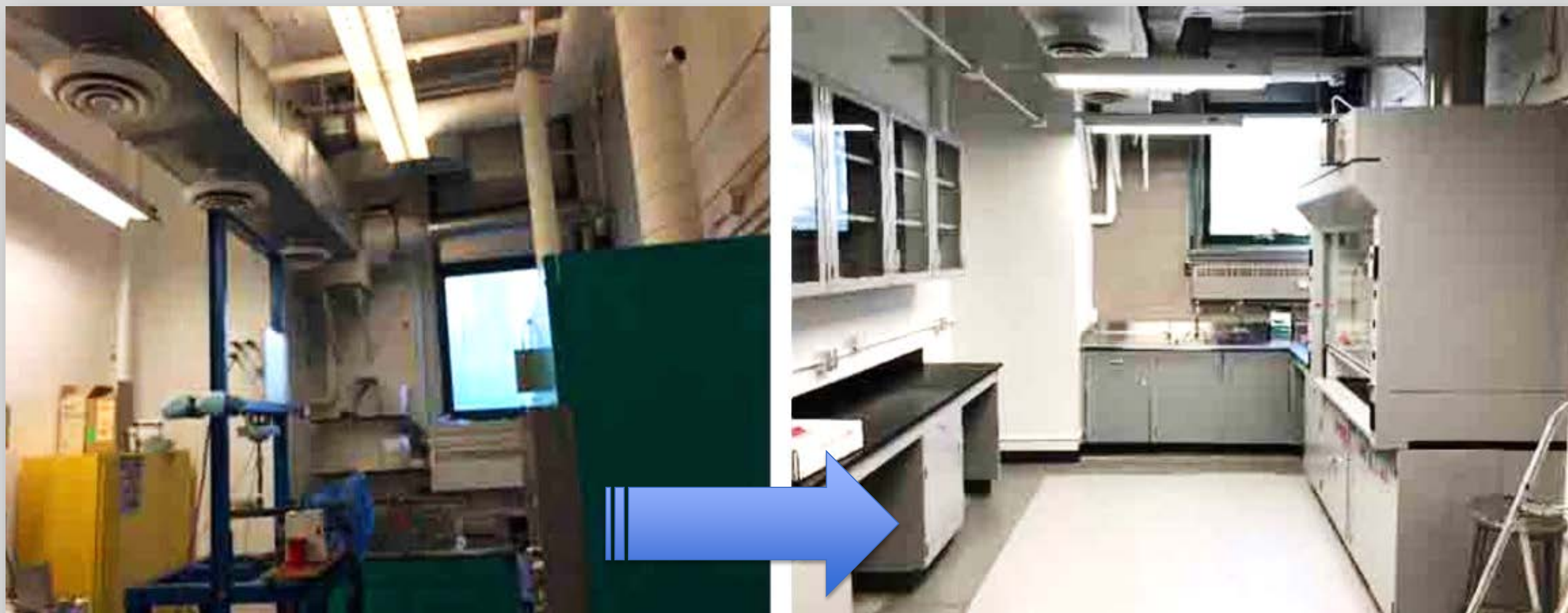
- 17 Buildings
- 592,000+ SF











**FOR EACH PROJECT, CHECKBOXES WILL HIGHLIGHT
PROJECT DETAILS AND USE OF SURGE SPACE.**

Whiskey

What types of whiskey do you prefer?

- ☒ Scotch
- ☒ Bourbon
- ☒ Irish
- ☒ Tennessee
- ☒ 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

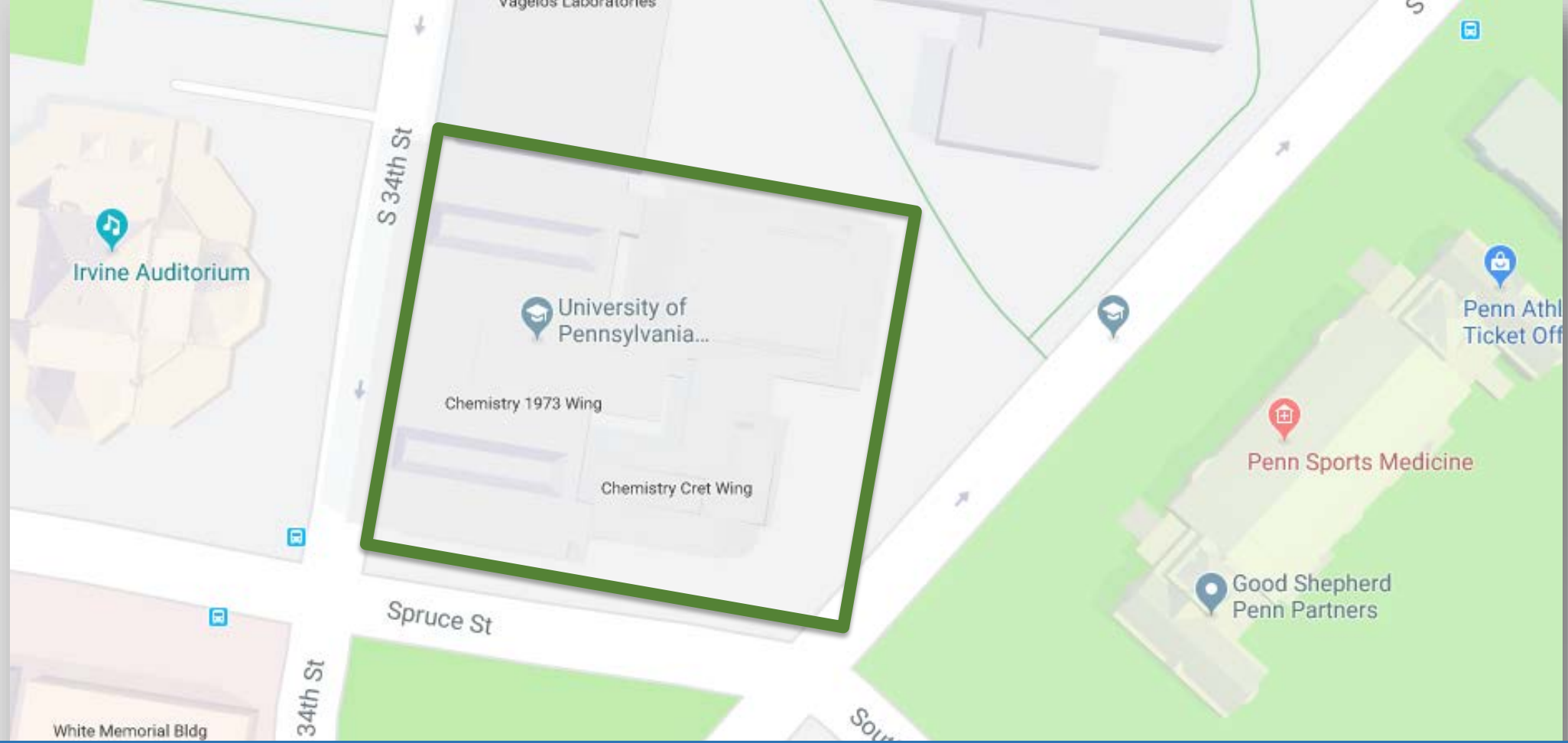
*Project
Champion*



UNIVERSITY OF PENNSYLVANIA

- Chemistry Laboratories
- 140,000 SF





“Open heart surgery on a living, breathing building”

University of Pennsylvania



SYNERGY



PRIOR PLANNING



OWNERSHIP



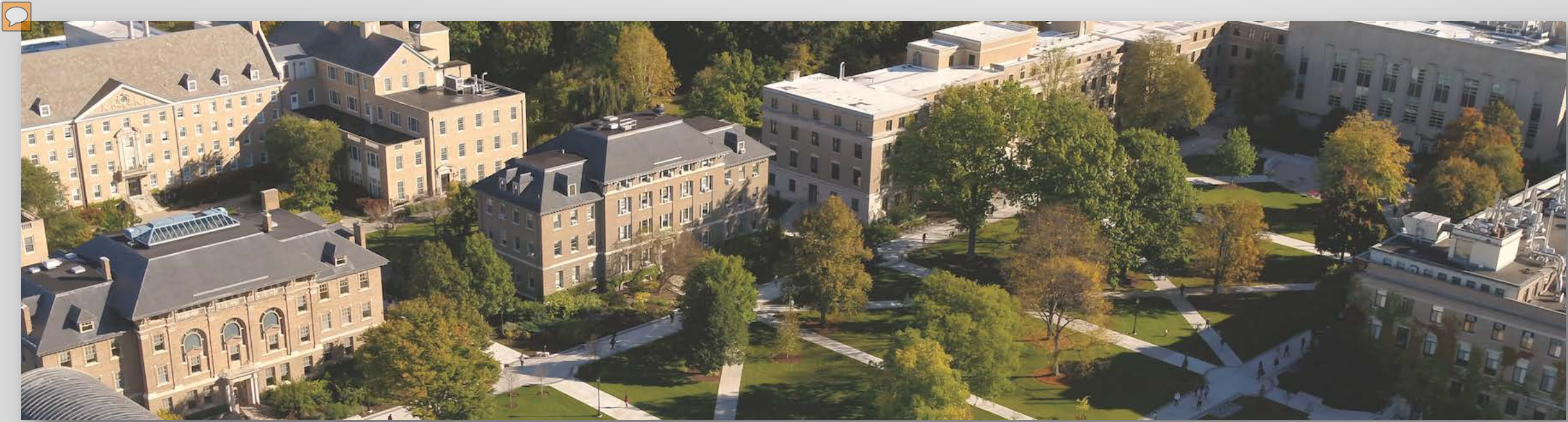
COMMUNICATION



MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



CORNELL UNIVERSITY

- Warren Hall
- 130,794 SF
- AG Quad Surge 22 modulares, 15,840 SF



Cornell University



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



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OWNERSHIP



COMMUNICATION



MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



UNIVERSITY OF PITTSBURGH

- Crawford Hall (Historic District)
- A lot of SF





Crawford Hall

Department of Biological Sciences University of Pittsburgh

Langley Hall

B
Clapp Hall

University of Pittsburgh



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PRIOR PLANNING



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COMMUNICATION



MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



BINGHAMTON UNIVERSITY

- Science II
- 145,215 SF



Binghamton University



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MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



UNIVERSITY OF CONNECTICUT

- Gant Science Complex
- 281,333 SF



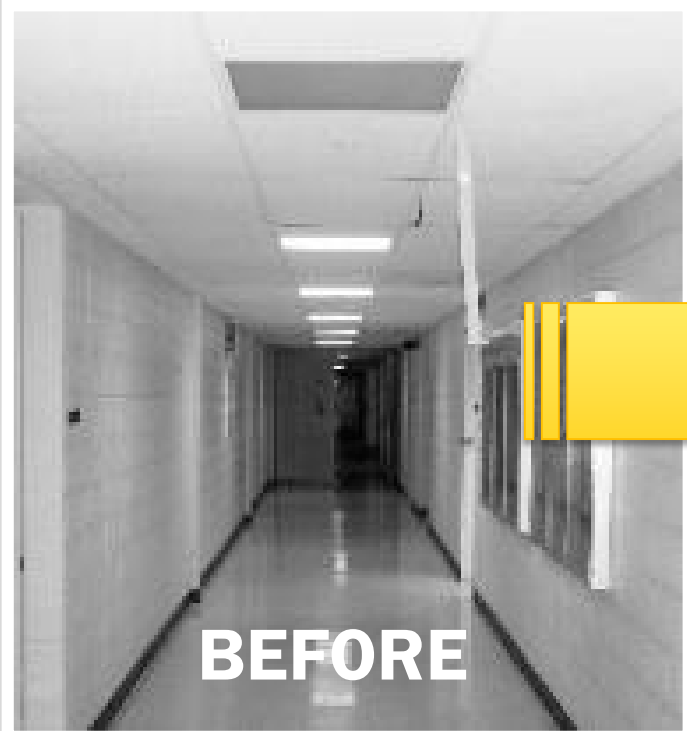
14,400sf of trailers provide dry swing space



Credits:

Goody Clancy, Architect

Mitchell Giurgola Architects, LLP, Associate Architect



University of Connecticut



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COMMUNICATION



MAXIMIZE EXISTING SPACE

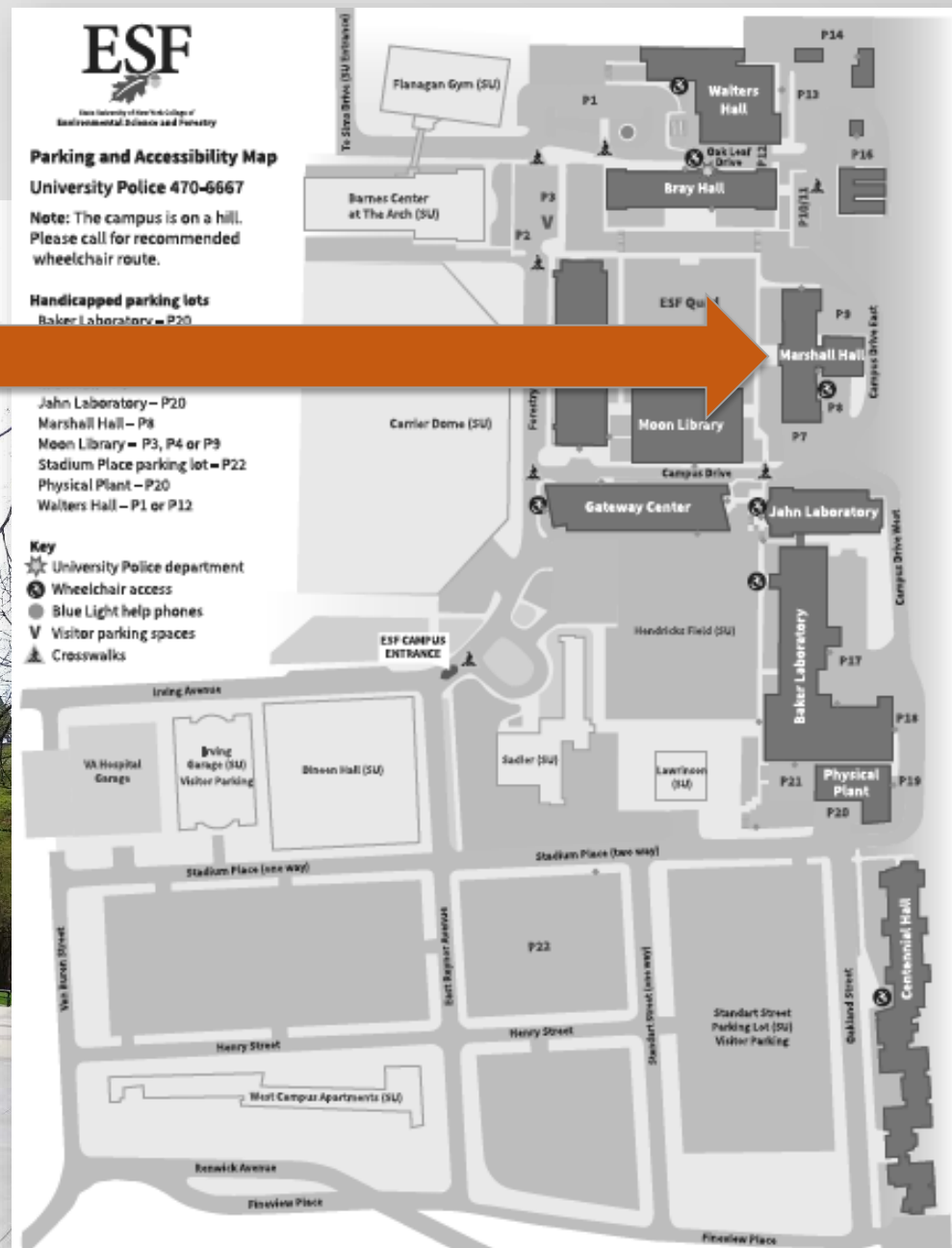


EXIT PLAN FOR TEMPORARY SPACE



SUNY ESF

- Marshall Hall
- 90,061 SF





ESF	201018	Surge/Enabling	ESF: Renovate Marshall Hall	5/20/2019	DRAFT 3.0			Reno	ESF Initial Const. Budget Info			Revised/SUCF Const. Budget Info				Per narrative 4/26/19
Ref	To Bldg.	Floor/location	Description	ESF timing	A/C?	Vent?	Abate	Intens	Sq Ft	\$/SF, LS	ESF Budget	Sq Ft	Adj. \$/SF	Adj. Budget	Resp.?	Comments
A.1	Illick	Sub Bsmt	FNRM Field Sample Intake: HD lab tables, workbenches, grinder, drying ovens, etc. South room needs sawdust coll.	Jan. 2020	N	Adj existin g+Saw-dust coll.	Fittings, (conc floor, no tile)	Med-High.	1,342	\$300	\$402,600	1,555	\$305.47	\$475,000	SUCF	R & R CMU partitions
A.2	Illick	Sub Bsmt	FNRM Field Sample Intake: Field eqpt. storage, loading dock upgrades. Build CMU partitions	Jan. 2020	N	N	N	Low	127	\$300	\$38,100	121	\$471.07	\$57,000	SUCF	CMU partitions, Replace loading dock doors,
A.3	Illick	Sub Bsmt	Ext. ADA access: Cutout & add door, conc pad, railing, move radiator, etc.	Aug. 2020?	N	N	pipe Fittings	N/A		LS	\$75,000	145	\$158.62	\$23,000	SUCF	Near FNRM area. Not Marshall scope
B.1	Illick	3rd Flr West	TERF: Dendrochronology & Geospatial Lab, Conf. Rm., Offices. Incl built in casework.	Apr. 2020	Y, PTAC	N	Y+30' benches	High	2,022	\$400	\$808,800	2,052	\$322.12	\$661,000	SUCF	Primary Area. Moves corridor east
B.2	Illick	2nd Flr West, North Side	Faculty & Grad students to office suite, vicinity of exist. Conf. rm 334.. CONST'N	Apr. 2020	Y, PTAC	N	pipe Fittings	Low	968	\$175	\$169,400	950	\$314.74	\$299,000	SUCF	
B.2	Illick	3rd Flr West, North Side	Faculty & Grad students to office suite near exist. Conf. rm 334.. FURNISHINGS \$16k + \$18k	Apr. 2020	N/A	N/A	N/A	Low		LS	\$34,000	0		\$0	SUCF	Campus FF&E budget for '334' suite & others?
B.3	Illick	3rd Flr West, South Side	Office Area shown as abatement Add alternate	Apr. 2020	N/A	N/A	Flr tile?	Low	646	\$175	\$113,050	623	\$85.07	\$53,000	SUCF	Not strictly req'd for surge space
C.1	Illick	4th Flr: B76, B77, B78	TERF: Team Rooms, Mycology Intake Lab. Related to 3rd flr reno below	Oct. 2019	Y, extend	Exh. vent	Chem, 9x9 tile, pipe	High	371	\$400	\$148,400	422	\$440.76	\$186,000	SUCF	Former photo darkroom
									5,476			5,868	Illick TOTALS	\$1,754,000		Illick Const Budgets
														\$640,000		Illick Soft Costs
													ILICK	\$2,394,000	SUCF	Building total



ESF Ref	201018 To Bldg.	Surge/Enabling Floor/location	ESF: Renovate Marshall Hall Description	5/20/2019 ESF timing	DRAFT 3.0 A/C?	Vent?	Abate	Reno Intens	ESF Initial Const. Budget Info				Revised/SUCF Const. Budget Info				Per narrative 4/26/19 Comments
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SUNY ESF



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PRIOR PLANNING



OWNERSHIP



COMMUNICATION



MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



MASSACHUSETTS INSTITUTE OF TECHNOLOGY

- Dreyfus Chemistry Laboratories
- 130,000 SF



Credit: Goody Clancy, Architect

Massachusetts Institute of Technology



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MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



CITY UNIVERSITY OF NEW YORK

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





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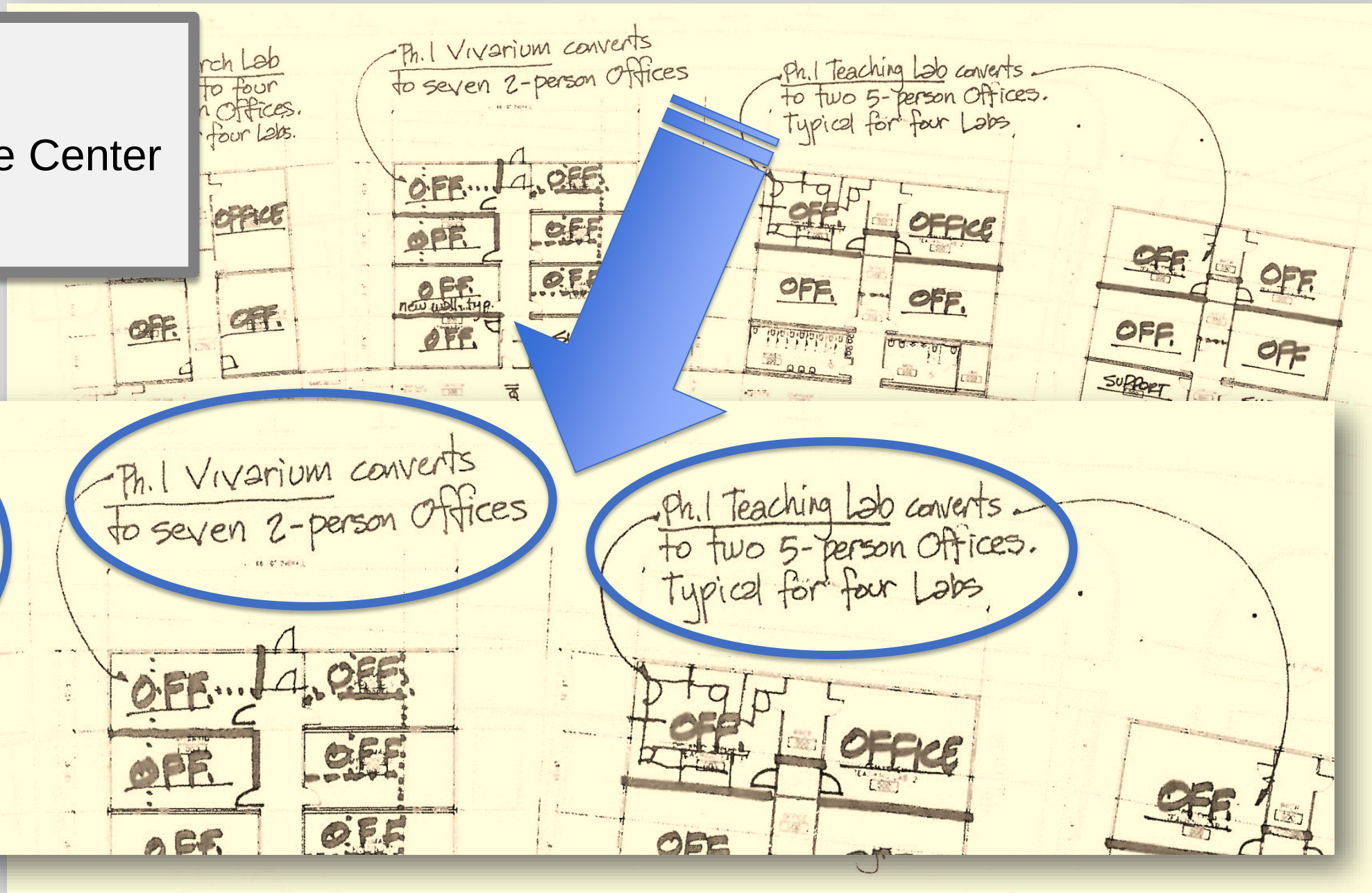
MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE

WELLESLEY

- Wellesley Science Center
- 200,000+ SF





Wellesley College



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COMMUNICATION



MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



ROLLINS COLLEGE

- Bush Science Center
- 91,519 SF



Credits:
EYP Architecture and Engineering



**TEMP OFFICES
IN RES HALL**

**EXISTING
BUILDING**

**SCIENCE
VILLAGE**

**Credits:
EYP Architecture and Engineering**



Credits:
EYP Architecture and Engineering

Rollins College



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MAXIMIZE EXISTING SPACE



EXIT PLAN FOR TEMPORARY SPACE



TRAILERS





ACADEMIC SURGE A
ACADEMIC SURGE B

TRAILERS

MODULARS

MOBILE
UNITS

PORTABLES





SUNY NEW PALTZ

- Multiple Projects
- Various SF





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



Hopefully, I have...

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”

