

1 hr fire separation - existing

sprinkler protected glazing - existing

2 hr fire separation - existing

# **Abbreviations**

- = above finished floor
- = centre line
- c/w = complete with elev = elevation
- eq = egual exist = existing
- = exterior int = interior
- max = maximum
- min = minimum = not applicable na
- = not in contract
- = on centre osci = owner supplied contractor installed
- osoi = owner supplied owner installed rec = recessed
- reqd = required
- rm = room sim = similar
- tme = to match existing t/o = top of
- typ = typical
- = unless noted otherwise
- u/s = underside = verify in field

= with

Written description

The Beaty Addition is a proposed addition of approximately 4,100 GSM (44,130 GSF) to the existing Beaty Biodiversity Centre – an academic facility designed by Patkau Architects and completed in 2009 which, in addition to administration and research functions, accommodates the Beaty Biodiversity Museum. The existing Centre is centrally located on campus, along Main Mall, the university's primary north-south spine. Upon completion, the Beaty Biodiversity Centre became home to the Beaty Biodiversity Museum at UBC and biology-related subsets of the Faculty of Sciences Zoology and Botany departments. Since 2009, the Museum has become an important landmark for the University and a one-of-a-kind natural sciences exhibition space. The Beaty Biodiversity Centre is rapidly expanding and hiring new faculty, launching new programs, and building new partnerships. The Centre's addition proposes to expand the existing research centre and add a museum storage facility that will enable it to qualify as an official BC fossil

The Biodiversity precinct is characterized by bar buildings, which are placed to form edges to exterior courts. The landscape design of these existing open areas provides a deliberate visual and functional representation of the principles of biodiversity. The Addition will provide office and research space to augment the existing research programs and house the new Conservation Science Initiative. Below grade, a contiguous expansion of the Collections and Museum facilities will accommodate growth and program

The Biodiversity Centre site as a whole is approximately 11,350 sm in area. The existing buildings occupy 2,600 sm of the site area above grade, increasing to 4,600 sm below grade. Fairview Grove, a stand of mature Cedar and Douglas Fir trees, extending south and east from the existing Museum Lantern occupies 950 sm at the southwest of the site. The remaining unbuilt area is limited. Approximately 1,500 sm in the south court has been identified as the most suitable area for the Addition. This project development site is however tightly constrained on all sides. The site is to the south of the existing research offices wing. It is currently planted and slopes down to bring light into offices at the existing basement level. The CEME lab building to the south is an unsprinklered industrial use, which places strict limits on spatial separation to new neighbours as well as allowable area of unprotected openings. The campus District Energy System infrastructure travels across the project site beneath the pedestrian laneway. The laneway is an important east-west campus route for both pedestrian and bicycle traffic.

The existing building contains 11,500sm of academic space on a site of 11,350sm for an approximate FSR of 1. The Addition is tasked with accommodating an additional 4,100sm of space on a site area of 1,500sm, for a FSR of 2.7. Put another way: the addition adds 35% more space to the existing building, on 15% of the overall site area. Massing is a significant challenge.

The functional program for the Addition consists of three primary groupings: space for researchers, space for museum collections & supporting functions, and meeting & gathering spaces shared by both groups. The research space is modular and repetitive, lending itself to an efficient stacking layout on levels. Museum expansion spaces are adjacent to the existing collections and back of house areas at the basement level, while spaces shared by the two functions occupy the ground floor and contribute to a public face for the Addition.

The proposed massing has six storeys above grade with one basement level and rooftop mechanical enclosure. It is sited to preserve daylight access to the existing south facing offices, limit the relocation of existing spaces and preserve an open South Court and existing east-west cross campus connection.

The basement level provides an efficient and functional expansion of museum facilities, with upper floors in a perpendicular bar that completes the west side of the reconfigured South Court and allows efficient stacking of research program. The Beaty Biodiversity Centre and Museum supports its strong internal community through opportunities for casual meeting and interaction in the existing building. The new Addition connects to these existing patterns of circulation and extends them. New program spaces are located adjacent to the existing spaces they augment. New connections are made at vertical circulation nodes to promote stair use and social interaction.

The Addition provides sorely needed expansion space. Space within the existing Centre is in significant demand. Care has been taken to locate the Addition's connections to limit the displacement of existing spaces which will have to be re-housed in the

## Design policy compliance

The project has been designed in accordance with the Vancouver Campus Plan Part 3 requirements for academic projects. The project site is in the Campus Core District, and is therefore subject to additional requirements outlined in section 3.1 of the Campus Plan Part 3 which are addressed by the design as follows.

The project is an addition to an existing building. As such, the design is considered for compliance with the Campus Plan as a single composition of new and existing components.

The campus pattern of blocks and courtyards is to be reinforced. By providing a new west edge to a preserved south court, the Addition builds on the 'edge and court' massing of the existing Biodiversity Precinct buildings, and provides a defined 'moment' along the east-west pedestrian and bicycle route. While having a green roof over museum collection space is not optimal, the extended basement level keeps all museum functions on one floor and preserves part of the project site for a pollinator garden meadow learning landscape, co-planar with the east-west connection across campus. The proposed addition is sited to avoid placing limitations on future development of CEME Labs site, and in consideration of the potential for new exterior spaces created by that eventual redevelopment.

The Addition needs to form a coherent expansion of the Biodiversity Precinct. While limited development site and program to be accommodated results in a tower form, a taller mass in this location is responsive to the verticality of Fairview Grove and acts as a counterpoint to the existing low-slung masses. In line with recommendations from the Campus Plan, the new taller mass of the addition forms a setback from the existing three storey research building at the fourth floor of the Addition, and preserves light access to the existing central court of the Biodiversity Precinct.

At 23.4m the addition is below the preferred 28m in height for projects along Main Mall, and set back from existing Museum 'lantern' by 17.5m to respect the 5m minimum setback from Main Mall fronting facade. In line with the Campus Core Materials Palette, the primary cladding material is white brick, in the same masonry unit size and bond pattern as the existing building. The rooftop mechanical screen material is aluminum safety tread material matching the existing building. Glazing is non-reflective, and supported on dark curtain wall framing. Secondary materials include white fibre

cement planks at solar shading devices, and natural colour concrete panels at grade within the lower court.

## **CPTED** description

and larger facility is cared for.

Amenity spaces on the ground floor and the research labs above overlook Fairview Grove to the west, while offices and the southern stair overlook the pollinator garden and cross campus connector to the east. The Addition takes advantage of the existing Centre's entry points and provides exterior doors for exiting only.

The lower courtyard is flanked by offices and other regularly occupied spaces along the entirety of the north and south edges for natural surveillance. Access to the courtyard will be controlled through a highly visible exterior stair at the east end and through the basement level of the Addition at the west end. The exterior stair runs parallel to the offices along the north and south with open mesh guards for maximum visibility. The lower courtyard's landscape will be low maintenance to demonstrate the space

## Development permit summary

Development pen	iiit Suiiiiiai y
Site area:	2188.4 m <sup>2</sup>
Building footprint:	588.4 m <sup>2</sup>
Site coverage:	26.8%
Net area by floor:	
B1	764.7 m <sup>2</sup>
L1	409.9 m <sup>2</sup>
L2	417.3 m²
L3	415.0 m <sup>2</sup>
L4	404.6 m²
L5	394.5 m <sup>2</sup>
L6	357.4 m²
Roof	50.3 m²
Grand total	3213.9 m <sup>2</sup>
Net area by use:	
Circulation	262.3 m <sup>2</sup>
Dry lab	732.8 m²
Meeting room	669.5 m <sup>2</sup>
Office	718.4 m <sup>2</sup>
Service	319.7 m <sup>2</sup>
Storage	511.2 m <sup>2</sup>
Grand total	3213.9 m <sup>2</sup>
Gross area by floor:	
B1	1067.1 m <sup>2</sup>
L1	588.4 m²
L2	588.4 m <sup>2</sup>
L3	588.4 m²
L4	568.3 m <sup>2</sup>
L5	561.5 m <sup>2</sup>
L6	561.5 m <sup>2</sup>
Roof	63.0 m <sup>2</sup>
Grand total	4586.6 m²
Building height	00
Permitted: Proposed:	28 m 22.9 m
'	ZZ.7 III
Setbacks	2/2
Front yard (west): Rear yard (east):	n/a n/a
Side yard (north):	n/a
Side yard (south):	n/a

Side yard (south): Parking spaces

Permitted: 1 accessible, 1 service Proposed:

Loading spaces Permitted: Existing: Proposed:

Bicycle parking (long-term)  $0.6 \text{ to } 0.8 \text{ per } 100\text{m}^2 \text{ of GFA} = 27 \text{ to } 36$ Permitted: Existing:

Proposed: Bicycle parking (short-term)

 $4 \text{ per } 100\text{m}^2 \text{ of GFA} = 183$ Permitted: Existing: Proposed:

Floor space ratio Permitted: Max 3.5 net area Proposed:

# Development permit variances

Bicycle parking (long-term): A variance is requested to provide 20 longterm bicycle parking spaces in lieu of 27.

Bicycle parking (short-term): A variance is requested to provide 10 + 6 = 16short-term bicycle parking spaces in lieu of 183. The existing Centre has

82 existing short-term bicycle parking spaces. The bicycle parking variances are requested to better correlate with the proposed Addition's future users. The proposed Addition will be populated by faculty, staff, postdoctorates and graduate students and provide 708.4 sm of new office space. The same users that occupy the offices will use the meeting rooms and dry labs.

## Project team

,			
Project Manager			
Shawn Rodgers	DP G0.01	Project information	
UBC Properties Trust	DP G0.02	Gross area plans	
200 - 3313 Shrum Lane	DP G0.03	Shadow analysis	
Vancouver, BC V6S 0C8	DP G0.04	Photographs	
T: (778) 987-8965	DP G0.10	Site plan	
E: srodgers@ubcproperties.com	2. 33.13	one plan	
Architect	DP A1.00	Floor plan - B1	
Brian Wakelin, MAIBC, MRAIC, LEED/AP	DP A1.01	Floor plan - L1	
Martina Caniglia, AIBC	DP A1.02	Floor plan - L2 and L3	
PUBLIC: Architecture + Communication	DP A1.03	Floor plan - L4 and L5	
1495 Frances Street	DP A1.04	Floor plan - L6 and roof	
Vancouver, BC V5L 1Z1	DI A1.04	r toor plan Lo and roor	
T: (604) 738-4323	DD 42.00	Duilding algorithms	
E: brian@publicdesign.ca	DP A2.00	Building elevations	
E: martina@publicdesign.ca	DP A2.01	Building elevations	
Civil Engineer	DD 43 00	Duilding costions	
Chris Hendriksen	DP A3.00	Building sections	
Thomas Schwabenbauer	DP A3.01	Building sections	
Stantec			
1100 - 111 Dunsmuir Street			
Vancouver, BC V6B 6A3	Drawing li	st - civil	
T: (604) 696-8000	Drawning ti	J. CIVIL	

### C-201 Utilities plan

Landscape Architect		
Joseph Fry		
Chris McBride	Drawing	ı list - landscape
Hapa Collaborative	<b>.</b>	,
403 - 375 W 5th Avenue	L0.00	Cover page
Vancouver, BC V5Y 1J6	L0.01	Urban landscape rationale
T: (604) 909-4150	L0.02	Design principles
E: jfry@hapacobo.com	L0.03	Tree management plan
E: cmcbride@hapacobo.com		-

Structural Engineer William Johnston Chris Jacques 1000 - 840 Howe Street Vancouver, BC V6Z 2M1 T: (604) 736-5329 E: william.johnston@wsp.com E: chris.jacques@wsp.com

E: chris.hendriksen@stantec.com

E: thomas.schwabenbauer@stantec.com

Mechanical Engineer Patrick Stewart AME Group 200 - 638 Smithe Street Vancouver, BC V6B 1E3 T: (604) 684-5995 x107 E: patrickstewart@amegroup.ca

Electrical Engineer Andv Su Richard Wu AES Engineering 950 - 505 Burrard Street Vancouver, BC V7X 1M4 T: (604) 695-2721 E: andy.su@aesengr.com E: richard.wu@aesengr.com

# Drawing list - architectural

DP G0.01	Project information
DP G0.02	Gross area plans
DP G0.03	Shadow analysis
DP G0.04	Photographs
DP G0.10	Site plan
DP A1.00	Floor plan - B1
DP A1.01	Floor plan - L1
DP A1.02	Floor plan - L2 and L3
DP A1.03	Floor plan - L4 and L5
DP A1.04	Floor plan - L6 and roof
DP A2.00	Building elevations
DP A2.01	Building elevations
DP A3.00	Building sections
DP A3.01	Building sections

Drawing list - landscape		
1.0.00		
L0.00	Cover page	
L0.01	Urban landscape rationale	
L0.02	Design principles	
L0.03	Tree management plan	
L1.01	Concept plan   Level 1	
L1.02	Concept plan   Basement level	
L1.10	Overall materials plan	
L1.11	Materials plan   Level 1	
L1.12	Materials plan   Basement level	
L1.21	Layout plan   Level 1	
L1.22	Layout plan   Basement level	
L1.31	Grading plan   Level 1	
L1.41	Planting schedule   Level 1	
L1.42	Planting plan   Level 1	
L1.43	Planting schedule   Basement level	
L1.44	Planting plan   Basement level	
L1.44	Franting plant basement level	
L2.01	Sections	
L2.02	Sections	
L3.10	Paving details	
L3.20	Site furnishing details	
L3.30	Walls and stairs details	
L3.40	Planting details	
	<b>3</b>	

## Drawing list - electrical

Drawning	ust	etectrica
E1	S	ite plan - lightii
E0	_	

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# the attention of the Architect for clarification. ISSUES + REVISIONS

NO DATE DESCRIPTION A Dec 15, 2021 Issued for SD costing B Feb 2, 2022 Issued for SD costing C Mar 29, 2022 Issued for DP D Apr 8, 2022 Issued for 25% DD costing H Jun 17, 2022 Issued for DP R1

# VANCOUVER BC V5L 1Z1

TEL 604 738 4323 WWW.PUBLICDESIGN.CA **UBC** Beaty **Biodiversity Centre** 

Addition 2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE

1:50

Project information

Gross area summary

Roof

Legend

New addition

Existing to be renovated

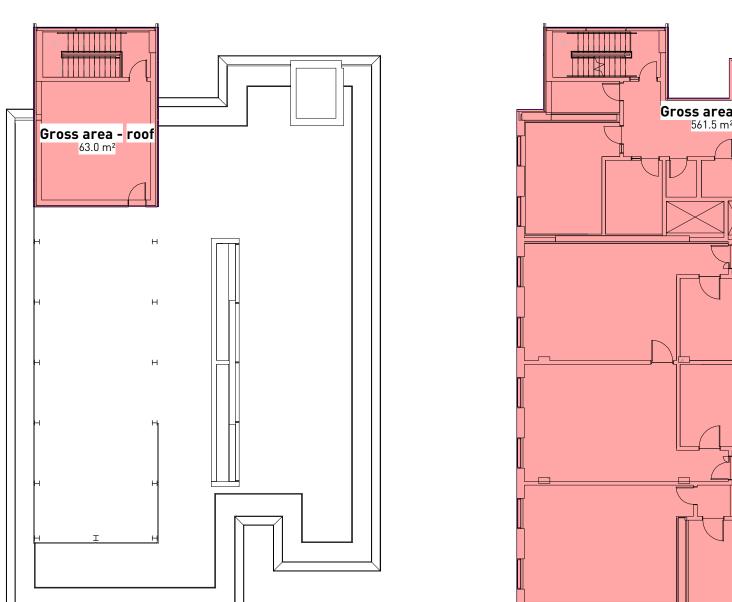
Existing to be maintained

Grand total

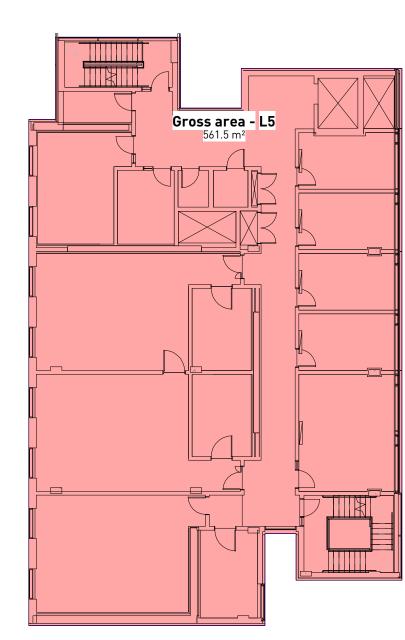
1067.1 m² 588.4 m² 588.4 m² 588.4 m<sup>2</sup> 568.3 m<sup>2</sup> 561.5 m² 561.5 m²

63.0 m²

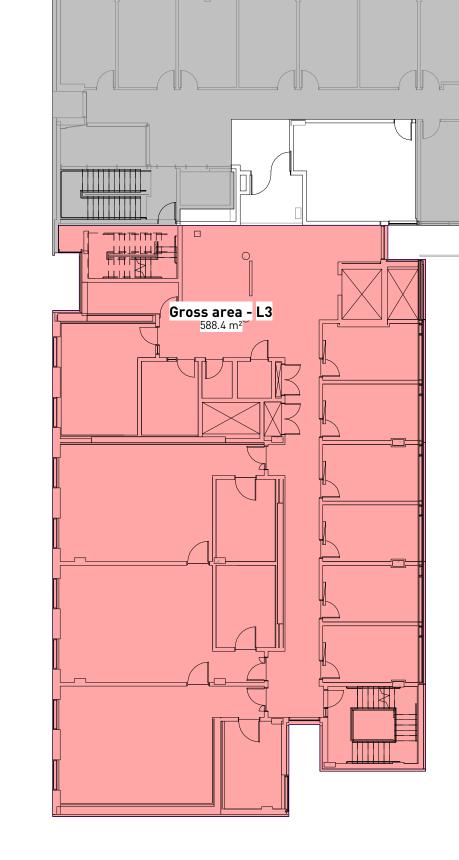
4586.6 m²



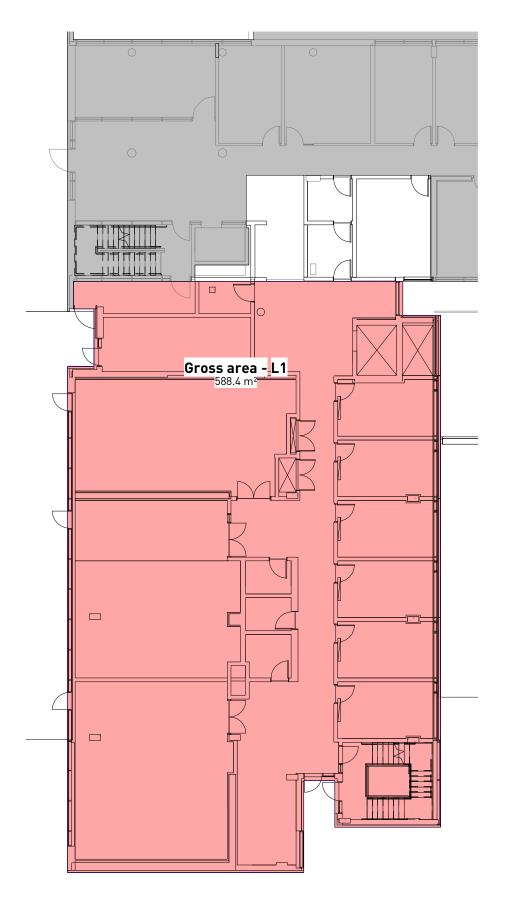
8 Gross area plan DP - roof 1/A2.01 1:200



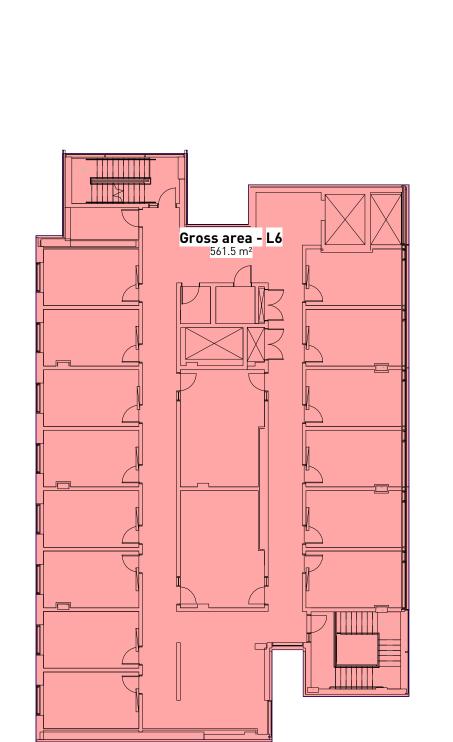
6 Gross area plan DP - L5 1/A2.01 1:200



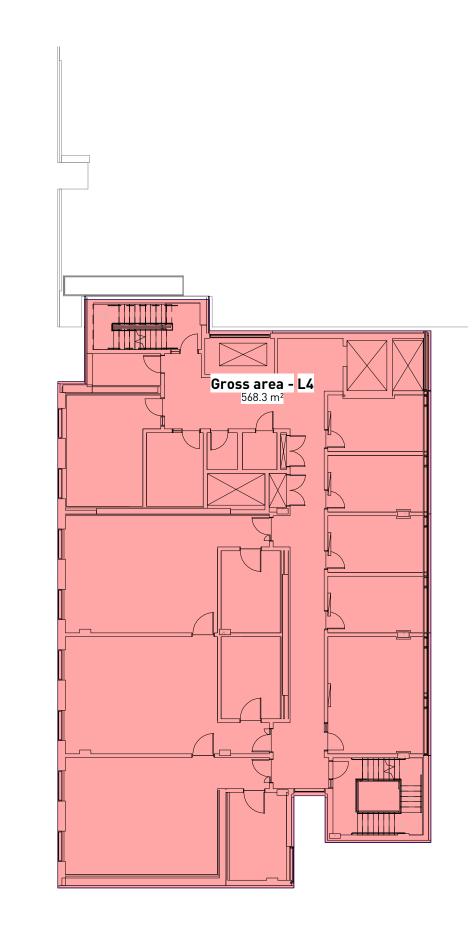
4 Gross area plan DP - L3 1 / A2.01 1 : 200



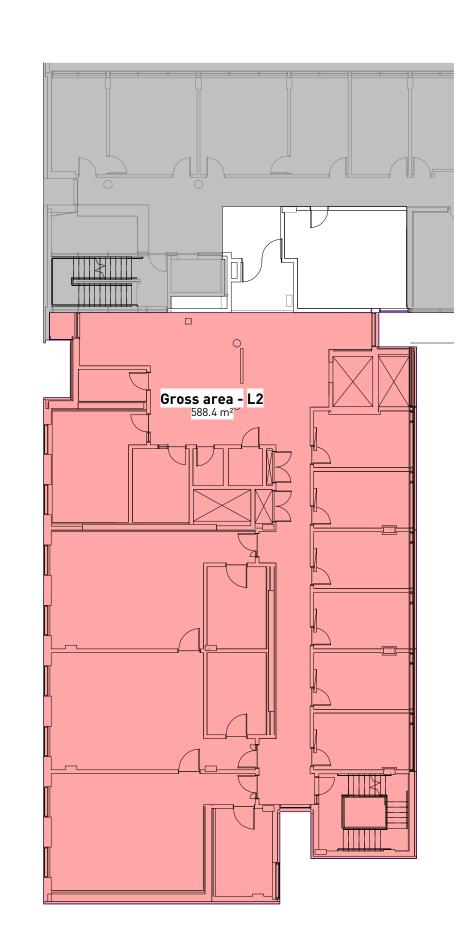
2 Gross area plan DP - L1



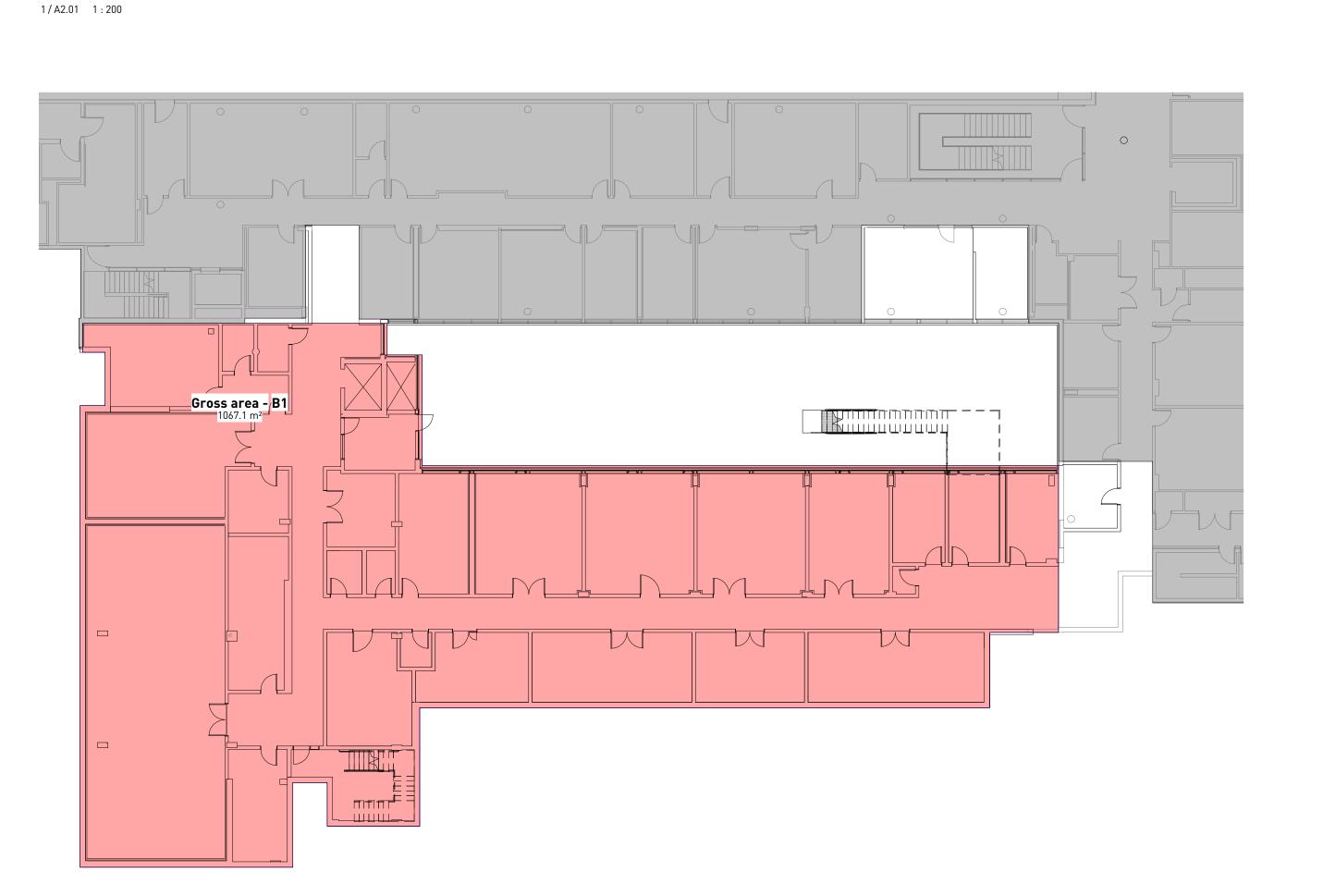
7 Gross area plan DP - L6 1 / A2.01 1 : 200



5 Gross area plan DP - L4 1 / A2.01 1 : 200



3 Gross area plan DP - L2 1 / A2.01 1 : 200



1 Gross area plan DP - B1 1/A2.02 1:200

public

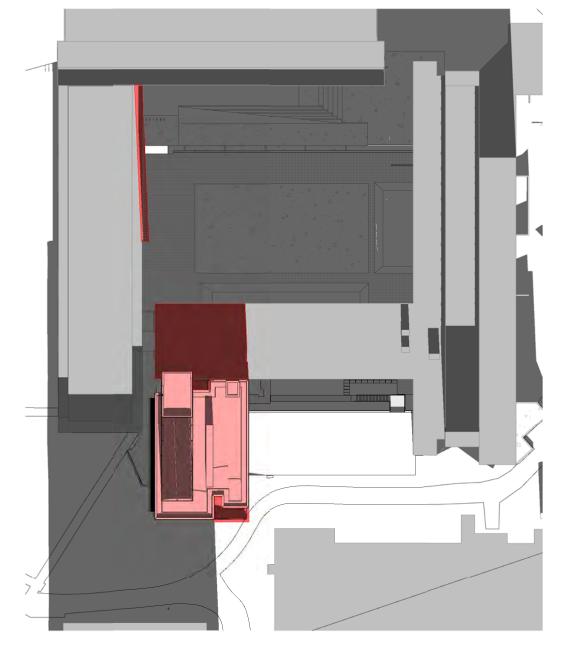
1495 FRANCES STREET VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA

**UBC** Beaty **Biodiversity Centre** Addition

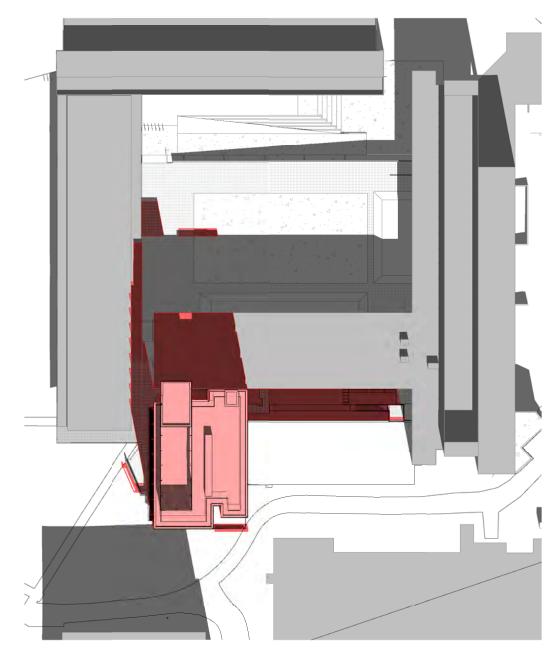
2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE As indicated

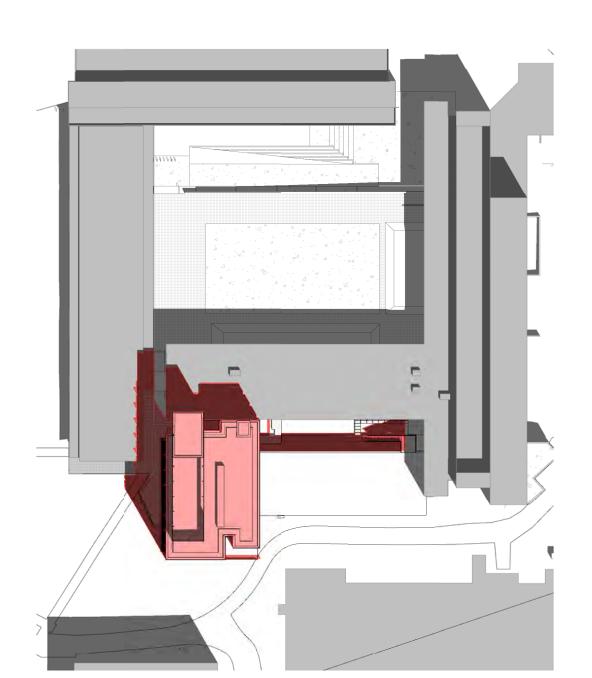
Gross area plans



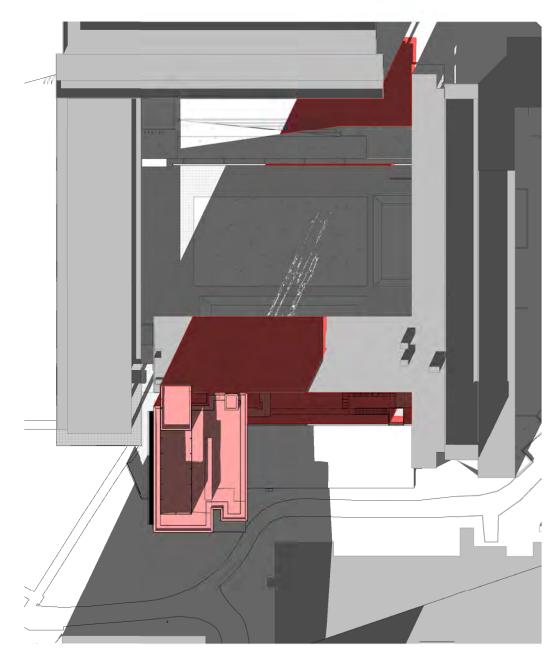
Winter solstice at 10am



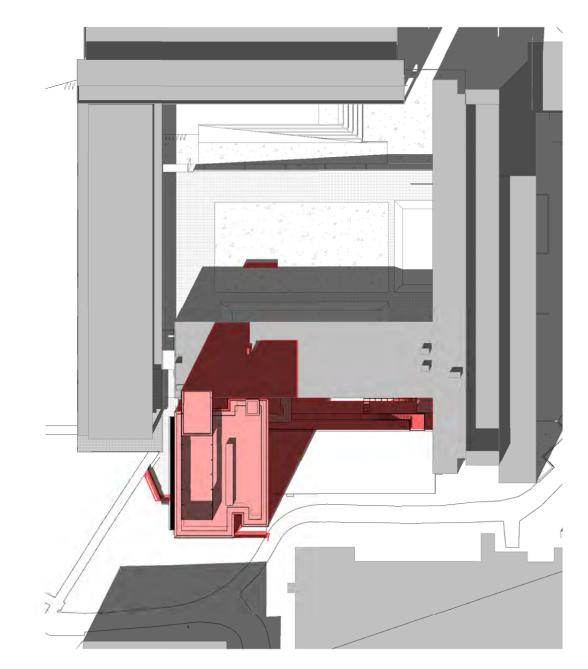
Spring equinox at 10am



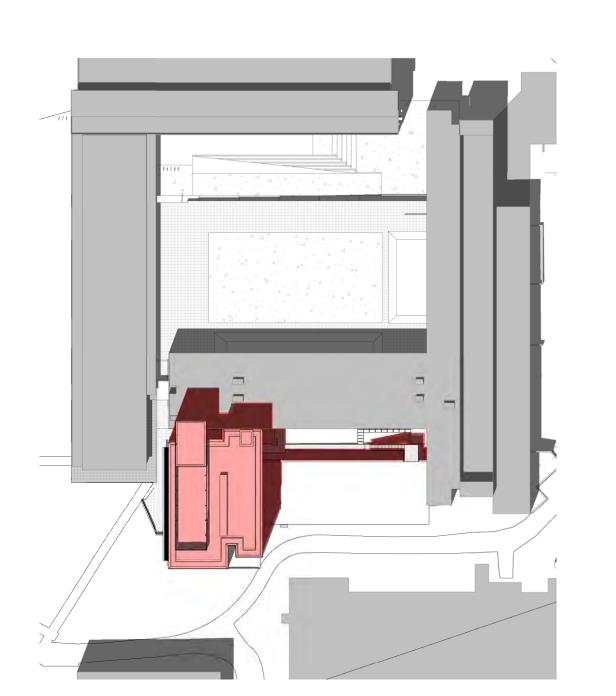
Summer solstice at 10am



Winter solstice at 12pm



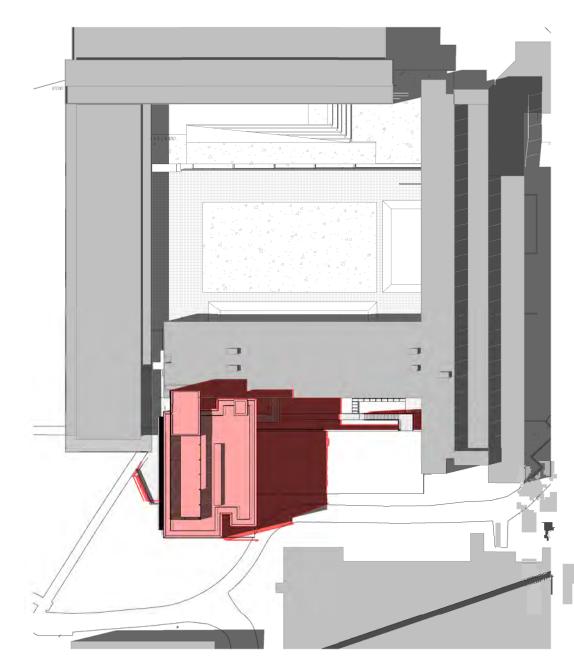
Spring equinox at 12pm



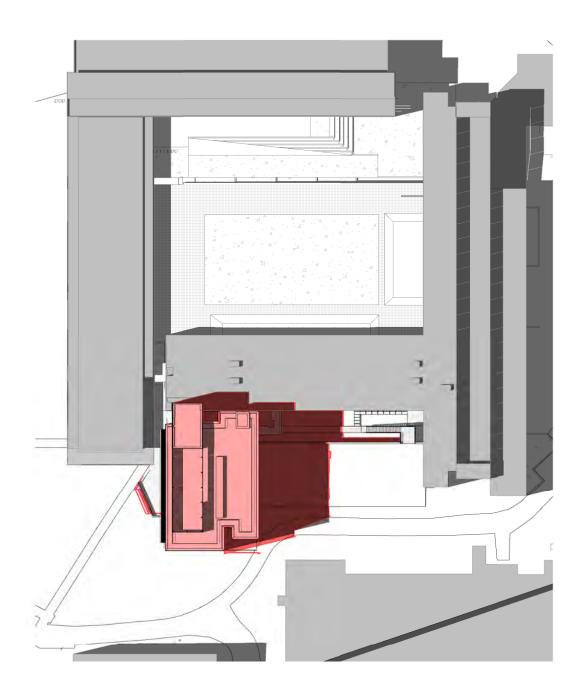
Summer solstice at 12pm



Winter solstice at 2pm



Spring equinox at 2pm



Summer solstice at 2pm

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NO DATE DESCRIPTION

C Mar 29, 2022 Issued for DP H Jun 17, 2022 Issued for DP R1

public 1495 FRANCES STREET VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA

**UBC** Beaty **Biodiversity Centre** Addition

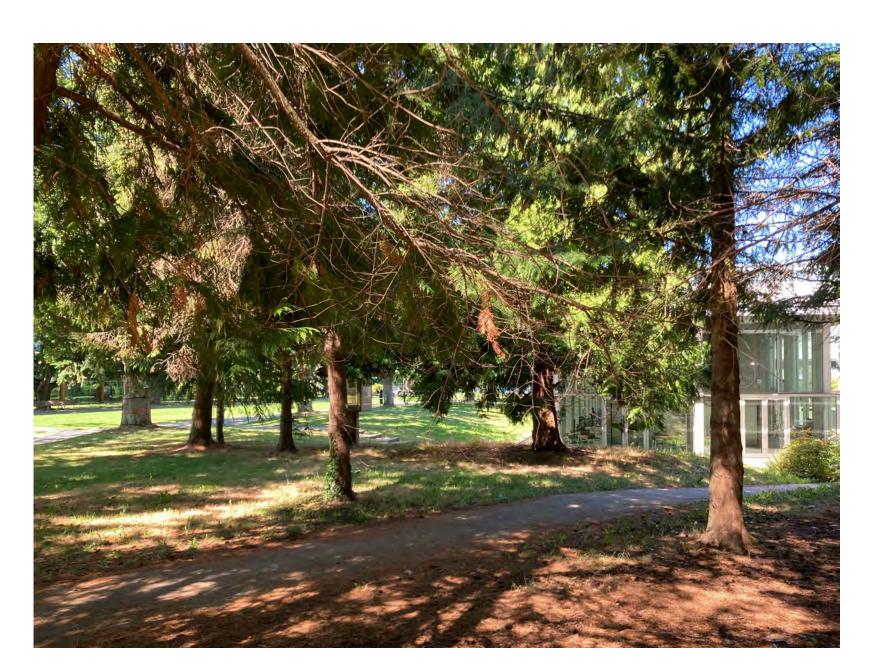
2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE 1:800

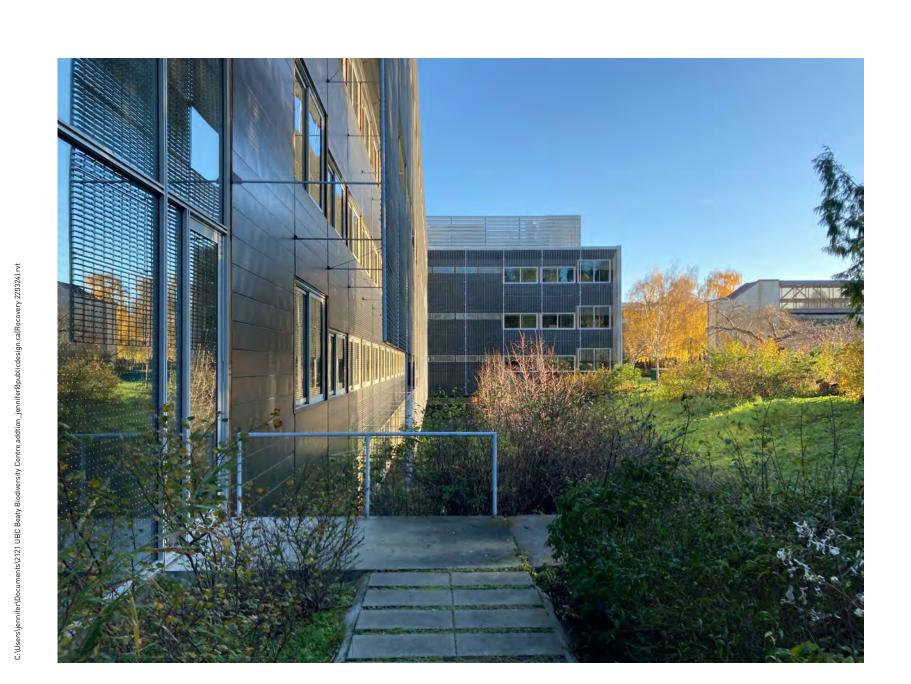
Shadow analysis



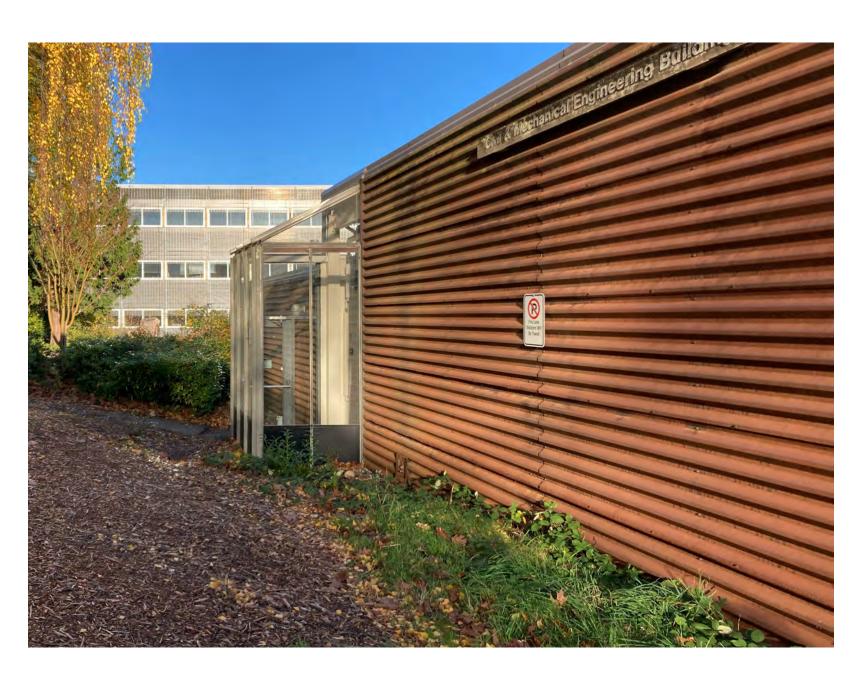
1. Looking east at project site from Main Mall



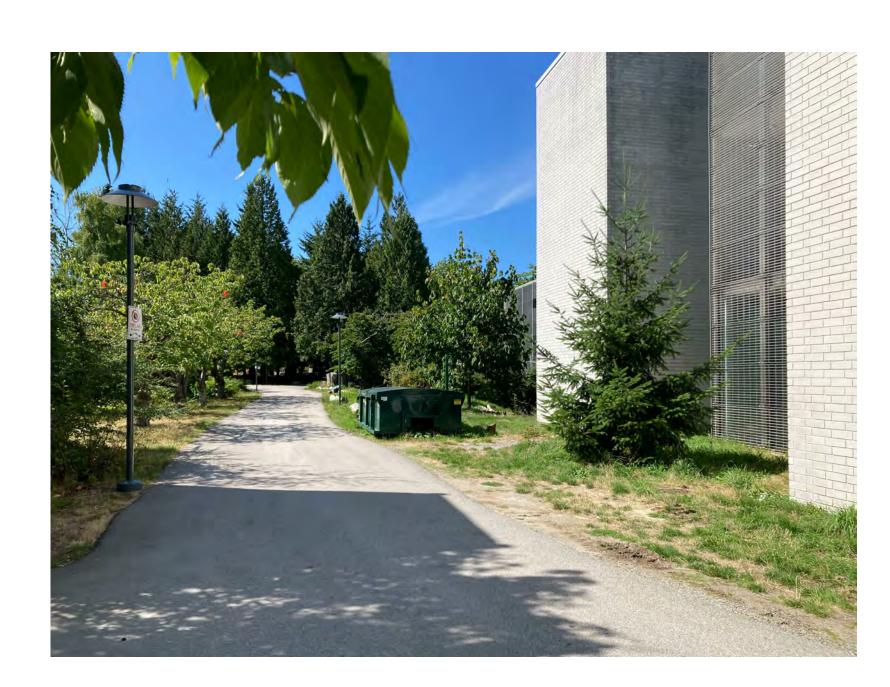
4. Moving east on pedestrian path from Main Mall



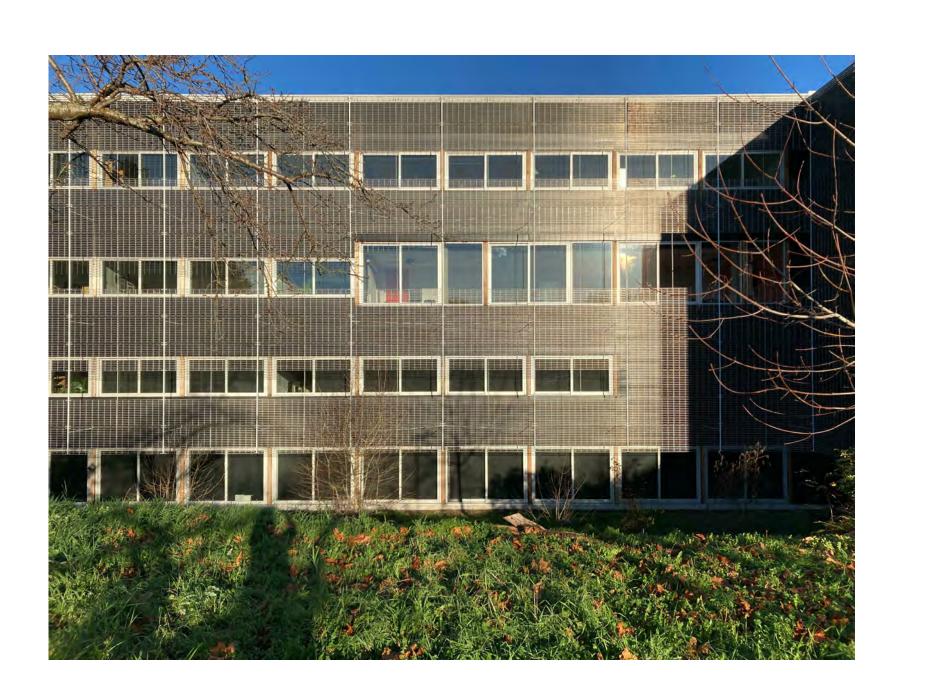
7. Looking east at project site from the Beaty Biodiversity Museum



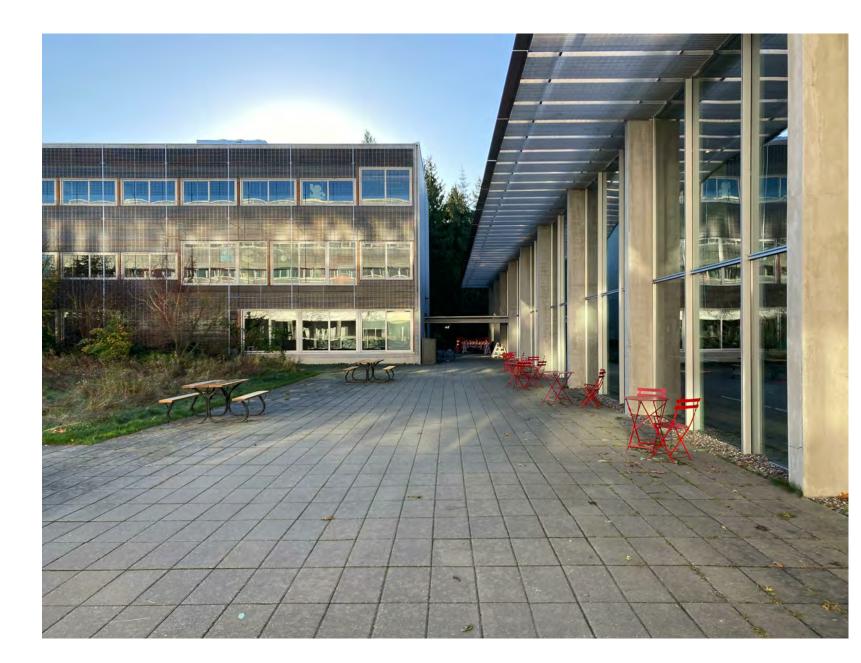
2. Looking north at project site from Civil Mechanical Engineering Building



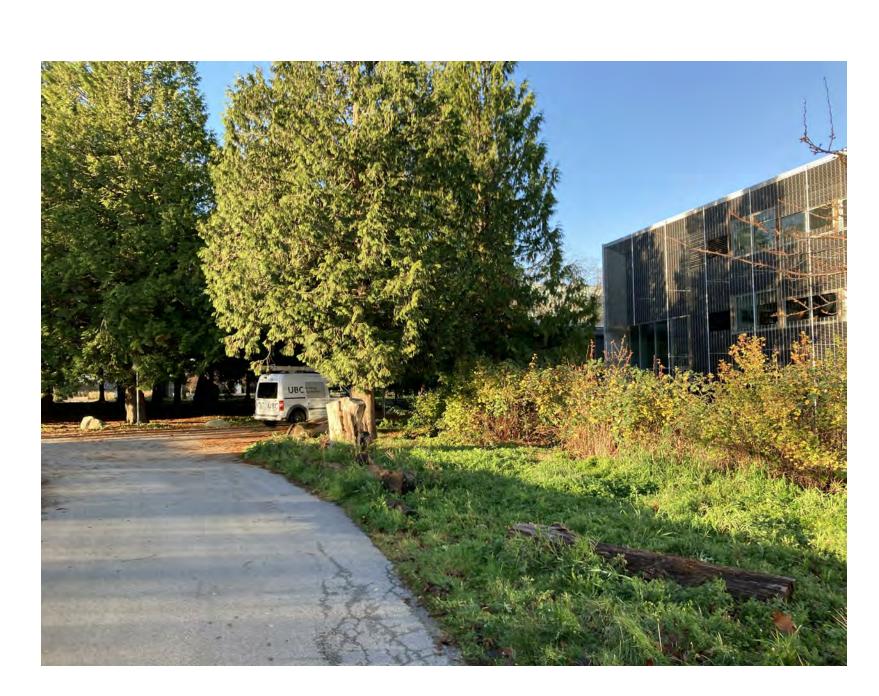
5. Moving west on pedestrian path from East Mall



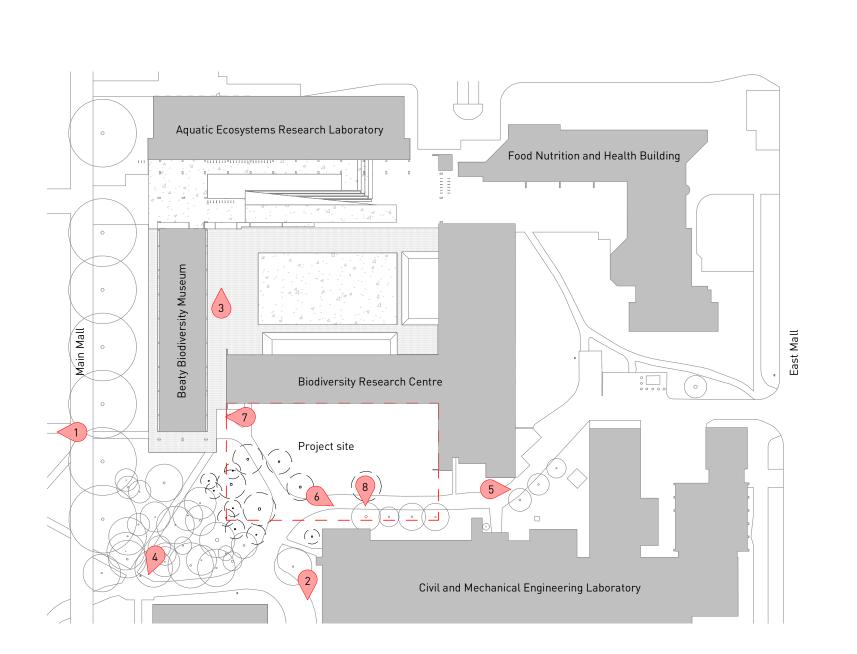
8. Looking north at project site from pedestrian path



3. Looking south at project site from existing courtyard



6. Moving west on pedestrian path from East Mall



Key plan



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# **UBC** Beaty **Biodiversity Centre** Addition

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 ISSUES + REVISIONS

 NO
 DATE
 DESCRIPTION

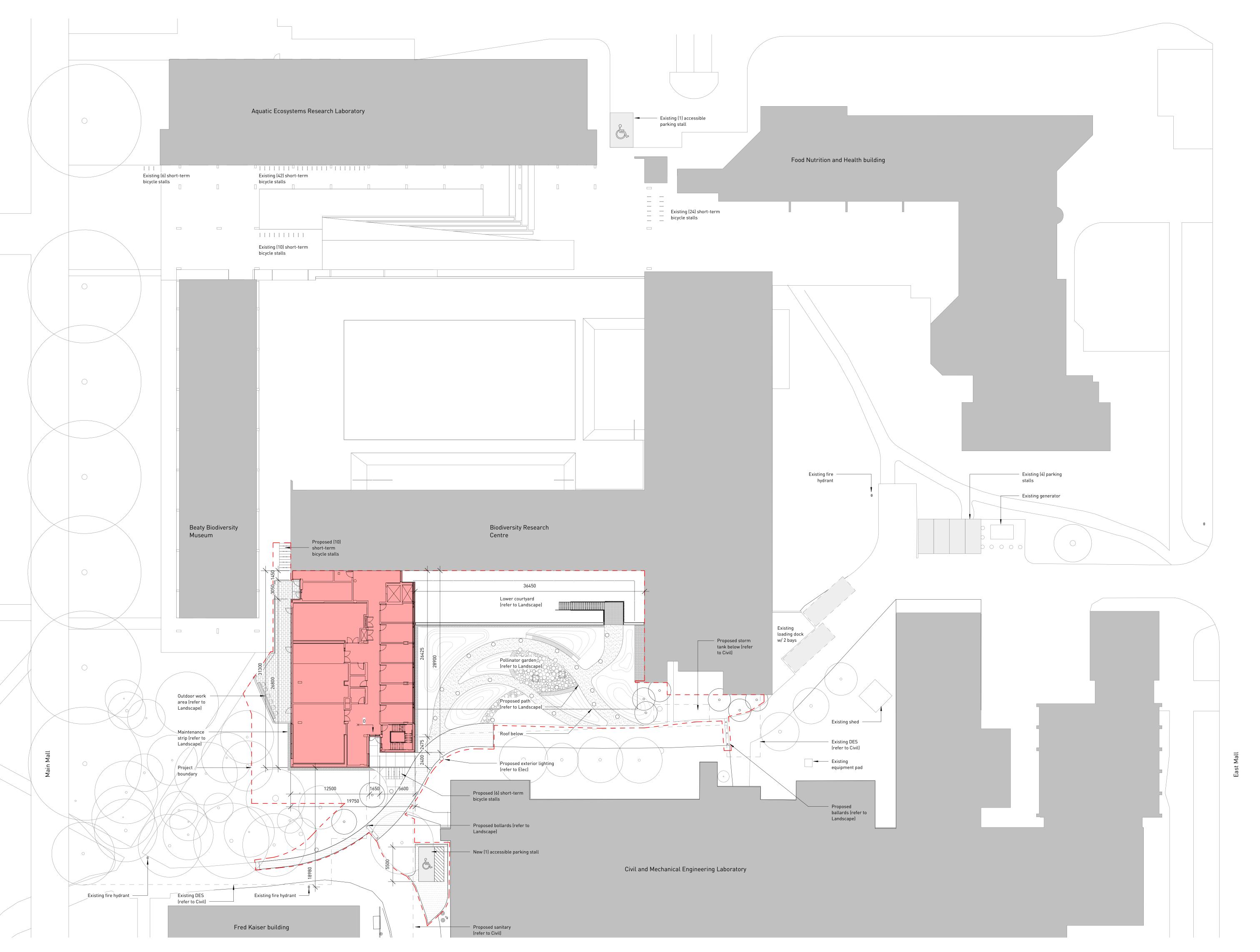
 C
 Mar 29, 2022
 Issued for DP

 H
 Jun 17, 2022
 Issued for DP R1

2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 SCALE 1:1000

# Photographs



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 ISSUES + REVISIONS

 NO
 DATE
 DESCRIPTION

 H
 Jun 17, 2022
 Issued for DP R1

public

1495 FRANCES STREET
VANCOUVER BC V5L 1Z1
TEL 604 738 4323
WWW.PUBLICDESIGN.CA

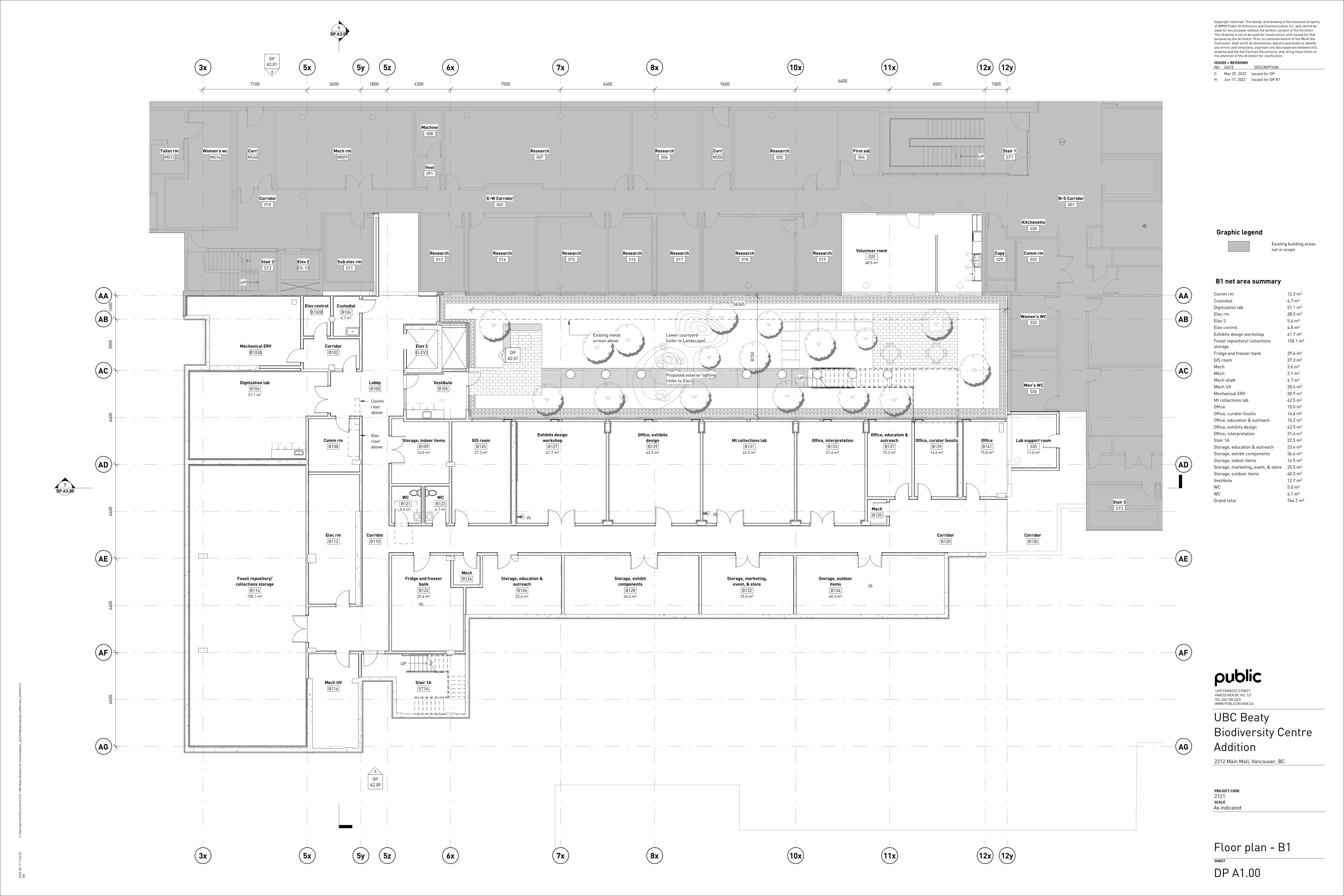
UBC Beaty Biodiversity Centre

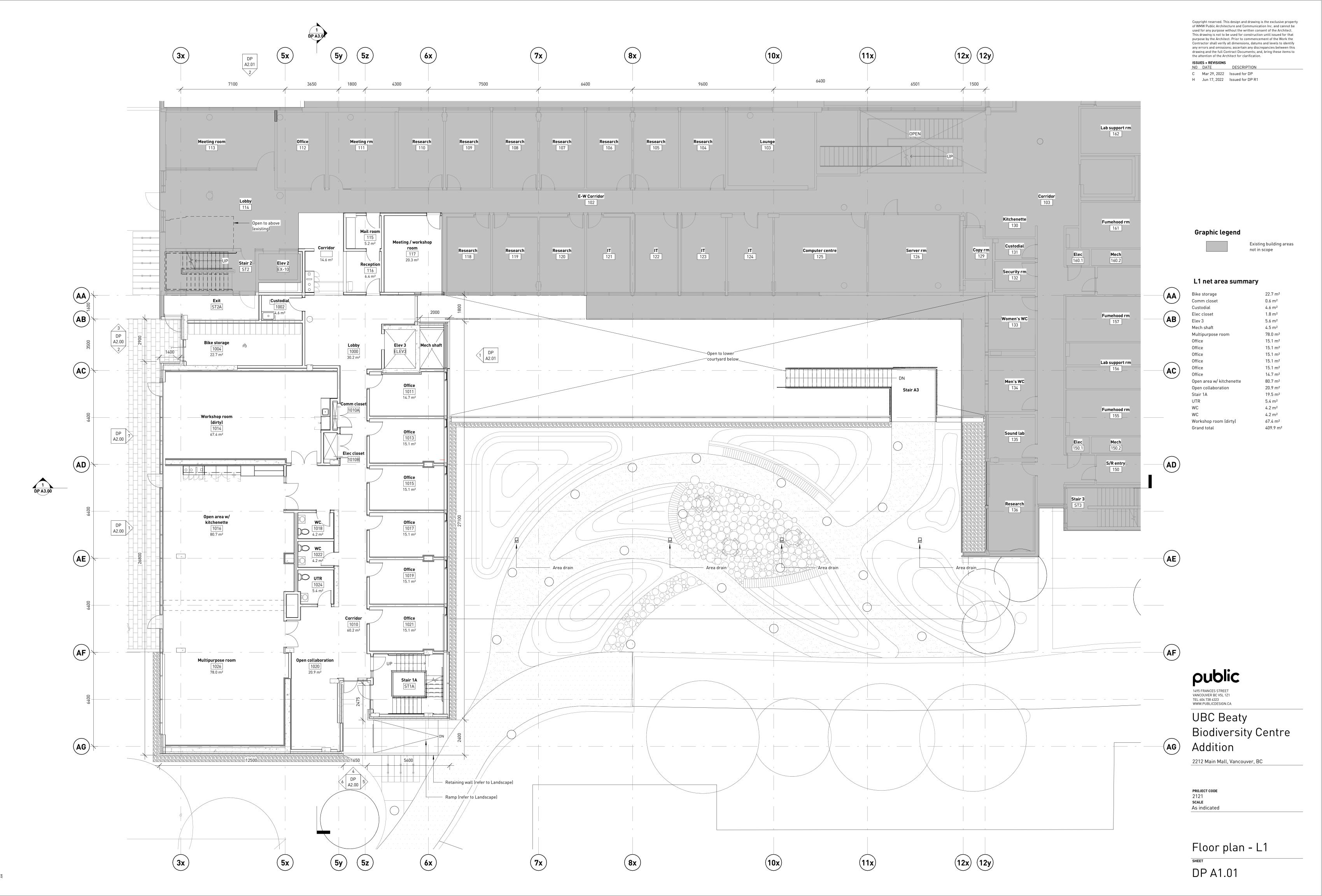
2212 Main Mall, Vancouver, BC

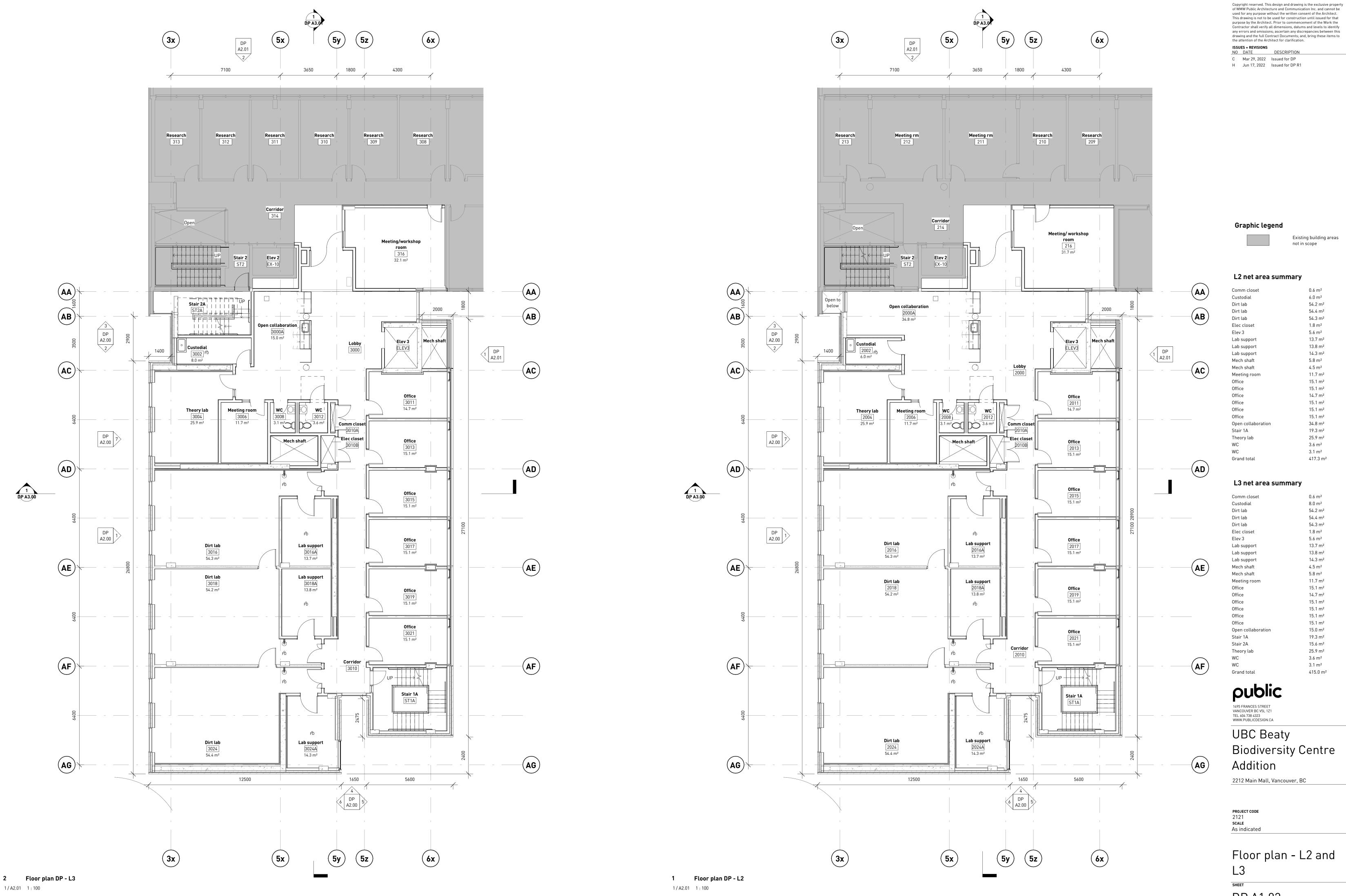
PROJECT CODE 2121 SCALE 1:250

Addition

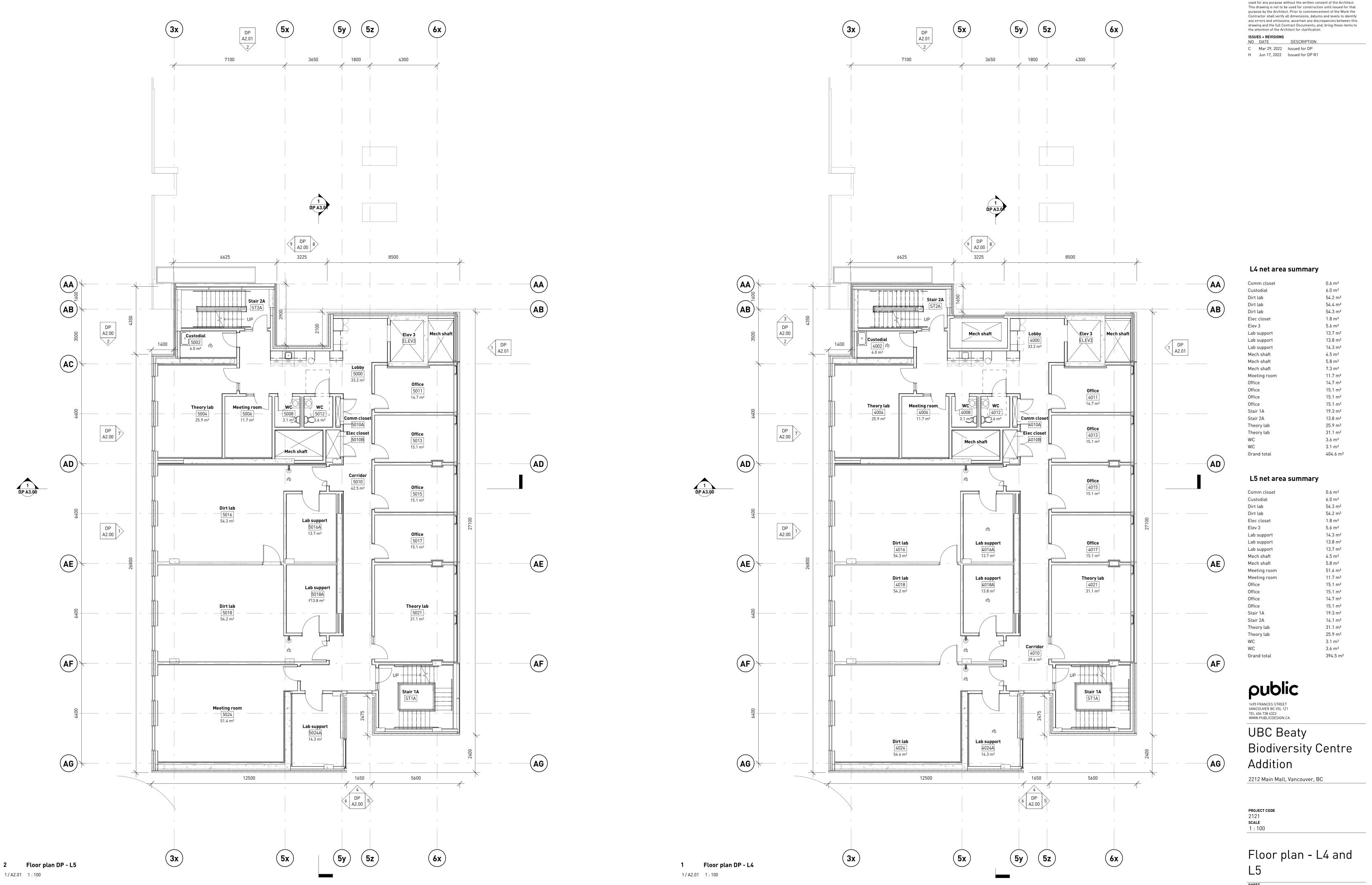
Site plan





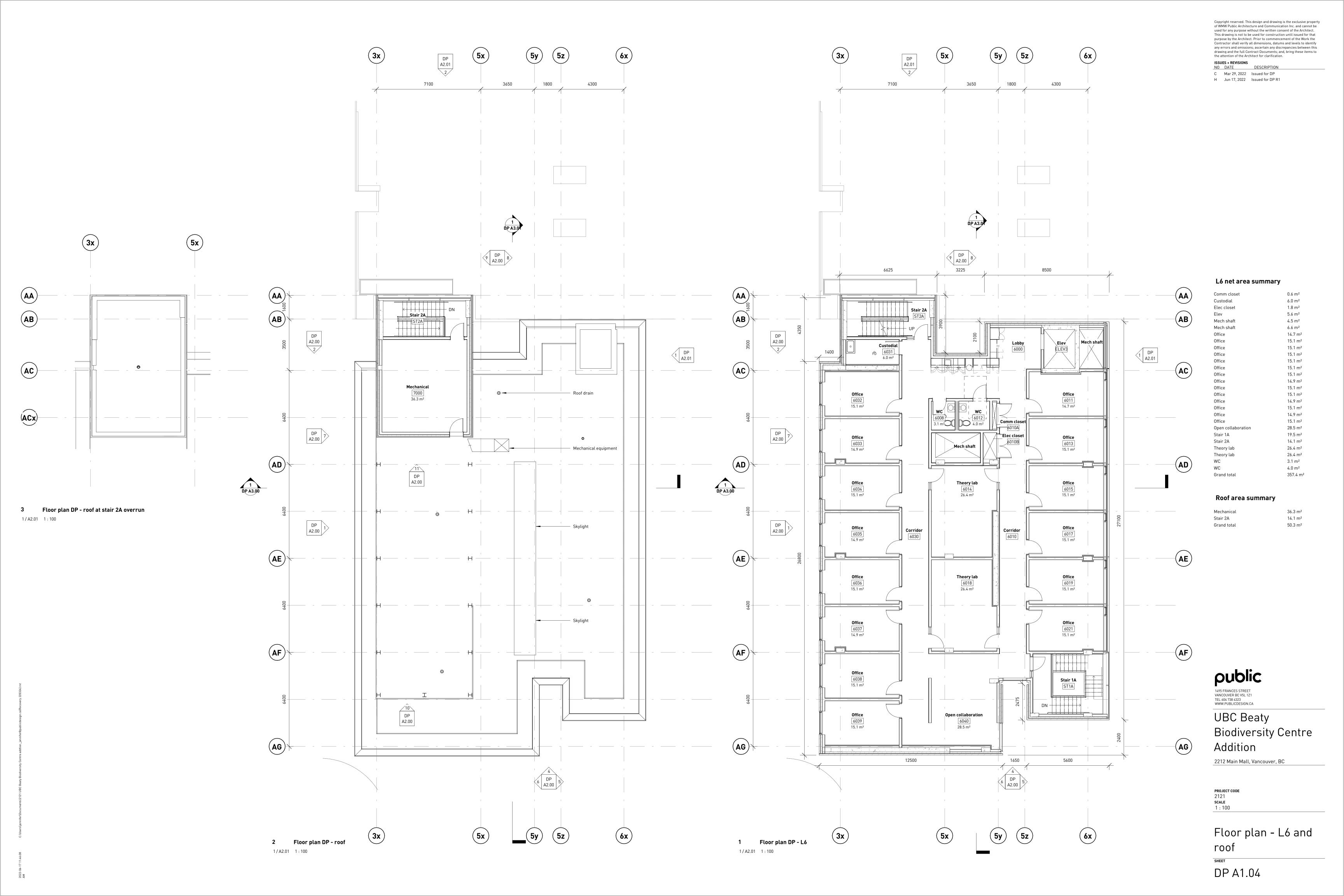


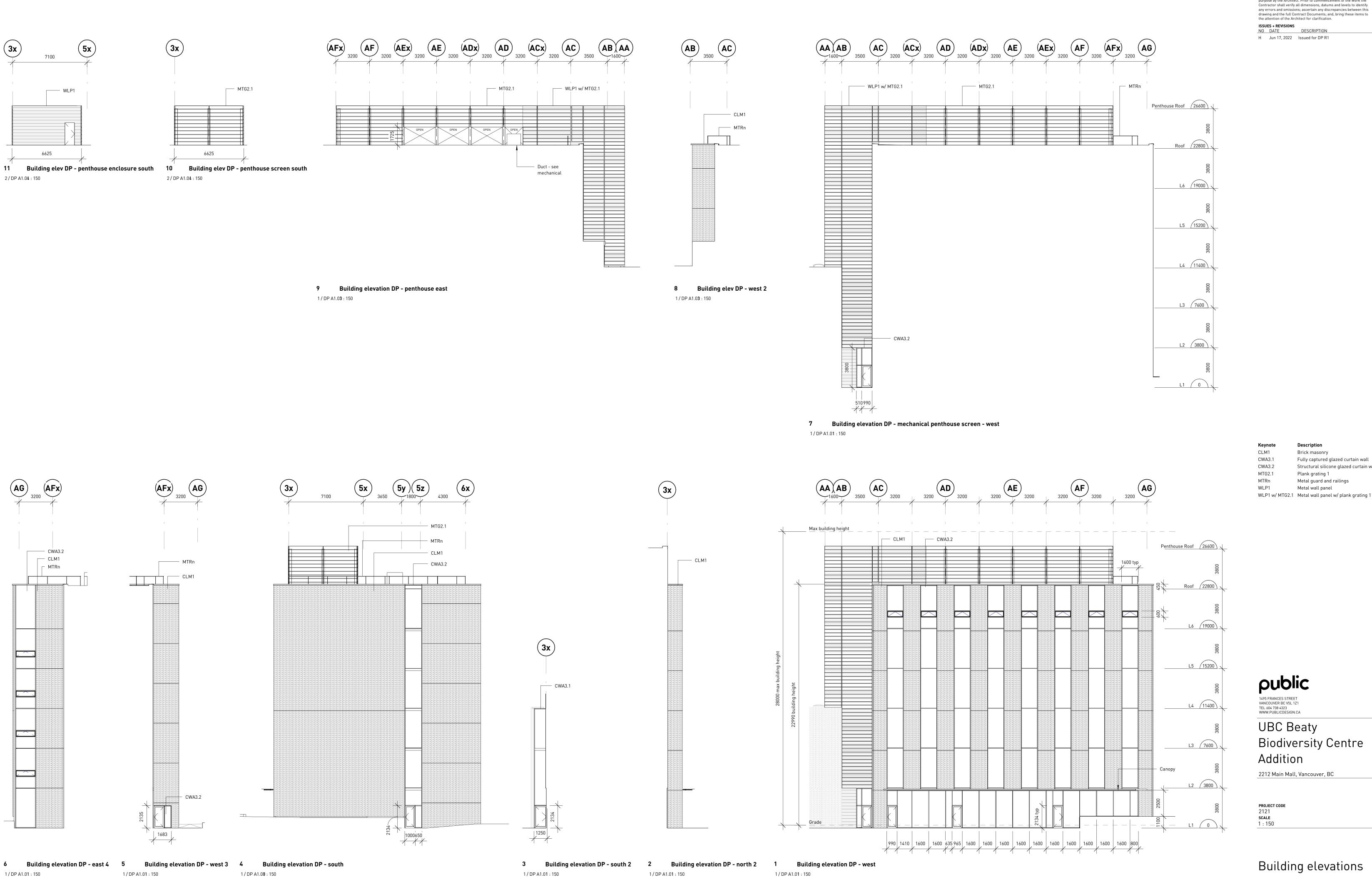
DP A1.02



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DP A1.03





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ISSUES + REVISIONS
NO DATE DESCRIPTION H Jun 17, 2022 Issued for DP R1

public

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**UBC** Beaty Biodiversity Centre Addition

Brick masonry

Plank grating 1

Metal wall panel

Metal guard and railings

Fully captured glazed curtain wall Structural silicone glazed curtain wall

2212 Main Mall, Vancouver, BC

PROJECT CODE

Building elevations

DP A2.00

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ISSUES + REVISIONS
NO DATE DESCRIPTION

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Penthouse Roof 26600 CWA3.2 Roof 22800 L6 (19000) L5 (15200) L4 (11400) → CWA3.2 L3 7600 L2 3800 100 100 CWA3.2 CWA3.2 CWA3.2 \_\_\_\_B1 (-4200) 1800 1625 | 965 | 292

1 Building elevation DP - east

1 / DP A1.0**0** : 150

Addition

**UBC** Beaty

public

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2212 Main Mall, Vancouver, BC

**Biodiversity Centre** 

Brick masonry

CWA3.2

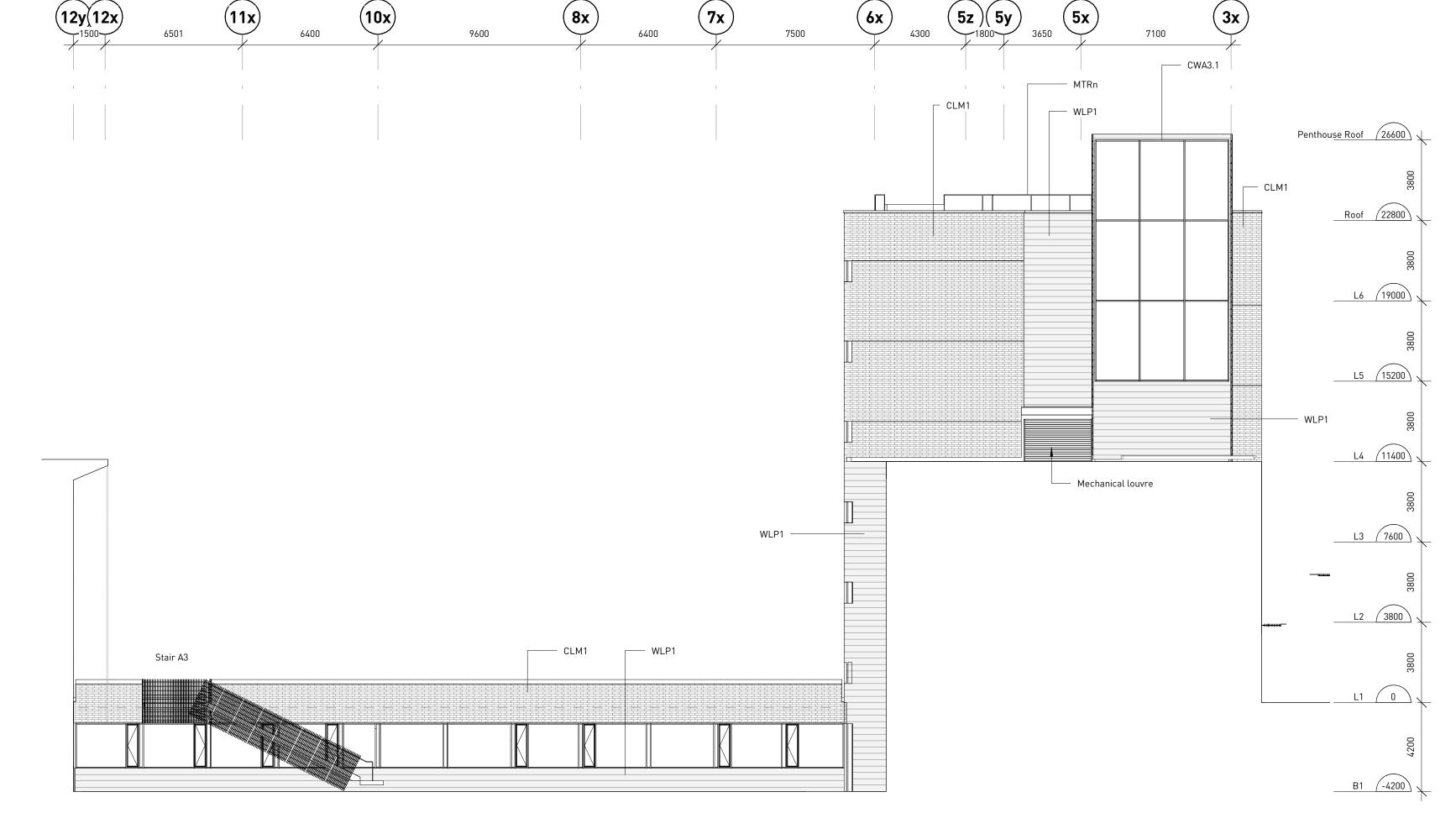
Fully captured glazed curtain wall Structural silicone glazed curtain wall

Metal guard and railings Metal wall panel

PROJECT CODE
2121
SCALE
1:150

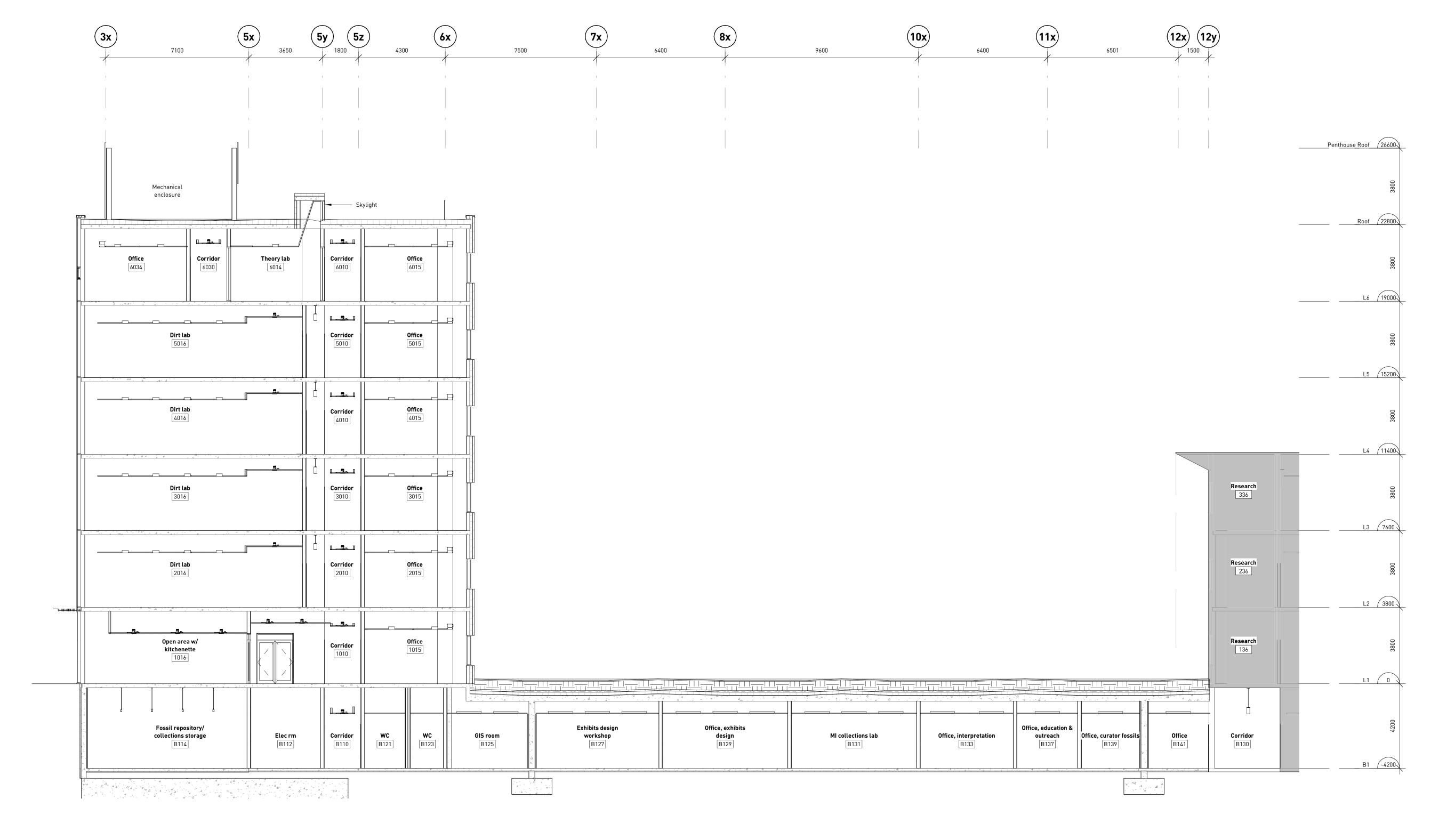
Building elevations

DP A2.01



2 Building elevation DP - north

1 / DP A1.00 : 150



Building section DP - east west

1 / DP A1.001 : 100

public 1/05 ERANCES STREET

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UBC Beaty Biodiversity Centre Addition

2212 Main Mall, Vancouver, BC

PROJECT CODE 2121 scale 1:100

Building sections

DP A3.00

ISSUES + REVISIONS
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Penthouse Roof 26600 Roof 22800 **Lobby** 6000 Theory lab Theory lab 6012 6018 L6 19000 **Lobby** 5000 **WC** 5012 Mech shaft Dirt lab \_\_\_\_ L5 <u>15200</u> Transition from existing building to proposed addition **Lobby** 4000 Lab support 4016A Lab support 4018A Mech shaft Dirt lab
4018
4024 Mech shaft L4 11400 **WC** 3012 Corridor 314 **Lobby** 3000 Lab support Lab support 3018A Mech shaft Dirt lab L3 7600 **WC** 2012 Corridor 214 Lab support 2016A **Lobby** 2000 Lab support 2018A Mech shaft Dirt lab L2 3800 Workshop room (dirty) **WC** 1018 **Lobby** 1000 Corridor 1010 Open collaboration E-W Corridor 1020 \_ L1\_\_\_0 \_\_\_\_ E-W Corridor Corridor B102 Lobby B100 Comm rm B108 Elec rm B112 Corridor B110 Mech UV Sub elec rm 

1 Building section DP - north south

1 / DP A1.001 : 100

**Building** sections

DP A3.01

public

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Addition

PROJECT CODE 2121 SCALE 1:100

**Biodiversity Centre**