

Capital Projects Update

August 2018



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Current Project Summary & Implementation Overview

P2P Project Overviews

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- *Chandler-Ullmann Hall Renovation*
- *Brinker Lofts*
- *New Residential Houses Phase I*
- *Health, Science, & Technology Building*
- *University Center*
- *Business Expansion*

General Project Overviews








- *Goodman Stadium Pressbox*
- *Center for Career and Professional Development*
- *Fairchild Martindale Café and Service Desk*
- *Electric Reliability and Resiliency Project*
- *On-Site and Off-Site Renewables*

Current Project Summary

	Project Name	BoT Approval		Date Complete	Budget/ Cost	2019												2020												2021												2022											
		Design	Construct			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
APPROVED	Residential - SouthSide Commons	May 2017	NA	Jul 2019	P3																																																
	Chandler Ullmann	July 2017	May 2018	Jul 2019	\$31.3 M																																																
	Brinker Lofts	Feb 2017	NA	Aug 2019	P3																																																
	New Residential Houses - Phase I	Oct 2017	Oct 2018	July 2020	\$79 M																																																
	New Residential Houses - Phase II	Oct 2017	TBD	TBD	\$61M*																																																
	Health, Science, & Technology	Jan 2018	Feb 2019	Fall 2021	\$145 M																																																
	University Center	Oct 2017	TBD	TBD	\$112 M																																																
	Perm. & Temp. Dining Support	TBD	TBD	TBD	\$20 M																																																
Business Expansion	Oct 2018	TBD	TBD	\$32.5 M																																																	
PREDESIGN /PLANNING	EWFM Renovation <i>Study completed August 2016</i>	TBD	TBD	Aug 2016	\$40-50 M*																																																
	Building B Renovation <i>Study completed July 2017</i>	TBD	TBD	July 2017	TBD																																																
	Packard Lab Renovation <i>Predesign Study anticipated for 2018</i>	TBD	TBD	Jan 2019	\$78-90 M*																																																
	Campus/Infrastructure Projects <i>Wayfinding, New Street, Packer</i>	TBD	TBD	Multiple	\$10 M (total)																																																

** Does not Include escalation. Budget assumes 2019 start, 5-8% escalation could be assumed for planning purposes until revised estimate is complete.*

LEGEND

-  Anticipated, not approved
-  Predesign
-  Design
-  Construction
-  Current Date
-  On Hold
-  Cost Estimate or GMP

Implementation Sequence Overview

Approved projects are critical to the Path to Prominence goals of University growth, facilities for the College of Health, and state-of-the-art academic research buildings. These are projects identified in the 2012 Master Plan, the 2016 Science and Engineering Framework Plan, and the 2016 Residential Masterplan. These projects will be funded by Lehigh through P3 development, the bond issue, commercial paper, and philanthropic support.

Building C - C1/Crescent & AAD Fitout Completed	\$30 M
SouthSide Commons Completed	P3
Chandler-Ullmann Renovation Completed	\$31.3 M
Brinker Lofts Completed	P3
New Residential Houses Fall 2020 Completion: South (Phase 1) Fall 2022 Completion: North (Phase 2) (schedule currently under review) Site & Landscape	\$79 M \$61 M \$2 M
Health Science & Technology: Packer Fall 2021 completion (Packer)	\$145 M
University Center Renovation & Addition / Tower Fall 2022 Completion (schedule currently under review) <i>Temp Dining Pavilion/Supplemental Improvements</i> (schedule currently under review)	\$112 M \$20 M
CBE Expansion TBD pending fundraising	\$32.5 (\$12.5M committed by P2P)
TOTAL	\$492.8

Planning projects are critical as current Path to Prominence in supporting Lehigh's mission. This second phase of projects are in the predesign phase, with the anticipation that implementation will be funded through philanthropic gifts or grant opportunities.

E.W. Fairchild-Martindale Library Renovation TBD	\$40-50 M
Packard Lab Renovation TBD	\$78-90 M
Building B Renovation TBD	\$30-45 M
Landscape/Infrastructure Upgrade Projects TBD	\$10 M
Wellness (Health, Fitness, and Counseling) Planning Study TBD (in process)	
Goodman Campus Planning Study TBD (in process)	
College of Education Program Study TBD (in process)	

Notes:

- *Philanthropic support may modify project priority and Phase designation*
Cost estimates may not include annual escalation that may range from 4-8%.
- *Costs reflect estimates as of today, escalation is fully calculated as start date is TBD*

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SouthSide Commons Residence Hall

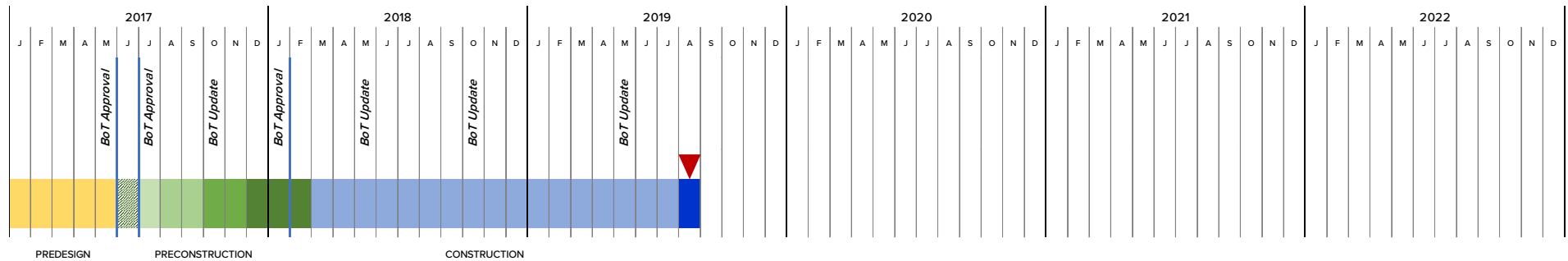


Entrance along Brodhead

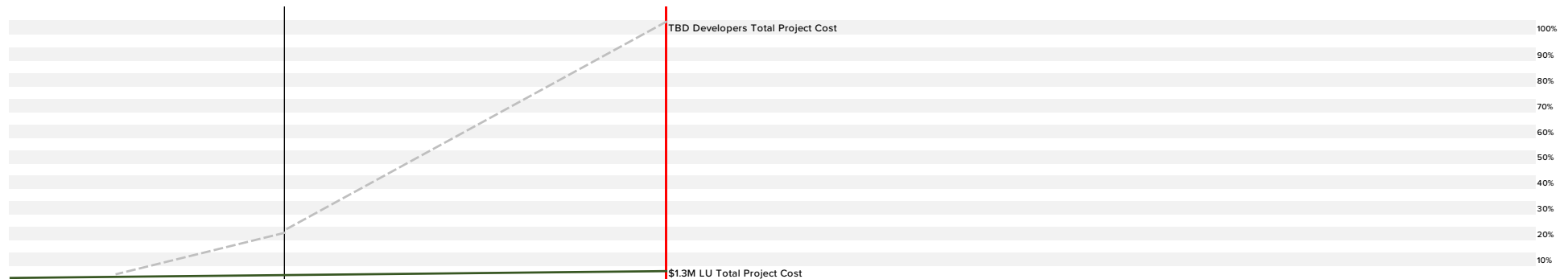
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Status: Southside Commons Residence Hall



SCHEDULE



EXPENDITURE

Description	Priority	Design Team	Status	Location	Total Project Cost
428 Bed Residence Hall P3 Development 175,825 GSF	Phase 1 project required for LU student growth beginning 2019 Brailsford & Dunlavey (Advisor)	Brailsford & Dunlavey (Advisor) Sasaki (Advisor) EdR (Developer) P. Agnes (CM) Philadelphia, PA	CONSTRUCTION Construction completion: July 2019	Packer Campus @ Brodhead & Packer Avenue	No capital cost to Lehigh Project costs for consultants and enabling work \$1.3M

SouthSide Commons is complete with students expected to start moving in early August. As of this time, almost 70% of the units have been leased.

The project features 428 beds, with common lounge, study, and fitness spaces available to students. The design bridges the Lehigh campus and the SouthSide neighborhood, establishing a critical gateway and connector between University and Bethlehem.

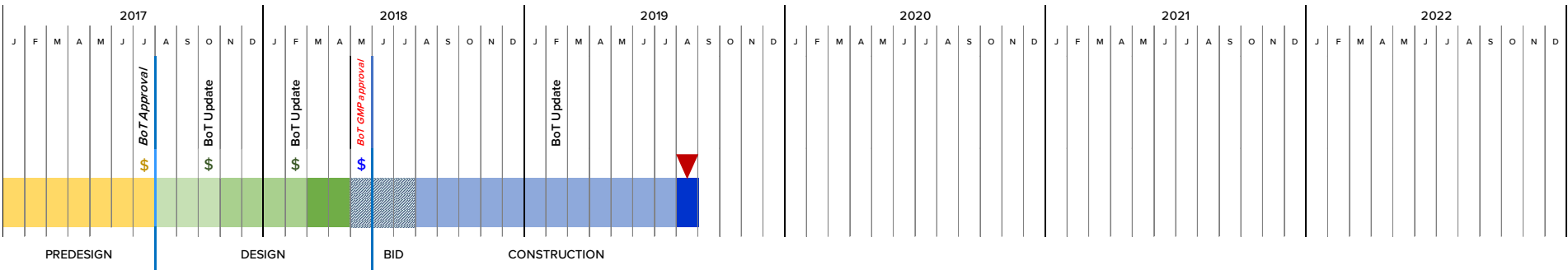
SouthSide Commons Residence Hall



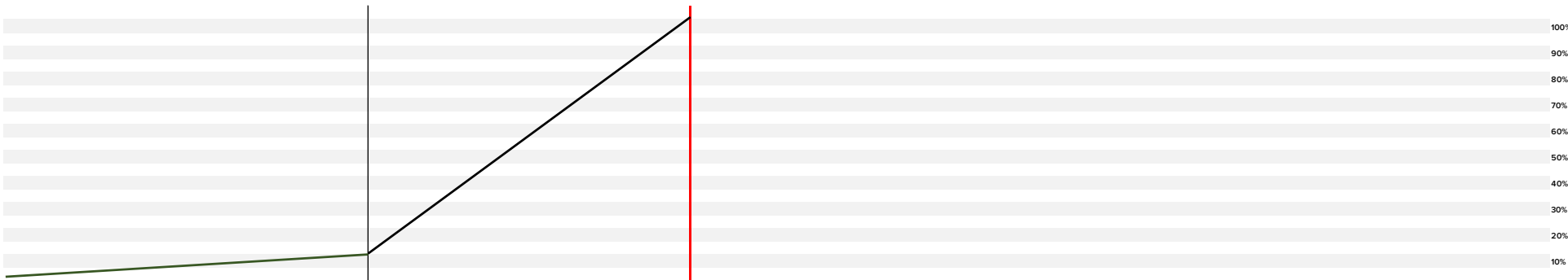
Chandler-Ullmann



Status: Chandler-Ullmann Hall



Schedule



EXPENDITURE

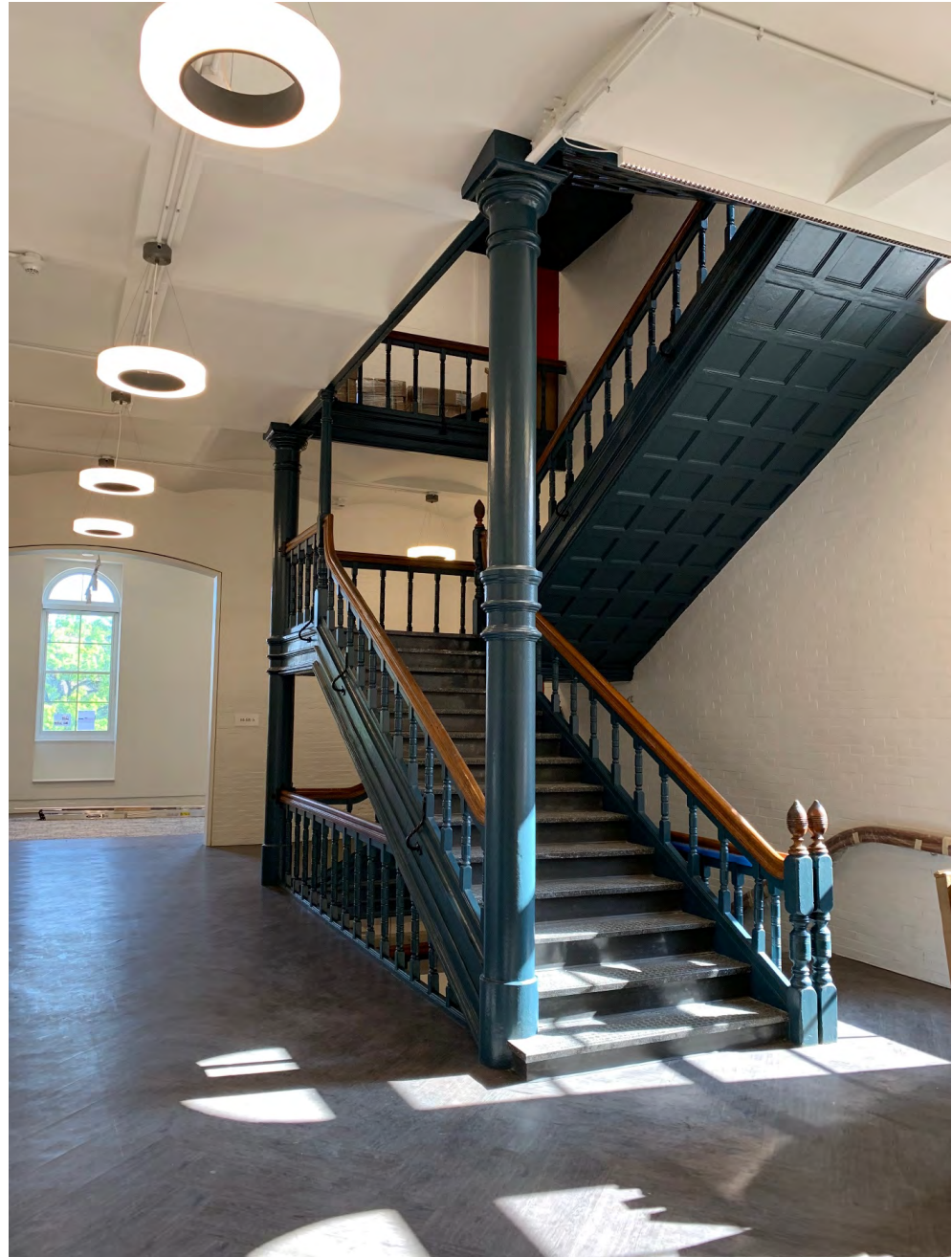
Description	Priority	Design Team	Status	Location	Total Project Cost
Existing Academic Building 94,658 SF Renovation	Phase 1 project restoring historic LU building and providing new space for Mathematics, currently in Christmas-Saucon Hall, and Psychology, which will remain in CU	MGA Architects Philadelphia (Architect) Turner (CM) Philadelphia, PA	DESIGN Complete Summer 2018 CONSTRUCTION Complete August 2019	Packer Campus	\$31.3 M Spent to Date \$25.7 M

Chandler-Ullmann Hall may be Lehigh’s most significant historic building. Originally constructed in 1884, Chandler Hall was the first purpose-built chemistry academic building in the United States. Enlarged with the Ullmann wing in 1938, it was home to the Chemistry department until 1975. Until this past summer, the building was occupied by Psychology and Art, Architecture and Design (AAD).

The 94,600 GSF renovation will upgrade the building systems, increase accessibility, and provide contemporary offices and classrooms for the Mathematics Department and Psychology Department.

Chandler Ullmann is ready to open for the Fall semester after a complete building renovation. The Certificate of Occupancy was issued on July 31st, and moves into the building are ongoing

Chandler-Ullmann



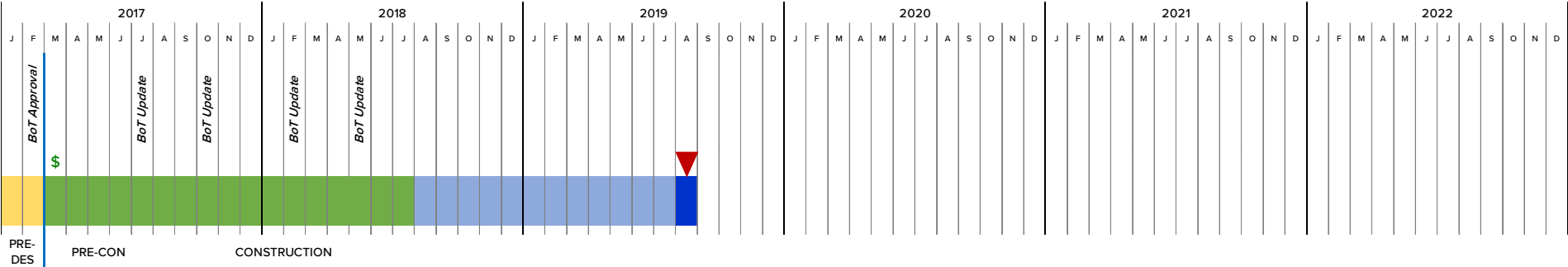
Stairs Before & After

Brinker Lofts

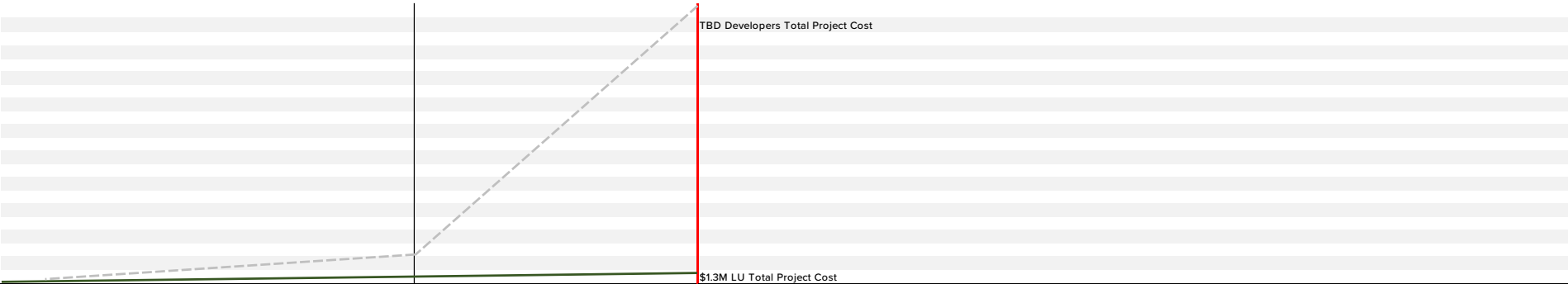


Interior Loft

Status: Brinker Lofts



SCHEDULE



EXPENDITURE

Description	Priority	Design Team	Status	Location	Total Project Cost
Market-Rate Housing P3 Development	Phase 1 project building on recommendations from 2012 Master and enhancing LU presence	Jefferson-Werner (Development Team)	CONSTRUCTION Completion August 2019 Delay resulting from unforeseen environmental conditions that have been resolved	Off-Campus 321 Adams Street (@Fourth Street)	No capital cost to Lehigh Project costs for consultants and enabling work \$1M

Local developer Charlie Jefferson is redeveloping Brinker Lofts, formally Lehigh’s Service Building (also known as the “icehouse”), into 30 apartments and 1 retail space. The University signed the 50-year ground lease on Friday, August 25, 2018. Construction is scheduled to take 1 year.

Construction will entail the partial demolition of the engine house building to create a courtyard. The newly formed courtyard, which has direct access to the greenway, will provide outdoor seating for the retail space and can be utilized by the tenants of the building.

Most of the windows for the apartments will face the courtyard, thereby preserving the historical south and west facades of the storage portion of the building and complying with the National Park Service’s requirements for eligibility for historic tax credits. Rents will range from \$995 to \$1425 per month. Most units have two-bedrooms.

Construction is complete, with the residential units fully rented. Work remains in the retail space and lease is yet to be signed.

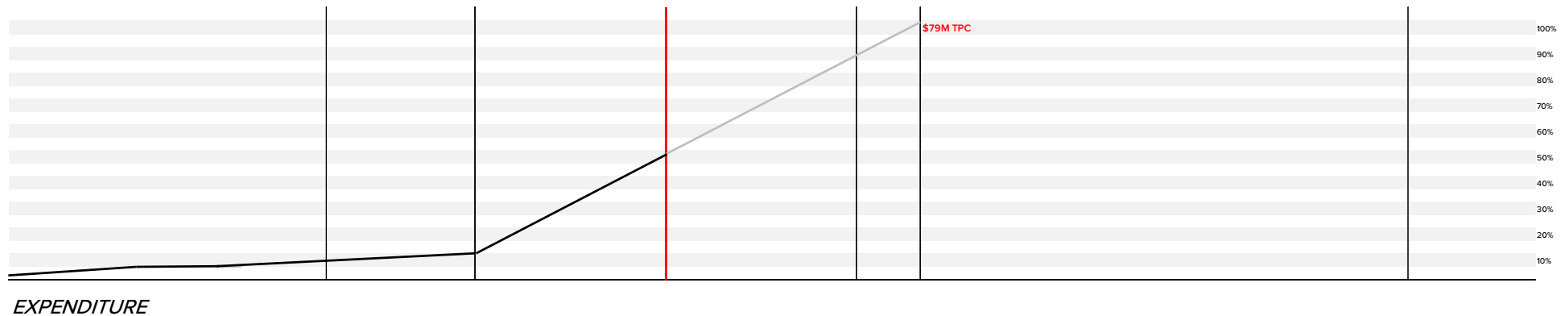
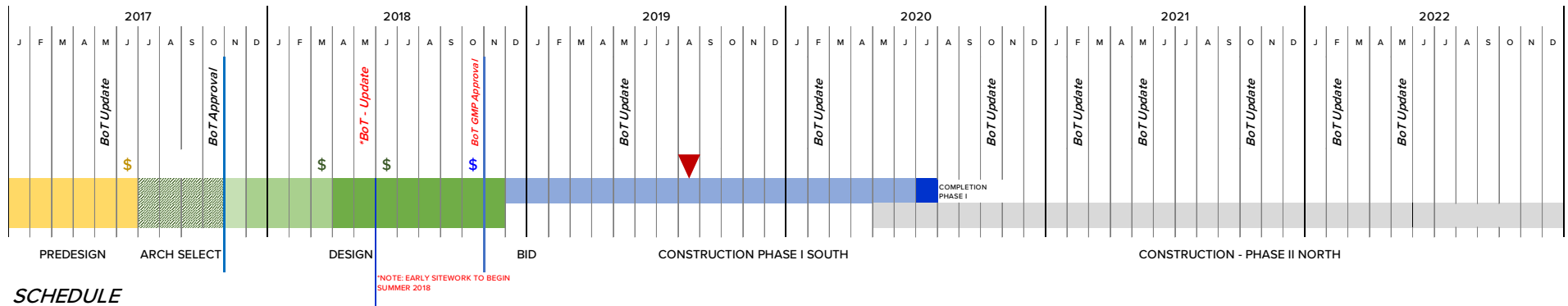
New Residential Houses



Phase I view toward Southeast

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Status: New Residential Houses Phase I



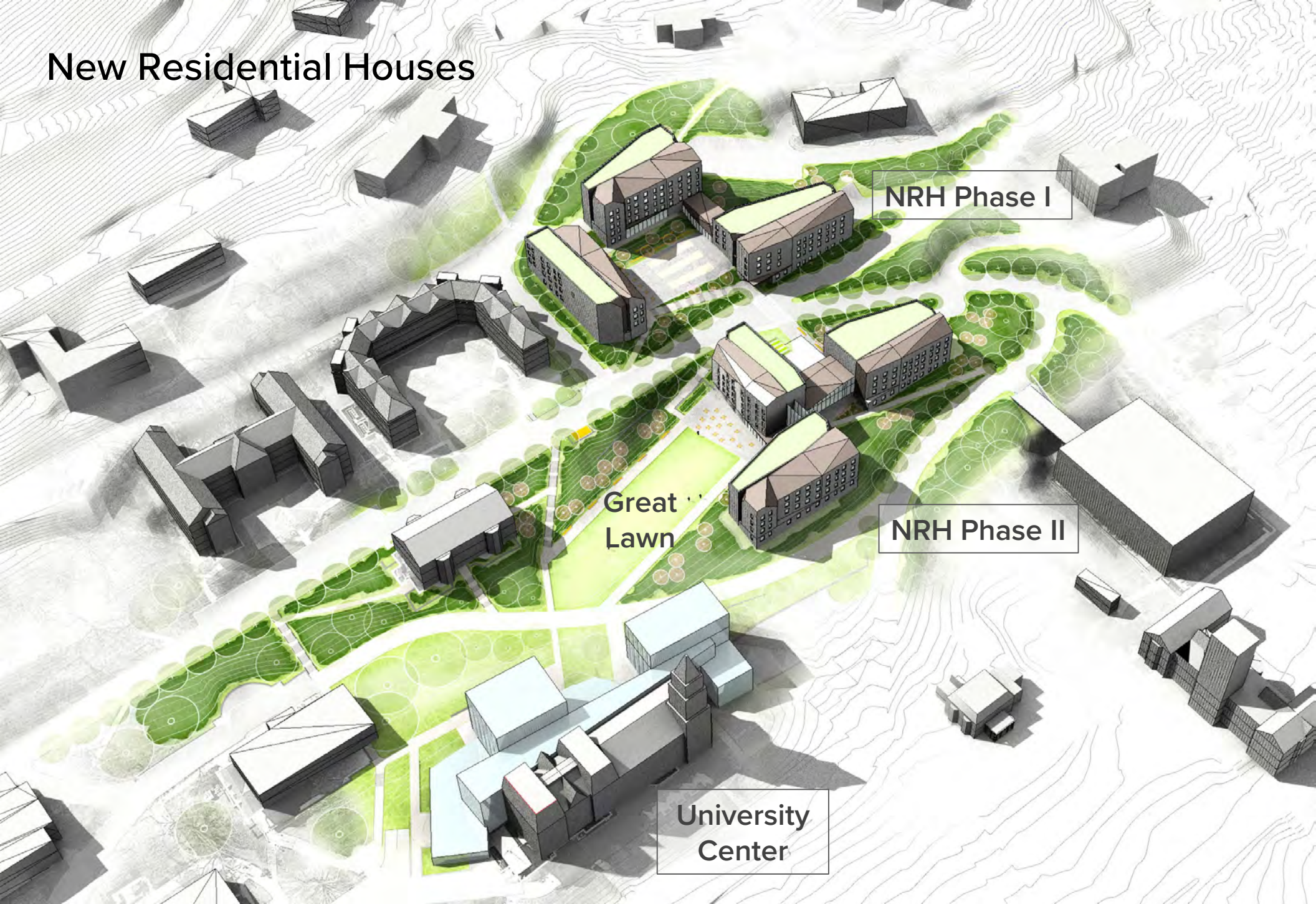
Description	Priority	Design Team	Status	Location	Total Project Cost
New Residential Houses Phase I (South): 142,330 GSF / 405 Beds Phase II (North): 111,511 GSF / 315 Beds	Phase 1 Project required for LU student growth beginning 2019	Sasaki (Architect) Boston, MA Whiting-Turner (CM) Allentown, PA	DESIGN Complete Fall 2018 Construction Complete Fall 2020 (Phase I: South) Fall 2022 (Phase II: North) currently under review	Packer Campus: Site of existing Trembley Houses and Upper Trembley Parking Lot	Phase I: \$79M Phase II: \$61M* Site: \$2M Spent to Date \$17.8 M

New Residential Houses Phase I and II will replace Trembley Park and, with the UC, create a new residential district on campus. The project will include over 700 beds for primarily first and second year students.

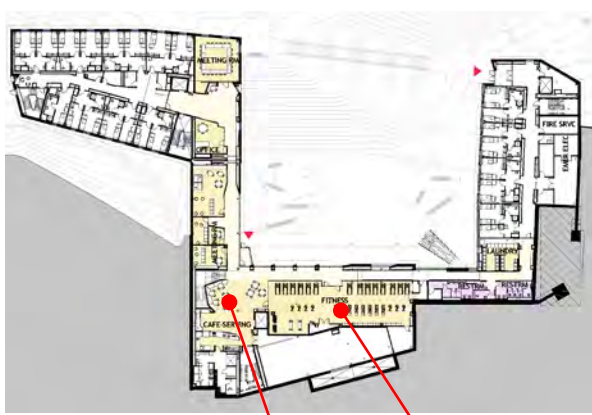
Phase 1 will consist of approximately 405 beds; while Phase 2 is approximately 315 beds. Note that the current proposal is 70 beds larger than master plan, equal to \$12-14M value.

Steel work for the Phase I project is well underway, with all three houses now taking form on the site. In the upcoming months, the exterior walls will be framed, which will allow many more subcontractors to begin their work, such as masonry, interior infrastructure, interior wall framing, and windows. The project is on schedule for a Fall of 2020 opening.

New Residential Houses



Aerial view of NRH & UC



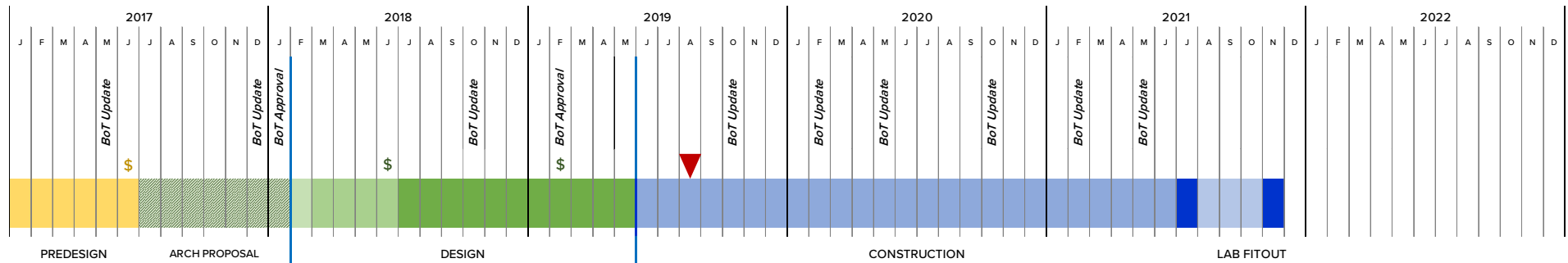
Interior Views of Café and Fitness Spaces

Health, Science, & Technology

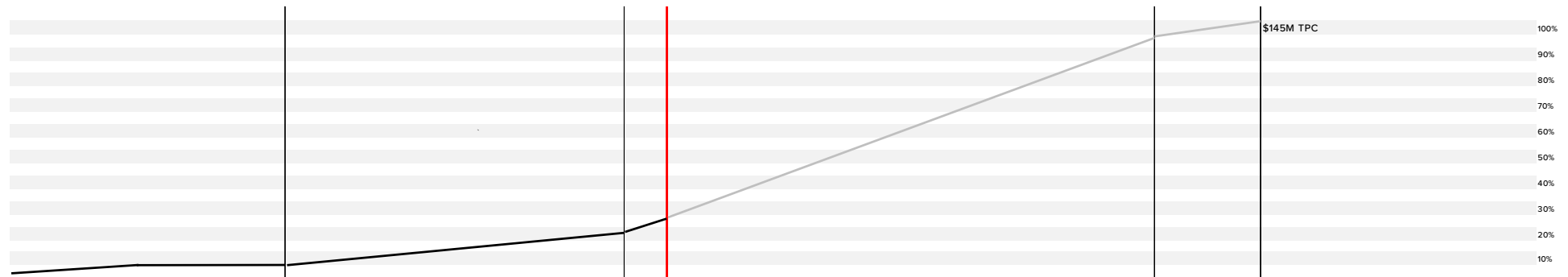


Exterior view looking east along Asa Drive

Status: HST Academic Research Building



SCHEDULE



EXPENDITURE

Description	Priority	Design Team	Status	Location	Total Project Cost
New Academic Building 190,000 GSF	Phase I state-of-the-art research science Facilities to supplant existing facilities, provide interdisciplinary research loci, and support the College of Health	Wilson/HGA (Architect) Boston, MA Turner (CM) Philadelphia, PA	DESIGN Completion May 2019	Packer Campus – Whitaker Parking Lot	\$145M
					Spent to Date \$4.5M

The Health, Science, & Technology (HST) Building is a 192,000 SF interdisciplinary research facility that will be the administrative home to the new College of Health. However, the building will serve the broader academic community and organized entirely according to research themes and activity.

The architecture itself aids the collaborative atmosphere. Dry and wet labs will be arranged around offices, open workspace and meeting spaces, creating a beehive of activity. Situated on what is currently a parking lot next to Whitaker Lab, HST will anchor the district, which also includes Mudd, Whitaker, and Sinclair.

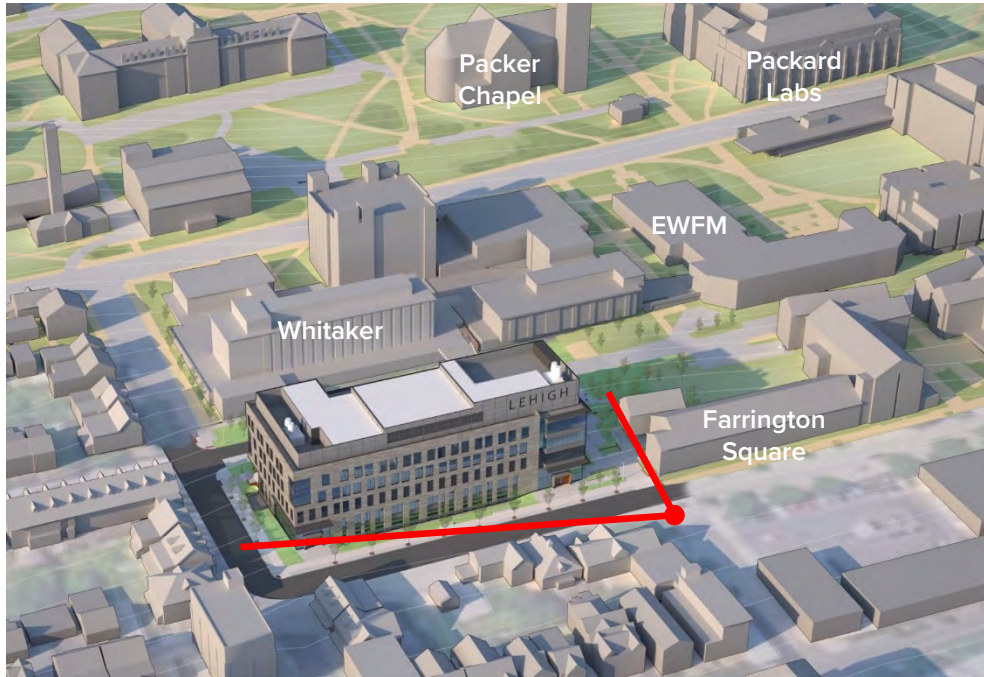
Construction began in July with fencing off the site, tree removal and relocation, and demolition of the parking lot. Work will continue with excavating for the buildings lower floors and foundations. The excavation will be 35' deep, with concrete for the foundations is expected to start in October.

HST remains on target to open in Fall of 2021



Aerial view looking South of HST Concept

Health, Science, & Technology



Exterior Views from Morton & Adams Streets

Health, Science, & Technology



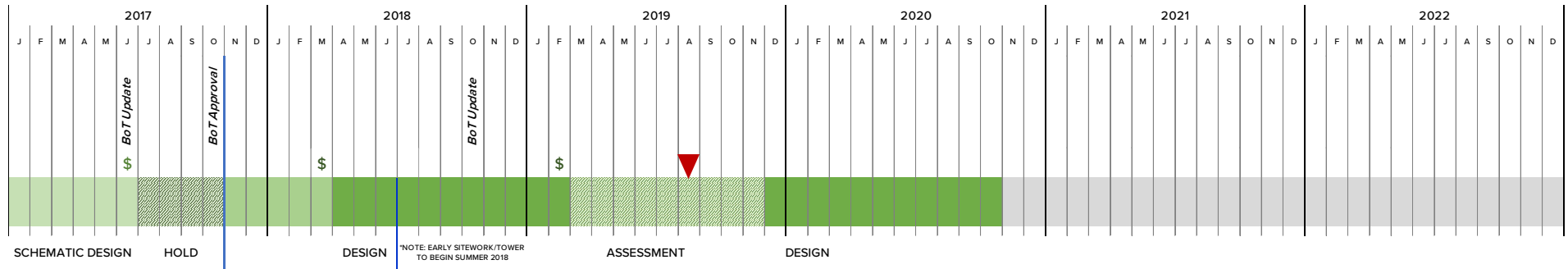
Interior Views

University Center



North Façade from Linderman

Status: University Center



SCHEDULE



EXPENDITURE

Description	Priority	Design Team	Status	Location	Total Project Cost
Existing Student Center 65,000 SF Renovation 77,000 SF Addition	Project to update UC to provide modern amenities and dining for expanding student body	Shepley Bullfinch Architects (Architect) Boston, MA Whiting-Turner (CM) Allentown, PA	DESIGN Under assessment Fall 2019 Construction Completion TBD	Packer Campus	\$112 M Spent to Date \$3.8M Reno/Addition \$2.8M Tower \$220,000 Temp Dining Prep

Comprised of a 55,000-square-foot renovation and a 70,000-square-foot addition, the UC project will result in a state-of-the-art student facility that offers the types of services today's prospective and current students demand. Enhancements include dining spaces, event venues, additional recreational and work spaces, and amenities such as a coffeehouse/pub, exterior courtyards, and flexible spaces to accommodate the more than 150 student clubs on campus. The project is currently on hold as we await the findings of a Dining Study related to student growth and changes on campus.

The Dining Study, which is expected to be complete in October 2019, will identify the dining needs on campus, as well as providing recommendations for the dining program to be included as part of the UC renovations and addition. Given the many changes to Lehigh's campus, such as NRH, South Side Commons, and HST, the Dining Study was initiated to confirm Lehigh's program and plans for the UC, and how it will continue to feed and support Lehigh students for years to come.

University Center



Interior View looking East

University Center



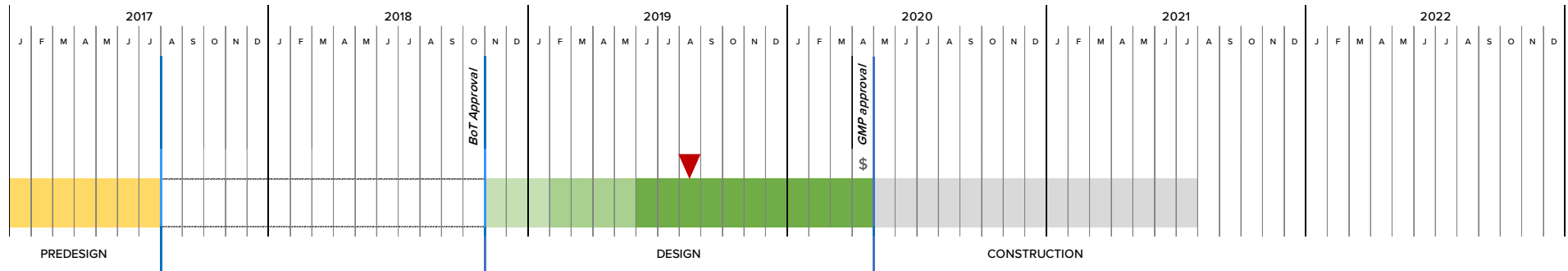
Interior View Asa Packer Room

Business Expansion

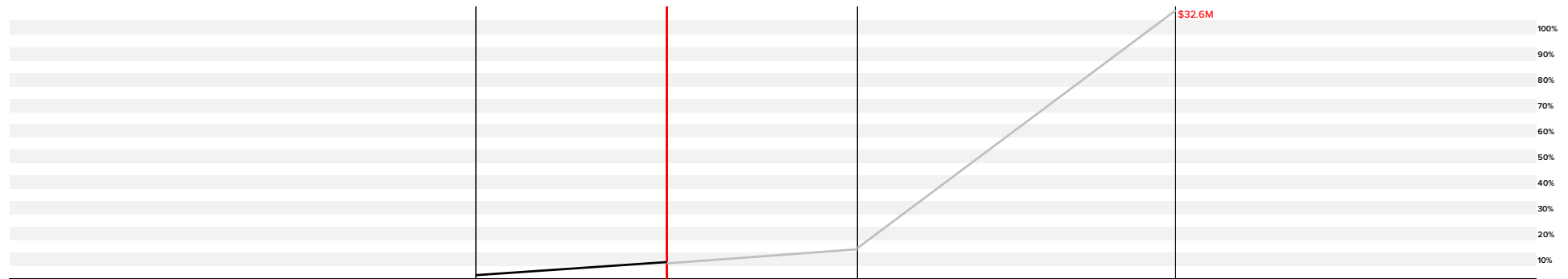


Exterior View from Webster & Packer

Status: Business Expansion



Schedule



EXPENDITURE

Description	Priority	Design Team	Status	Location	Total Project Cost
New Academic Building 60,000 GSF	New academic building to house Executive Education, MBA programs, and media and communications labs	Voith & Mactavish Philadelphia (Architect) CM TBD	DESIGN Complete winter 19-20	Packer Campus	\$32.6M Spent to Date: \$800,000

The College of Business Expansion is a 60,000 SF building intended to house MBA and Executive Education programs, as well as new flexible and technology-forward classroom and experiential learning spaces.

The building will relieve the Rauch Business Center from its struggles with overcapacity, allowing for reorganization of administrative spaces to better serve undergraduate programs and make better use of the existing building. Its location along Packer Avenue will reinforce the academic activity running east-west along this important axis.

Quadratus Construction has been selected as Construction Manager for the project. The CM is working with the design team to confirm overall construction costs, prior to moving into the Design Development phase. It is anticipated that construction will begin in late Spring of 2020 for this new building, pending fundraising goals.

Business Expansion



View of Entry Courtyard

Business Expansion



Looking East from within the Lobby

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Center for Career and Professional Development

The Center for Career and Professional Development (CCPD) renovation on the 5th floor of Maginnes is now complete. The center is now relocated from its previous location on the 4th floor of the Rauch Business Center. This new space will provide the program updated spaces and a central location on campus, as well as freeing up essential space for the College of Business



Fairchild Martindale Café and Service Desk

As part of the continuing evolution of student space on-campus and in line with the library's masterplan of 2016, plans to relocate and expand the current cafe space from the lower level to the main lobby floor of Fairchild Martindale Library are coming to fruition this summer. Offices to the rear of the circulation desk area are being removed, the building facade visually opened up to the exterior courtyard and then re-purposed for an expanded Cafe area with more dining options, open seating, and new restrooms. The new Café will be open for the start of the Fall semester 2019.

This café is also an enabling project in anticipation of work on the UC, providing additional retail capacity on campus.



Electric Reliability Work

Lehigh University owns an electric substation on Mountaintop Campus where power is received at 69,000 volts from Pennsylvania Power and Light (PPL). Roughly 90% of Lehigh's electric power comes through the substation, and 75% of that is for Asa Packer Campus.

Lehigh's electric distribution lines connecting the substation to Asa Packer Campus were installed in the late 1980s and are in need of replacement. We have elected to install a new system underground. This work began in July 2018 and will be completed during winter break of 2019-2020. Upon completion, this project will eliminate overhead system reliability issues, and ensure continued power reliability for Asa Packer Campus for several decades.

The new electric distribution system will have a greater carrying capacity to serve new and renovated buildings included in the Path to Prominence. The first phase of the Project was energized on June 15. New switchgear will be commissioned August 2019.



On-Site & Off-Site Renewables

Lehigh, with the help of a consultant, has been conducting request-for-proposal processes to procure renewable energy from both on-site and off-site installations. Both procurements have identified a few select finalists, and in each case contract negotiations are expected to begin soon with a single finalist. In both cases solar energy will be purchased, most likely starting in 2021. The on-site installation will be located on the southern edge of Goodman Campus and is expected to produce slightly more energy than that campus normally uses each year. The off-site purchase quantity will roughly match the remainder of the University's annual electric usage. The off-site purchase will be completed in association with several other Pennsylvania colleges. Each college seeks to reduce its own carbon emissions at a price lower than what any individual college would be able to obtain on its own.



