

UNIVERSITY PLANNING DESIGN AND CONSTRUCTION

CAPTIAL PROJECTS REPORT TO BUSINESS BOARD

February 4, 2019

AGENDA

- PROGRAM SUMMARY
- PROJECTS UNDER DESIGN
- PROJECTS UNDER CONSTRUCTION



PROGRAM SUMMARY

2019 Project Cost Volume by Phase and Campus

	Mississauga Campus	Scarborough Campus	St. George Campus	TOTALS
Planning	\$0	\$309,908,000	\$696,035,000	\$1,005,943,000
Design	\$152,952,156	\$0	\$532,601,000	\$685,553,156
Construction	\$147,804,999	\$52,900,000	\$123,457,000	\$324,161,999
	\$300,757,155	\$362,808,000	\$1,352,093,000	\$2,015,658,155
Number of Projects	3	4	90	97

**Planning projects have approved terms of reference.*

***Design projects have contracted with an architect.*

****UTM and UTSC projects are all over the \$5M minor projects threshold.*

Last report : \$1.404M Total

PROJECTS UNDER DESIGN

Academic (Wood) Tower

- 14 Stories,
- 80 Meters Tall
- 11,000 GSM
- Academic Offices on Floors 5 to 10
- Classrooms on Floors 11 to 13
- Rotman, Faculty of Kinesiology, Faculty of Arts and Science
- Architects: Patkau / MJMA Architects

Status

- Design Development (about 50% design completion)
- About \$7M in government funding identified to support wood innovation



PROJECTS UNDER DESIGN

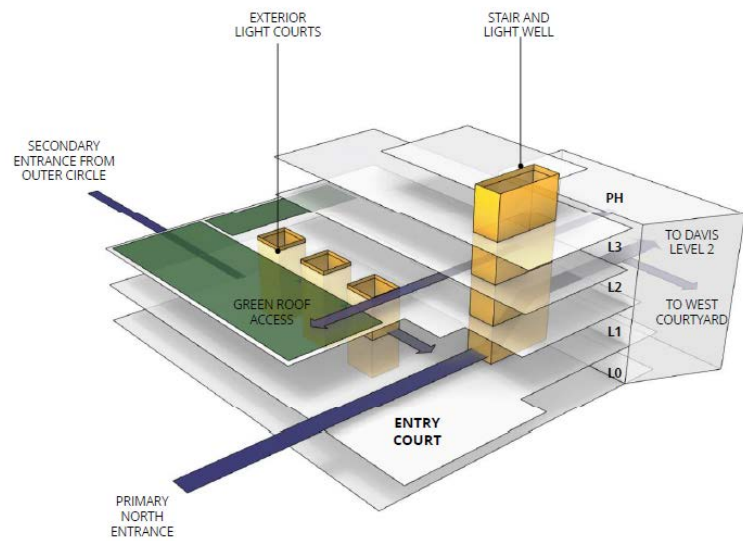
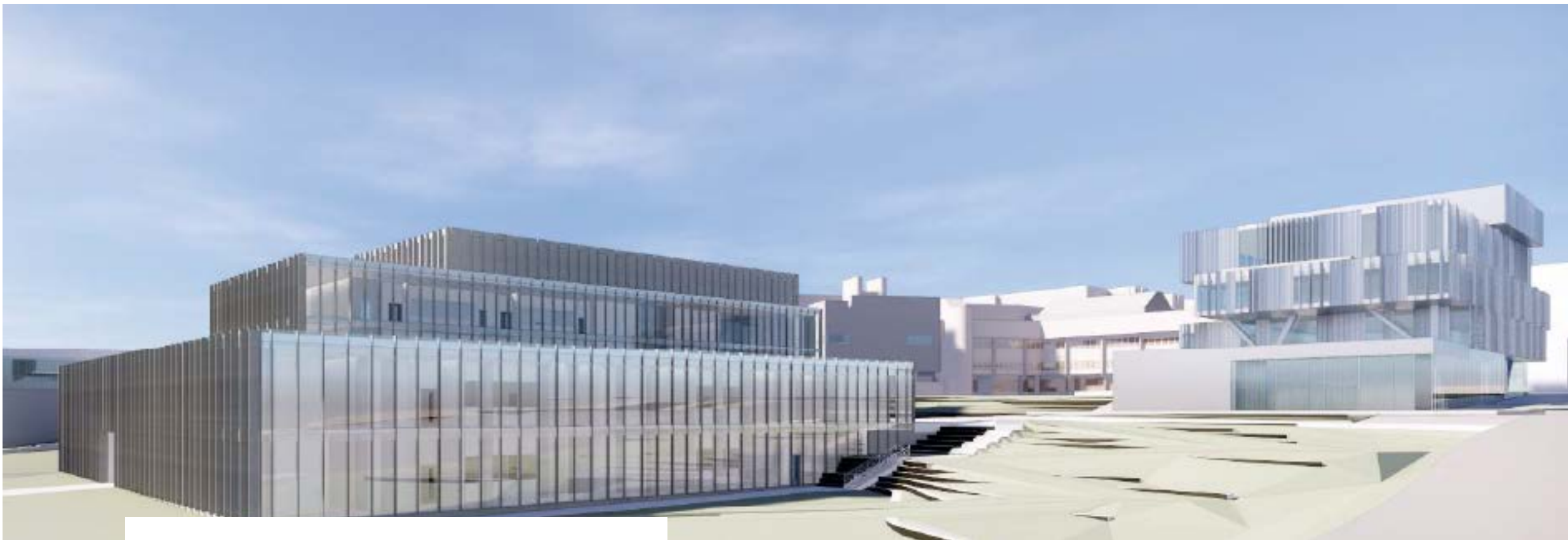
UTM Science Building

- New Science Building Centre for Medicinal Chemistry as foundational occupant
- 15,550 GSM
- Connection to Davis Building at Multiple Levels
- Creation of New Landscape Exterior Spaces
- Architect: Kieran Timberlake

Status

- Design Development (about 60% design completion)
- Construction start planned for November 2019





PROJECTS UNDER DESIGN

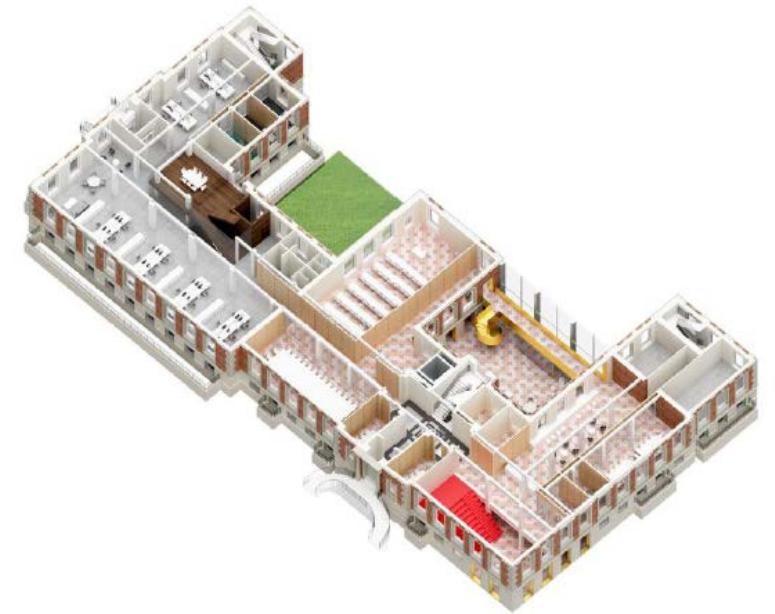
Fitzgerald Building

- 8660 GSM
- Historic Renovation of 1927 Building
- General Purpose Administrative Use
- Architects: Office of Metropolitan Architecture / RDHA



Status

- Construction Documents (about 80% design completion)
- Demolition planned for April 2019 completion
- Construction start planned for April 2019



PROJECTS UNDER DESIGN

Landscape of Landmark Quality

- 90,000 SM Revitalization of the St. George Campus's Historic Core
- Below grade parking
- Addition of 180 trees,
- 25 new "necklace" gardens
- Granite Paving
- Architects: KPMB / Michael Van Valkenburgh

Status

- Design Development (about 50% design completion)



PROJECTS UNDER DESIGN

Partners in Innovation and Entrepreneurship (PIE)

- Revitalization of the St. George Campus's Historic Core
- About 90,000 SM of landscape revitalization
- Architects: Weiss-Manfredi / Teeple Architects



Status

- Design Development (about 50% design completion)



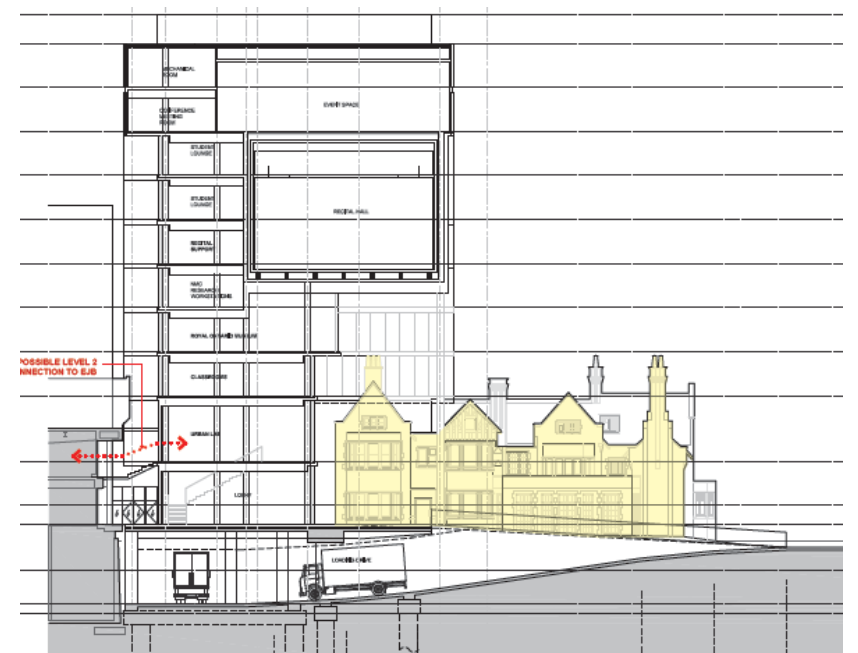
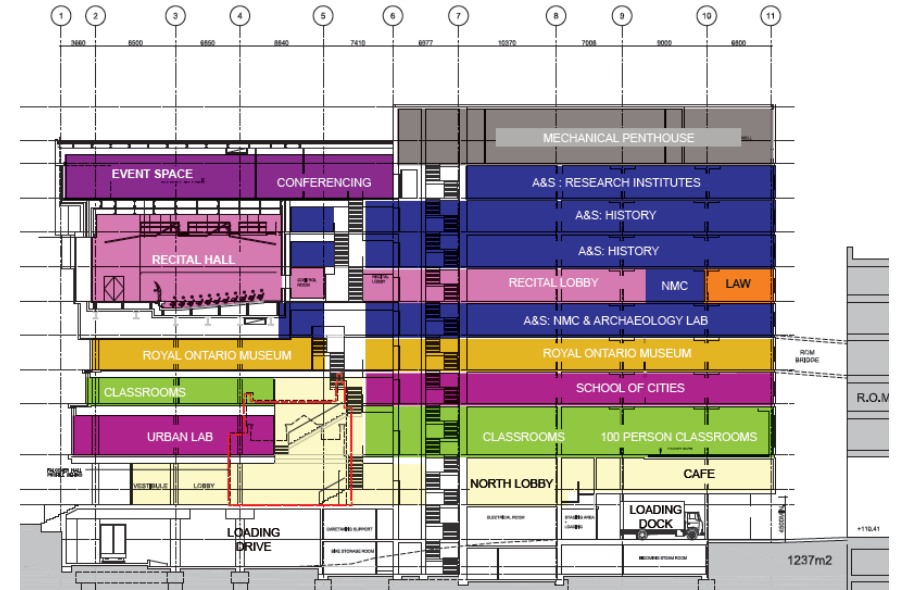
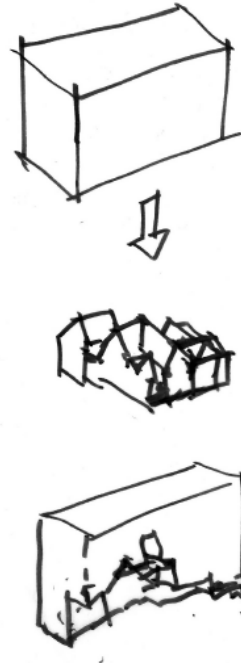
PROJECTS UNDER DESIGN

Centre for Cities and Civilization

- Interdisciplinary School of Cities
- Multi-Occupant Program
- Architects: Diller Scofidio Renfro/ Architects Alliance

Status

- Schematic Design
- Rezoning Application



PROJECTS UNDER DESIGN

Centre for Cities and Civilization



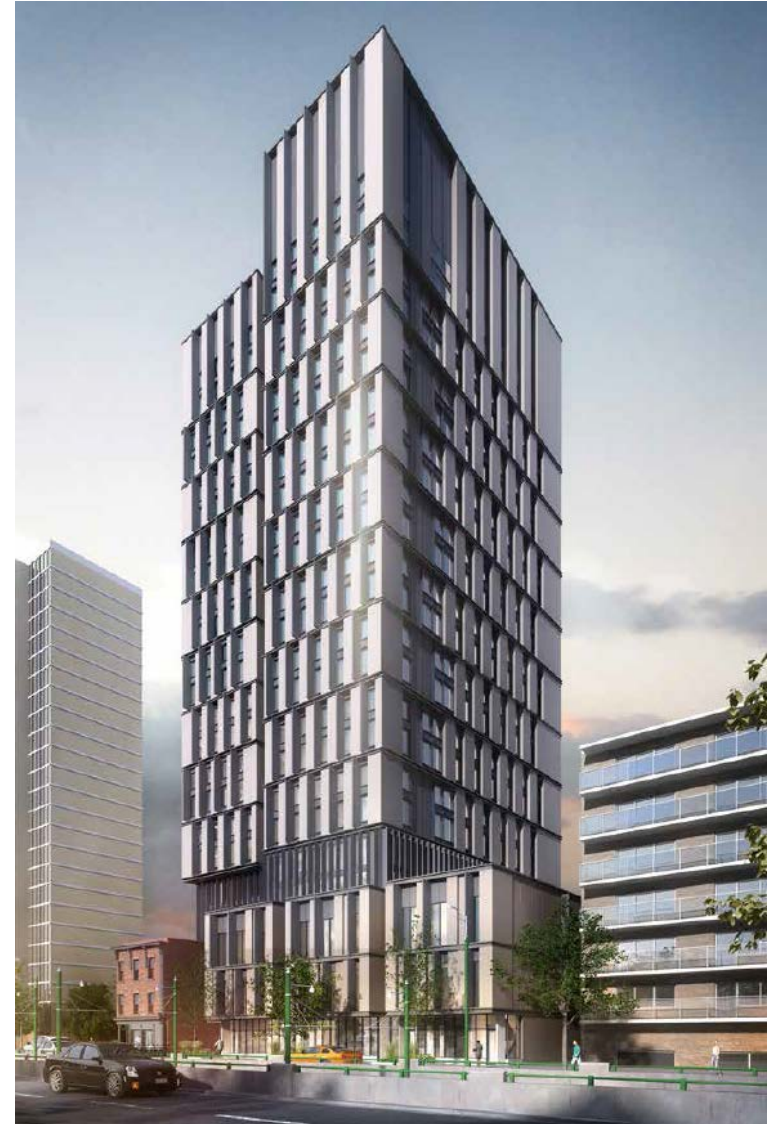
PROJECTS UNDER DESIGN

Spadina-Sussex Student Residence

- 23 Story Student Residence
- 511 beds
- Ground floor retail
- Architect: Diamond Schmidt

Status

- In Design Development (60%)
- Agreement reached with community stakeholders through mediation



GTA CONSTRUCTION MARKET

Labor Shortages in 2018 & 2019 reported by BuildForce Canada

- 1 = Trade workers in excess supply
- 2 = Trade workers sufficient to meet the market demand
- 3 = Employers need to compete to attract qualified workers
- 4 = Qualified workers generally not available to meet market demand
- 5 = Excess demand, intense competition for qualified workers for all projects

What does this mean to us?

- Issues in qualified contractor's project management
- Issues with trade workmanship

Table 9: Non-residential market rankings, Greater Toronto Area

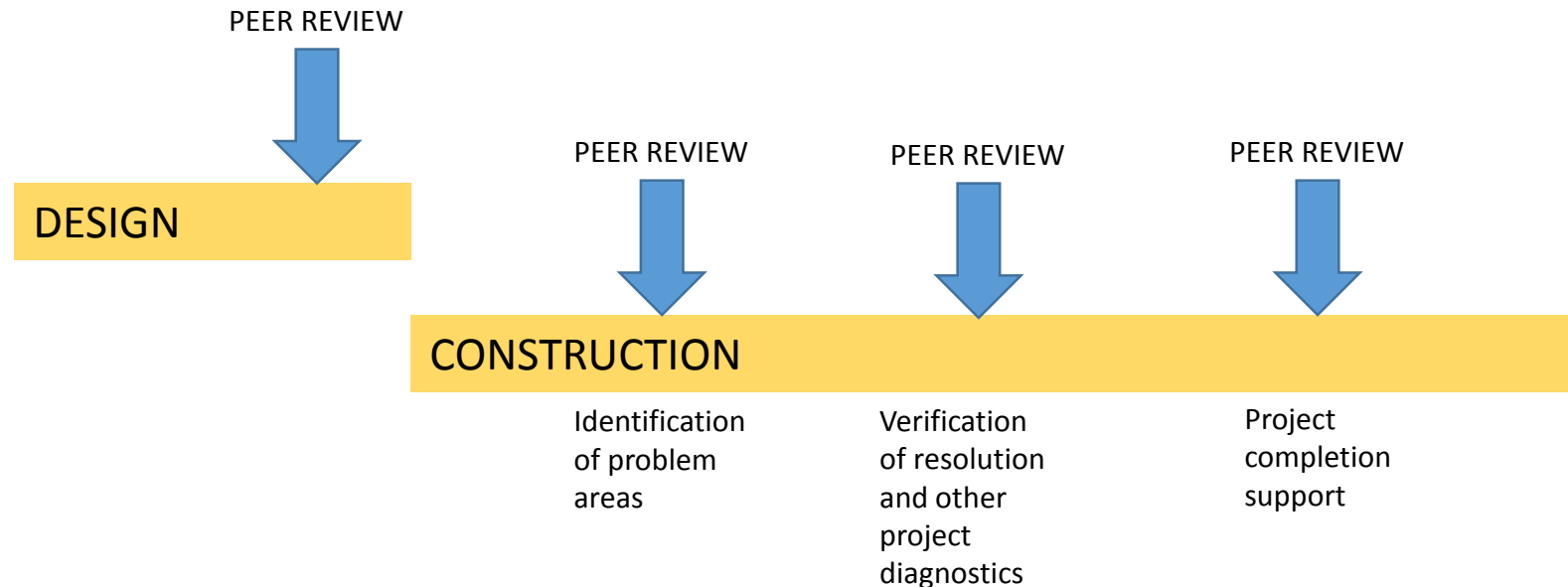
TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	5	4	4	4	4	5	4	4	3	3	3
Bricklayers	4	4	4	3	3	3	3	3	3	3	3
Carpenters	4	4	4	3	3	3	3	3	3	3	3
Concrete finishers	3	4	4	3	3	3	3	3	3	3	3
Construction estimators	4	4	4	3	3	3	3	3	3	3	3
Construction managers	4	3	4	4	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	3	3	3	3	3	3	3	4	3	3	3
Contractors and supervisors	3	4	4	3	3	3	3	3	3	3	3
Crane operators	4	4	4	3	3	3	3	3	3	3	3
Electrical power (line and cable) workers	3	4	4	3	3	3	3	3	3	3	3
Electricians	3	4	4	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	4	4	4	3	3	3	3	3	3	3
Floor covering installers	4	4	4	4	3	3	3	3	3	3	3
Gasfitters	3	4	4	3	3	3	3	3	3	3	3
Glaziers	4	4	4	4	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	4	4	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	4	4	4	4	3	3	3	3	3	3	3
Insulators	4	4	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	4	3	3	3	3	4	3	3	3
Painters and decorators (except interior decorators)	4	4	4	4	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	4	4	3	3	3	3	3	3	3
Plumbers	3	4	4	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	4	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	3	4	3	3	3	3	3	3	3	3
Roofers and shinglers	3	4	4	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	3	4	4	3	3	3	3	3	3	3	3
Tilesetters	4	4	4	4	3	3	3	3	3	3	3
Trades helpers and labourers	3	4	4	3	3	3	3	3	3	3	3
Truck drivers	3	4	4	3	3	3	3	3	3	3	3
Welders and related machine operators	4	4	4	4	3	3	3	3	3	3	3

Source: BuildForce Canada

CONSTRUCTION PROGRAM ENHANCEMENTS

Project Management Peer Review

- Design: To validate the proposed schedule, identify potential risks, examine quality of contract documents
- Construction: At three stages review the quality of the schedule, review project documentation, and advise teams and management of opportunities for improvement



PROJECTS UNDER CONSTRUCTION

University College Renovation

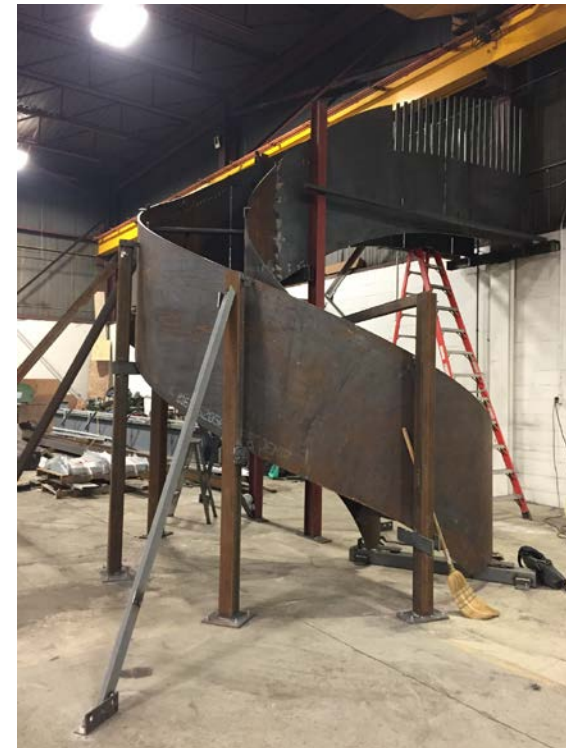
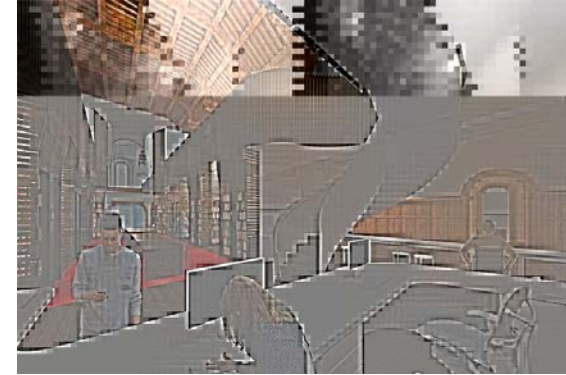
- Oldest Building on Campus, 1859
- 1,700 GSM renovation/180 GSM New Construction
- Restoration of East and West Halls to accommodate new library
- Renovation of Croft Chapter House to create a conference center
- Accessibility upgrades including new elevator
- Mechanical, electrical and fire alarm system upgrades
- Architects: Kohn Shnier Architects

Schedule

- Construction started January 2018, contract completion: October 2019 for interior spaces, January 2020 for exterior elevator.
- 50% complete

Status

- Differing site conditions have significantly impacted the schedule



PROJECTS UNDER CONSTRUCTION

Differing Site Conditions



As-built drawings showed only one pipe



Roofing condition at the top of the planned elevator



Convoluting piping around existing pipes.

PROJECTS UNDER CONSTRUCTION

University College Renovation

Status/Issues

- Project divided into multiple work areas

WORK AREA	DOMINANT DELAY	DESCRIPTION
Croft House & West Wing Work Area	6 months	Selective Demolition
East Library Work Area	8 months	Structural Steel/ Decking and MEP rough-in
East Library Work Area	4 months	Heritage Plaster and Wood Repairs
Elevator	5 months	Selective Demolition, Excavation and Underpinning

PROJECTS UNDER CONSTRUCTION

Robarts Common Library Addition

- 5540 GSM Addition
- Expansion of student study space.
- Architect: Diamond Schmidt

Status

- Construction started: June 2017, contract completion: July 2019*
- 25% complete
- Municipal approval delays affected start of project
- Discovery of buried differing site conditions regarding existing building's foundation requiring redesign,
- Steel supply issues
- Schedule analysis conducted through third party consultant

*Contract date, actual date being actively negotiated



PROJECTS UNDER CONSTRUCTION

UTSU Student Commons

- Renovation and re-use of building
- 5500 GSM of renovation/520 GSM of new construction
- Renovation of heritage building to convert from Architecture to Student Commons
- Architects: Superkul

Status

- Construction started June 2017, contract completion June 2019*
- 70% complete
- Discovery of differing site conditions has translated into significant delays
- Construction completion schedule for December 2018
- Notice of default issued and detailed manpower loaded schedule provided. Schedule is being monitored daily based on resource allocations.
- Schedule analysis to review delay

*Contract completion date, actual planned date being negotiated.



PROJECTS UNDER CONSTRUCTION

UTM Meeting Place

- Central gathering space for UTM increasing seating capacity for up to 1000 students
- Update the main building entry into the campus providing a revitalized arrival presence
- Renovation of 3,618 GSM

Status

- Construction start: March 2018, completion June 2019
- Delay in city permitting resulted in 21 week delay



THANK YOU