Pre-Engineered Building

University of Toronto Mississauga

3265 Principal's Road, Mississauga

Issued for Tender 2024-11-25

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ARCHITECTURAL DRAWING LIST

Sheet Number	Sheet Name
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A002	LIFE SAFETY AND CODE MATRIX
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A704	INTERIOR ELEVATIONS
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E101	ELECTRICAL SITE LIGHTING PLAN
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E701	MECHANICAL SCHEDULE
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AV000	AV DRAWING LIST
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FOR REFERENCE ONLY: FOUNDATION AND FRAME BY OTHER

STRUCTURAL - FOUNDATION - DRAWING LIST

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2A	ANCHOR ROD DETAILS
3	ANCHOR ROD REACTIONS
3A	ROOF LOADS
4	RIGID FRAME ELEVATION
4A	RIGID FRAME ELEVATION
4B	WIND BENT ELEVATION
5	ROOF FRAMING
6	ENDWALL FRAMING
7	ENDWALL FRAMING
8	SIDEWALL FRAMING
9	SIDEWALL FRAMING
10	FLOOR FRAMING AND JOISTS

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
3	Issued for 100% SD	2023-12-21
4	Issued for SPA	2024-02-09
5	Issued for Design Development Costing	2024-03-28
6	Issued for Permit	2024-11-08
7	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

COVER SHEET & DRAWING LIST

architects
Baird Sampson Neuert

416.363.8877 bsnarchitects.com

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 1
DATE :	03/28/2024
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

A000

DIVISION	ITEM	SCOPE			
		Other - Pre-Engineered	General Contractor	Owner	Other - per note
	NOTE: Scope items not noted in this list are the responsibility of the General Contractor				
Div 01	**General Requirements**				
	CCTV site monitoring		X		
	construction survey	X [foundation only]	X		
	locates		X		
Div 02	**Existing Conditions**				
Div 03	**Concrete**				
	Foundation walls, footings, and piers	supply and install	coordinate		
	frost slabs		supply and install		
	slab-on-grade	supply and install	coordinate		
	slab on metal deck at mezzanine	supply and install	coordinate		
	service openings in foundation wall	install	coordinate		
	concrete polishing		supply and install		
	concrete sealer		supply and install		
	exterior paving		supply and install		
Div 05	**Metals**				
	Moment Frames and wind-bent frames	supply and install	coordinate		
	Cross Bracing	supply and install	coordinate		
	roof purlins	supply and install	coordinate		
	wall girts	supply and install	coordinate		
	framing at openings [windows, doors, roof curbs]	supply and install	coordinate		
	mezzanine framing and deck	supply and install	coordinate		
	Entrance canopy [framing only]	supply and install	coordinate		
	Rooftop Mechanical enclosure		supply and install		
	Metal Fabrications - refer to 05 50 00		supply and install		
	Architectural Metal Fabrications - refer to 05 70 00		supply and install		
Div 06	**Wood, Plastics and Composites**		supply and install		
Div 07	**Thermal and Moisture Protection**				
	foundation wall - waterproofing	supply and install	coordinate		
	foundation wall - insulation	supply and install	coordinate		
	slab-on-grade - insulation and vapour barrier	supply and install	coordinate		
	Walls - Insulated Metal Panels	supply and install	coordinate		
	Roof - Insulated Metal Panels	supply and install	coordinate		
	IMP opening - temporary protection	supply and install	supply and install		
	IMP/IMP interface - sealing and flashing	supply and install	coordinate		
	IMP rough opening - sealing and flashing	supply and install	coordinate		
	IMP opening - sealing at aluminum framed glazing		supply and install		
	IMP opening - sealing at sectional doors		supply and install		
	IMP opening - sealing at hollow metal doors		supply and install		
	Roof hatch with integral curb and sealing	install	Supply and coordinate		
	IMP roof penetrations for services	provide opening	supply and install		
	IMP roof penetrations - sealing	supply and install	coordinate		
	IMP wall penetrations for services	provide opening	supply and install		
	IMP wall penetrations - sealing	supply and install	coordinate		
	fabricated gutters and downspouts	supply and install	coordinate		
	mineral wool batt insulation		supply and install		
	mineral wool rigid insulation		supply and install		
	Entrance canopy roofing and cladding	coordinate	supply and install		
Div 08	**Openings**		supply and install		
Div 09	**Finishes**		supply and install		
Div 10	**Specialties**		supply and install		
Div 11	**Equipment**		supply and install		
Div 12	**Furnishings**		supply and install		
Div 20	**General Mechanical**		supply and install		
Div 21	**Fire Suppression**		supply and install		
Div 22	**Plumbing**		supply and install		
Div 23	**HVAC**		supply and install		
	roof curbs for mechanical equipment	install	Supply and coordinate		
Div 25	**Integrated Automation**		supply and install		
Div 26	**General Electrical**		supply and install		
	transformer - refer to Electrical documents		coordinate	supply	install: Alectra Utilities
Div 27	**Communications**		supply and install		
Div 28	**Electronic Security and Safety**		supply and install		
Div 31	**Earthwork**				
	excavation and disposal for foundation	supply and install	coordinate		
	backfill and compaction for foundation	supply and install	coordinate		
	Fill, granular and compaction for slab-on-grade	supply and install	coordinate		
Div 32	**Exterior Improvements**		supply and install		
Div 33	**Utilities**				
	foundation wall perimeter drainage	supply and install	coordinate		
	sump pit and sand pit excavation and placing	coordinate	supply and install		
	site servicing		supply and install		

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Missisauga, Ontario

TITLE

RESPONSIBILITY MATRIX

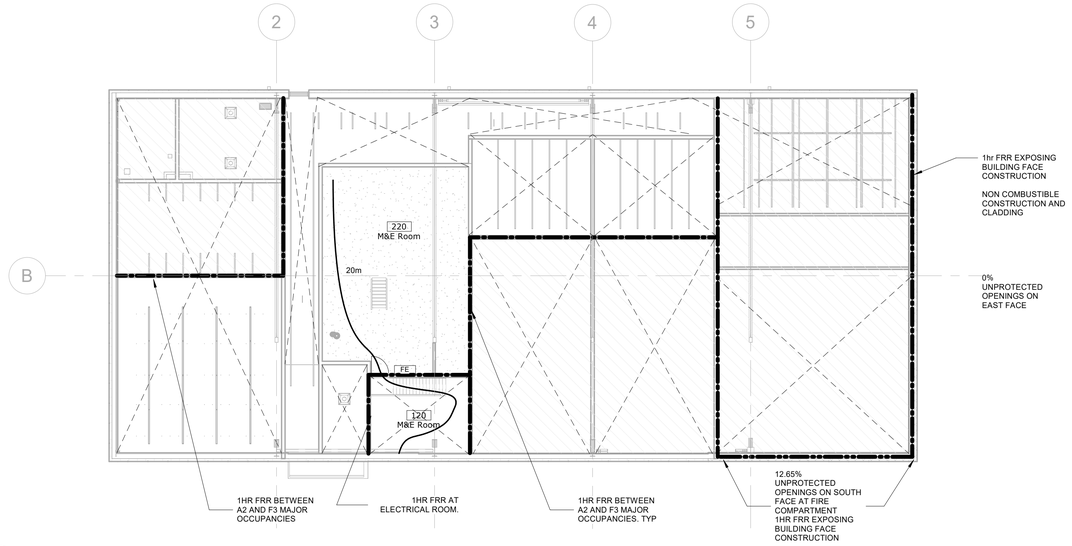
architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL

SCALE :	
DATE :	03/28/2024
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

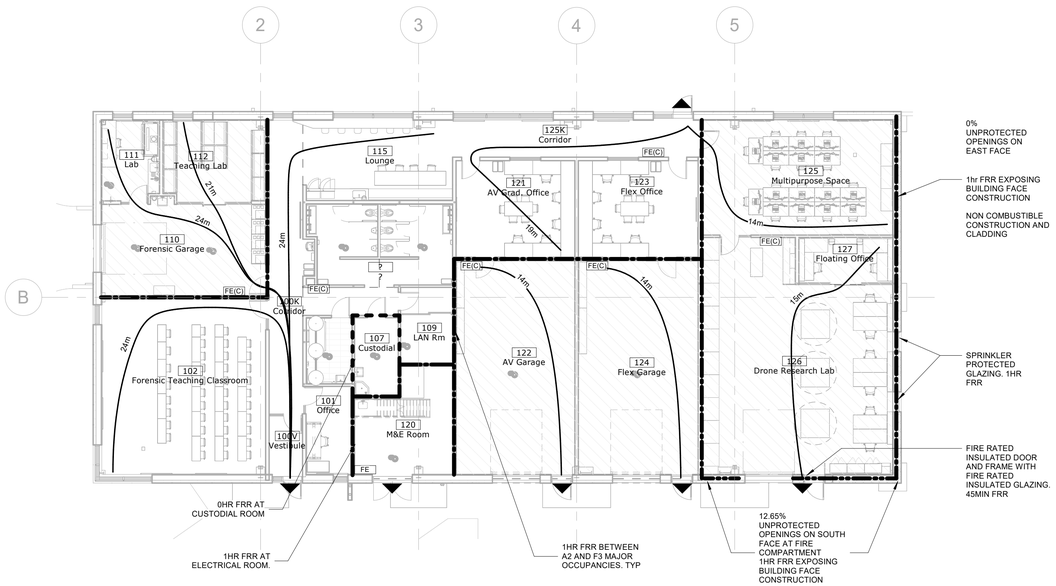
SHEET NO :

A001



2 A002 LEVEL 2 - LIFE SAFETY AND EGRESS

Scale: 1 : 150



1 A002 LEVEL 1 - LIFE SAFETY AND EGRESS

Scale: 1 : 150

DRAWING LEGEND:

- F3 MAJOR OCCUPANCY
- A2 MAJOR OCCUPANCY
- TRAVEL DISTANCE
- 0 HR FRR
- 1 HR FRR
- FE(C) FIRE EXTINGUISHER (WITH CABINET WHERE INDICATED)
- BUILDING EXIT

Building Occupant Load Calculation

Room	Area (sm)	sm/person T3.1.17.1	Occupancy	Basis
100V Vestibule	6.27	-	-	*T3.1.17.1*
100K Corridor	37.31	-	-	" "
125K Corridor	26.81	-	-	" "
115 Lounge	34.12	1.85	19	" "
102 Teaching Classroom	82.25	1.85	45	" "
110 Forensics Garage (school shop)	43.29	4.6	5	" "
111 Lab	13.27	4.6	3	" "
112 Teaching Lab	24.05	4.6	10 (actual)	" "
101 Office	11.62	9.3	2 (actual)	" "
105 Univ. WC	8.65	-	-	" "
107 Custodial	9.65	-	-	" "
109 LAN	11.23	-	-	" "
120 Mech / Elec	26.07	46	1	" "
106 + 108 Washrooms	31.57	-	-	" "
121 AV Grad Support (lab)	32.75	4.6	8	" "
122 AV Garage (lab)	72.75	4.6	16	" "
123 Flex Support (lab)	32.75	4.6	8	" "
124 Flex Garage (lab)	72.75	4.6	16	" "
125 MP Space (classroom)	61.62	1.85	34	" "
127 Floating Office	11.94	9.3	2 (actual)	" "
126 Drone Research Lab	114.26	4.6	24	" "
220 Mech / Elec	82.67	46	2	" "
Total			**203**	

Name of Practice:
Baird Sampson Neuert Architects (part of the WF Group)
Name of Project:
University of Toronto Mississauga – Pre- Engineered Building
Location:
3265 Principal's Road, Mississauga On.

Item	Ontario 2012 Building Code Data Matrix Part 3	OBC Reference (Part B u.n.o)
1	**Project Description:** ■ New ☐ Addition ☐ Alteration ☐ Change of Use New single storey research lab and classroom building.	■ Part 3 1.1.2. [A]
2	**Major Occupancies:** **A2** (classroom and research offices) **F3** (teaching and research labs / storage garage) 1hr FRR separation between areas of A2 and F3 occupancies	3.1.2.1.(2)
3	**Building Area** (sm) Existing: 0 New 857 (sm) Total 857 sm	1.4.1.2. [A]
4	**Gross Area** Existing 0 New 944 (sm) Total 944 sm	1.4.1.2. [A]
5	**Number of Storeys** Above grade **2** Below grade 0	1.4.1.2. [A] & 3.2.1.1.
6	**Building Height (m)** 6.2m	
7	**Number of Streets/Fire Fighter Access** - 2	3.2.2.10. & 3.2.5.
8	**Building Classification** - 3.2.2.25 (A2) Building contains multiple major occupancies of A2 and F3. Requirements for most restrictive major occupancy shall apply.	3.2.2.25 3.2.2.78 (3.2.2.6)
9	**Sprinkler System Proposed** ■ entire building ☐ selected compartments ■ in lieu of roof rating ☐ not required Sprinkler system is not required per building classification. Sprinkler system proposed. Roof is non rated and combustible. Sprinkler system proposed in lieu of roof rating required by 3.2.2.25 as permitted by 3.2.2.17.	3.2.2.25 3.2.2.78 3.2.2.17
10	**Standpipe required** ☐ Yes ■ No	3.2.9.
11	**Fire Alarm required** ■ Yes ☐ No	3.2.4.
12	**Water Service/Supply is Adequate** ■ Yes ☐ No	3.2.5.7 (1),(2)
13	**High Building** ☐ Yes ■ No	3.2.6
14	**Construction Restrictions Actual Construction** ■ Combustible permitted ☐ Non-combustible req'd ☐ Both ☐ Combustible ☐ Non-combustible ■ Both	3.2.2.25. 3.2.2.78
15	**Importance Category** ☐ Low ☐ Low human occupancy ☐ Post-disaster shelter ■ Normal ☐ High ☐ Minor storage building ☐ Explosive or hazardous substances ☐ Post-disaster	4.1.2.1.(3) & T4.1.2.1.B
16	**Seismic Hazard Index** (IE Fa Sa (0.2)) = 0.219 Seismic design required for Table 4.1.8.18. items 6 to 21: ((IE Fa Sa (0.2)) ≥ 0.35 or Post-disaster) ■ No ☐ Yes	4.1.2.1.(3) 4.1.8.18.(1)
17	**Occupant load** based on ■ sm/person ■ design of building Total occupant load: 203 people *Refer to Building Occupant Load Calculation Table*	3.1.17. 11.4.2.2 T3.1.17.1
18	**Barrier-free Design** ■ Yes ☐ No (Explain)	3.8.
19	**Hazardous Substances** ☐ Yes ■ N	3.3.1.2. & 3.3.1.19.
20	**Required Fire Resistance Rating (FRR)**	3.2.2.25 3.2.2.78
	Horizontal Assemblies FRR (Hours) — **Listed Design No. or Description**	
	Floor 0hr for non combustible — Concrete on metal deck	3.2.2.25
	Floor / ceiling at electrical room. 1hr. — Gypsum board membrane. OBC SB 2 component additive	3.6.2.1
	Roof 45min — Sprinklered in lieu of roof rating	3.2.2.25, 3.2.2.17
21	**Vertical Assemblies FRR (Hours)** — **Listed Design No. or Description**	
	A2 / F3 separation between teaching spaces and laboratory or storage garage spaces: 1hr. — GWB on metal stud partition. ULC W453	3.1.3.1
	Electrical room. 1hr	3.6.2.1
	Custodial room. 0hr.	3.3.1.20
	Fire compartmentalization (for limiting distance calculations). 1hr	3.2.3.2
	Exterior wall construction (east and part south). 1hr — Fire rated, non combustible insulated Metal Panel with mineral wool core. ULC S101 Intertek Design No KIP/CWP 180-01. Non combustible to ULC S114.	3.2.3.7

22 **Spatial Separation, Construction of Exterior Walls** — 3.2.3.1, T3.2.3.1D, T3.2.3.1B, 3.2.3.7, T3.2.3.7

Building Face	EBF area (sm)	Area of Unprotected Openings Proposed (%)	Area of Unprotected Openings Permitted (%)	Limiting Distance (m) Available	Construction of Exposing Building Face
North	235.4	24.2% (57.0sm)	100%	>9m available	No rating Combustible Construction permitted Combustible Cladding permitted
East	116.70	0%	0%	0m available	1hr FRR Non. Combustible Construction Non. Combustible Cladding. Fire rated, non combustible IMP provided Sprinkler protected glazing.

Analysis of spatial separation for east face at fire compartment facing adjacent building:
Existing facing building is F3 laboratory (Paleomagnetism lab)
Exposing fire compartment in existing building has EBF of 675m, and UPO of 28smsm (42%)
LD required for existing building is 6.3m (T3.2.3.1.B, extrapolated)
Distance between new and existing buildings is 6.3m
0m LD for new building = 0% permitted UPO (T3.2.3.1.D)

South 1	202.15	25.28% (51.11sm)	100%	>9m available	No rating Combustible Construction permitted Combustible Cladding permitted
South 2	68.64	12.65% (8.68sm)	16%	1.5m available	1hr FRR Non. Combustible Construction Non. Combustible Cladding. Fire rated, non combustible IMP provided

Analysis of spatial separation for south face at fire compartment facing adjacent building:
Proposed building is separated into fire compartments for application of spatial separation calculations (3.2.3.2)
Existing facing building is F3 storage garage (Grounds building)
Exposing fire compartment in existing building has EBF of 6144sm, and UPO of 97sm (67.5%)
LD required for existing building is 11m (T3.2.3.1.B)
Distance between new and existing buildings is 12.6m
1.6m available LD for new building at fire compartment 2 = 16% permitted UPO (T3.2.3.1.D)

West	116.70	15.5% (17.39sm)	100%	>9m available	45m FRR Combustible Construction permitted Combustible Cladding permitted

21	**Plumbing Fixture Requirements** Total building occupant load (calculated). 203 people 102 male / 102 female Required fixtures: 1 male, 2 female. *1 fixture for each 75 females. 1 fixture for each 100 males.* Fixtures provided: 3 male, 3 female + 1 universal = 4 male, 4 female effective.	3.7.4.3 (15) 3.7.4.2 (7)
22	**Egress and Exiting** Building is sprinklered. Rooms within suite are F3 and A2 occupancy. Each room requires one means of egress based on room area (under 200sm for A2, under 300sm for F3). Travel distance to exit > 45m from all areas.	3.3.1.5, T3.3.1.5(B) 3.4.2.5
23	**Energy Efficiency** Energy Cost Budget Method. National Energy Code of Canada for Buildings 2015, as modified by OBC SB-10 Chapter 3. Refer to NECB Compliance Workbook and Energy Modelling Report	SB-10

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
3	Issued for Design Development Costing	2024-03-28
4	Issued for Permit	2024-11-08
5	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
LIFE SAFETY AND CODE MATRIX

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE 6624

SCALE :	1 : 150
DATE :	06/16/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO : **A002**

ASSEMBLIES

WALL ASSEMBLIES

W1

W1: INSULATED METAL PANEL WITH PUR FOAM INSULATION

152 mm (6") INSULATED METAL PANEL. VERTICAL ORIENTATION
PREFINISHED GALVANIZED SHEET METAL FINISH ON BOTH SIDES
DOUBLE SEAL INTEGRATED JOINT.
EFFECTIVE R-VALUE: 45 hr·ft2·°F/Btu MINIMUM
HORIZONTAL GALVANIZED STEEL Z-GIRTS. REFER TO STRUCTURAL
BY OTHER

38mm VERTICAL GALVANIZED STEEL FURRING @ 450mm o.c.
15.9 mm PAINTED GYPSUM WALL BOARD WHERE INDICATED (TO APPROX 3450MM AFF) ABUSE-RESISTANT TO 1220 AFF

REFER TO ELEVATION LEGEND FOR FINISH TYPE / COLOUR OF IMP

W1A

W1A: INSULATED METAL PANEL WITH MINERAL FIBRE INSULATION
1 HR FRR (ULC S101. INTERTEK DESIGN NO. KIP/CWP 180-01).
1 HR FRR FROM INTERIOR SIDE PER OBC SB-2.
NON COMBUSTIBLE (ULC S114)

152 mm (6") INSULATED METAL PANEL WITH MINERAL FIBRE CORE. VERTICAL ORIENTATION
PREFINISHED GALVANIZED SHEET METAL FINISH ON BOTH SIDES
DOUBLE SEAL INTEGRATED JOINT.
EFFECTIVE R-VALUE: 24 hr·ft2·°F/Btu MINIMUM
HORIZONTAL GALVANIZED STEEL Z-GIRTS
BY OTHER

125mm MINERAL FIBRE RIGID INSULATION
38mm VERTICAL GALVANIZED STEEL FURRING.
2 LAYERS 15.9 mm TYPE X PAINTED GYPSUM WALL BOARD FULL EXTENT OF INTERIOR FACE. ABUSE RESISTANT TO 1220mm AFF

W1 IMP FINISH TYPES:
IMP1: METALLIC MEDIUM GREY
IMP2: DARK / CHARCOAL GREY
IMP3: METALLIC COPPER/ORANGE

W2

W2: CONCRETE FOUNDATION WALL
100mm EXTRUDED POLYSTYRENE RIGID INSULATION
12mm CONCRETE-FACE FINISH ON UPPER 600mm OF INSULATION.
10mm FLEECE LINED DRAINAGE BOARD
SELF ADHERED WATERPROOFING MEMBRANE
CONCRETE FOUNDATION WALL (REFER TO STRUCTURAL)

W2A

W2A: CANOPY FOUNDATION WALL
CONCRETE FOUNDATION WALL (REFER TO STRUCTURAL)
BY OTHER

W3

W3: CANOPY FIN WALL
4MM PREFINISHED ALUMINUM COMPOSITE PANEL WITH CONCEALED JOINT FASTENERS
(30MM TOTAL SYSTEM DEPTH)
VAPOUR PERMEABLE SELF ADHERED WATER SHEDDING AIR BARRIER MEMBRANE
16MM EXTERIOR GRADE PLYWOOD
125MM GALVANIZED ENGINEERED STEEL STUDS

STRUCTURAL GALVANIZED HSS POSTS
BY OTHER

16MM EXTERIOR GRADE PLYWOOD
VAPOUR PERMEABLE SELF ADHERED WATER SHEDDING AIR BARRIER MEMBRANE
4MM PREFINISHED ALUMINUM COMPOSITE PANEL WITH CONCEALED JOINT FASTENERS
(30MM TOTAL SYSTEM DEPTH)

ROOF ASSEMBLIES

R1

R1: INSULATED METAL PANEL ROOF
INSULATED METAL PANEL SYSTEM WITH STANDING SEAM PROFILE (IMP-4) ON PURLINS
(REFER TO STRUCTURAL DOCUMENTS FOR SIZES AND SPACING)

EFFECTIVE R-VALUE: 45 hr·ft2·°F/Btu MINIMUM
BY OTHER

R2

R2: CANOPY ROOF
LIQUID APPLIED PMMA ROOF MEMBRANE
7MM SBS BASE SHEET ROOFING PANEL
16MM EXTERIOR GRADE PLYWOOD SHEATHING
GALVANIZED STEEL JOIST FRAMING AT 450MM O.C. MAX

GALVANIZED STRUCTURAL STEEL BEAMS WITH THERMAL BREAK
BY OTHER

CANOPY SOFFIT ASSEMBLY AS NOTED

GLAZING ASSEMBLIES

G1

G1: ALUMINUM CURTAIN WALL GLAZING, TRIPLE-GLAZED INSULATED GLAZING UNITS
134mm MULLION BODY DEPTH ALUMINUM CURTAIN WALL FRAMING
2 SIDED STRUCTURAL SILICONE GLAZING (SSG)
TRIPLE GLAZED INSULATED GLASS UNIT (GL1)

G1A

G1A: ALUMINUM STOREFRONT GLAZING, SINGLE GLAZED AT VESTIBULE INTERIOR
115mm MULLION BODY DEPTH ALUMINUM STOREFRONT GLAZING
MIN 6mm TEMPERED GLASS (GL4)

G2

G2: FIRE RATED CURTAIN WALL GLAZING (1hr FRR)
THERMALLY BROKEN FIRE RATED STEEL CURTAIN WALL FRAMING
FIRE RATED INSULATED GLAZING UNIT (GL2)

GP1

GP1: INTERIOR GLAZED HOLLOW METAL SCREEN
38mm FACE WIDTH PAINTED HOLLOW METAL FRAMING
MIN 6mm TEMPERED GLASS (GL4)

GP2

GP2: INTERIOR FIRE-RATED GLAZED HOLLOW METAL SCREEN (1HR FRR)
38mm FACE WIDTH FIRE RATED PAINTED HOLLOW METAL FRAMING
MIN 6mm TEMPERED GLASS (GL5)

GP3

GP3: INTERIOR ALUMINUM FRAMED GLAZED SCREEN
ALUMINUM FRAMED INTERIOR SCREEN
MIN 6mm TEMPERED GLASS (GL4)
SILICONE BUTT JOINTS AT ALL VERTICAL PANEL JOINTS

GLAZING TYPES

GL1: TRIPLE GLAZED INSULATED GLAZING UNIT (45mm NOMINAL)
CERAMIC FRIT BIRD FRIENDLY MARKERS SURFACE 2 (5mm DOTS, 75mm SPACING, 45° ROTATION)
LOW-E COATING SURFACE 3 AND 5
SHGC: ≤ 0.3
U-VALUE: ≤ 0.12 Btu/°F·hr·ft2 CENTER OF GLASS

GL1A: DOUBLE GLAZED INSULATED GLAZING UNIT
CERAMIC FRIT BIRD FRIENDLY MARKERS SURFACE 2 (5mm DOTS, 75mm SPACING, 45° ROTATION)
LOW-E COATING SURFACE 3

GL2: FIRE RATED INSULATED GLAZING UNIT (57mm NOMINAL)

GL3: FIRE RATED IMPACT SAFETY RATED MONOLITHIC GLAZING UNIT (27mm NOMINAL)

GL4: CLEAR TEMPERED GLASS (MIN. 6mm OR AS INDICATED)

GL5: FIRE RATED IMPACT SAFETY RATED GLAZING (5mm NOMINAL)

FLOOR ASSEMBLIES

F1

F1: CONCRETE FLOOR SLAB
100mm REINFORCED CONCRETE SLAB ON GRADE. (REFER TO STRUCTURAL)
15mil BELOW SLAB POLYETHYLENE VAPOUR BARRIER
50mm BELOW SLAB RIGID INSULATION
MIN 200mm CLEAR CRUSHED STONE (20mm)

F2

F2: MECHANICAL MEZZANINE FLOOR
POURED CONCRETE ON COMPOSITE STEEL DECK. REFER TO STRUCTURAL

CEILING ASSEMBLIES

C1

C1: 16MM GYPSUM BOARD CEILING
PAINTED 16MM GYPSUM CEILING PANEL
75mm ACOUSTIC MINERAL WOOL BATT INSULATION
METAL CEILING FRAMING AS REQUIRED

C1A

C1a: HORIZONTAL MEMBRANE CEILING
1HR FRR OBC SB2 2.3.4, TABLE 2.3.4.B, T 2.3.5
(2) LAYER 16MM TYPE X GWB
38MM METAL FRAMING AT MAXIMUM 610mm O.C. 110MM OVERLAP AT JOINTS. 15MM CLEARANCE AT ENDS
FLOOR MEMBRANE ABOVE MIN 50MM CONCRETE ON FORMED STEEL SHEET (REFER TO FLOOR ASSEMBLY)

C2

C2: ACOUSTIC BAFFLES
9" DEEP ACOUSTIC BAFFLES SPACED 18" OC ON CABLE SUSPENSION SYSTEM

S1

S1: CANOPY SOFFIT

4MM PREFINISHED ALUMINUM COMPOSITE PANEL WITH CONCEALED JOINT FASTENERS
(30MM TOTAL SYSTEM DEPTH)
VAPOUR PERMEABLE SELF ADHERED WATER SHEDDING AIR BARRIER MEMBRANE
16MM EXTERIOR GRADE PLYWOOD SUBSTRATE SECURED TO CANOPY FRAMING.
CANOPY ROOF ASSEMBLY ABOVE.

PARTITION ASSEMBLIES

P1

P1: GYPSUM WALL BOARD PARTITION

16mm PAINTED GYPSUM WALL BOARD.
92mm STEEL STUDS @ 450mm o.c. MAX
89 mm MINERAL WOOL BATT INSULATION
16mm PAINTED GYPSUM WALL BOARD.

P1A

P1A: GYPSUM WALL BOARD PARTITION
1 HR F.R.R (ULC W453)

16mm PAINTED GYPSUM WALL BOARD.
92mm STEEL STUDS @ 450mm o.c. MAX
89 mm MINERAL WOOL BATT INSULATION
16mm PAINTED GYPSUM WALL BOARD.

P2

P2: GYPSUM WALL BOARD PARTITION

16mm PAINTED GYPSUM WALL BOARD.
152mm STEEL STUDS @ 450mm o.c. MAX
152 mm MINERAL WOOL BATT INSULATION
16mm PAINTED GYPSUM WALL BOARD.

P2A

P2A: GYPSUM WALL BOARD PARTITION
1 HR F.R.R (ULC W453)

16mm PAINTED GYPSUM WALL BOARD.
152mm STEEL STUDS @ 450mm o.c. MAX
152 mm MINERAL WOOL BATT INSULATION
16mm PAINTED GYPSUM WALL BOARD.

PARTITION NOTES

1. ALL GYPSUM BOARD PARTITIONS ARE TO BE CONSTRUCTED USING ABUSE RESISTANT GYPSUM BOARD UP TO 1220mm ABOVE FINISHED FLOOR.
2. USE WATER RESISTANT GYPSUM BOARD ON PARTITIONS AT SINKS AND WATER FOUNTAINS UNLESS NOTED OTHERWISE.
3. REPLACE GYPSUM BOARD WITH GLASS MAT TILE BACKER BOARD AT WALL TILE FINISH (WF1) AND FIBRE REINFORCED PLASTIC WALL PANEL (WF2) FINISH LOCATIONS WHERE INDICATED.
4. ALL FIRE RATED GYPSUM BOARD PARTITIONS SHOWN ON FIRE & LIFE SAFETY PLANS ARE TO EXTEND FROM TOP SLAB TO THE UNDERSIDE OF STRUCTURAL FLOOR SLAB OR INSULATED METAL PANEL ROOF PANELS ABOVE UNLESS NOTED OTHERWISE.
5. ALL FIRE RATED AND ACOUSTIC GYPSUM BOARD PARTITIONS ARE TO USE TYPE 'X' GYPSUM BOARD.
6. REFER TO ENGINEERING JUDGMENT FIRE STOP DETAIL 646436A FROM HILTI FOR REQUIREMENTS FOR CONTINUITY OF FIRE SEPARATION AT INTERIOR FIRE RATED PARTITIONS MEETING EXTERIOR INSULATED METAL PANEL ROOF AND WALL ASSEMBLIES.
7. 7. GYPSUM WALLBOARD TO BE CONTINUOUS TO UNDERSIDE OF FLOOR/ROOF ABOVE ON BOTH SIDES OF PARTITION UNLESS OTHERWISE NOTED.

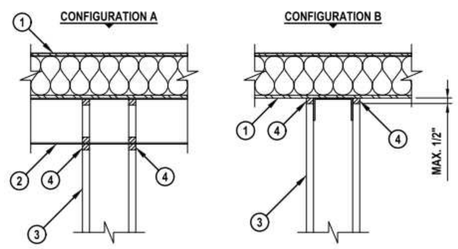
ENGINEERING JUDGMENT FIRESTOP DETAIL

THIS ENGINEERING JUDGMENT REPRESENTS A FIRESTOP SYSTEM THAT WOULD BE EXPECTED TO PASS THE STATED RATINGS IF TESTED

PROJECT : UTM PRE-ENGINEERED BUILDING
ADDRESS : 3265 PRINCIPAL'S ROAD, MISSISSAUGA , ONTARIO L5L 1C6

ISSUED TO : BSN ARCHITECTS

Ratings
F-RATING = 1-HR. (SEE NOTE NO. 4 BELOW)



1. INSULATED METAL ROOF ASSEMBLY (NON-RATED).
2. STEEL PURLIN (MIN. 16 GA.) (NON-RATED).
3. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED) WITH MINIMUM 3-1/2" WIDE STEEL STUDS (1-HR. FIRE-RATING).
4. MINIMUM 5/8" DEPTH HILTI CP 606 FLEXIBLE FIRESTOP SEALANT.

NOTES :
1. MAXIMUM WIDTH OF JOINT = 1/2".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1".
3. [NOT SHOWN] WHEN ANNULAR SPACE IS 0", APPLY MINIMUM 1/2" BEAD HILTI CP 606 FLEXIBLE FIRESTOP SEALANT AT POINT OF CONTACT.
4. FIRE-RATING OF ASSEMBLY IS DEPENDENT UPON THE PERFORMANCE OF PURLIN AND ROOF ASSEMBLY UNDER FIRE CONDITIONS.

Referenced Tested Systems
(REFERENCE : UL/cUL SYSTEM NO. HW-D-0184, HW-D-0209, W-L-1297, & W-L-7130; UL SYSTEM NO. CJ-D-0004)

Project Application Details
CS0251427

Applicable Test Method
CAN/ULC S115-23

HILTI, Inc.
Plano, Texas USA (800) 879-8000

Designed by Hilti FPE
Austin Griffith

Drafter
NG

Sheet 1 of 1
Scale 5/32" = 1"
Date Sep. 03, 2024

Drawing No.
646436a

Saving Lives through Innovation and Education

ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AC	AIR CONDITIONING
ALUM	ALUMINUM
ARCH	ARCHITECTURAL
ASPH	ASPHALT
AV	AUDIO-VISUAL
BD	BOARD
BLDG	BUILDING
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CGSB	CANADIAN GENERAL STANDARD BOARD
CJ	CONTROL JOINT
Cm	CENTIMETER
CONC	CONCRETE
CORR	CORRIDOR
CR	CARD READER
CT	CERAMIC TILE
CL	CENTRE LINE
COL	COLUMN
CONT	CONTINUOUS
CSA	CANADIAN STANDARDS ASSOCIATION
CTR	CENTRE
C/W	COMPLETE WITH
DIA	DIAMETER
DIM	DIMENSION
DO	DOOR OPENER / PUSH BUTTON
DWG	DRAWING
E	EAST
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRIC(AL)
ENCL	ENCLOSURE
ENG	ENGINEER
EQ	EQUAL
EXP	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAS	FIRE ALARM STATION
FB	FLOOR BOX
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISHED
FTG	FOOTING
F.R.	FIRE RATED
FRR	FIRE RESISTANCE RATED
FURR	FURRING
GA	GAUGE
GAL	GALVANIZED
GB	GRAB BAR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GL	GLASS
GR	GRADE
GWB	GYPSUM WALL BOARD
HB	HOSE BIB
HC	HANDICAPPED
HD	HAND DRYER
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
IGU	INSULATED GLAZING UNIT
IMP	INSULATED METAL PANEL
INSUL	INSULATION or INSULATED
KP	KICK PLATE
LAB	LABORATORY
LAM	LAMINATE
LED	LIGHT EMITTING DIODE
m	METRES
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBREBOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
mm	MILLIMETER
N	NORTH
ND	NAPKIN DISPOSAL
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PREVENTION ASSOCIATION
No.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OBC	ONTARIO BUILDING CODE
OC	ON CENTRE
O/H	OVERHEAD
PTN	PARTITION
PCONC	PRECAST CONCRETE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PTD	PAINT
POL	POLISHED
PTD	PAINT
PUR	POLYURETHANE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN REINFORCE
REQ'D	REQUIRED
RESIL	RESILIENT
REV	REVISION
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SCH	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SP	STANDPIPE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
TB	TACK BOARD
TEL	TELEPHONE
TEMP.	TEMPERED
THR	THRESHOLD
T.O.	TOP OF
TYP	TYPICAL
UL	UNDERWRITER LABORATORY
UNO	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
UTIL	UTILITY
VEST	VESTIBULE
W	WEST
WC	WATER CLOSET
WD	WOOD
WPM	WATERPROOF MEMBRANE
WR	WASHROOM
WS	WEATHERSTRIPPING

DRAWING ANNOTATIONS

DRAWING LEGEND

FHC	FIRE HOSE CABINET C/W FIRE EXTINGUISHER.
101	DOOR NUMBER
W22	WINDOW NUMBER
RWL	RAIN WATER LEADER
FD	FLOOR DRAIN, REFER TO MECH.
FB	RECESSED FLOOR BOX, REFER TO ELEC..
CR	CARD READER, REFER TO ELEC.
DO	AUTOMATIC DOOR OPERATOR CONTROL, REFER TO ELEC.
	OWNER PROCURED FURNITURE

ELEVATION LEGEND

	GLAZING
TEMP.	TEMPERED GLAZING
	IMP 1 - METALIC MEDIUM GREY
	IMP 2 - CHARCOAL
	IMP 3 - METALIC COPPER / ORANGE

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
3	Issued for 100% SD	2023-12-21
4	Issued for Design Development Costing	2024-03-28
5	Issued for Permit	2024-11-08
6	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ASSEMBLIES, LEGENDS & NOTES

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	06/16/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A003

ROOM FINISH SCHEDULE

Room Number	Room Name	Area	Floors		Walls				Ceiling Finish	SIGNAGE REQUIREMENTS - REFER TO SIGNAGE PACKAGE
			Floor Finish	Base Finish	North	East	South	West		
100K	Corridor	29 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP	
100V	Vestibule	6 m²	FF-4	WB-1	n/a	PTD	n/a	PTD	C3	
101	Office	11 m²	FF-3	WB-1	PTD	PTD	PTD	PTD	C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
102	Forensic Teaching Classroom	81 m²	FF-3	WB-1	PTD	PTD	PTD	PTD	C2	SIGNAGE: NAME PLATE AND ROOM NUMBER (W/HOLDER FOR ROOM SCHEDULE)
105K	Corridor	8 m²	FF-1	WB-1	PTD	PTD	PTD	n/a	C1	SIGNAGE: MAIN DIRECTORY
106	Men's Washroom	15 m²	FF-2	WB-2	WF1	WF1	PTD	WF1	C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
107	Custodial	10 m²	FF-5	WB-3	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
108	Women's Washroom	16 m²	FF-2	WB-2	WF1	WF1	WF1	WF1	C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
109	LAN Rm	11 m²	FF-7	WB-1	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
110	Forensic Garage	44 m²	FF-5	WB-3	PTD	PTD	WF2	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
111	Lab	13 m²	FF-5	WB-3	PTD	PTD	PTD	PTD	C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
112	Teaching Lab	24 m²	FF-5	WB-3	PTD	PTD	PTD	PTD	C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
115	Lounge	34 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP / C1	SIGNAGE: NAME PLATE AND ROOM NUMBER
120	M&E Room	26 m²	FF-6	WB-1	PTD	PTD	PTD	PTD	EXP	
121	AV Grad. Office	33 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
122	AV Garage	72 m²	FF-5	WB-1	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
123	Flex Office	33 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
124	Flex Garage	73 m²	FF-5	WB-3	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
125	Multipurpose Space	62 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	C2	SIGNAGE: NAME PLATE AND ROOM NUMBER
125K	Corridor	26 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP	
126	Drone Research Lab	116 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	EXP	SIGNAGE: NAME PLATE AND ROOM NUMBER
127	Floating Office	12 m²	FF-1	WB-1	PTD	PTD	PTD	PTD	C1	SIGNAGE: NAME PLATE
220	M&E Room	63 m²	FF-6	WB-1	PTD	PTD	PTD	PTD	EXP	

GENERAL NOTE: REFER TO INTERIOR ELEVATIONS FOR EXTENT OF WALL TILE FINISH

FLOOR FINISHES

FF1	POLISHED CONCRETE FINISH
FF2	PORCELAIN TILE
FF3	RESILIENT SHEET FLOORING
FF4	RESILIENT LOW PROFILE ENTRANCE MATTING
FF5	EPOXY FLOOR COATING
FF6	TROWELED SEALED CONCRETE SLAB
FF7	ANTI STATIC VINYL FLOOR TILE

COORDINATE TOP OF SLAB TO ACHIEVE FLUSH SURFACE BETWEEN ADJACENT FLOOR FINISHES.

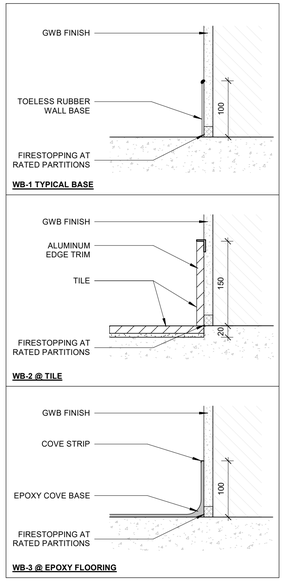
WALL FINISHES

WF1	8MM PORCELAIN WALL TILE. FULL HEIGHT TO CEILING UNLESS NOTED OTHERWISE
WF2	FIBREGLASS REINFORCED WALL PANEL

PAINT FINISHES

ALL PAINTABLE SURFACES PAINTED PT1 (WHITE) UNLESS NOTED OTHERWISE)

PT1	WHITE
PT2	FEATURE COLOUR - ORANGE / RED
PT3	FEATURE COLOUR - DARK BLUE
PT4	MEDIUM GREY
PT5	DARK / CHARCOAL GREY

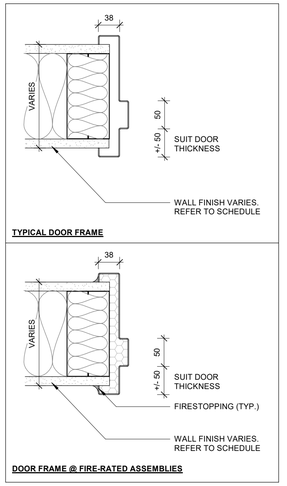


TYPICAL WALL BASE DETAILS

DOOR & SCREEN SCHEDULE

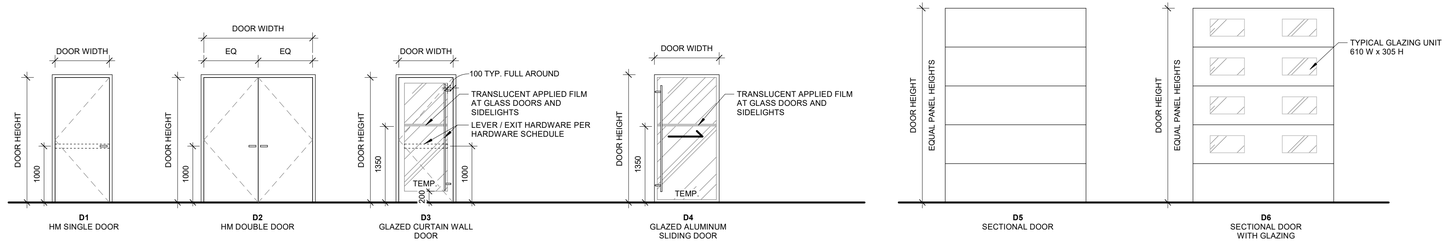
Door Mark	Location	Width	Height	Door				Frame		Hardware Schedule Set *	Fire Rating	Insulated / Thermal Break	Notes
				Type / Elev	Material	Finish	Glazing	Material	Finish				
GROUND FLOOR													
100V	Vestibule	965	2240	D3	AL	PTD	GL1A	AL	PTD	9.0		No	
101	Office	965	2240	D1	HM	PTD		HM	PTD	11.0		No	
102	Forensic Teaching Classroom	960	2229	D1	HM	PTD		HM	PTD	10.0		No	
105		965	2132	D1	HM	PTD		HM	PTD	17.0		No	
107	Custodial	965	2132	D1	HM	PTD		HM	PTD	15.0	0 hr	No	
109	LAN Rm	965	2132	D1	HM	PTD		HM	PTD	11.0		No	
110	Forensic Garage	965	2232	D1	HM	PTD		HM	PTD	12.0	3/4 hr	No	
111	Lab	965	2228	D1	HM	PTD		HM	PTD	13.0		No	
112	Teaching Lab	1155	2270	D4	AL	PTD	GL4	AL	PTD	2.0		No	ADD BLACKOUT FILM
121	AV Grad. Office	965	2220	D3	HM	PTD	GL4	HM	PTD	11.0		No	
122	AV Garage	965	2228	D1	HM	PTD		HM	PTD	14.0	3/4 hr	No	
123	Flex Office	965	2220	D3	HM	PTD	GL4	HM	PTD	11.0		No	
124	Flex Garage	965	2228	D1	HM	PTD		HM	PTD	14.0	3/4 hr	No	
125	Multipurpose Space	965	2240	D1	HM	PTD	GL5	HM	PTD	10.0	3/4 hr	No	
126	Drone Research Lab	965	2225	D3	HM	PTD	GL4	HM	PTD	8.0		No	
127	Floating Office	1620	2270	D4	AL	PTD	GL4	AL	PTD	2.0		No	
E100V	Vestibule	965	2240	D3	AL	PTD	GL1A	AL	PTD	3.0		Yes	
E110	Forensic Garage	2540	3450	D5	STL	PTD		STL		1.0		Yes	
E120	M&E Room	2006	2240	D2	HM	PTD		HM	PTD	5.0		Yes	
E122	AV Garage	1016	2240	D3	AL	PTD	GL1A	AL	PTD	7.0		Yes	
E122b	AV Garage	2540	3450	D6	STL	PTD	GL1A	STL		1.0		Yes	
E124	Flex Garage	1016	2240	D3	AL	PTD	GL1A	AL	PTD	7.0		Yes	
E124b	Flex Garage	2540	3450	D6	STL	PTD	GL1A	STL		1.0		Yes	
E125K	Corridor	1016	2240	D3	AL	PTD	GL1A	AL		4.0		Yes	
E126	Drone Research Lab	1016	2240	D3	STL	PTD	GL3	STL	PTD	6.0	1 hr	Yes	
E126b	Drone Research Lab	2540	3450	D6	STL	PTD	GL1A	STL		1.0		Yes	
MEZZ. FLOOR													
220	M&E Room	915	2134	D1	HM	PTD	NONE	HM	PTD	16.0	3/4 hr	No	

* REFER TO DOOR HARDWARE SCHEDULE INCLUDED IN THE SPECIFICATIONS



TYPICAL INTERIOR DOOR FRAME DETAILS

DOOR TYPE ELEVATIONS



CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
3	Issued for 100% SD	2023-12-21
4	Issued for Design Development Costing	2024-03-28
5	Issued for Permit	2024-11-08
6	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

SCHEDULES

architects
Baird Sampson Neuert

416.363.8877 bsnarchitects.com

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	06/16/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

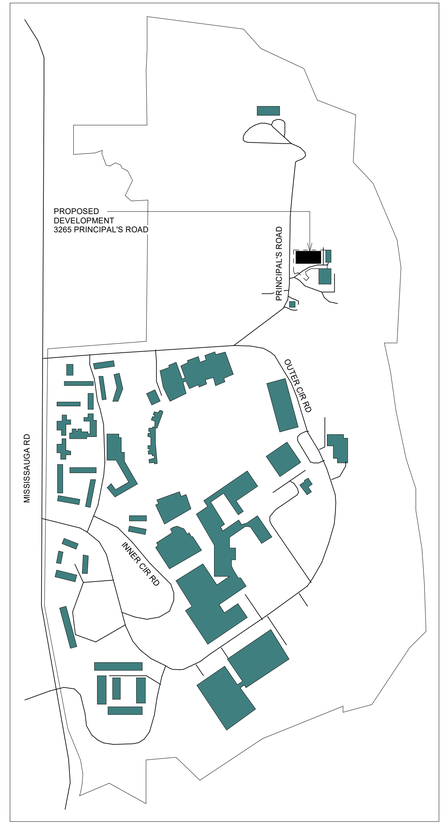
SHEET NO :

A004

1 A100 — 100_Context Plan
Scale: 1 : 500

CONTEXT PLAN LEGEND

- CREDIT VALLEY CONSERVATION REGULATORY AREA
- WETLAND AREA
- WETLAND BUFFER (10m and 30m)
- WOODLAND DRIPLINE
- EXISTING
- BOUNDARY OF PROPOSED WORK

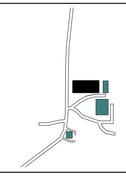


2 A100 — UTM CAMPUS MAP
Scale: NTS

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
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5	Issued for Design Development Costing	2024-03-28
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7	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

CONTEXT PLAN

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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	05/24/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

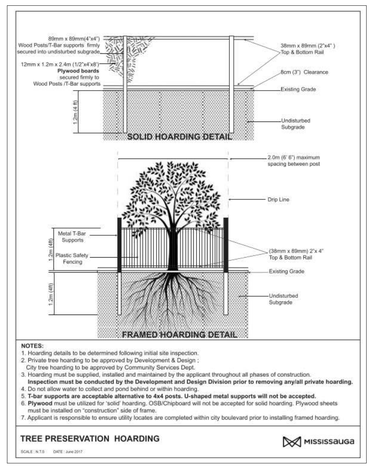
SHEET NO : **A100**

PROJECT INFORMATION AND ZONING ANALYSIS

PROJECT NAME:	UTM PRE-ENGINEERED BUILDING
PROJECT ADDRESS:	3265 PRINCIPAL'S ROAD
CITY IDENTIFIER:	116808600 (Z-24)
LEGAL DESCRIPTION:	PT LTS 3, 5 RANGE 1NDS,, LT 4, PT LTS 3,5 RANGE 2 NDS. PT LTS 3, 4 RANGE 3 NDS, PT BLK M PL 550, PT RDAL BTN RANGE 2 & RANGE 3 NDS - 43R31817 PTS 4-6, 43R-18295 PT 1
SPA PROJECT NUMBER:	SP 21-4 W8 (PREVIOUSLY PAM 20-138 W8)

ZONING ANALYSIS. CITY OF MISSISSAUGA BYLAW 0225-2007

ZONE:	I-5 (ZONING MAP 24)
PROPOSED USE:	INSTITUTIONAL (UNIVERSITY/COLLEGE), AS PERMITTED
CAMPUS LOT AREA:	897,543.66 m2
DEVELOPMENT AREA OF PROPOSED PROJECT:	approx. 2260 m2
COVERAGE OF PROPOSED PROJECT:	863 m2
PROPOSED GROSS FLOOR AREA:	Total: 779m2 Basement: N/A Ground floor: 859m2 - 38m2 - 42m2 = 779m2 (ground floor - washrooms - Mechanical & Electrical) Mechanical mezzanine: 95m2 (Not included in GFA)
FLOOR SPACE INDEX:	779m2 proposed + 274,884m2 existing / 897,543.66m2 lot area = 0.307:1
PERMITTED GROSS FLOOR AREA:	N/A
PROPOSED BUILDING HEIGHT:	6.20m TOP OF ROOF 7.80m TOP OF MECHANICAL EQUIPMENT ENCLOSURE
FRONT YARD SETBACK:	MEASURED FROM BUILDING TO EDGE OF PRIVATE ROAD MIN REQUIRED: 7.50m (N/A - INTERNAL ROADS WITHIN SINGLE CONSOLIDATED PROPERTY) PROPOSED: 4.10m
ROOF EAVES ENCROACHMENT:	PERMITTED: 0.45m PROPOSED: 0.00m *(PROPOSED ROOF EDGE 4.10m FROM LOT BOUNDARY AT ROAD)*
LANDSCAPED BUFFER:	MIN REQUIRED: 4.50m (N/A - INTERNAL LOT BOUNDARY AT ROAD WITHIN SINGLE CONSOLIDATED PROPERTY) PROPOSED: 4.10m
PARKING:	REQUIRED SPACES: 1.1 SPACE FOR 100m2 GFA. 779m2/100m2 x 1.1 = 8.57 = 9 SPACES REQUIRED PROVIDED: 2 + 1 ACCESSIBLE EXISTING 104 SURPLUS SPACES ON CAMPUS - LESS 5 SPACES ON EXISTING SITE = 99 SURPLUS SPACES 99 SPACES - 6 (PROJECT DEFICIT) = **93 SURPLUS REMAINING**
BICYCLE PARKING:	EXISTING 359 TOTAL BICYCLE PARKING SLOTS PROPOSED: 6 ADDITIONAL BICYCLE PARKING SLOTS (NOT REQUIRED NON-RESIDENTIAL USES LESS THAN 1000M2 GFA)



NOTES:
1. Hoarding details to be determined following initial site inspection.
2. Private tree hoarding to be approved by Development & Design ; City tree hoarding to be approved by Community Services Dept.
3. Hoarding must be supplied, installed and maintained by the applicant throughout all phases of construction. **Inspection must be conducted by the Development and Design Division prior to removing any/all private hoarding.**
4. Do not allow water to collect and pond behind or within hoarding.
5. **T-bar supports are acceptable alternative to 4x4 posts. U-shaped metal supports will not be accepted.**
6. **Plywood** must be utilized for 'solid' hoarding. OSB/Chipboard will not be accepted for solid hoarding. Plywood sheets must be installed on "construction" side of frame.
7. Applicant is responsible to ensure utility locates are completed within city boulevard prior to installing framed hoarding.

TREE PRESERVATION HOARDING

SCALE: N.T.S DATE: June 2017

MISSISSAUGA

SITE PLAN NOTES

1. GC TO PROVIDE CONTINUOUS CCTV MONITORING OF SITE THROUGHOUT CONSTRUCTION. REFER TO SECURITY.

2. SAFE ACCESS TO EXISTING ADJACENT BUILDINGS TO BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION NOTE:

The applicant is responsible for ensuring that tree protection hoarding is maintained throughout all phases of demolition and construction in the location and condition as approved by the Planning and Building Department. No materials (building materials, soil, etc.) may be stockpiled within the area of hoarding. Failure to maintain the hoarding as originally approved or the storage of materials within the hoarding will be cause for the Letter of Credit to be held for two years following completion of all site works. Hoarding must be inspected prior to the removal of any tree hoarding from the site.

Owner's Signature: _____

Date: _____

CURB CUTS AND RAMPS:

If the final course of asphalt paving is delayed, install a temporary lift of asphalt at ramps or curb cuts to provide barrier-free access.

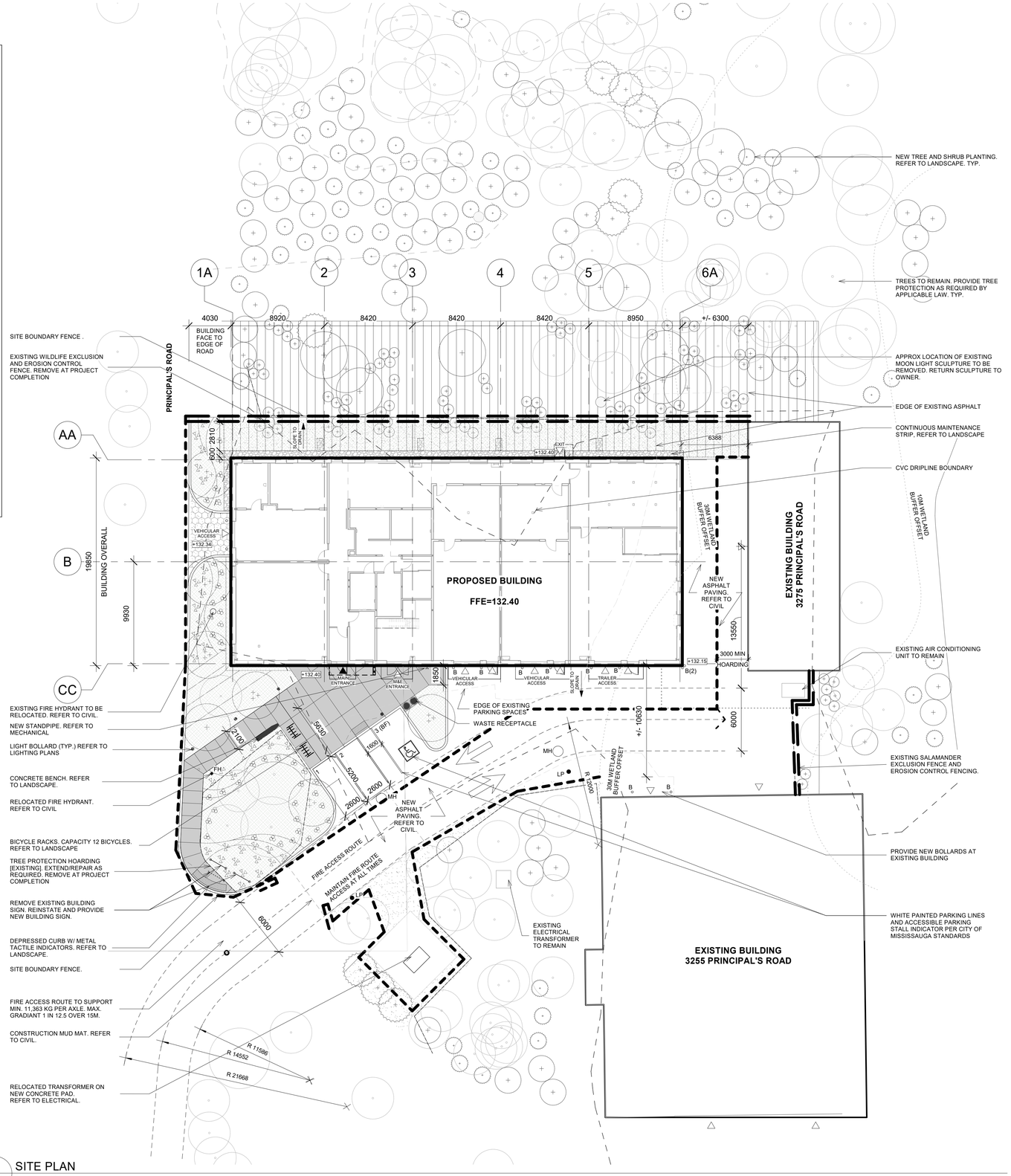
SITE GRADING:

Refer to Site Grading Plan prepared by MTE Consultants, Drawing C2.1, Revision 4, for the purposes of obtaining site grading information.

Prior to commencing construction, all required hoarding, in accordance with the Ontario Occupational Health & Safety Act and Regulations for construction projects, must be erected and then maintained throughout all phases of the project.

SITE PLAN LEGEND

- AREA OF WORK BOUNDARY LINE AND SITE BOUNDARY FENCE
- TREE PROTECTION HOARDING. REFER TO CIVIL.
- CVC DRIPLINE BOUNDARY
- WETLAND BUFFER ZONE
- SALAMANDER EXCLUSION AND EROSION CONTROL FENCING (EXISTING).
- AREA OF PLANTING. REFER TO LANDSCAPE
- WOODLAND BUFFER ZONE
- TURFSTONE PAVING. REFER TO LANDSCAPE
- CONCRETE PAVING. REFER TO LANDSCAPE
- STONE MAINTENANCE STRIP. REFER TO LANDSCAPE
- B — CONC. FILLED STEEL BOLLARD
- MH — MANHOLE. REFER TO CIVIL.
- FH — FIRE HYDRANT. REFER TO CIVIL.
- LP — POLE MOUNTED LIGHT FIXTURE.



1 A101 SITE PLAN
Scale: 1 : 200

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

TRUE NORTH PROJECT NORTH

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5	Issued for Design Development Costing	2024-03-28
6	Issued for Permit	2024-11-08
7	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
SITE PLAN

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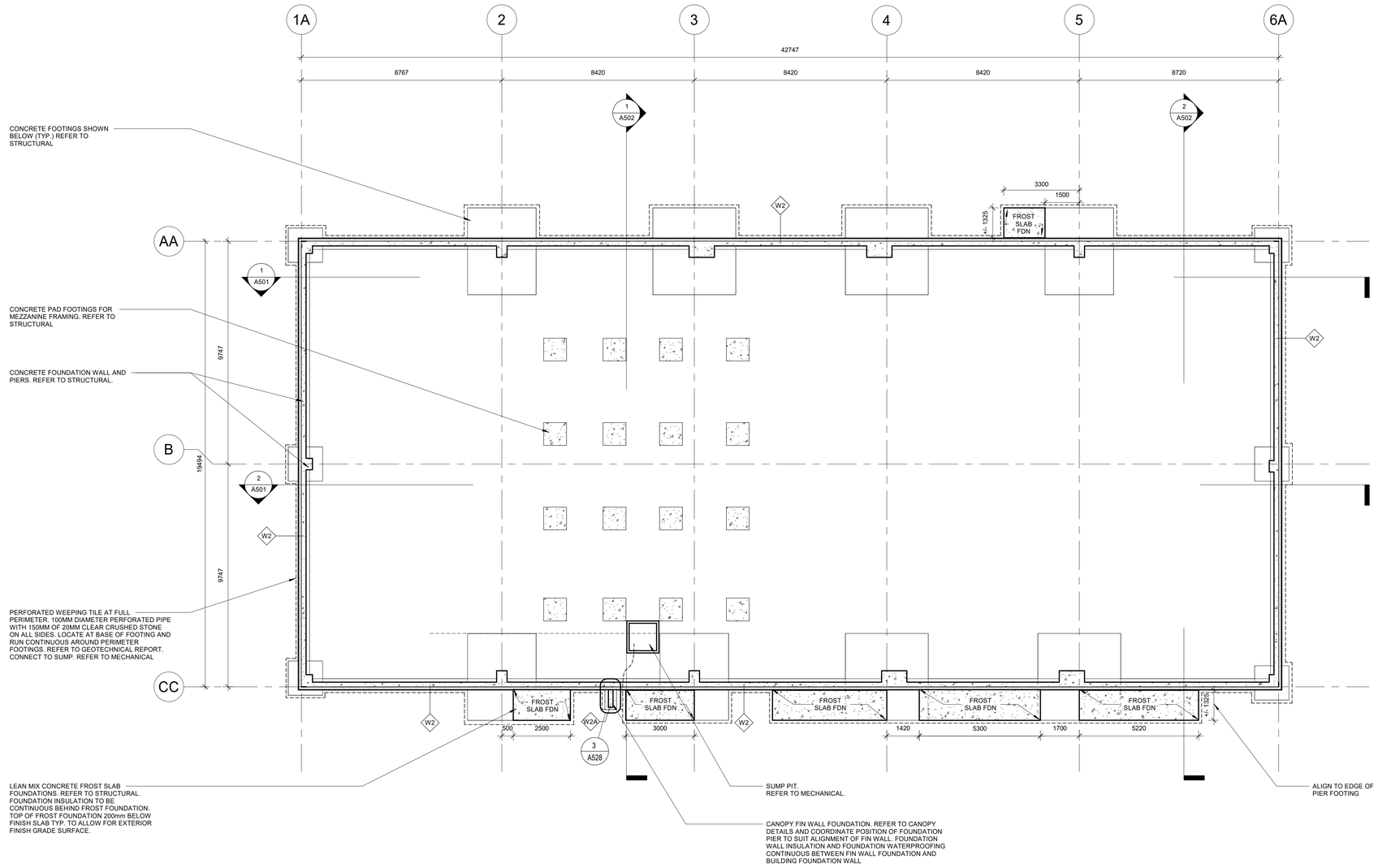
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	05/07/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO : **A101**

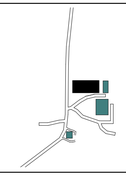


1 A200 FOUNDATION PLAN
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



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CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

FOUNDATION PLAN

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Baird Sampson Neuert
416.363.8877 bsnarchitects.com

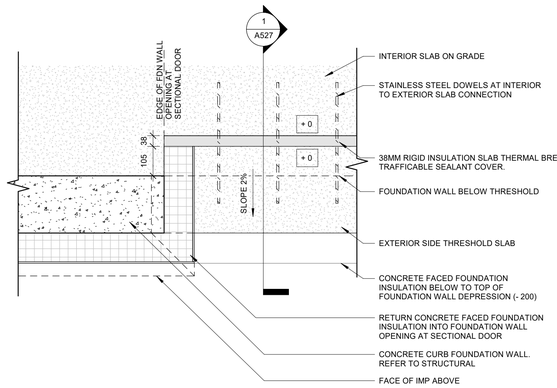
SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

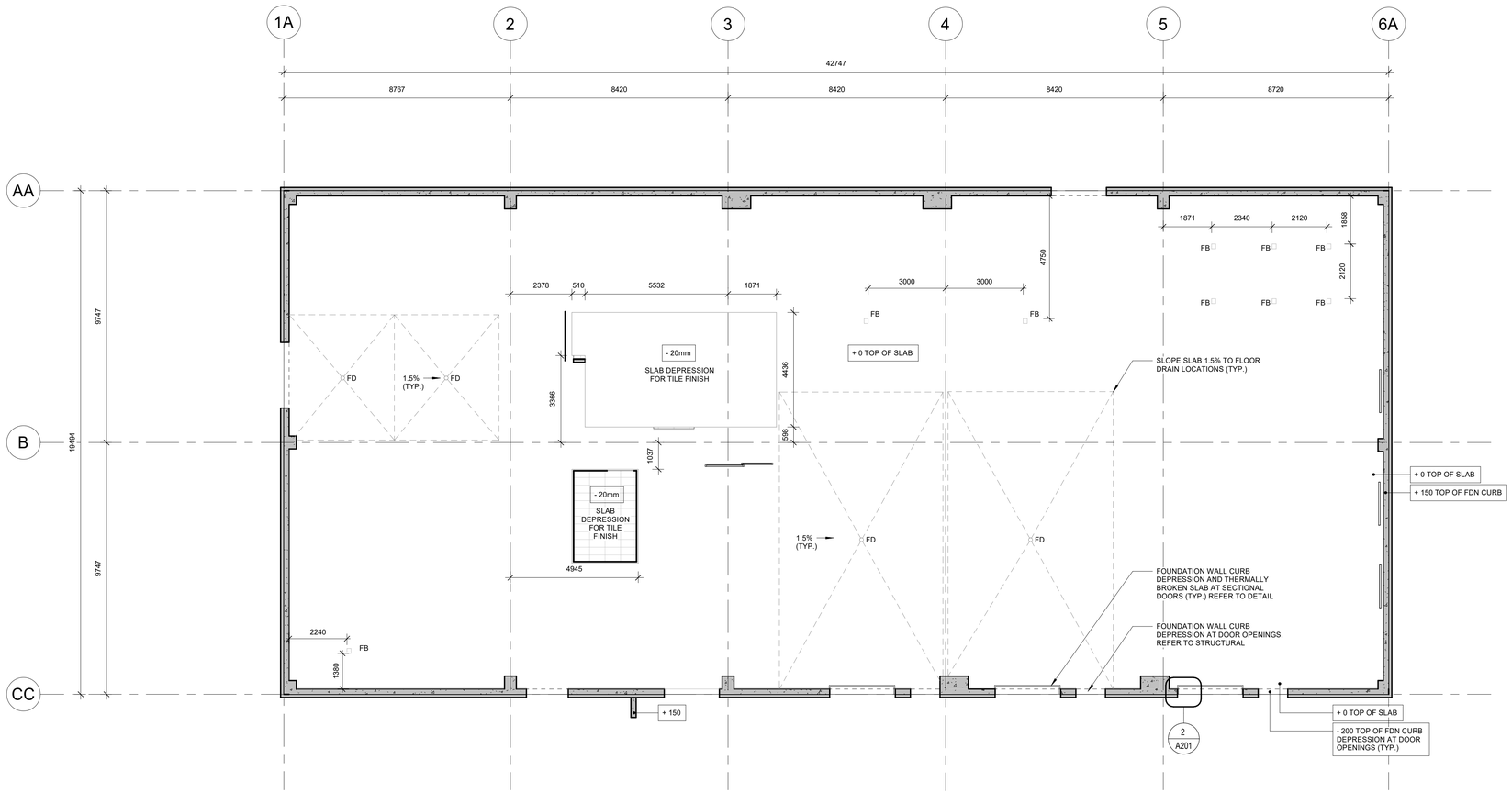
SCALE :	1 : 100
DATE :	05/12/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

A200



2 A201 SLAB EDGE DETAIL AT OVERHEAD DOOR
Scale: 1 : 10



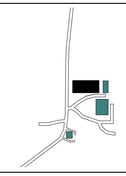
NOTE: WIDTH AND POSITION OF ALL CURB DEPRESSIONS FOR OPENINGS TO BE COORDINATED AND FINALIZED WITH CONSULTANT PRIOR TO PLACING CONCRETE

1 A201 SLAB EDGE PLAN
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

SLAB EDGE PLAN

architects
Baird Sampson Neuert

416.363.8877 **bsnarchitects.com**

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	05/12/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

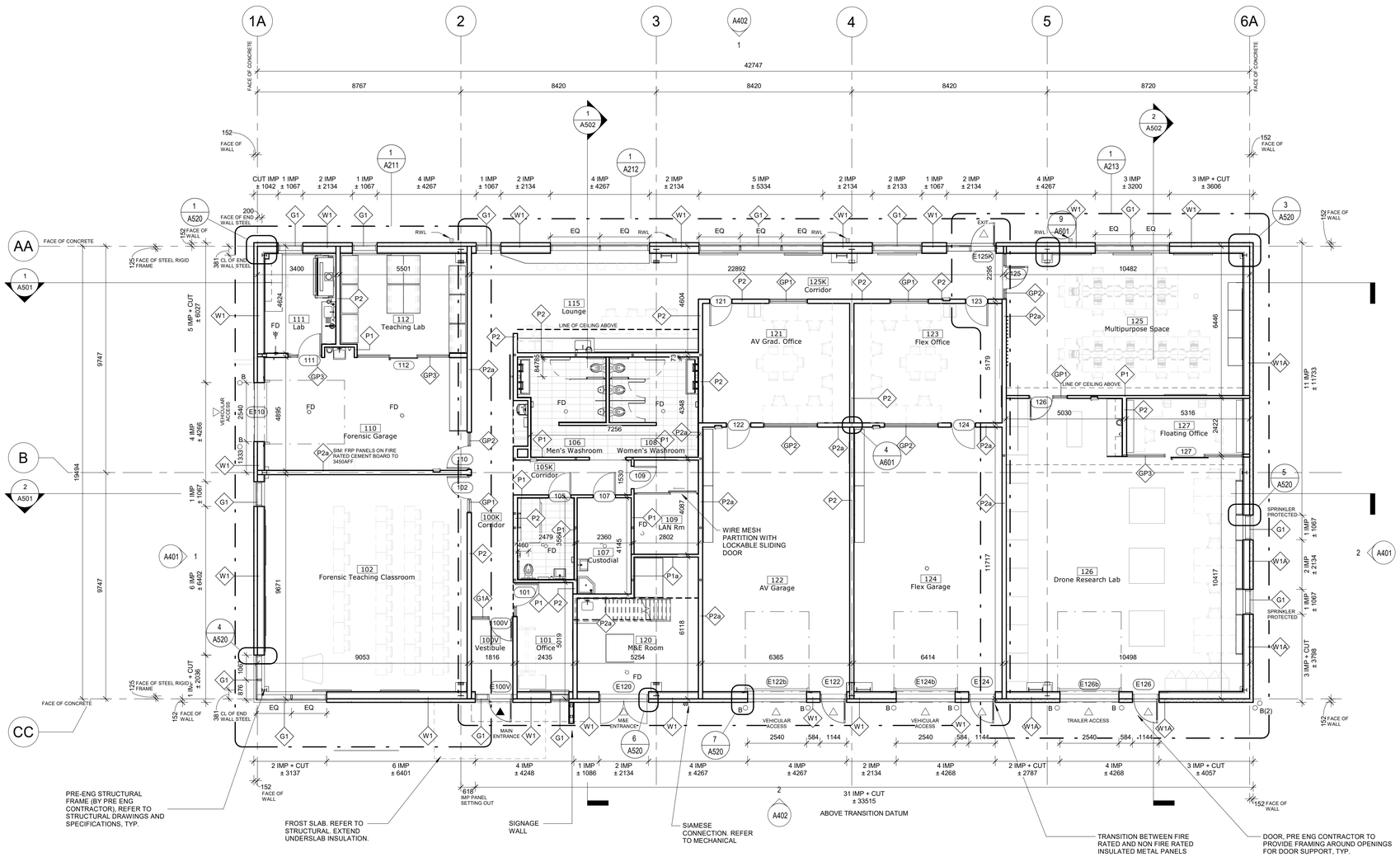
SHEET NO :

A201

GENERAL NOTES:

1. LAYOUT AND DIMENSIONS OF WALL SEGMENTS AND OPENING WIDTHS ARE BASED ON A NOMINAL 1067 (42") INSULATED METAL PANEL MODULE. OWNER'S PRE-ENGINEERED BUILDING CONTRACTOR TO CONFIRM PANEL SIZE. POSITIONING AND WIDTH OF OPENINGS MAY NEED TO BE ADJUSTED IF AN ALTERNATIVE INSULATED METAL PANEL IS USED.
BASIS OF CONTRACT TO ASSUME 1067mm NOMINAL INSULATED METAL PANEL WIDTH.

2. ALL DIMENSIONS FOR PARTITIONS ARE TO FACE OF STUD AND FROM GRIDLINE.

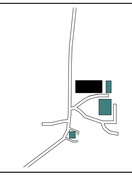


1 A202 GROUND FLOOR PLAN
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
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6	Issued for Permit	2024-11-08
7	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

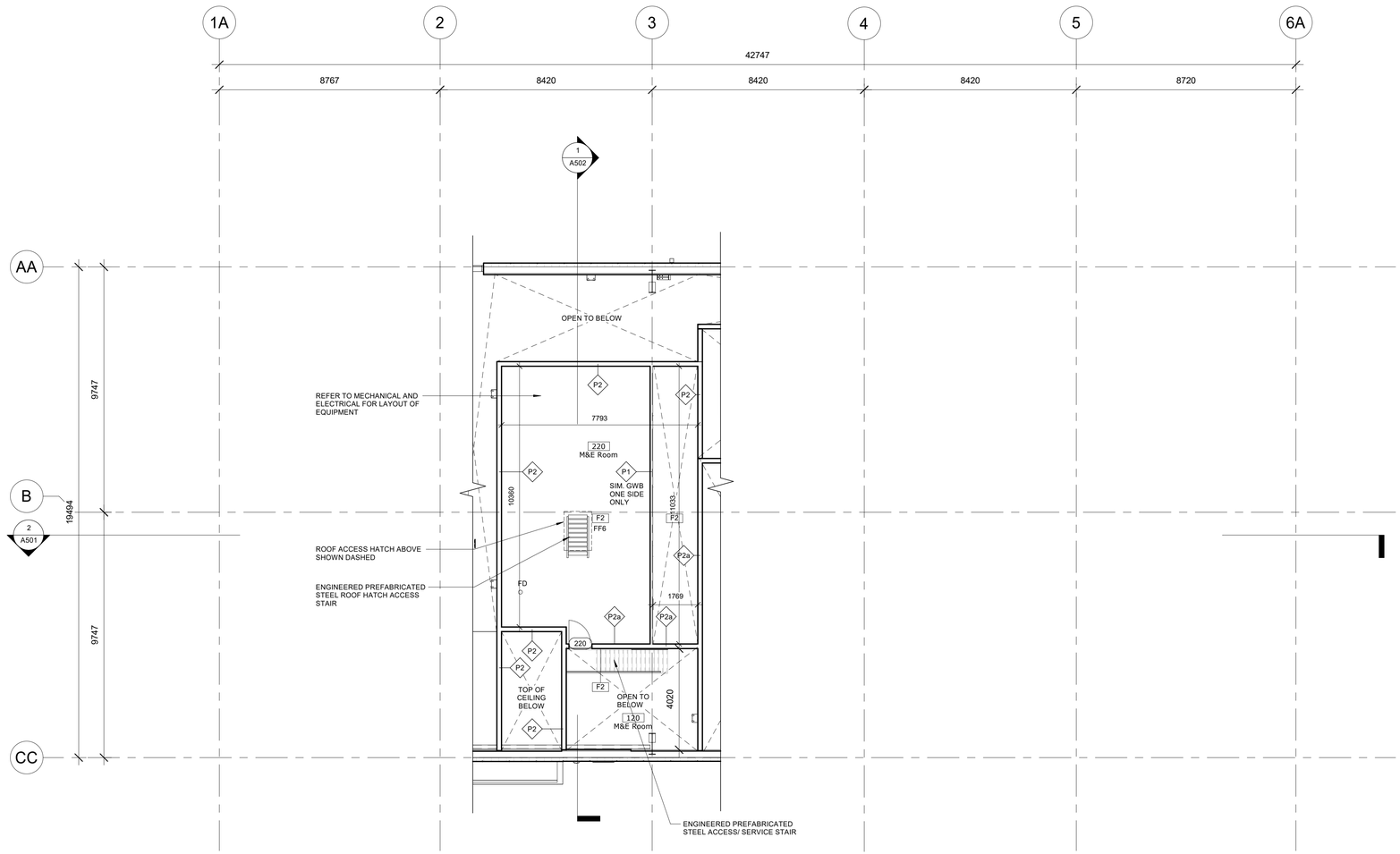
TITLE
GROUND FLOOR PLAN

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 100
DATE :	05/12/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A202

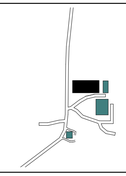


1 A203 MEZZANINE FLOOR PLAN
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



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CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

MEZZANINE FLOOR PLAN

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Baird Sampson Neuert
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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

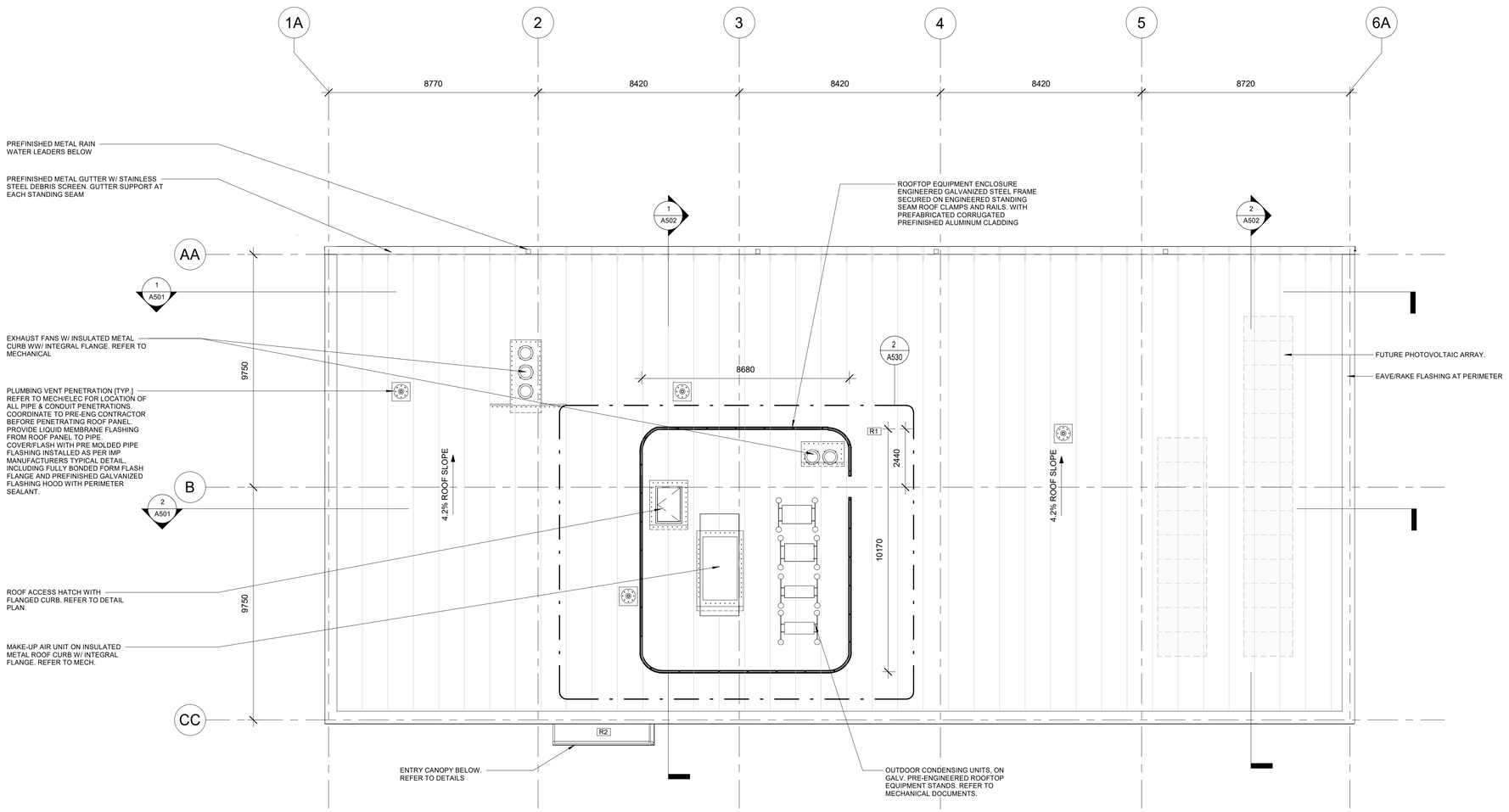
SCALE :	1 : 100
DATE :	05/12/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

A203

GENERAL NOTES

- MECHANICAL EQUIPMENT CURBS TO BE INSTALLED IN SEQUENCE W/ INSULATED METAL ROOF PANELS. COORDINATE W/ PRE=ENG CONTRACTOR.
- PRE-ENG SUPPLIER TO PROVIDE SUPPLEMENTARY ROOF STRUCTURE AS REQ'D AT ROOF PENETRATIONS & OPENINGS AS WELL AS BELOW ROOF MOUNTED EQUIPMENT LOADS. CONTRACTOR TO REVIEW ENGINEERED DRAWINGS OF PRE-ENG STRUCTURE & VERIFY WITH PRE-ENG SUPPLIER'S ENGINEER PRIOR TO PLACEMENT OF EQUIPMENT OR OTHER APPLIED LOADS ONTO ROOF.
- COORDINATE ALL ROOF PENETRATIONS W/ INSULATED METAL PANEL SUPPLIER/ PRE-ENG CONTRACTOR PRIOR TO INSTALLATION.



1 / A204 ROOF PLAN
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

TRUE NORTH PROJECT NORTH

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CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ROOF PLAN

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Baird Sampson Neuert
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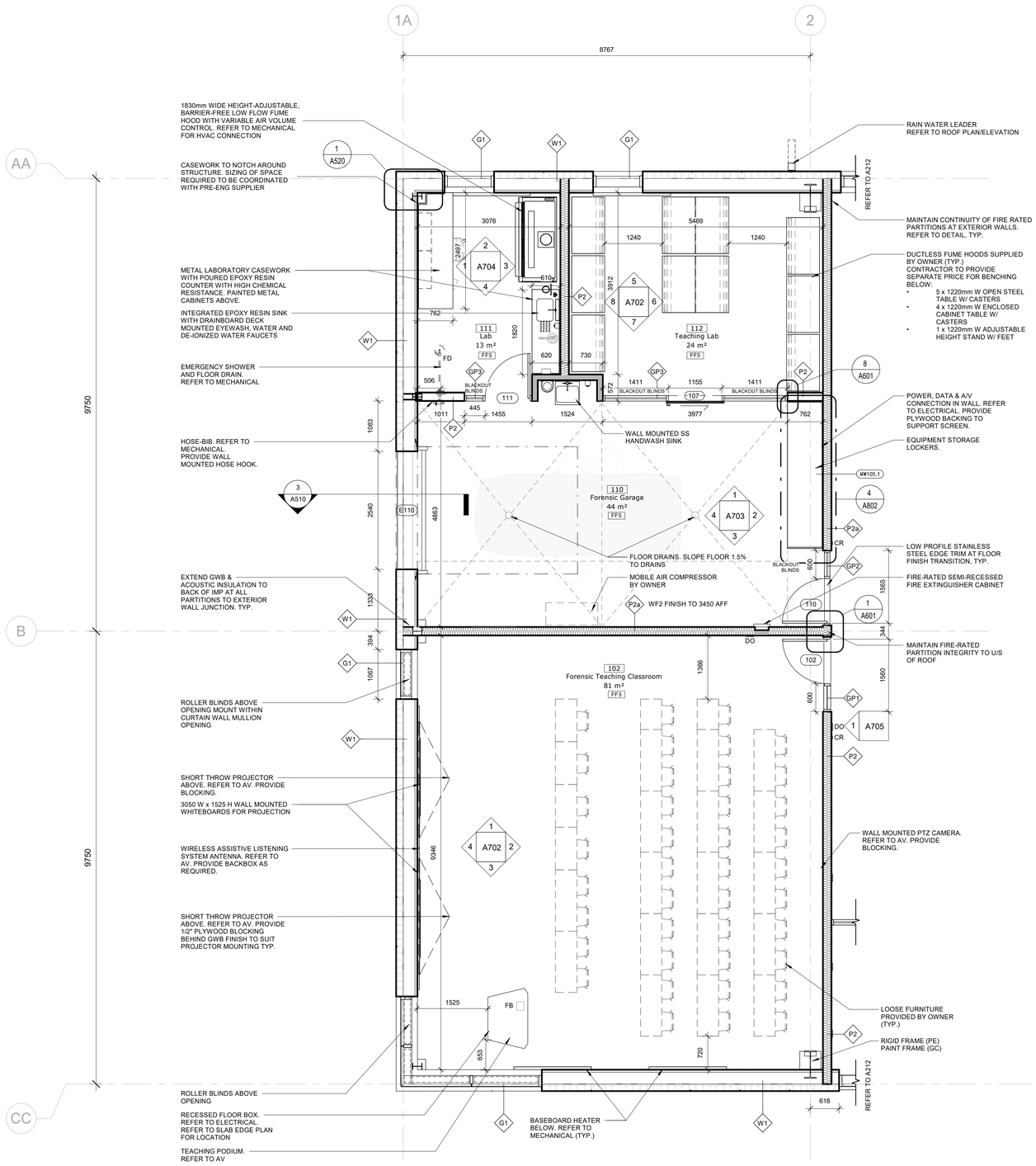
LICENCE
6624

SCALE :	1 : 100
DATE :	05/19/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A204

FLOOR PLAN LEGEND

REQUIRED CLEARANCE AREA
OBC AND FADS



1 / A211 ENLARGED PLAN - WEST WING/FSC
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Permit	2024-11-08
2	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ENLARGED PLANS - WEST WING/ FSC

architects
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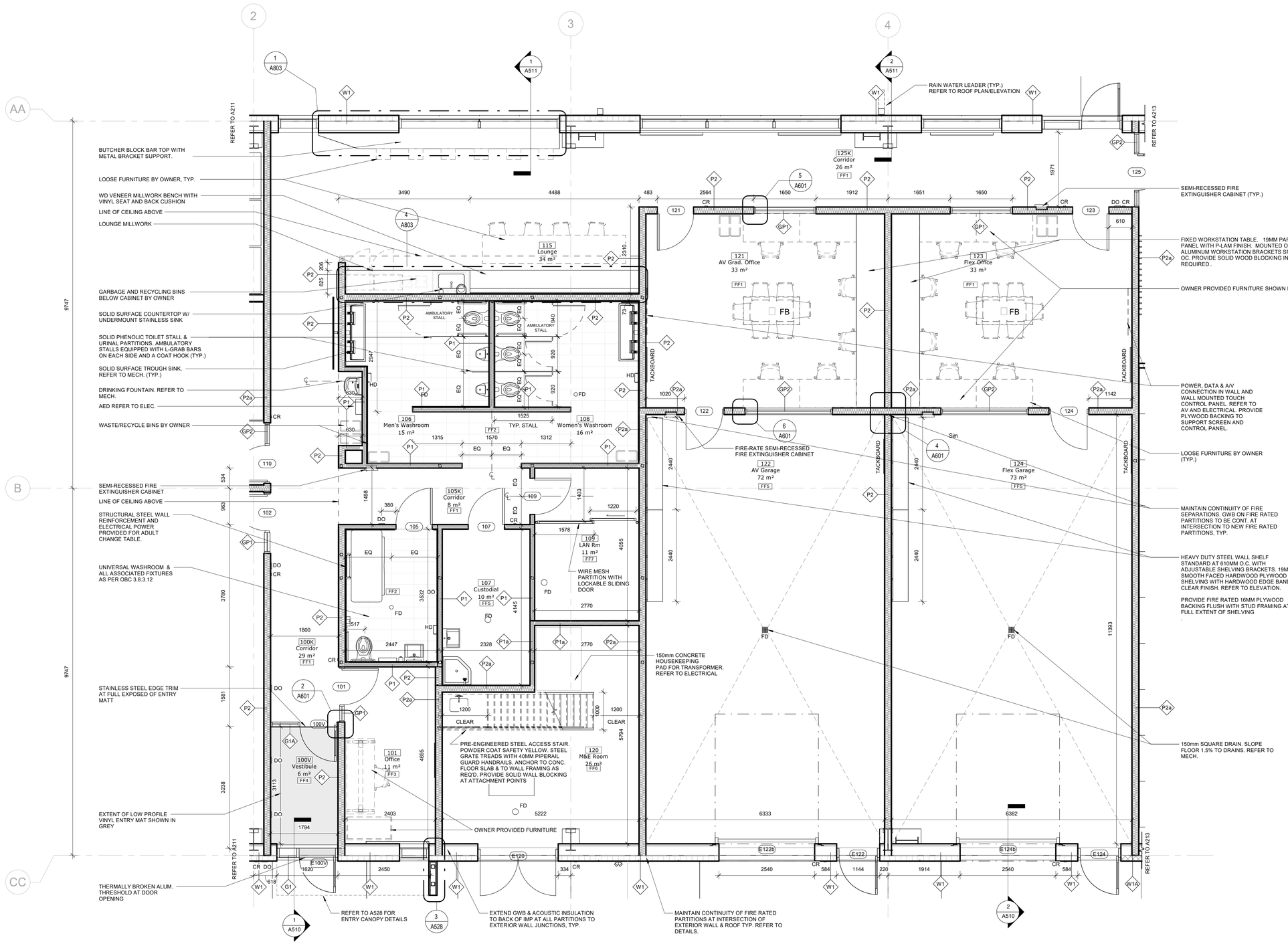
LICENCE
6624

SCALE :	As indicated
DATE :	09/11/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A211



1 A212 ENLARGED PLAN - CENTRAL WING
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Permit	2024-11-08
2	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

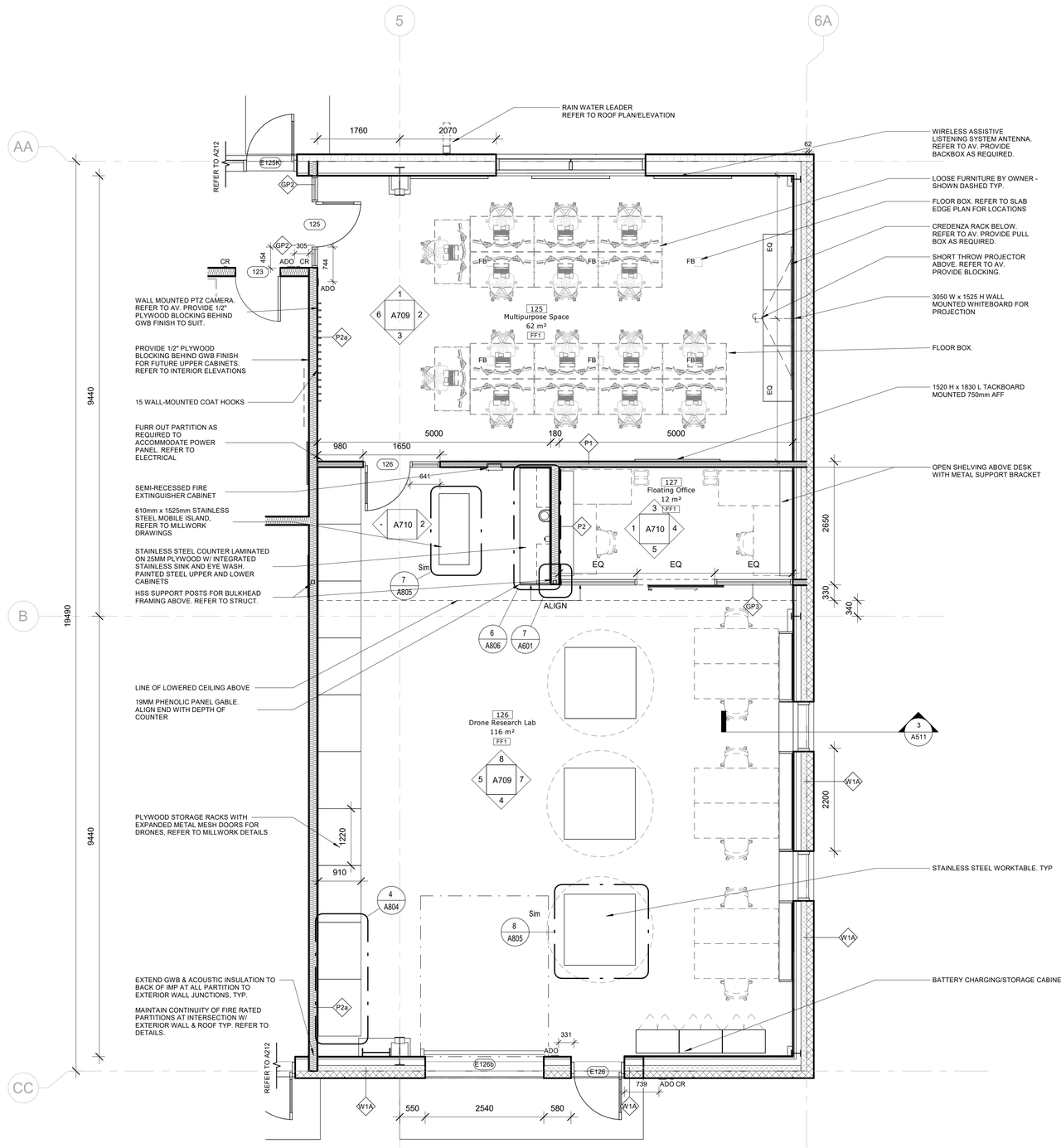
TITLE
ENLARGED PLANS - CENTRAL WING

architects
Baird Sampson Neuer
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 50
DATE :	09/30/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A212



1 / A213 ENLARGED PLAN - EAST WING/CROBE
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Permit	2024-11-08
2	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ENLARGED PLANS - EAST WING/CROBE

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Baird Sampson Neuert
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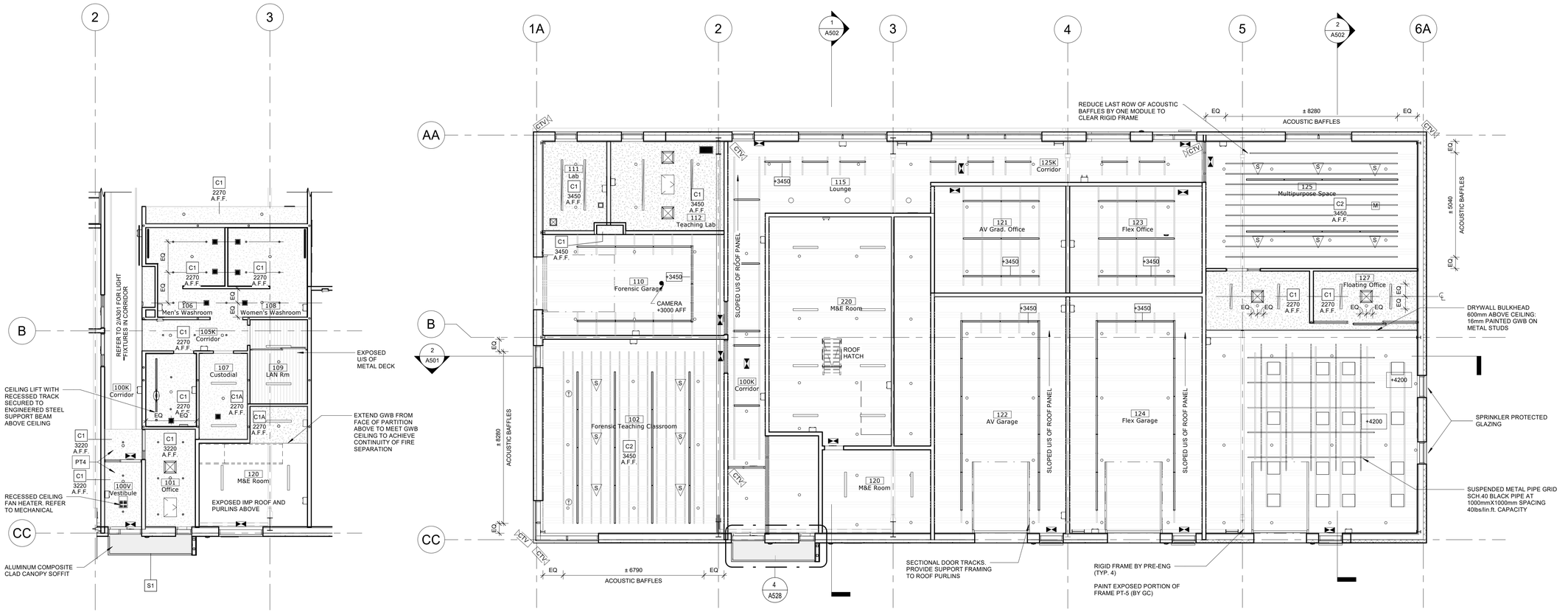
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 50
DATE :	09/11/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A213

CEILING LEGEND

- SUSPENDED CEILING LUMINAIRE. REFER TO ELECTRICAL LIGHTING LAYOUT
- RECESSED CEILING LUMINAIRE. REFER TO ELECTRICAL LIGHTING LAYOUT
- RECESSED CEILING DOWNLIGHT. REFER TO ELECTRICAL LIGHTING LAYOUT
- SUPPLY DIFFUSER. REFER TO MECHANICAL
- EXHAUST GRILL. REFER TO MECHANICAL
- FLUSH CEILING ACCESS PANEL
- SPRINKLER HEAD. REFER TO FIRE PROTECTION
- EXIT SIGN. REFER TO ELECTRICAL LIGHTING LAYOUT
- PENDANT SPEAKERS. REFER TO AV
- CEILING MICROPHONE. REFER TO AV
- WIRELESS MIC ANTENNA. REFER TO AV
- CLOSED CIRCUIT TELEVISION (SECURITY CAMERA). REFER TO SECURITY AND ELECTRICAL



1 A301 REFLECTED CEILING PLAN - ENTRY AND SERVICE CORE
Scale: 1 : 100

2 A301 REFLECTED CEILING PLAN
Scale: 1 : 100

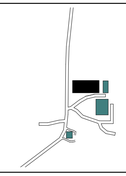
CEILING COMPRISED OF EXPOSED UNDERSIDE OF INSULATED METAL ROOF PANEL EXCEPT WHERE INDICATED

REFER TO ELECTRICAL AND MECHANICAL FOR SERVICES AT CEILING

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for PEB Scope RFP	2023-12-15
3	Issued for 100% SD	2023-12-21
4	Issued for Design Development Costing	2024-03-28
5	Issued for Permit	2024-11-08
6	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

REFLECTED CEILING PLAN

architects
Baird Sampson Neuert

416.363.8877 bsnarchitects.com

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	05/19/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

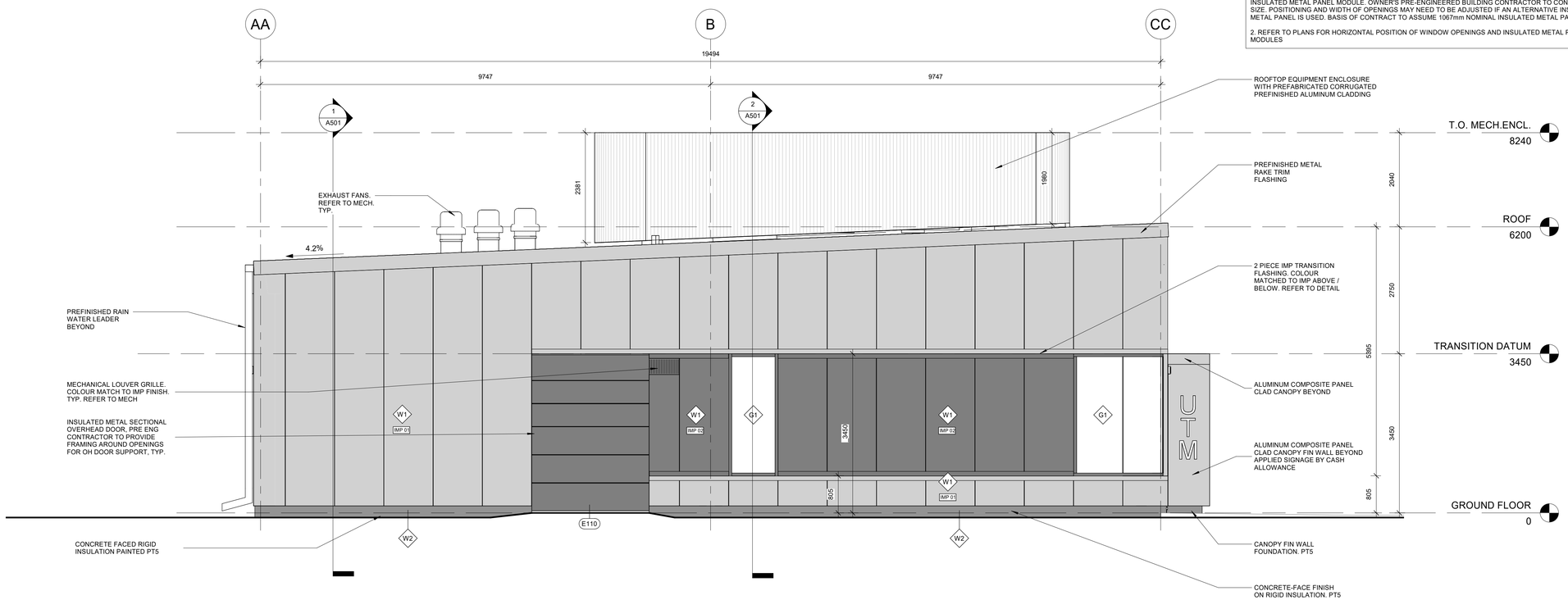
SHEET NO :

A301

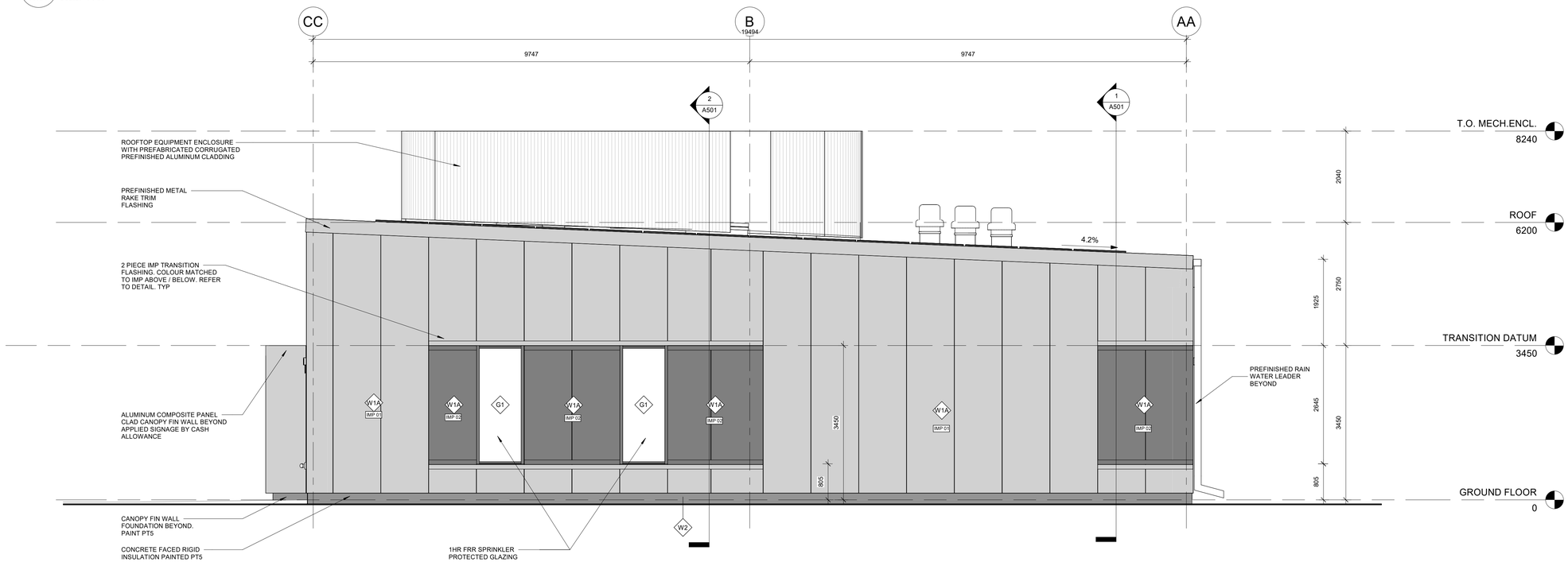
GENERAL NOTES:

1. LAYOUT AND DIMENSIONS OF WALL SEGMENTS AND OPENING WIDTHS ARE BASED ON A NOMINAL 1067 (42") INSULATED METAL PANEL MODULE. OWNER'S PRE-ENGINEERED BUILDING CONTRACTOR TO CONFIRM PANEL SIZE. POSITIONING AND WIDTH OF OPENINGS MAY NEED TO BE ADJUSTED IF AN ALTERNATIVE INSULATED METAL PANEL IS USED. BASIS OF CONTRACT TO ASSUME 1067mm NOMINAL INSULATED METAL PANEL WIDTH.

2. REFER TO PLANS FOR HORIZONTAL POSITION OF WINDOW OPENINGS AND INSULATED METAL PANEL MODULES



1 A401 WEST ELEVATION
Scale: 1 : 50



2 A401 EAST ELEVATION
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
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6	Issued for Permit	2024-11-08
7	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

ELEVATIONS

architects
Baird Sampson Neuert

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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 50
DATE :	05/19/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

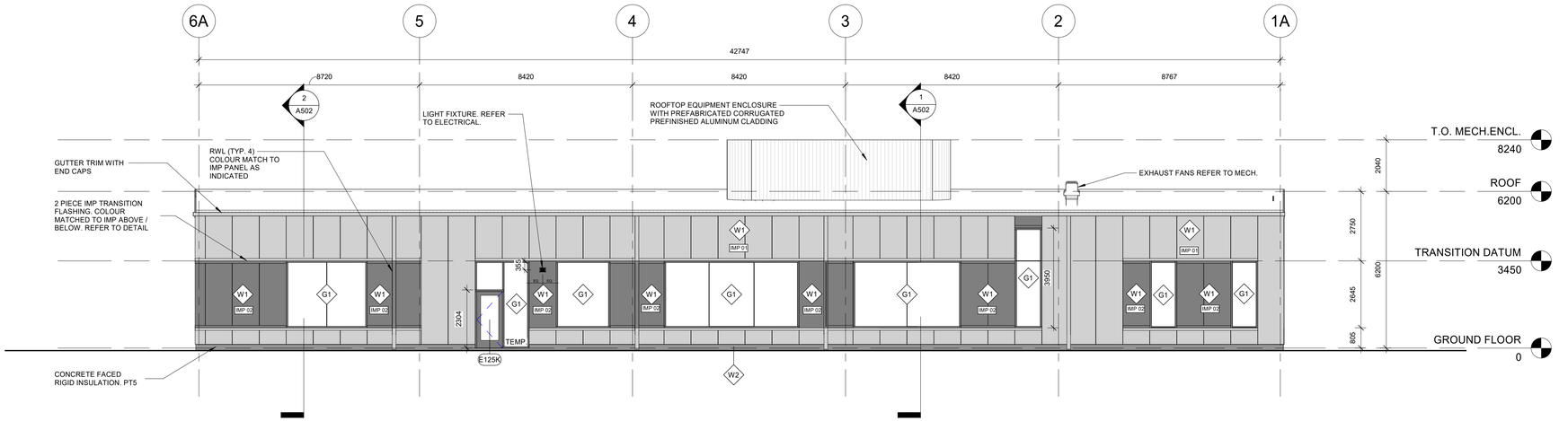
SHEET NO :

A401

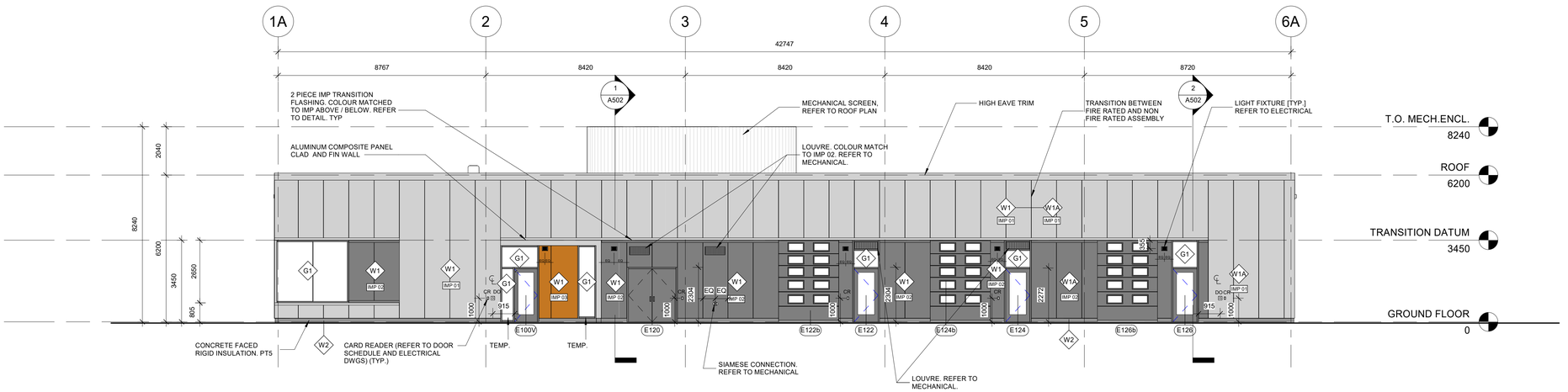
GENERAL NOTES:

1. LAYOUT AND DIMENSIONS OF WALL SEGMENTS AND OPENING WIDTHS ARE BASED ON A NOMINAL 1067 (42") INSULATED METAL PANEL MODULE. OWNER'S PRE-ENGINEERED BUILDING CONTRACTOR TO CONFIRM PANEL SIZE. POSITIONING AND WIDTH OF OPENINGS MAY NEED TO BE ADJUSTED IF AN ALTERNATIVE INSULATED METAL PANEL IS USED. BASIS OF CONTRACT TO ASSUME 1067mm NOMINAL INSULATED METAL PANEL WIDTH.

2. REFER TO PLANS FOR HORIZONTAL POSITION OF WINDOW OPENINGS AND INSULATED METAL PANEL MODULES



1 A402 NORTH ELEVATION
Scale: 1 : 100



2 A402 SOUTH ELEVATION
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
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7	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ELEVATIONS

architects
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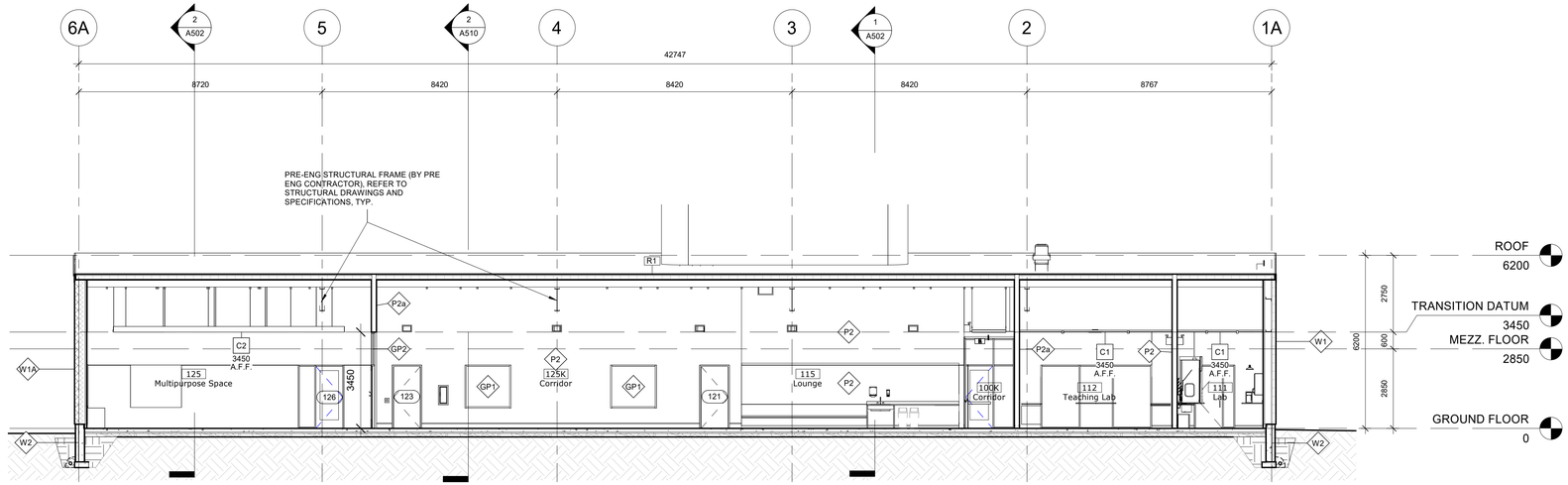
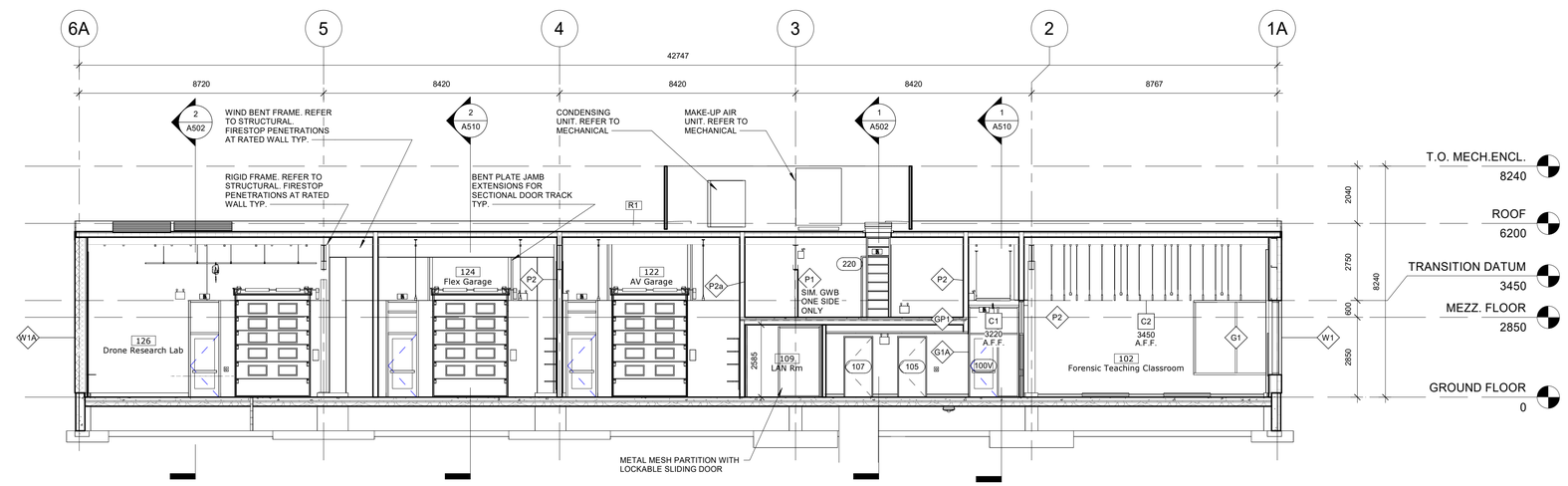
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 100
DATE :	06/12/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A402



1 A501 N-S SECTION
Scale: 1 : 100



2 A501 N-S SECTION
Scale: 1 : 100

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
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CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

BUILDING SECTIONS

architects
Baird Sampson Neuert

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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
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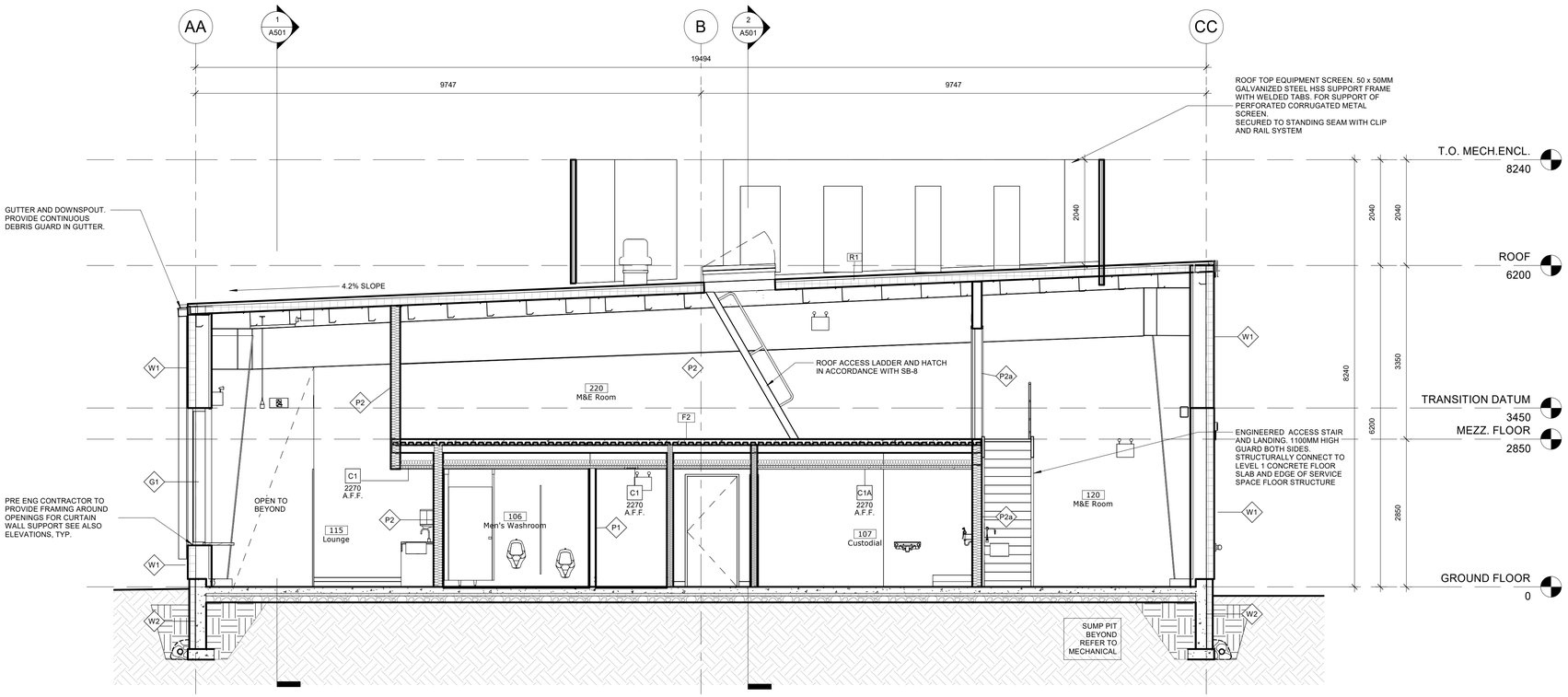
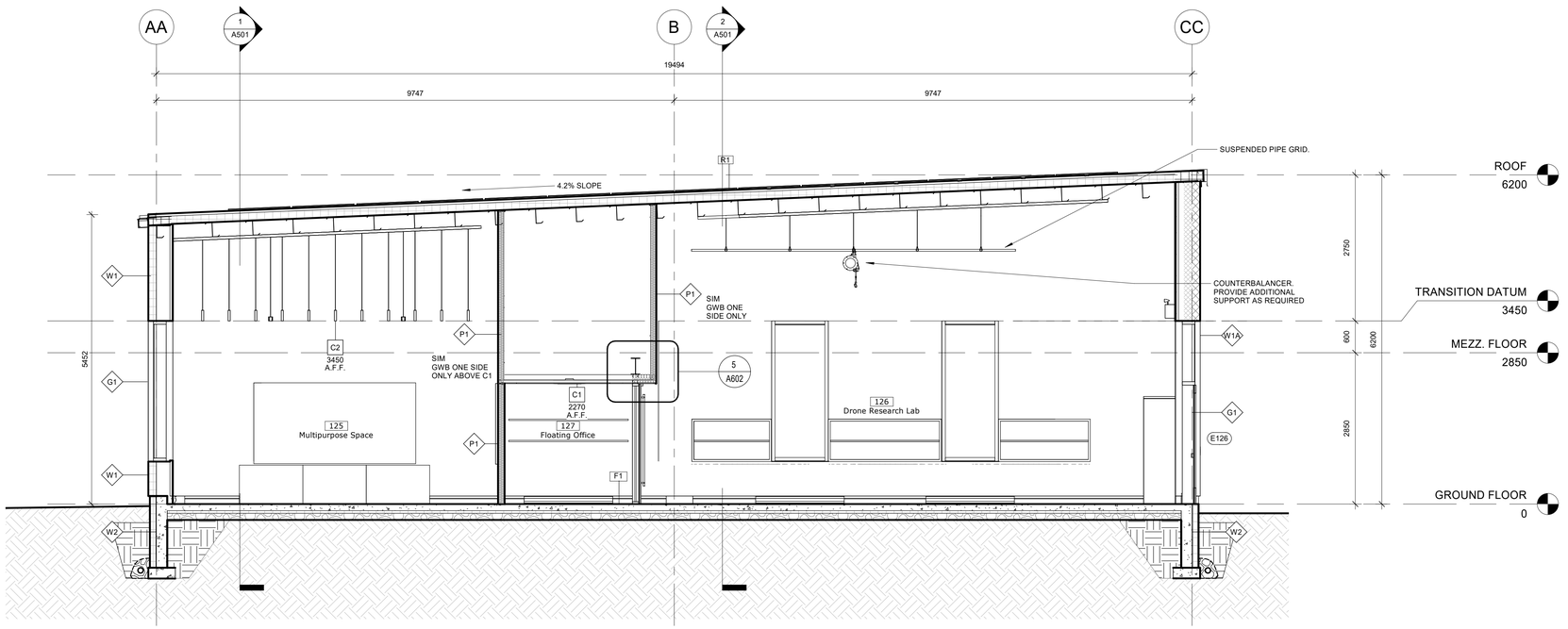
SCALE :	1 : 100
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

A501



1 A502 E-W SECTION
Scale: 1 : 50



2 A502 E-W SECTION 2
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
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CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
BUILDING SECTIONS

architects
Baird Sampson Neuert
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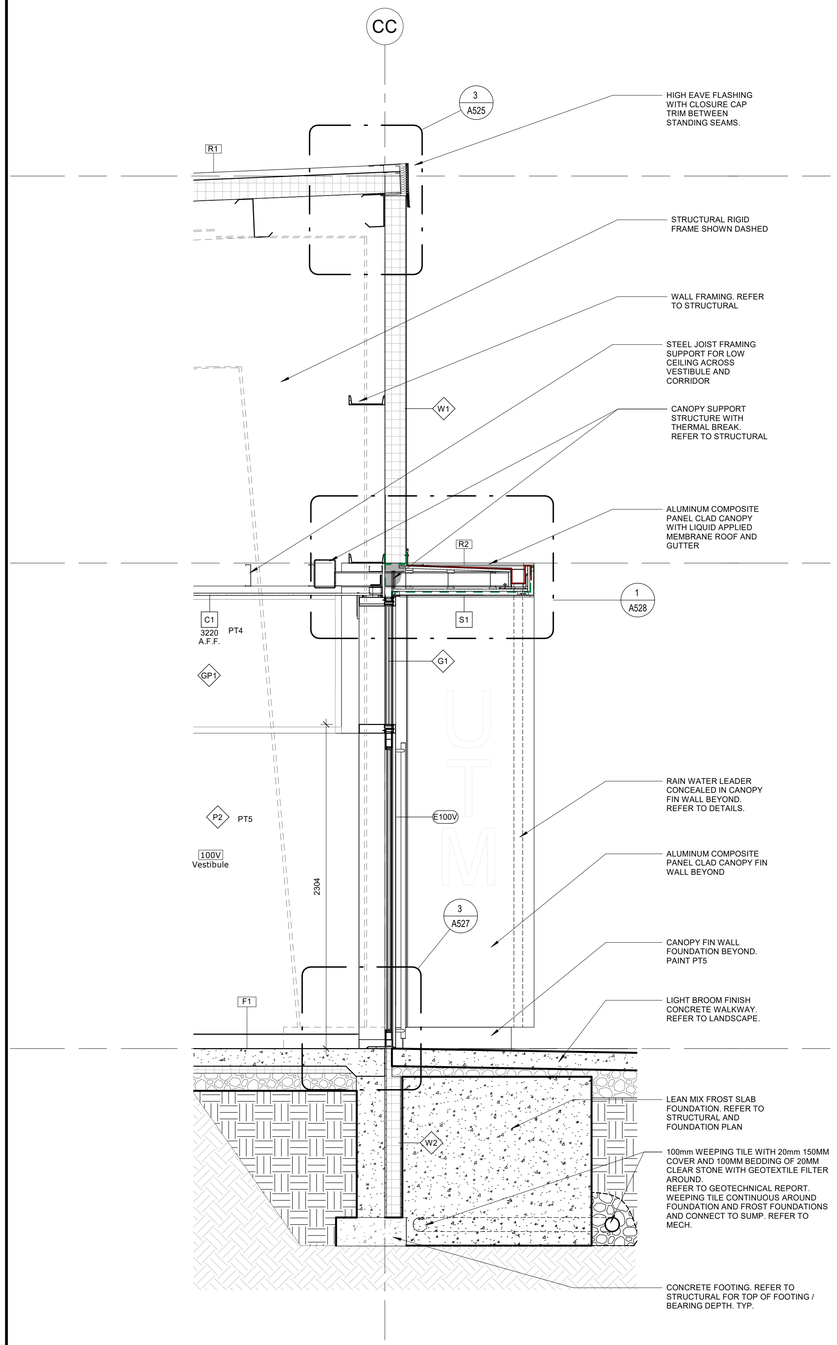
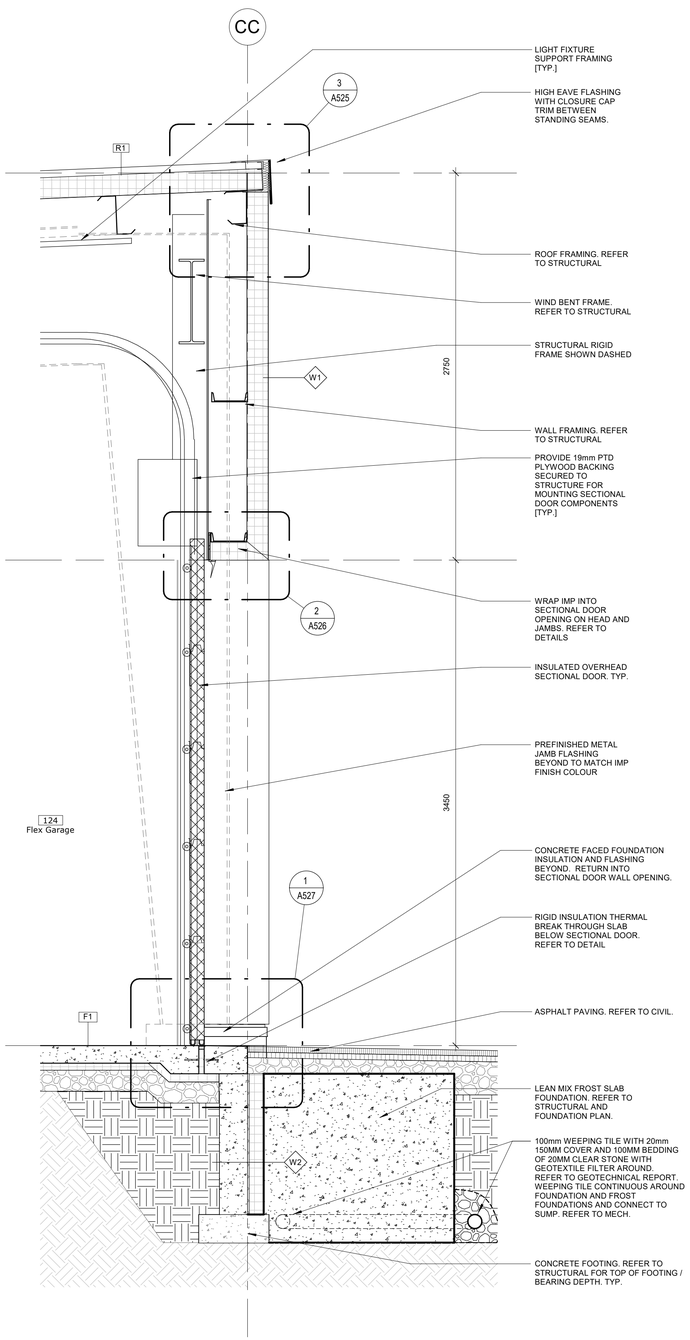
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 50
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

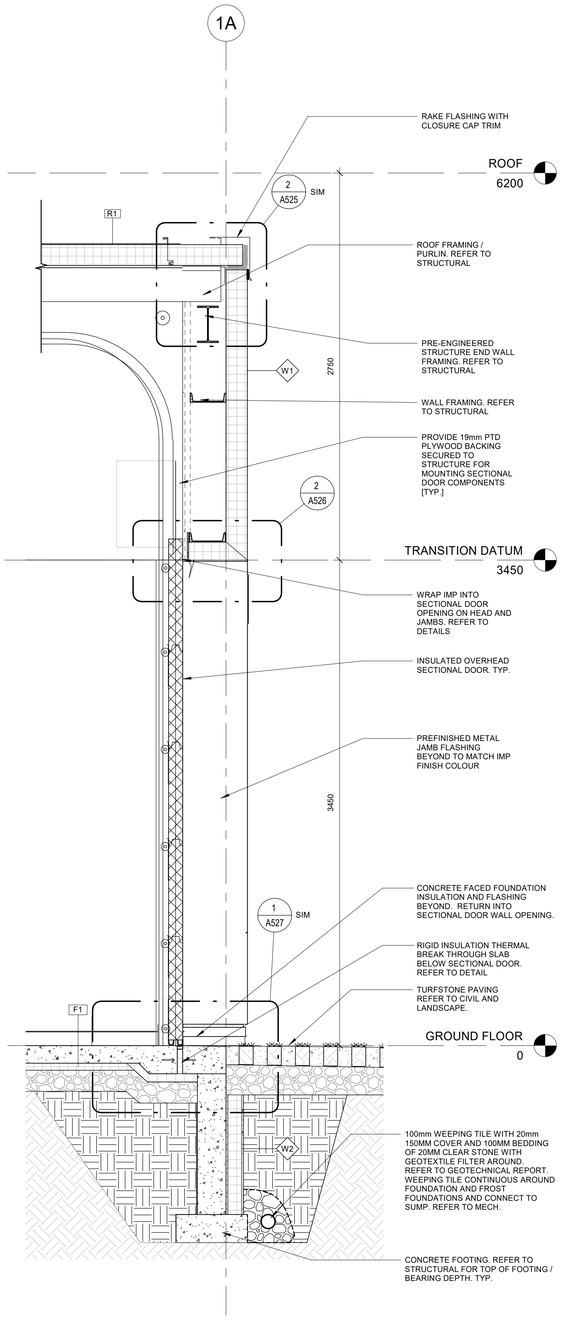
SHEET NO :
A502



1 A510 WALL SECTION AT ENTRY
Scale: 1 : 20



2 A510 WALL SECTION AT SECTIONAL DOOR - SOUTH WALL
Scale: 1 : 20



3 A510 WALL SECTION AT SECTIONAL DOOR - WEST WALL
Scale: 1 : 20

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for 100% SD	2023-12-21
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CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
WALL SECTIONS

architects
Baird Sampson Neuert
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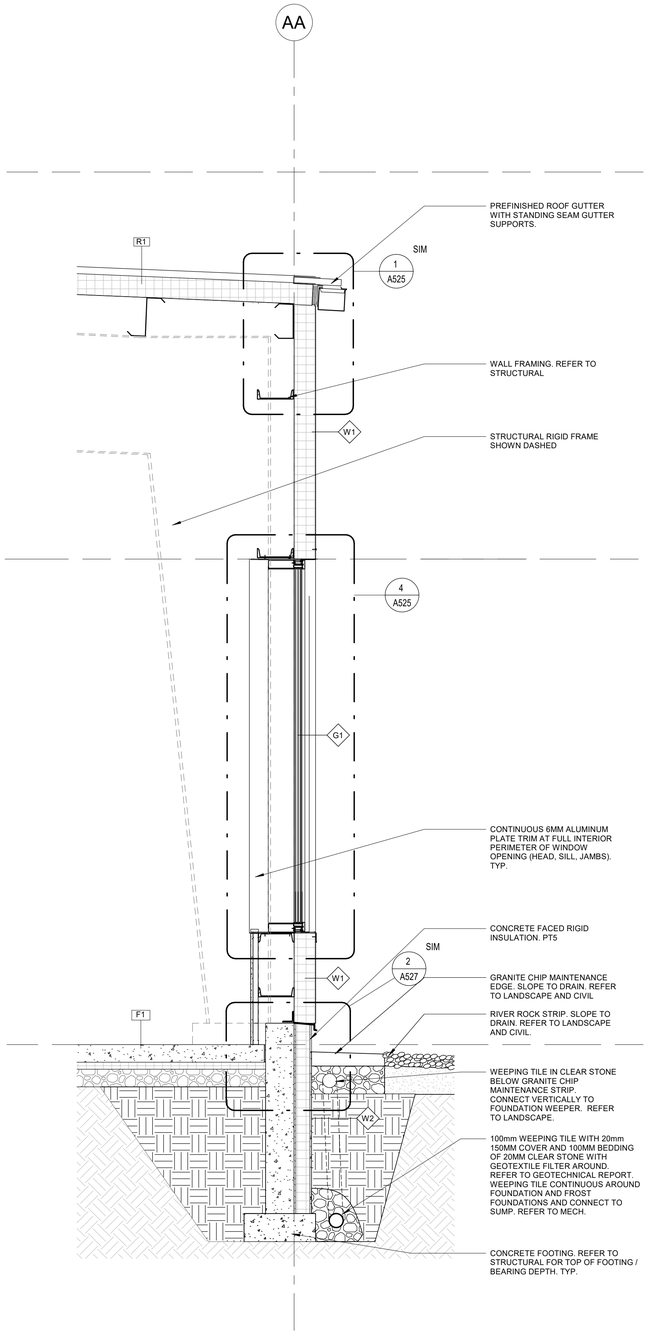
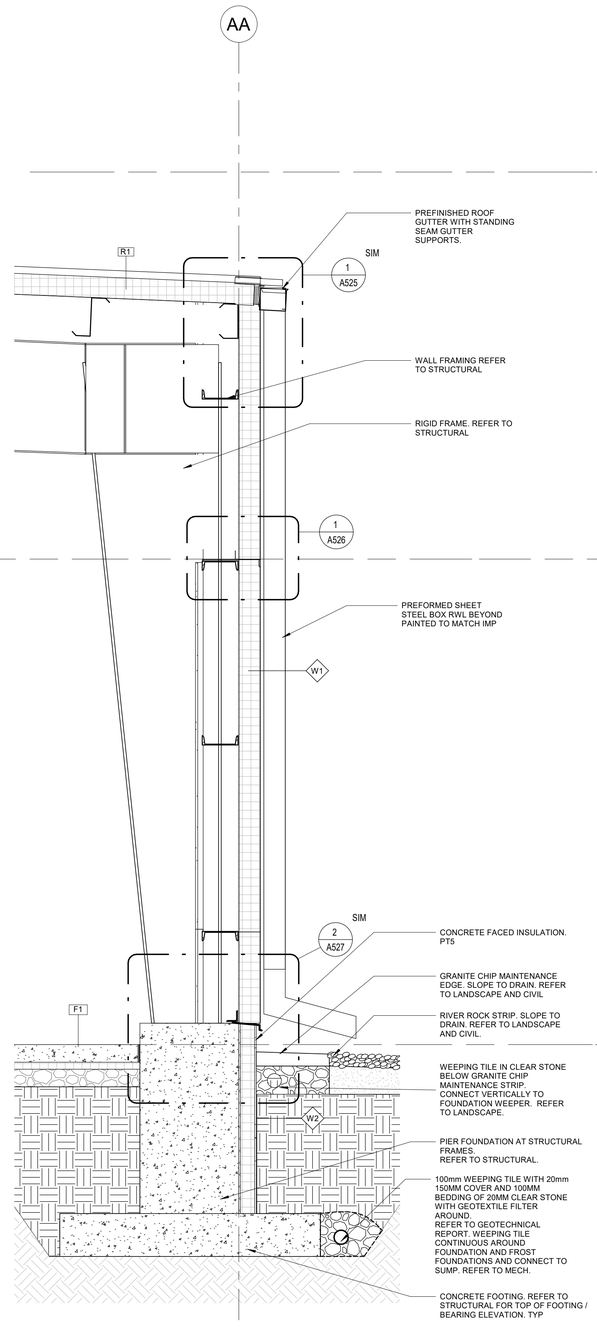
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 20
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

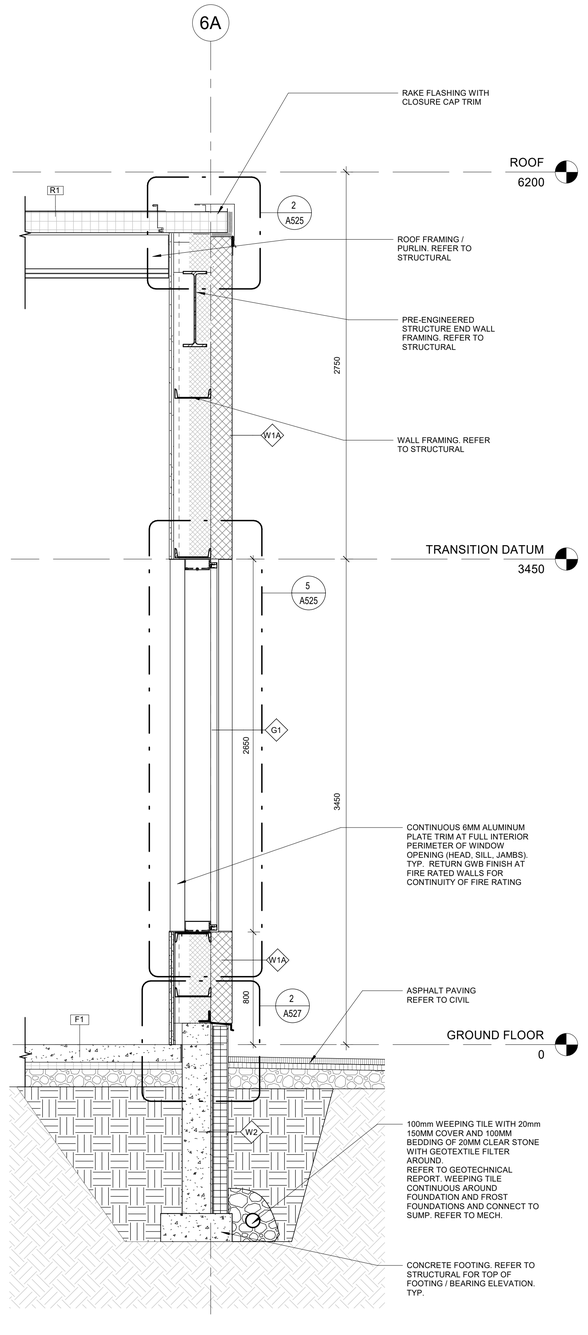
SHEET NO :
A510



1 A511 WALL SECTION AT FULL HEIGHT WINDOW
Scale: 1 : 20



2 A511 WALL SECTION AT COLUMN PIER
Scale: 1 : 20



3 A511 WALL SECTION AT EAST WALL
Scale: 1 : 20

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for 100% SD	2023-12-21
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CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

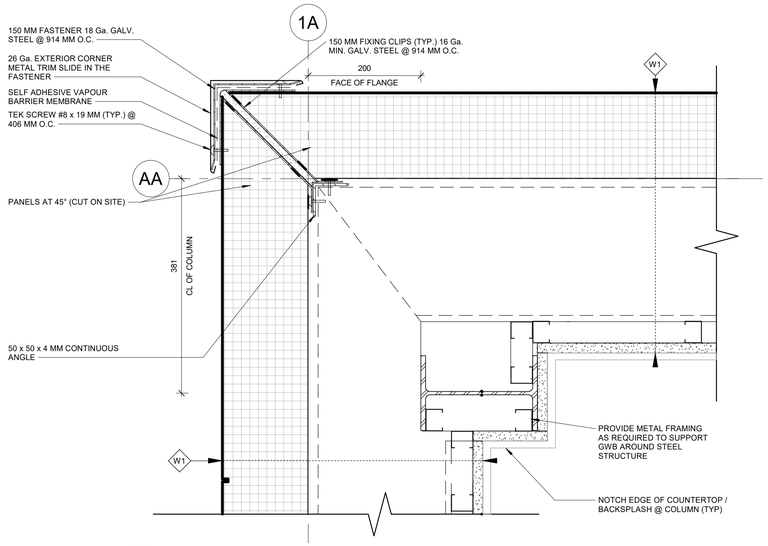
TITLE
WALL SECTIONS

Baird Sampson Neuert architects
416.363.8877 bsnarchitects.com

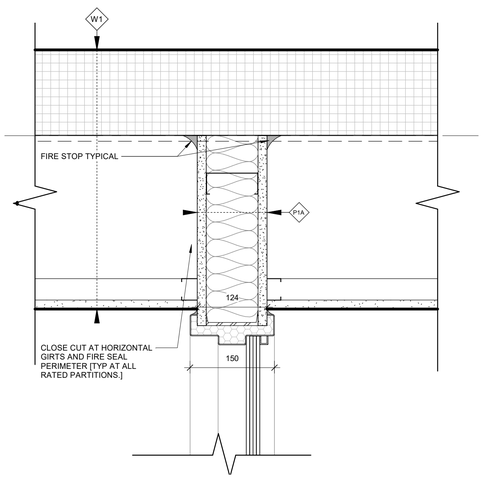
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 20
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

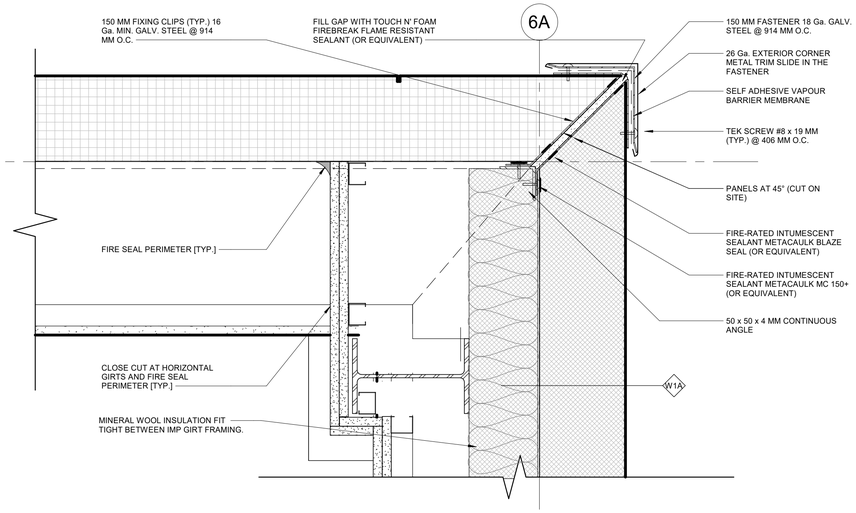
SHEET NO :
A511



1 A520 PLAN DETAIL AT NORTHWEST CORNER
Scale: 1 : 5



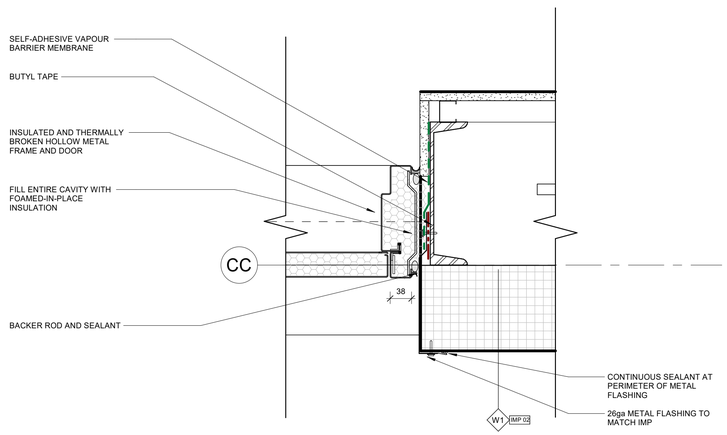
2 A520 PLAN DETAIL AT FIRE RATED GLAZING PARTITION
Scale: 1 : 5



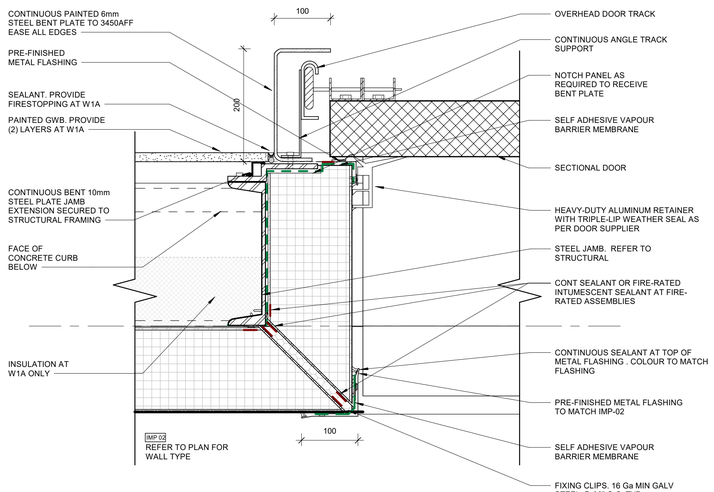
3 A520 PLAN DETAIL AT NORTHEAST CORNER
Scale: 1 : 5

4 A520 PLAN DETAIL AT GLAZING TYP.
Scale: 1 : 5

5 A520 PLAN DETAIL AT EAST WALL GLAZING (FRR)
Scale: 1 : 5



6 A520 PLAN DETAIL AT HOLLOW METAL DOOR
Scale: 1 : 5



7 A520 PLAN DETAIL AT SECTIONAL DOOR JAMB
Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
PLAN DETAILS - ENVELOPE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 5
DATE :	05/26/20
PROJECT NO :	2301
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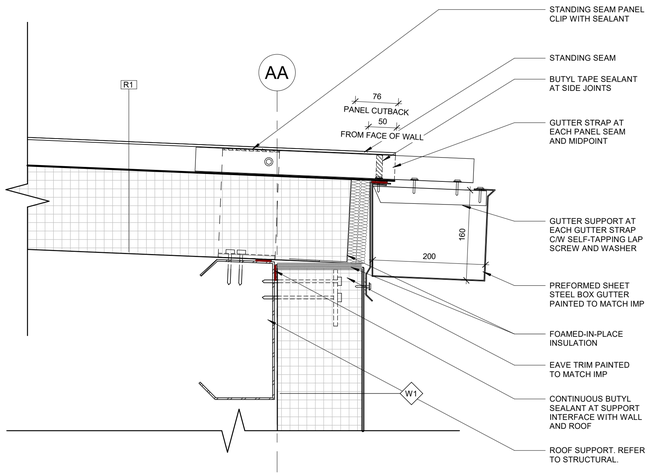
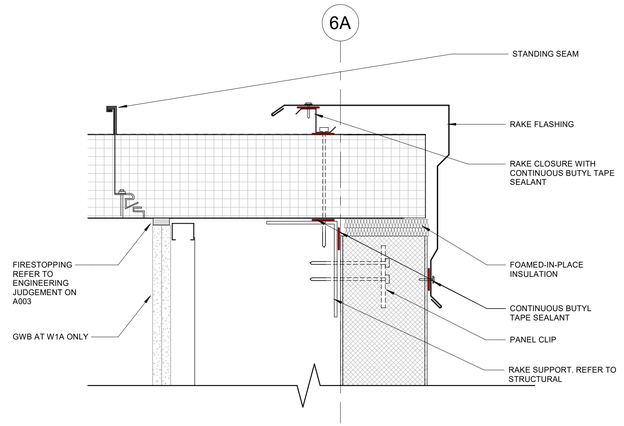
CHECKED BY :	Checker

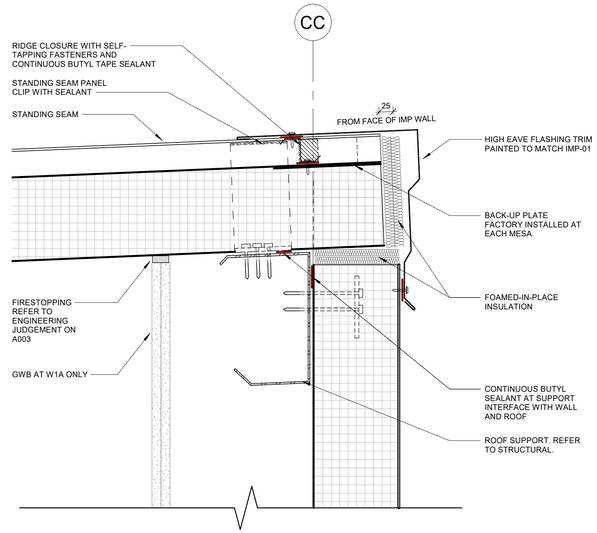
SHEET NO :
A520



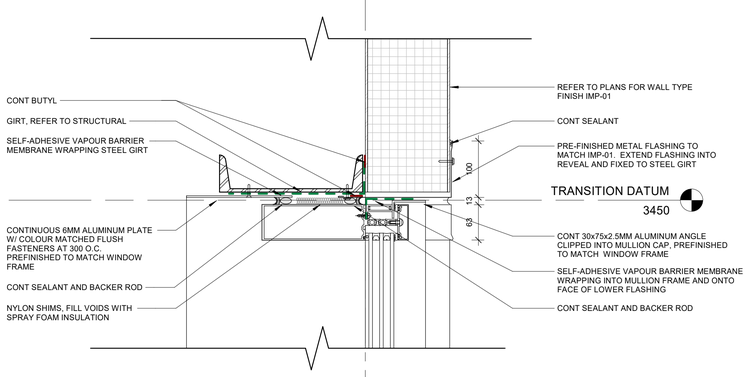
1 A525 SECTION DETAIL AT LOW EAVE
Scale: 1 : 5



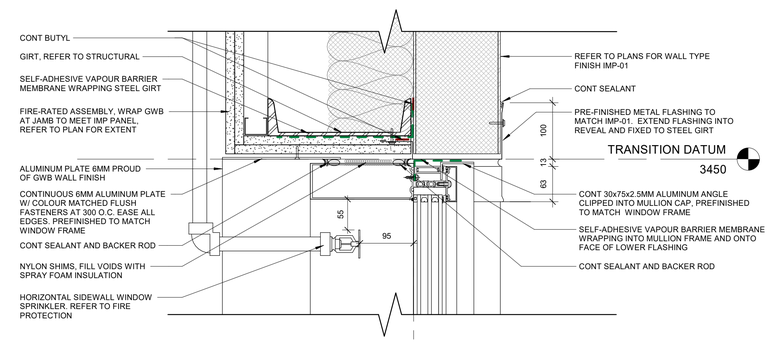
2 A525 SECTION DETAIL AT RAKE WALL
Scale: 1 : 5

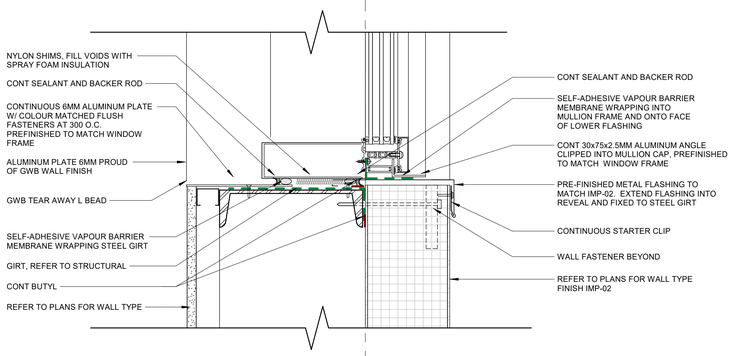


3 A525 SECTION DETAIL AT HIGH EAVE
Scale: 1 : 5

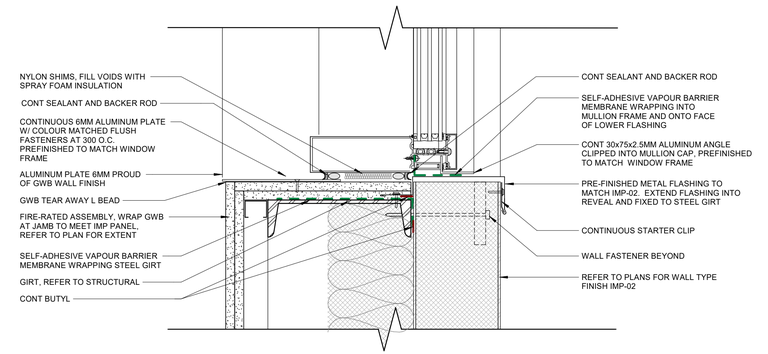


4 A525 SECTION DETAIL AT GLAZING (TYP)
Scale: 1 : 5





5 A525 SECTION DETAIL AT GLAZING - EAST WALL
Scale: 1 : 5



CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

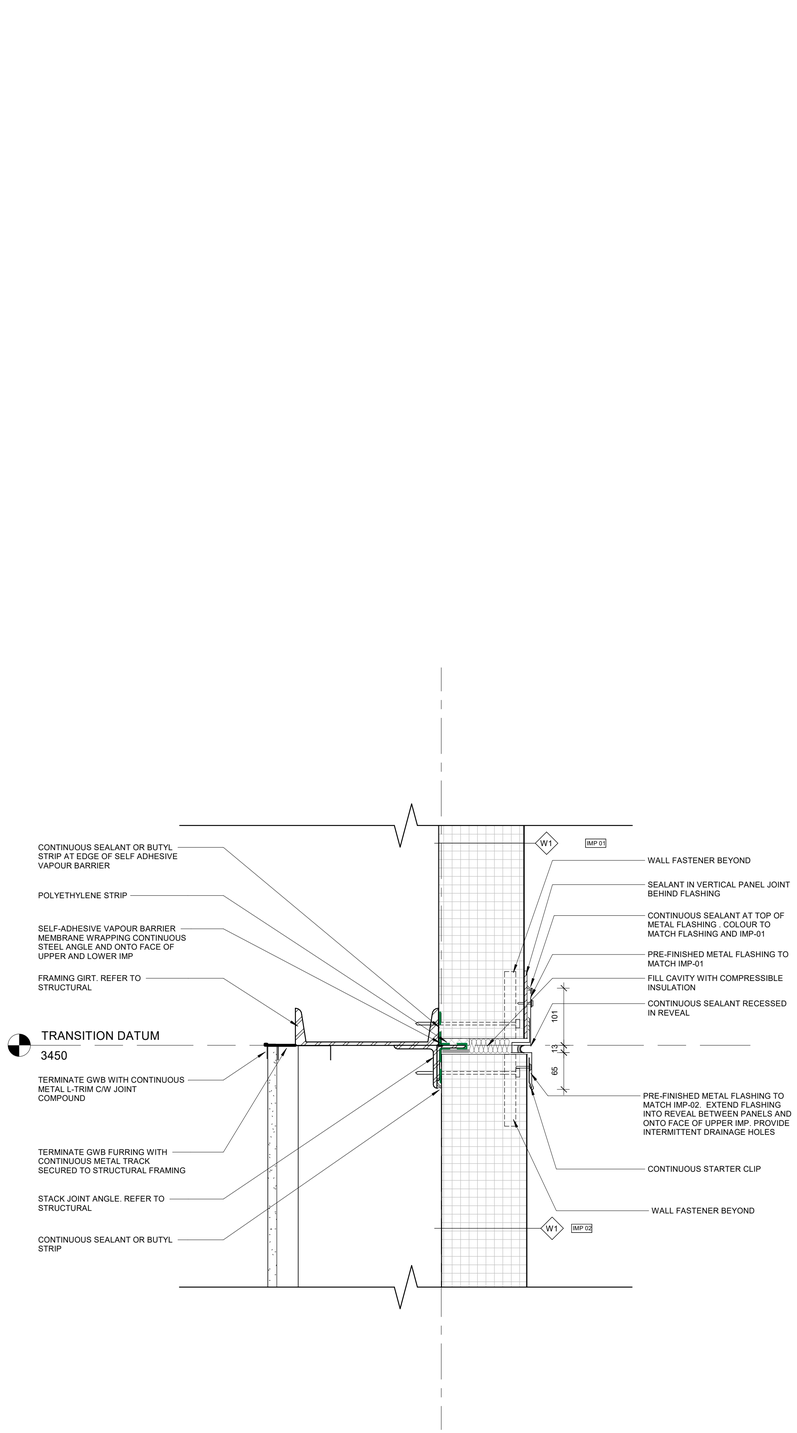
TITLE
SECTION DETAILS - ENVELOPE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

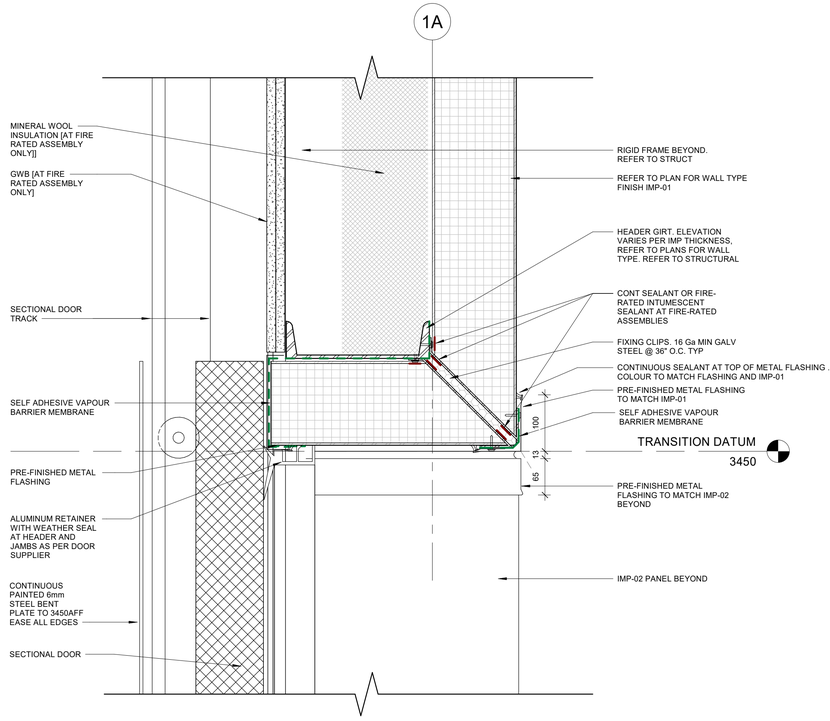
SCALE :	1 : 5
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A525



1 A526 SECTION DETAIL AT IMP PANEL TRANSITION

Scale: 1 : 5



2 A526 SECTION DETAIL AT SECTIONAL DOOR HEADER

Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

SECTION DETAILS - ENVELOPE

architects
Baird Sampson Neuert

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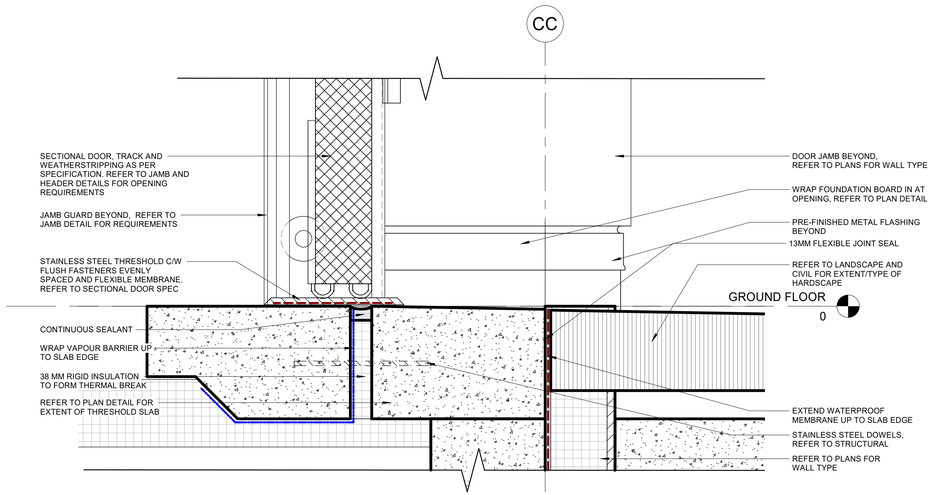
SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

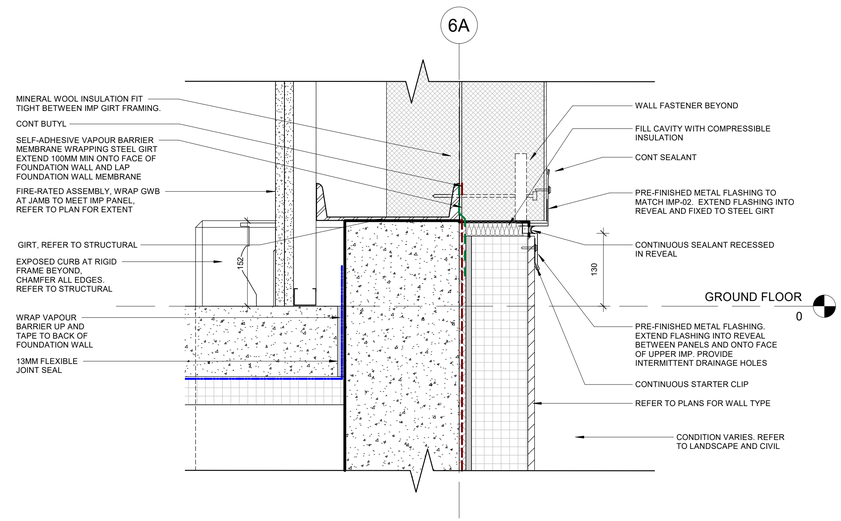
SCALE :	1 : 5
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

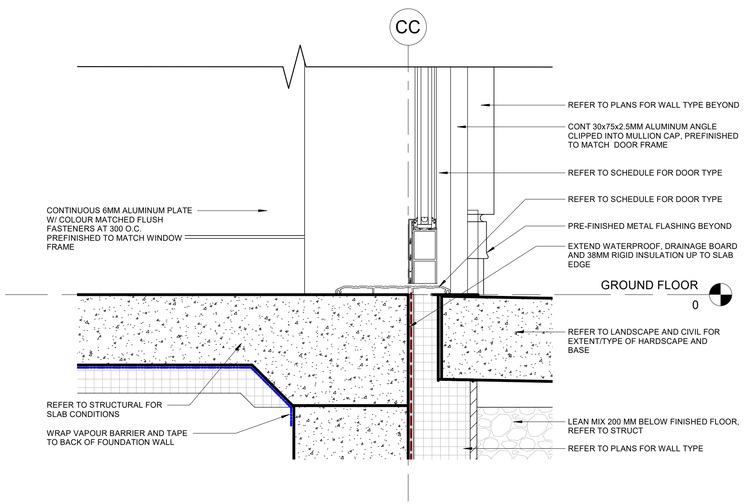
A526



1 A527 SECTION DETAIL AT SECTIONAL DOOR
Scale: 1 : 5



2 A527 SECTION DETAIL AT CURB - EAST WALL
Scale: 1 : 5



3 A527 SECTION DETAIL AT ENTRANCE
Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

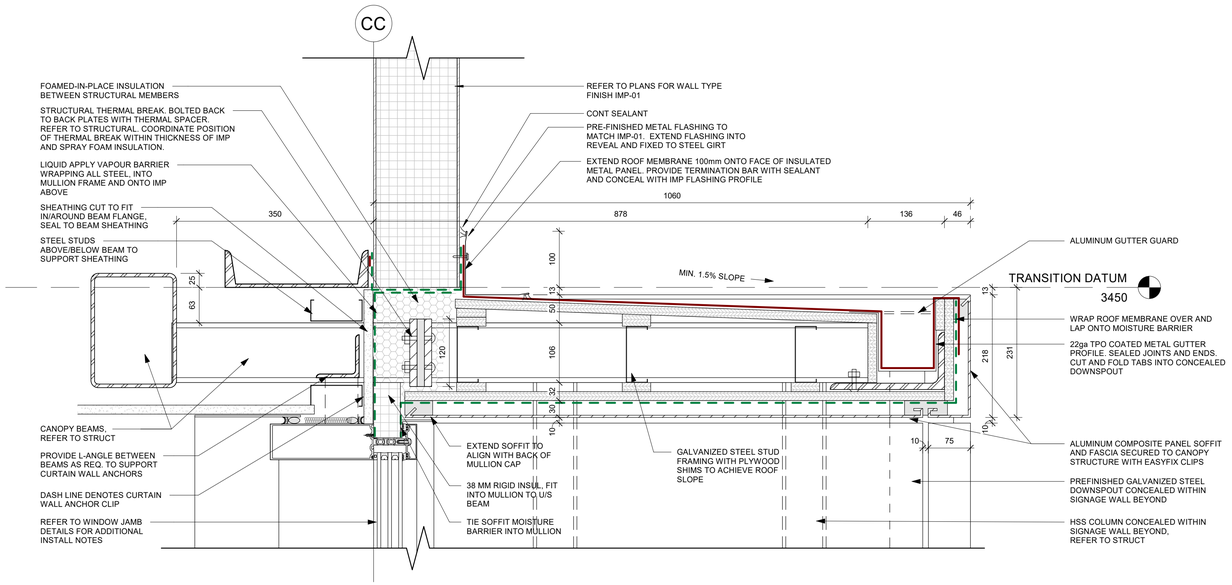
TITLE
SECTION DETAILS - ENVELOPE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

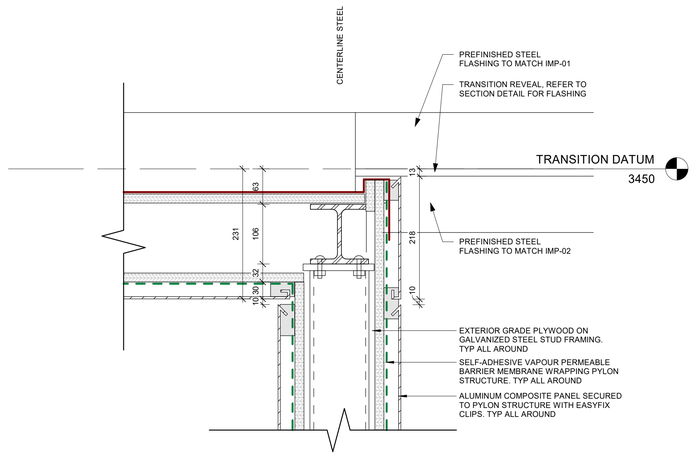
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

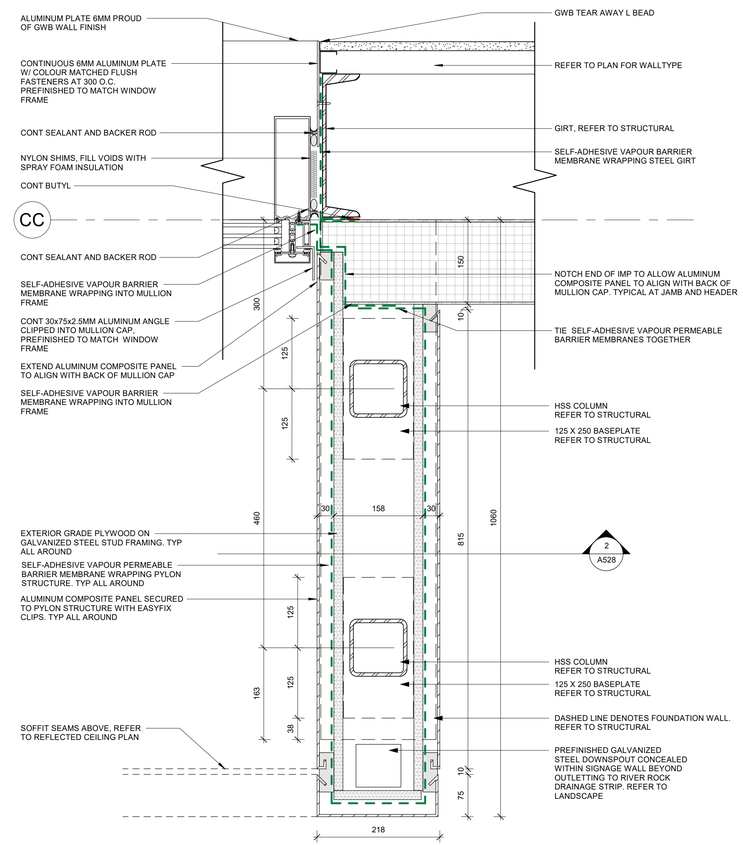
SCALE :	1 : 5
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A527

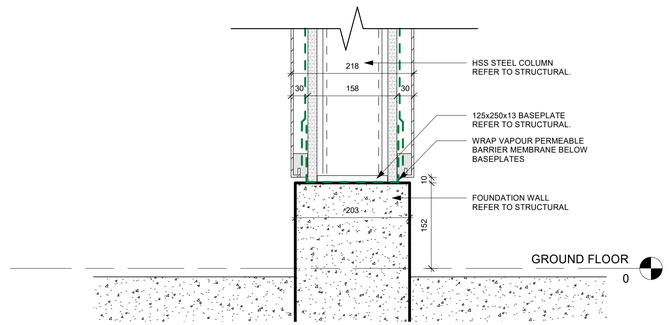


1 A528 SECTION DETAIL AT ENTRY CANOPY
Scale: 1 : 5

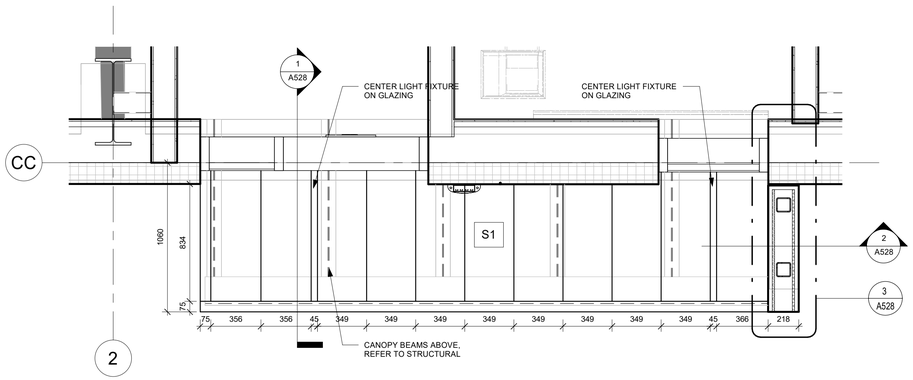




3 A528 PLAN DETAIL AT ENTRY CANOPY SIGNAGE WALL
Scale: 1 : 5



2 A528 SECTION DETAIL AT ENTRY CANOPY SIGNAGE WALL
Scale: 1 : 5



4 A528 ENTRY CANOPY REFLECTED CEILING PLAN
Scale: 1 : 20

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
ENTRANCE CANOPY DETAILS

architects
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JESSE DORMODY
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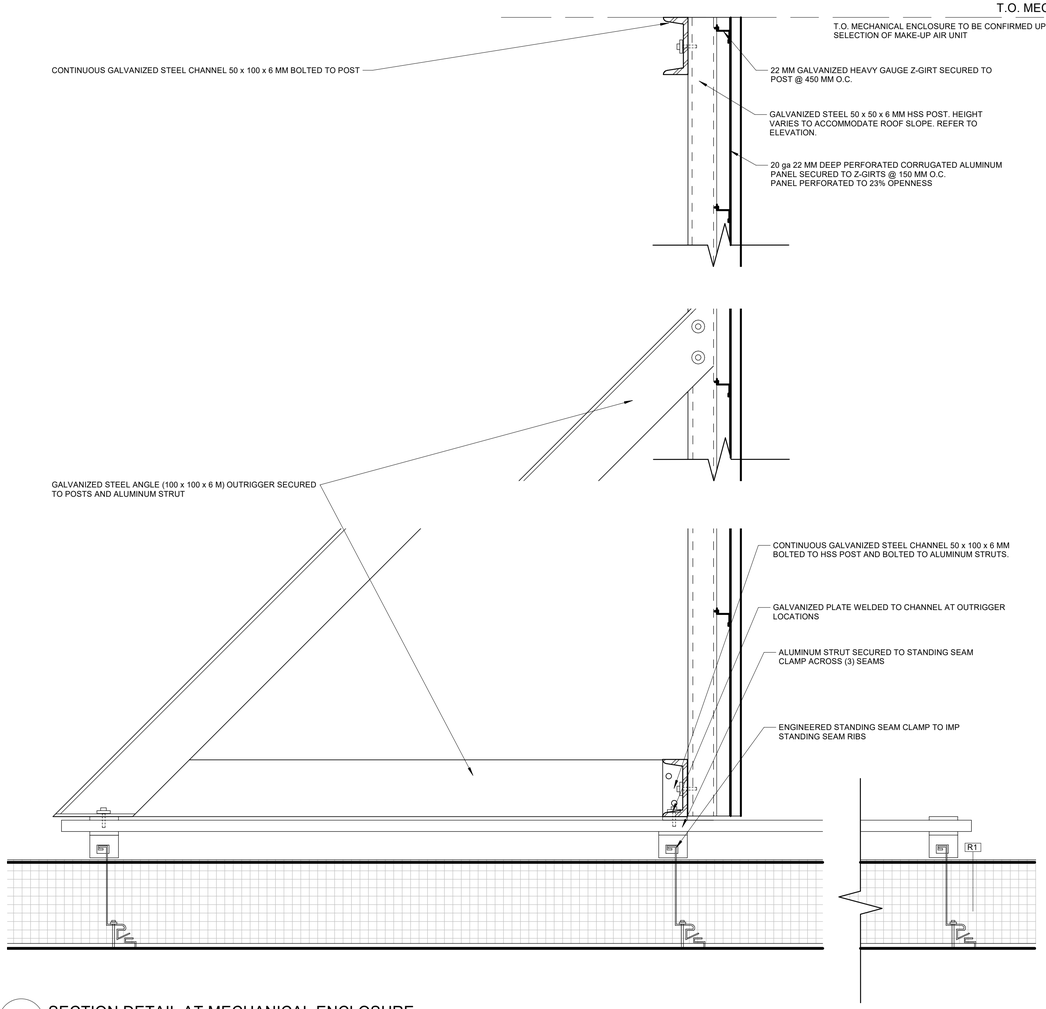
6624

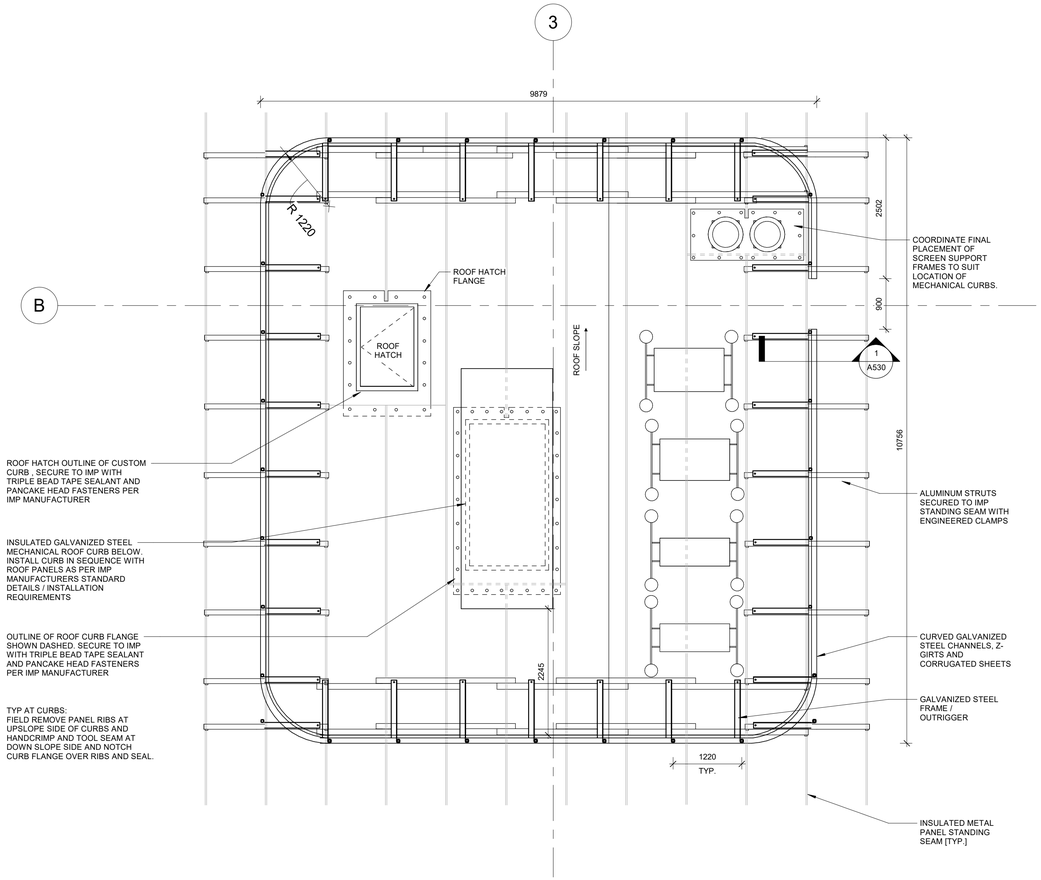
SCALE :	As indicated
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	AM
CHECKED BY :	Checker

SHEET NO :
A528



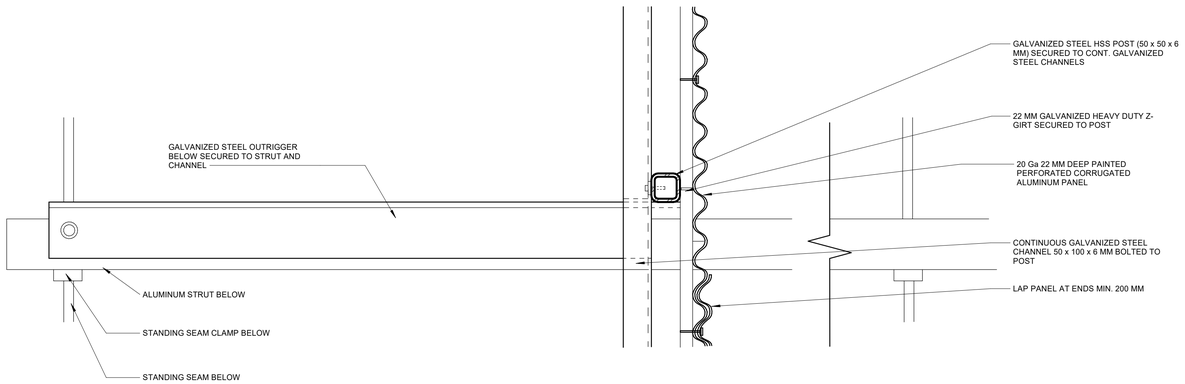
1 A530 SECTION DETAIL AT MECHANICAL ENCLOSURE

Scale: 1 : 5



2 A530 ENLARGED PLAN - ROOF TOP ENCLOSURE

Scale: 1 : 50



3 A530 PLAN DETAIL AT MECHANICAL ENCLOSURE

Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

ROOF TOP ENCLOSURE DETAILS

architects
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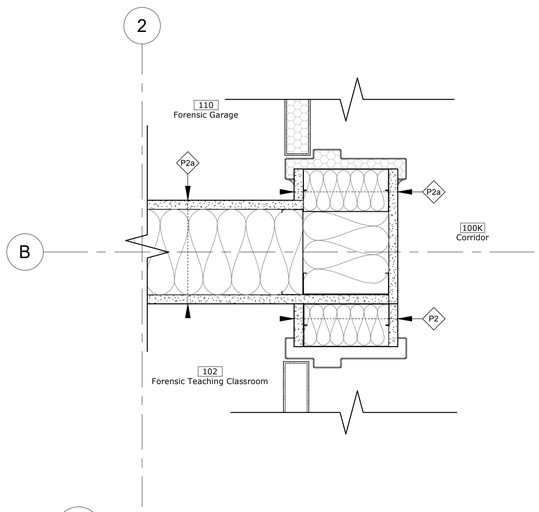
JESSE DORMODY
LICENCE
6624

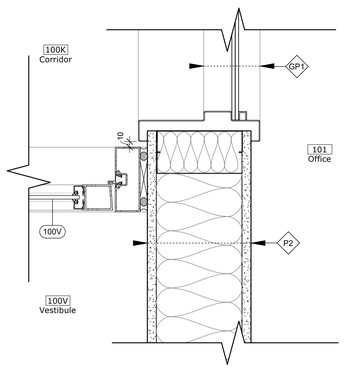
SCALE :	As indicated
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

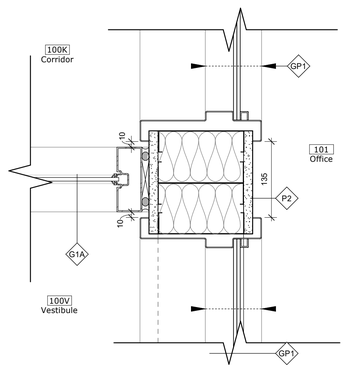
A530



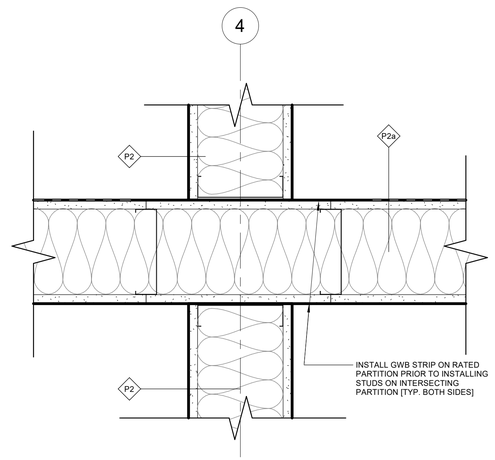
1 A601 PLAN DETAIL - P2 / P2A CONNECTION
Scale: 1 : 5



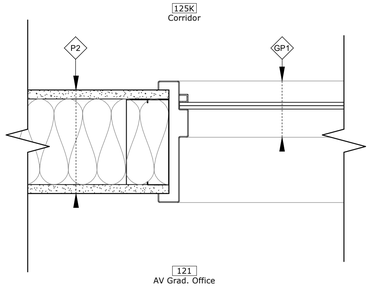
2 A601 PLAN DETAIL - INTERIOR VESTIBULE
Scale: 1 : 5



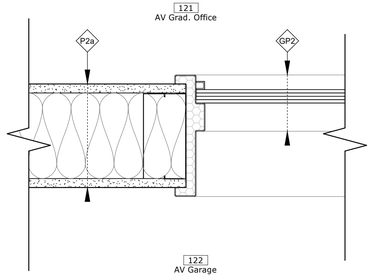
3 A601 PLAN DETAIL - INTERIOR VESTIBULE AT TRANSOM
Scale: 1 : 5



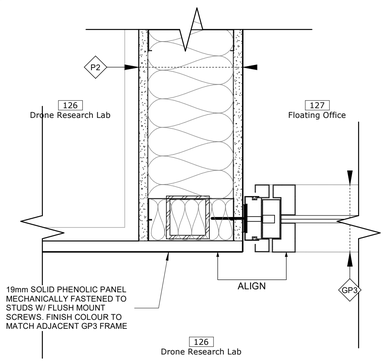
4 A601 PLAN DETAIL - FIRE-RATED PARTITION INTERSECTION
Scale: 1 : 5



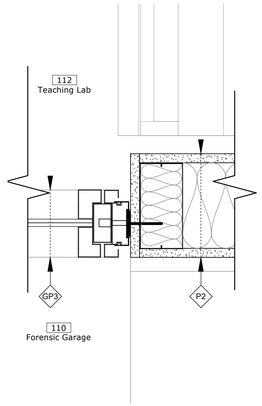
5 A601 PLAN DETAIL - INTERIOR WINDOW GP1
Scale: 1 : 5



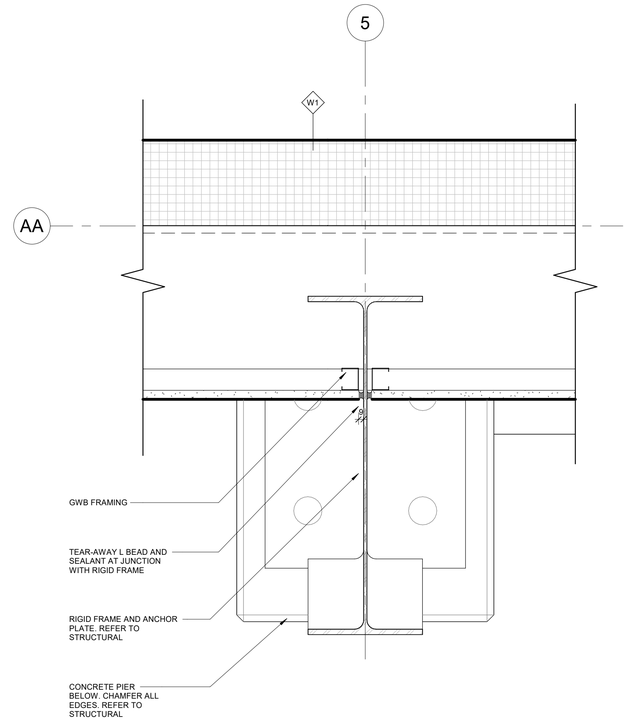
6 A601 PLAN DETAIL - INTERIOR FIRE-RATED WINDOW GP2
Scale: 1 : 5



7 A601 PLAN DETAIL - GL3 @ CROBE OFFICE
Scale: 1 : 5



8 A601 PLAN DETAIL - GL3 @ TEACHING LAB
Scale: 1 : 5



9 A601 PLAN DETAIL AT RIGID FRAME
Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

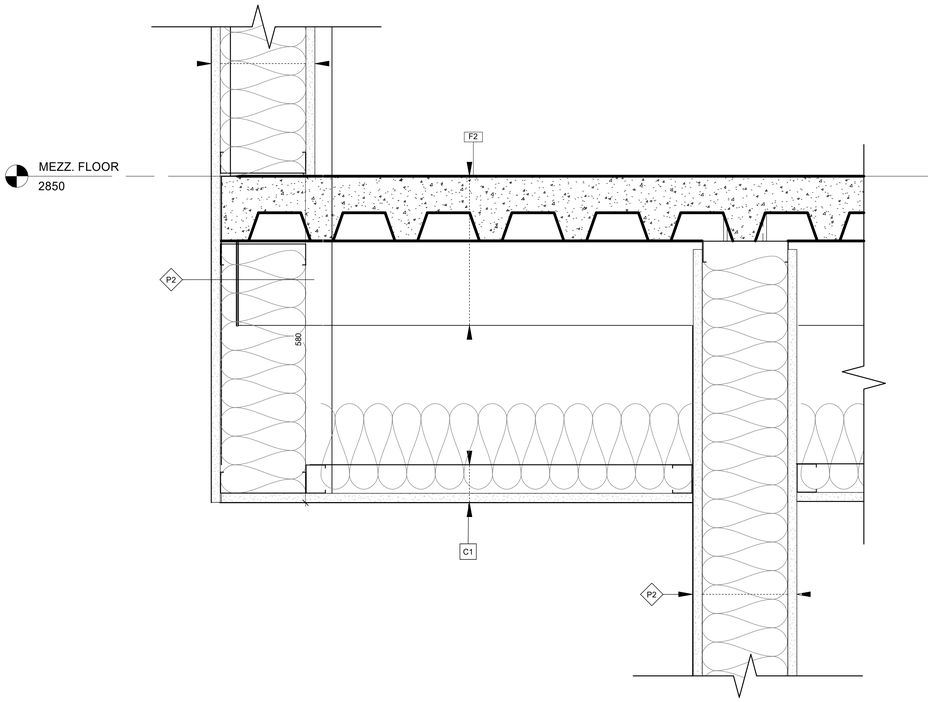
TITLE
PLAN DETAILS - INTERIOR

Baird Sampson Neuert architects
416.363.8877 bsnarchitects.com

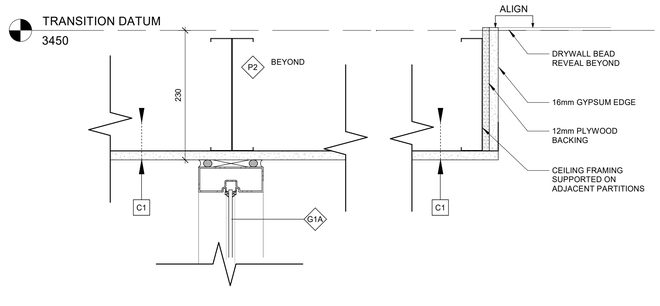
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 5
DATE :	05/26/20
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

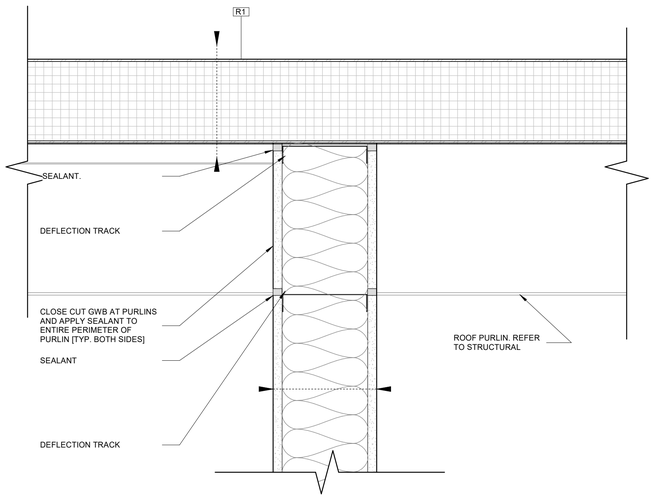
SHEET NO :
A601



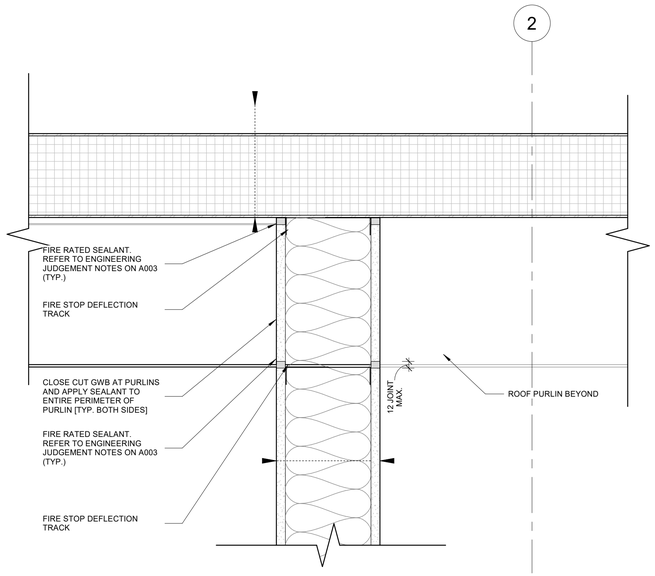
1 / A602 SECTION DETAIL - MEZZANINE OVERHANG
Scale: 1 : 5



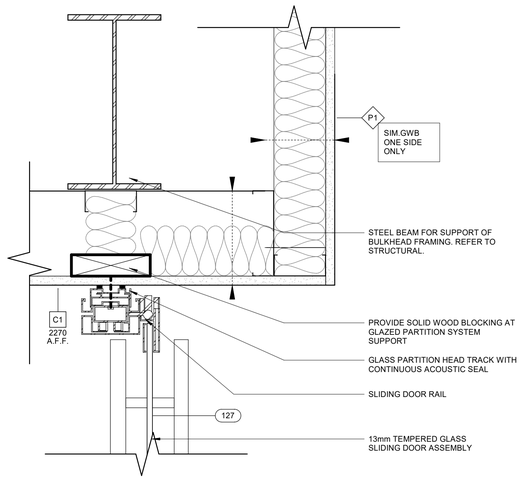
2 / A602 SECTION DETAIL - VESTIBULE CEILING
Scale: 1 : 5



3 / A602 SECTION DETAIL - TYPICAL PARTITION AT ROOF
Scale: 1 : 5



4 / A602 SECTION DETAIL - TYPICAL FIRE-RATED PARTITION AT ROOF
Scale: 1 : 5



5 / A602 SECTION DETAIL - BULKHEAD @ FLOATING OFFICE
Scale: 1 : 5

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
SECTION DETAILS - INTERIOR

architects
Baird Sampson Neuert
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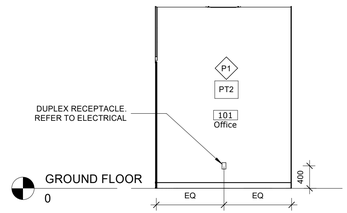
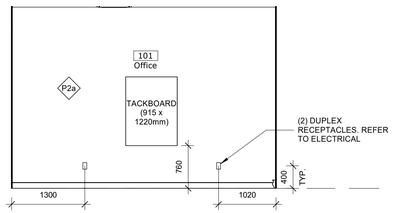
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

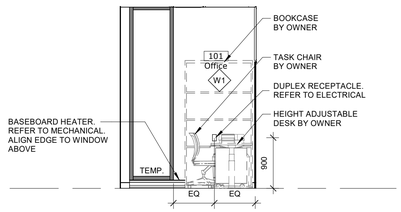
SCALE :	1 : 5	SHEET NO :	A602
DATE :	05/26/20		
PROJECT NO :	2301		
DRAWN BY :	Author		
CHECKED BY :	Checker		



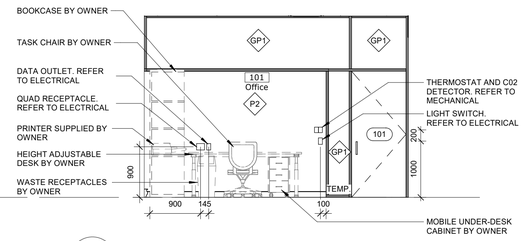
1 A701 INT ELEV - OFFICE NORTH
Scale: 1 : 50



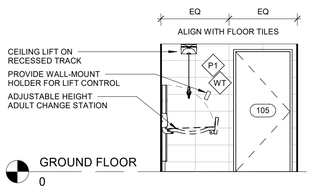
2 A701 INT ELEV - OFFICE EAST
Scale: 1 : 50



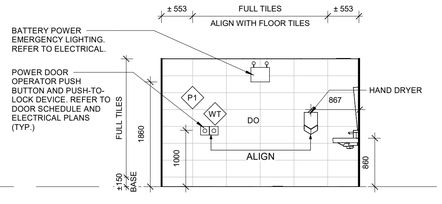
3 A701 INT ELEV - OFFICE SOUTH
Scale: 1 : 50



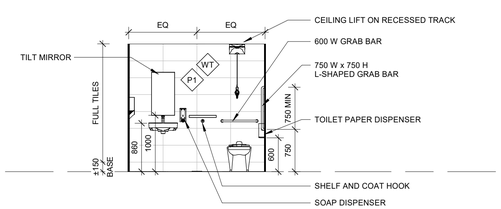
4 A701 INT ELEV - OFFICE WEST
Scale: 1 : 50



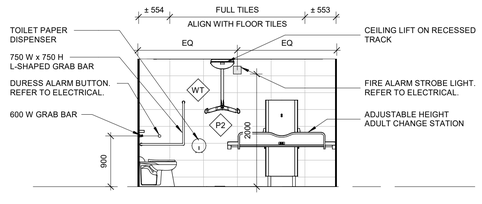
5 A701 INT ELEV - UNIVERSAL WASHROOM NORTH
Scale: 1 : 50



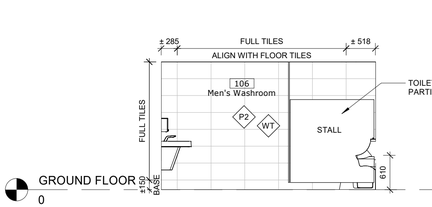
6 A701 INT ELEV - UNIVERSAL WASHROOM EAST
Scale: 1 : 50



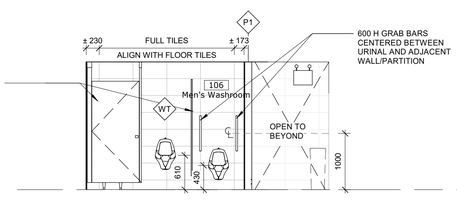
7 A701 INT ELEV - UNIVERSAL WASHROOM SOUTH
Scale: 1 : 50



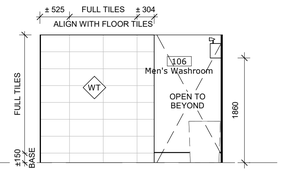
8 A701 INT ELEV - UNIVERSAL WASHROOM WEST
Scale: 1 : 50



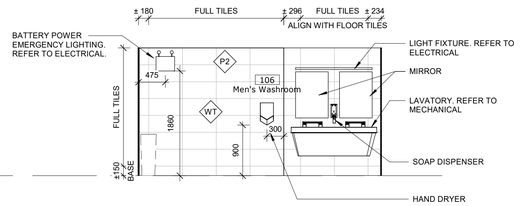
9 A701 INT ELEV - MEN'S WASHROOM NORTH
Scale: 1 : 50



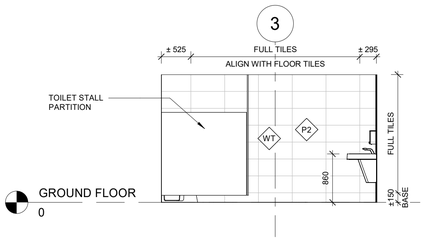
10 A701 INT ELEV - MEN'S WASHROOM EAST
Scale: 1 : 50



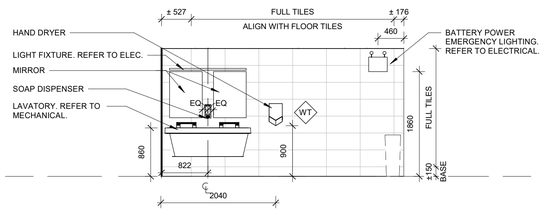
11 A701 INT ELEV - MEN'S WASHROOM SOUTH
Scale: 1 : 50



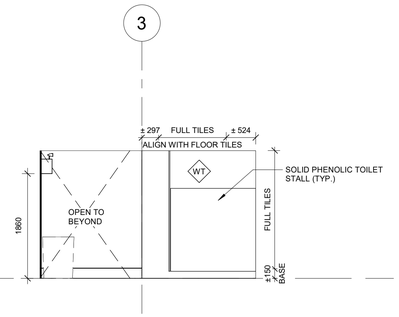
12 A701 INT ELEV - MEN'S WASHROOM WEST
Scale: 1 : 50



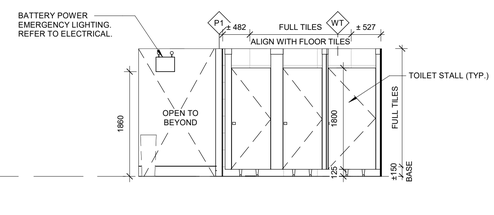
13 A701 INT ELEV - WOMEN'S WASHROOM NORTH
Scale: 1 : 50



14 A701 INT ELEV - WOMEN'S WASHROOM EAST
Scale: 1 : 50



15 A701 INT ELEV - WOMEN'S WASHROOM SOUTH
Scale: 1 : 50



16 A701 INT ELEV - WOMEN'S WASHROOM WEST
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Design Development Costing	2024-03-28
2	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

INTERIOR ELEVATIONS

architects
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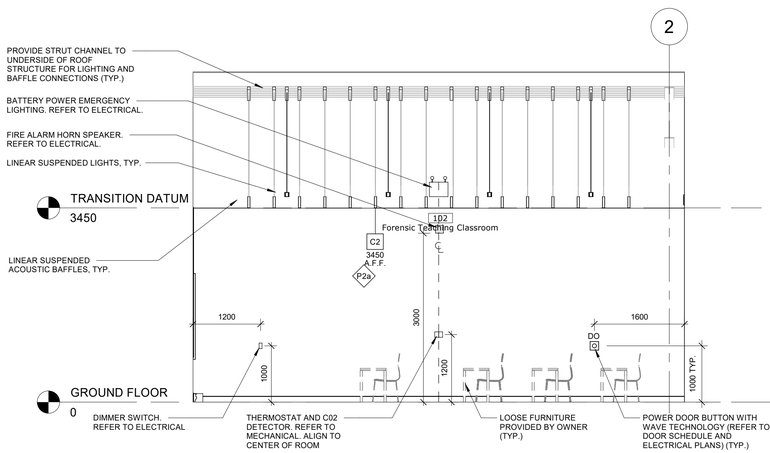
SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

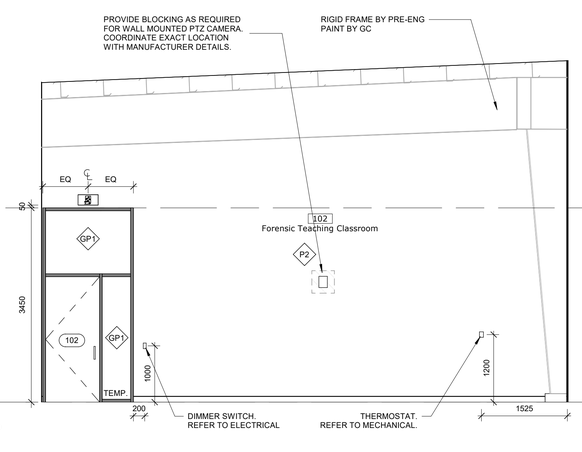
SCALE :	1 : 50
DATE :	02/22/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

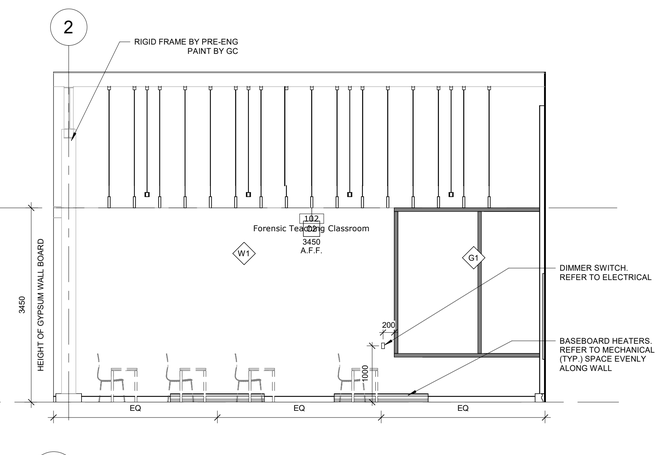
A701



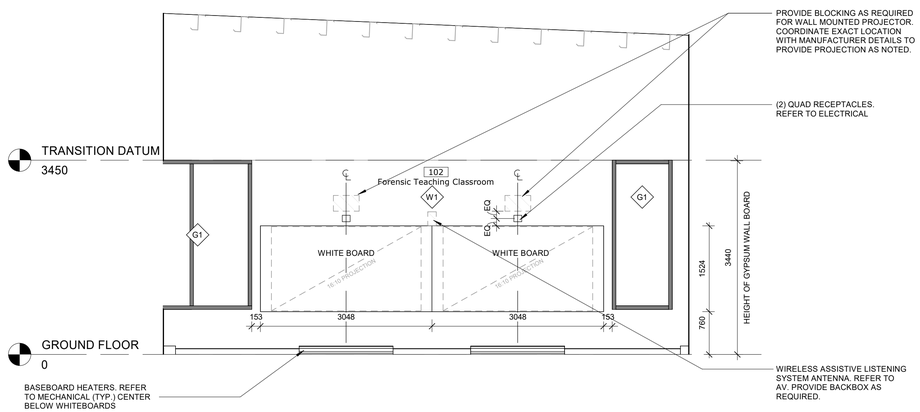
1 A702 INT ELEV - TEACHING CLASSROOM NORTH
Scale: 1 : 50



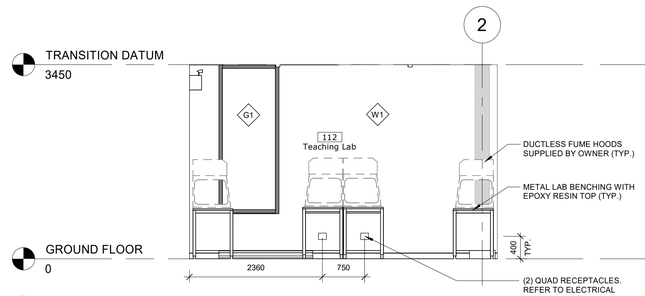
2 A702 INT ELEV - TEACHING CLASSROOM EAST
Scale: 1 : 50



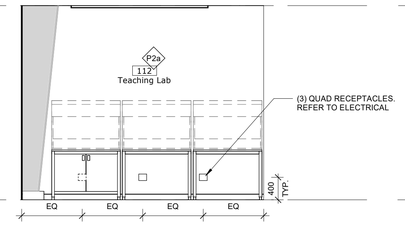
3 A702 INT ELEV - TEACHING CLASSROOM SOUTH
Scale: 1 : 50



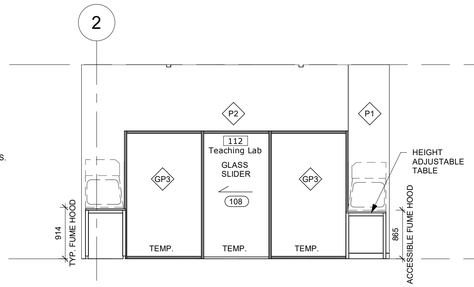
4 A702 INT ELEV - TEACHING CLASSROOM WEST
Scale: 1 : 50



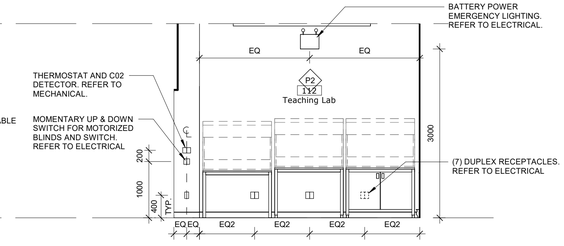
5 A702 INT ELEV - FSC TEACHING LAB NORTH
Scale: 1 : 50



6 A702 INT ELEV - FSC TEACHING LAB EAST
Scale: 1 : 50



7 A702 INT ELEV - FSC TEACHING LAB SOUTH
Scale: 1 : 50

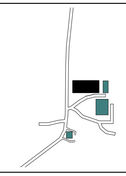


8 A702 INT ELEV - FSC TEACHING LAB WEST
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



No.	ISSUANCE	DATE
1	Issued for Design Development Costing	2024-03-28
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CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
INTERIOR ELEVATIONS

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 50
DATE :	02/22/24
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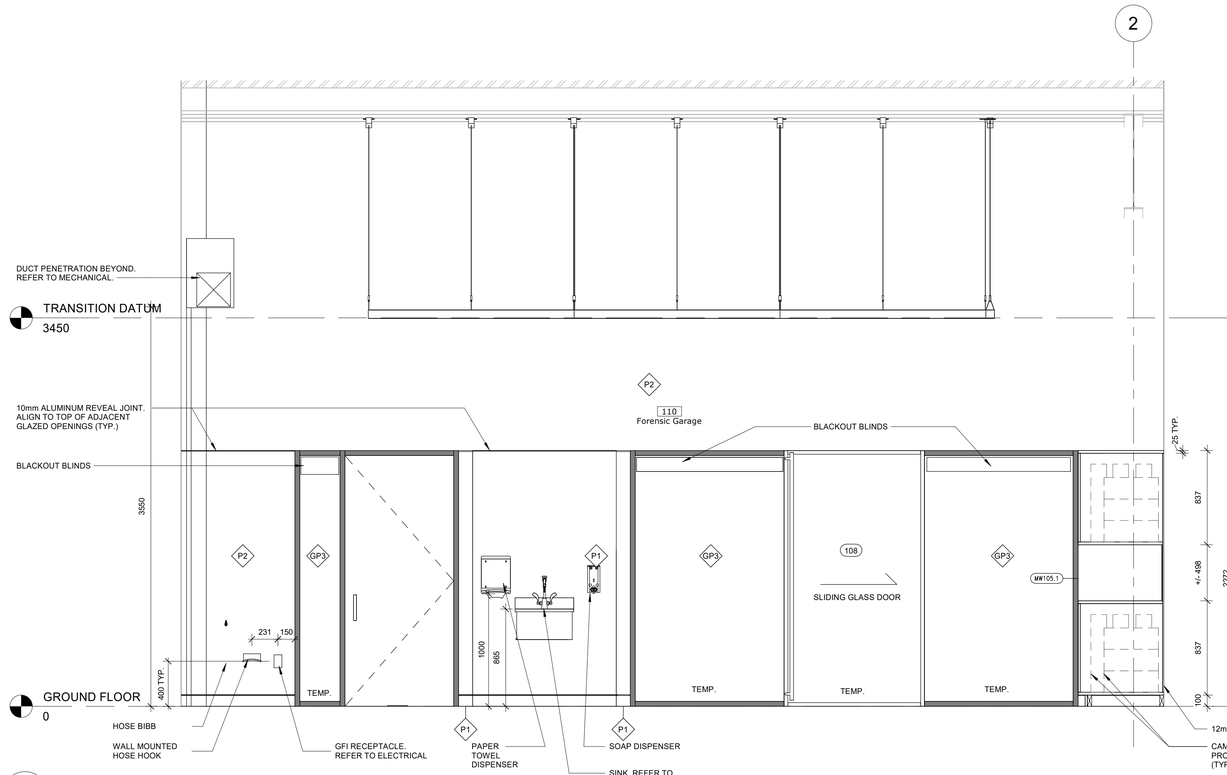
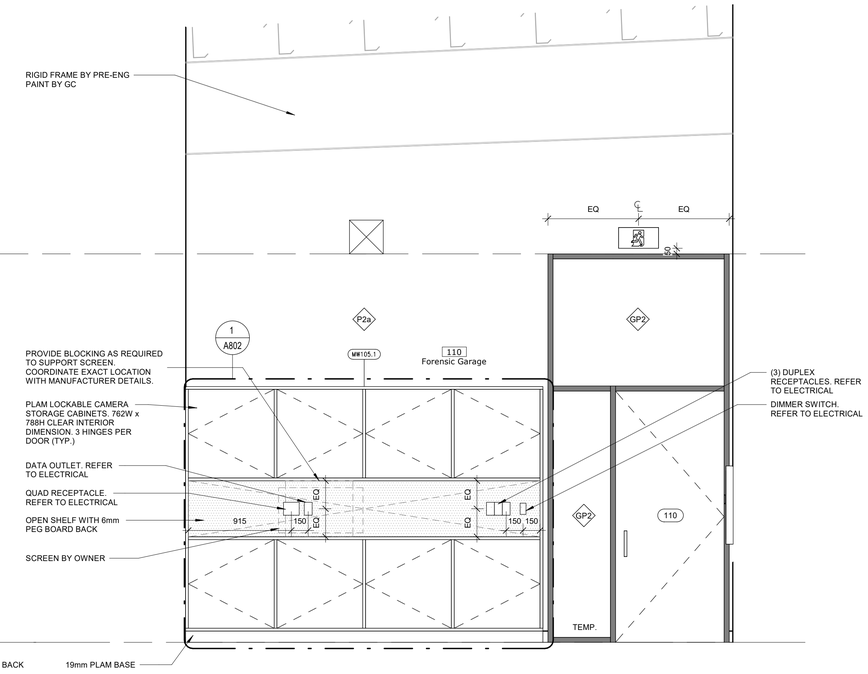
DRAWN BY :	Author
CHECKED BY :	Checker

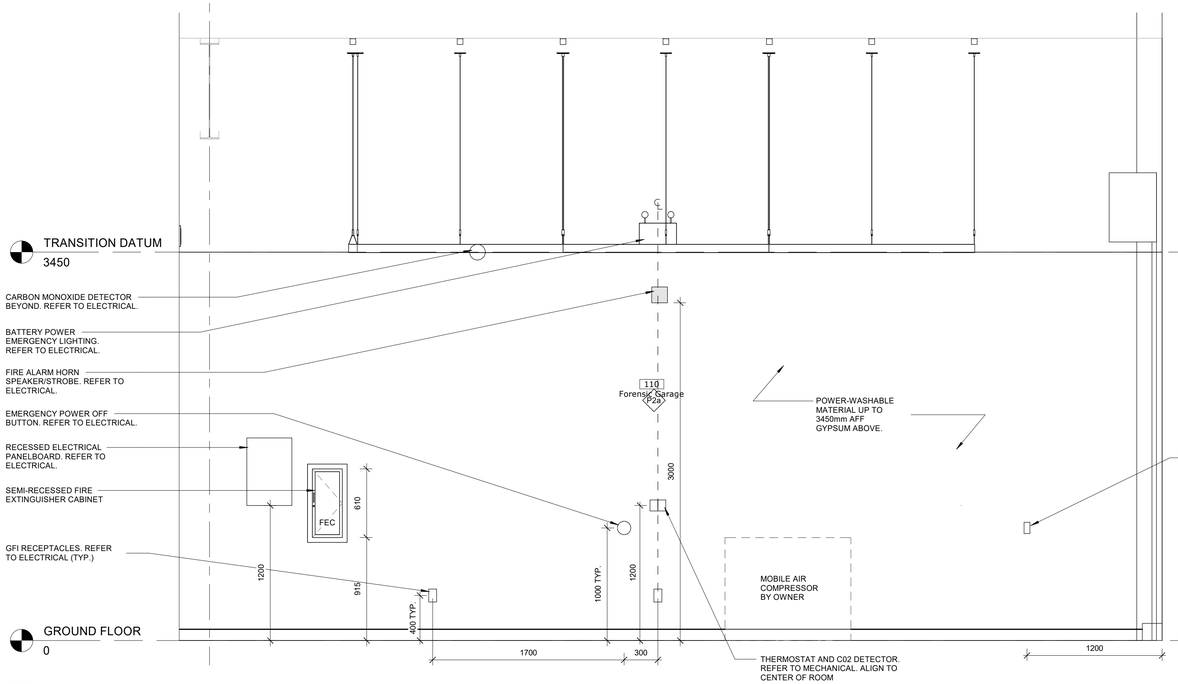
SHEET NO :
A702



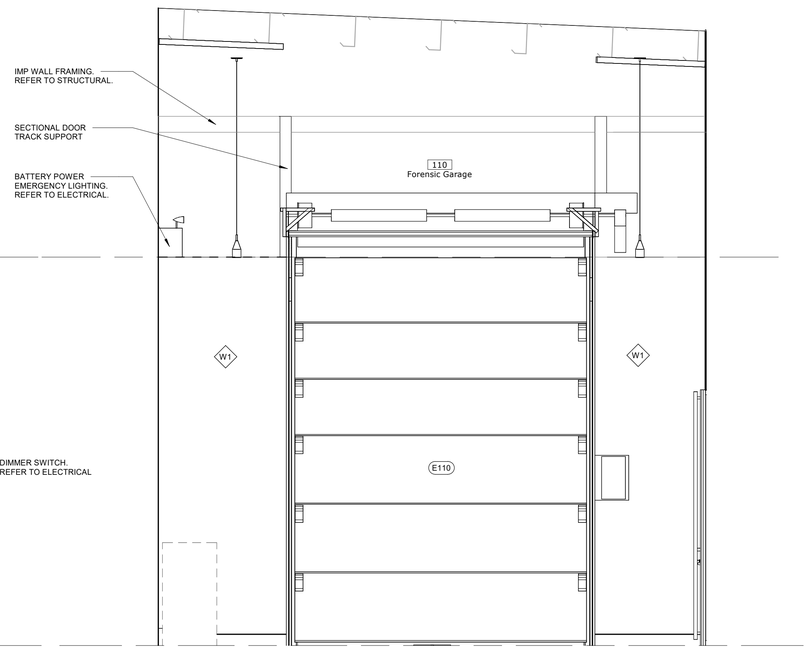
1 A703 **INT ELEV - FSC GARAGE NORTH**
Scale: 1 : 25



2 A703 **INT ELEV - FSC GARAGE EAST**
Scale: 1 : 25



3 A703 **INT ELEV - FSC GARAGE SOUTH**
Scale: 1 : 25



4 A703 **INT ELEV - FSC GARAGE WEST**
Scale: 1 : 25

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UNIVERSITY OF TORONTO MISSISSAUGA

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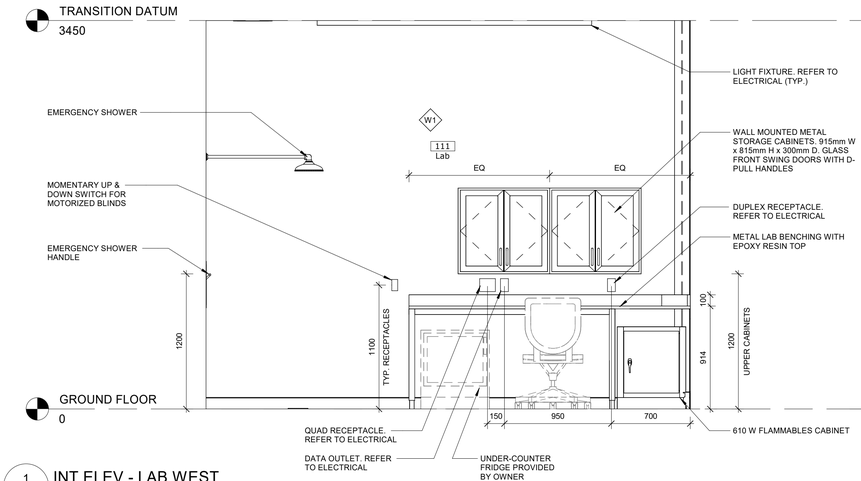
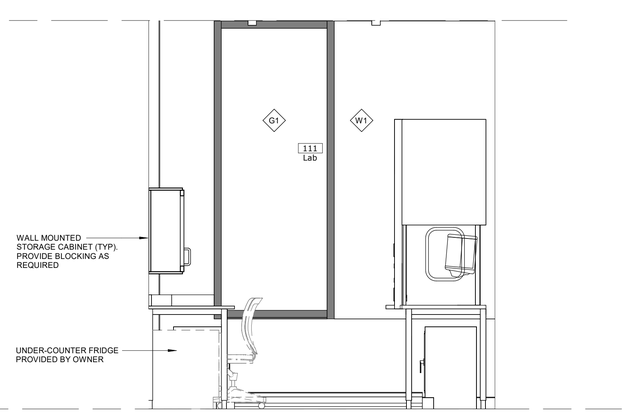


1 A704 **INT ELEV - LAB WEST**
Scale: 1 : 25



2 A704 **INT ELEV - LAB NORTH**
Scale: 1 : 25

3 A704 **INT ELEV - LAB EAST**
Scale: 1 : 25

4 A704 **INT ELEV - LAB SOUTH**
Scale: 1 : 25

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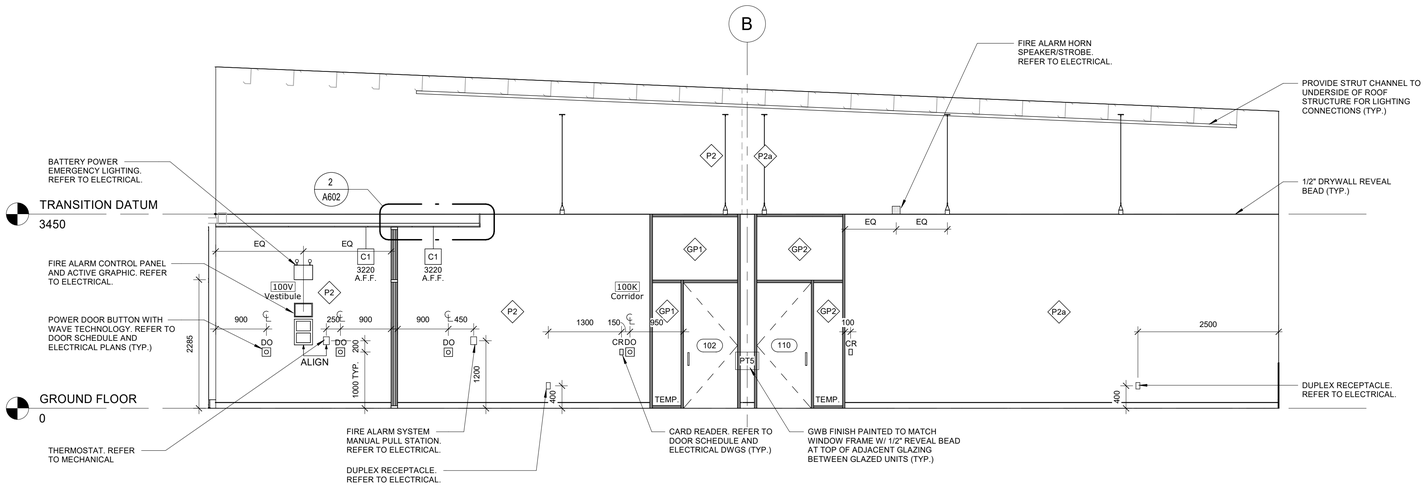
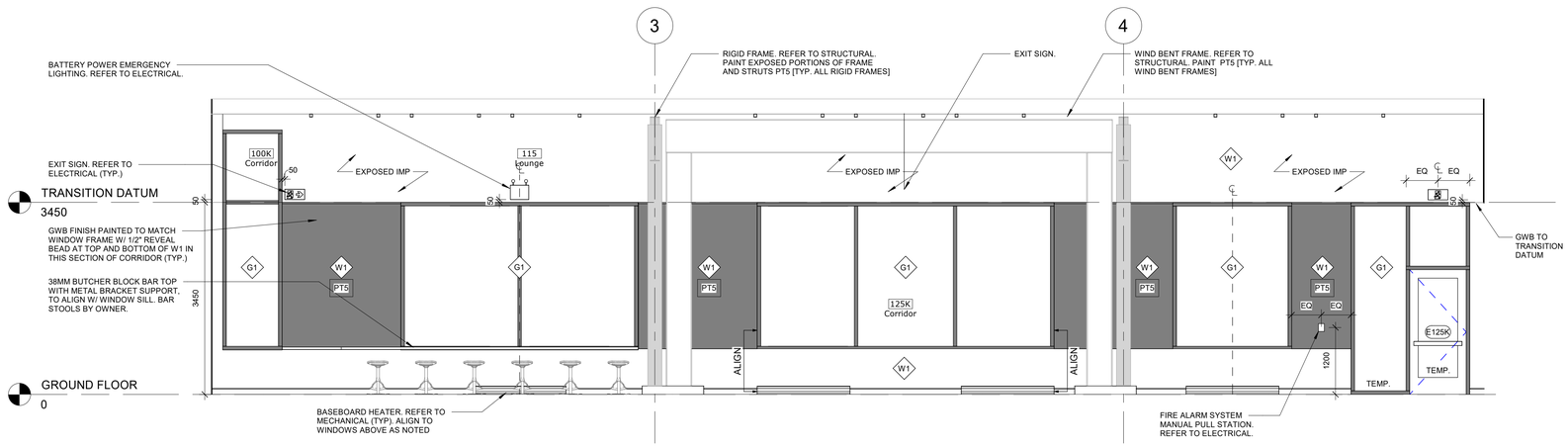
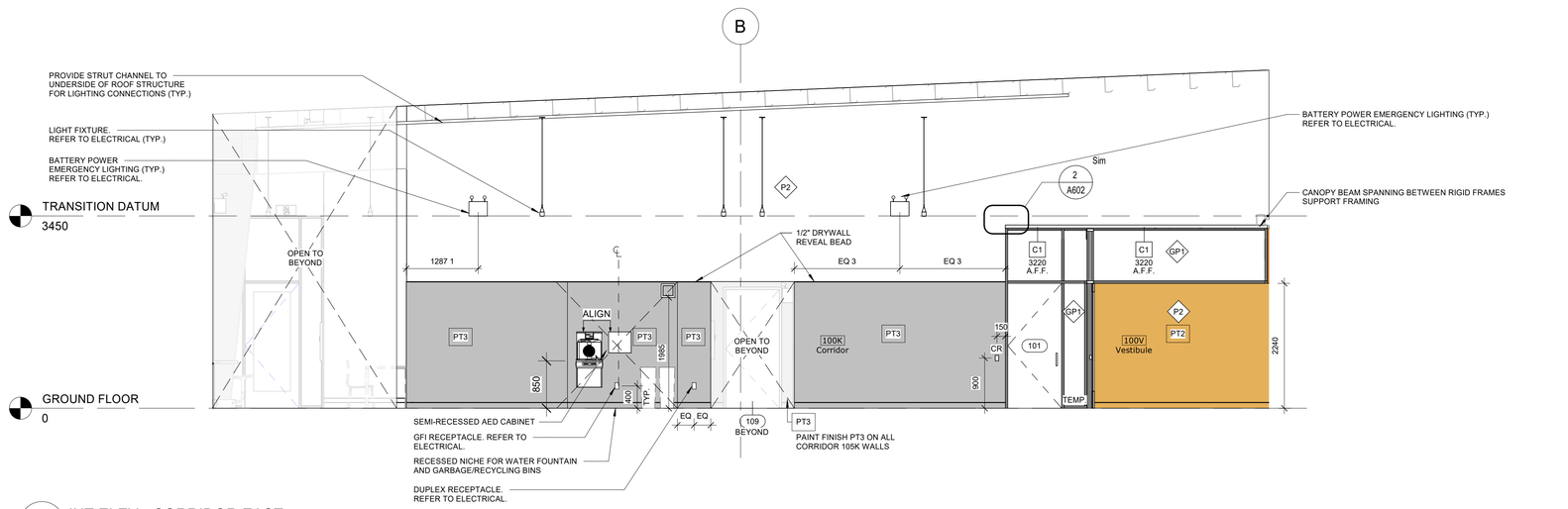


1 A705 INT ELEV - CORRIDOR WEST
Scale: 1 : 50



2 A705 INT ELEV - CORRIDOR NORTH
Scale: 1 : 50



3 A705 INT ELEV - CORRIDOR EAST
Scale: 1 : 50

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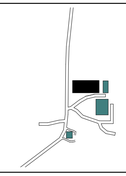

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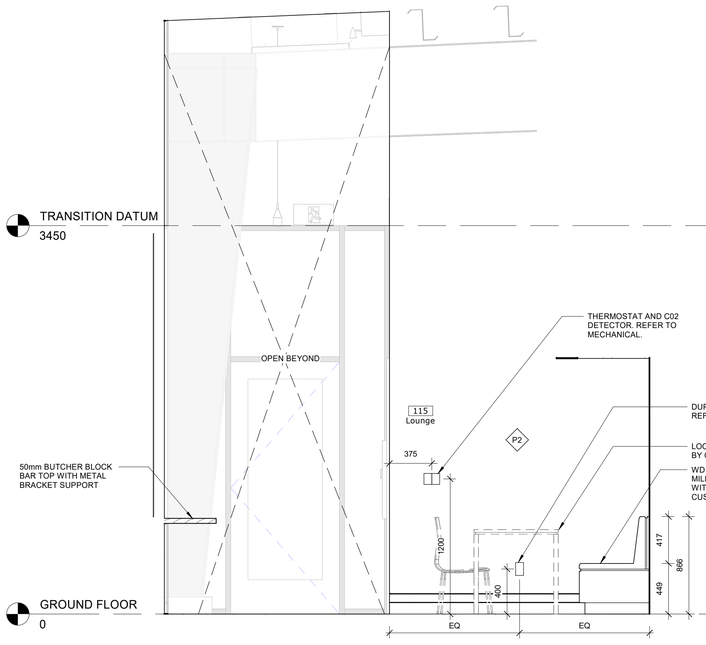
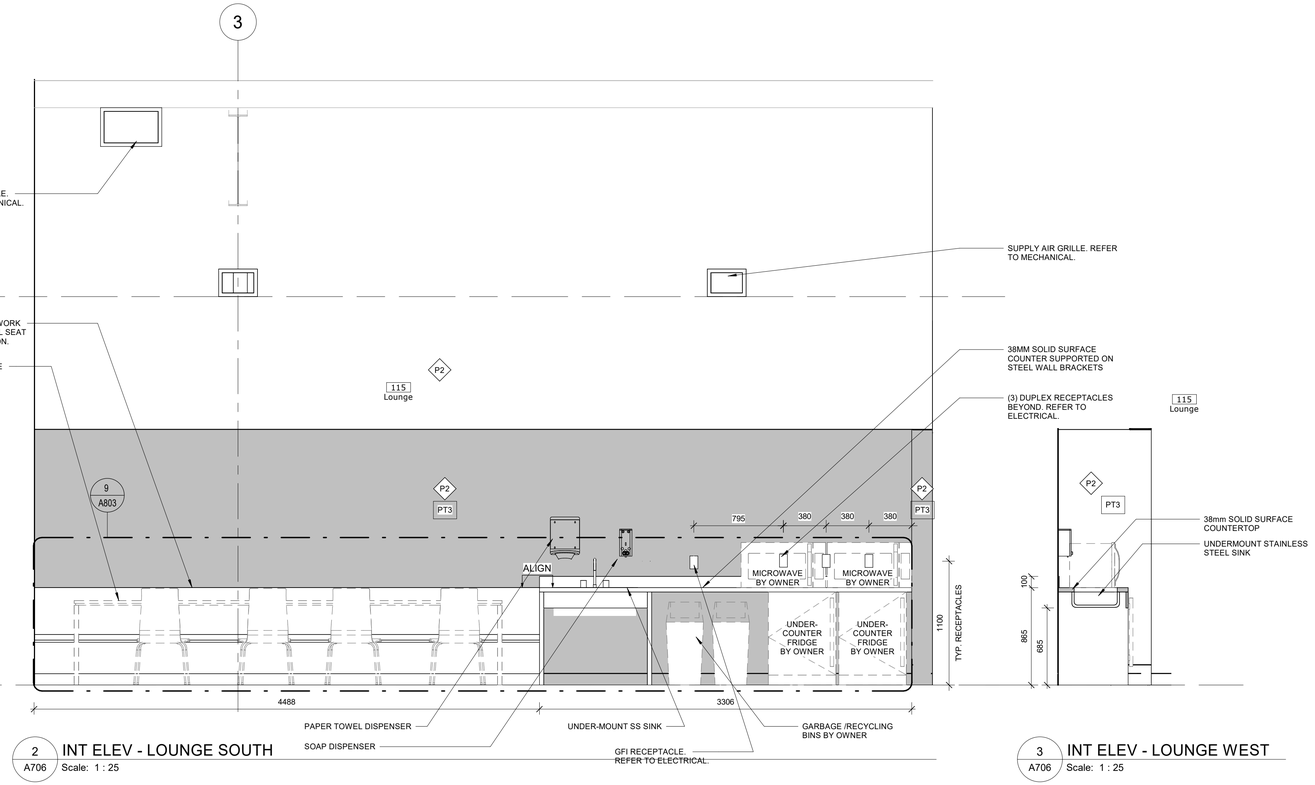
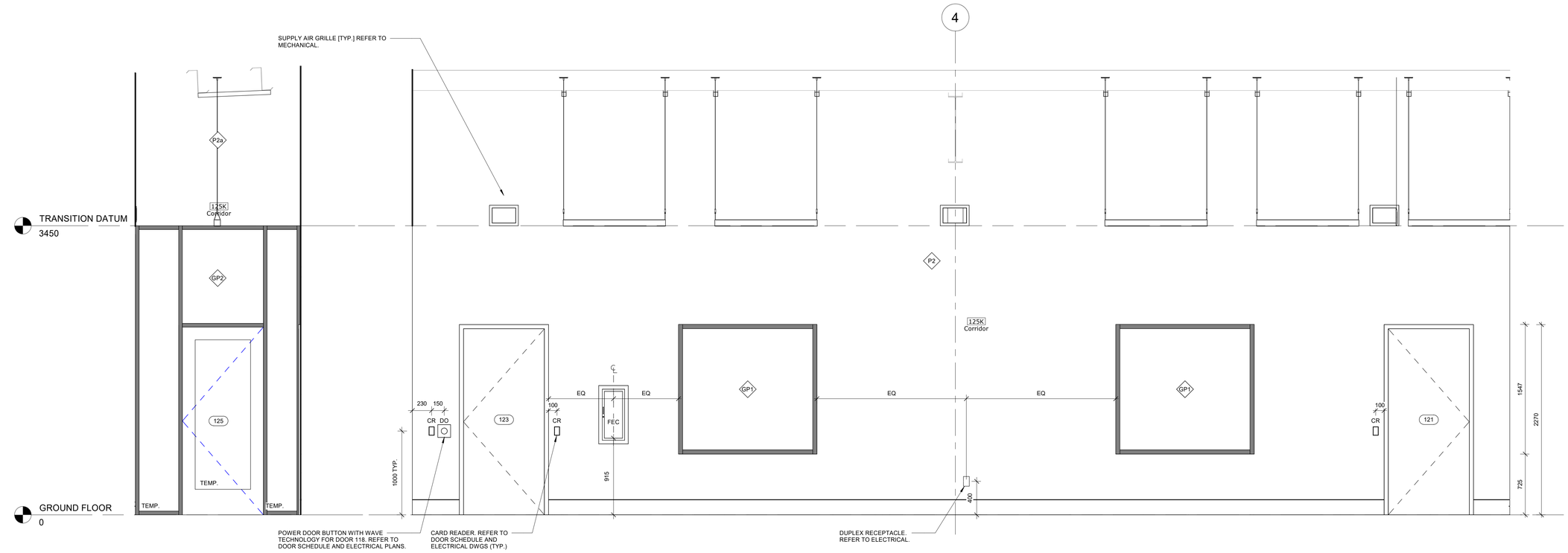


1 A706 INT ELEV - LOUNGE EAST
Scale: 1 : 25



2 A706 INT ELEV - LOUNGE SOUTH
Scale: 1 : 25

3 A706 INT ELEV - LOUNGE WEST
Scale: 1 : 25



4 A706 INT ELEV - CORRIDOR 102b EAST
Scale: 1 : 25

5 A706 INT ELEV - CORRIDOR 102b SOUTH
Scale: 1 : 25

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

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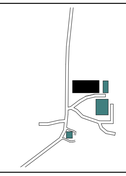

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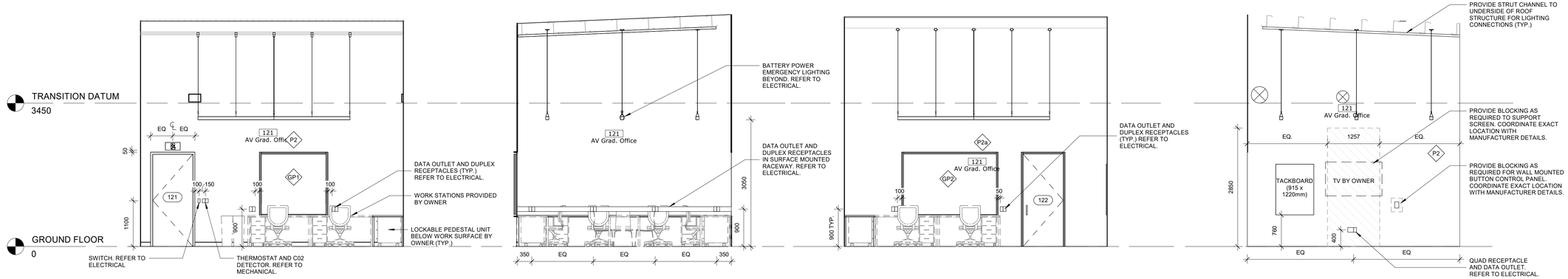
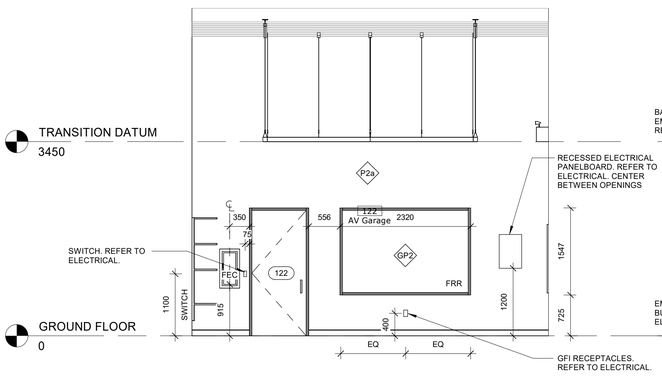


1 A707 INT ELEV - AV GRAD OFFICE NORTH
Scale: 1 : 50

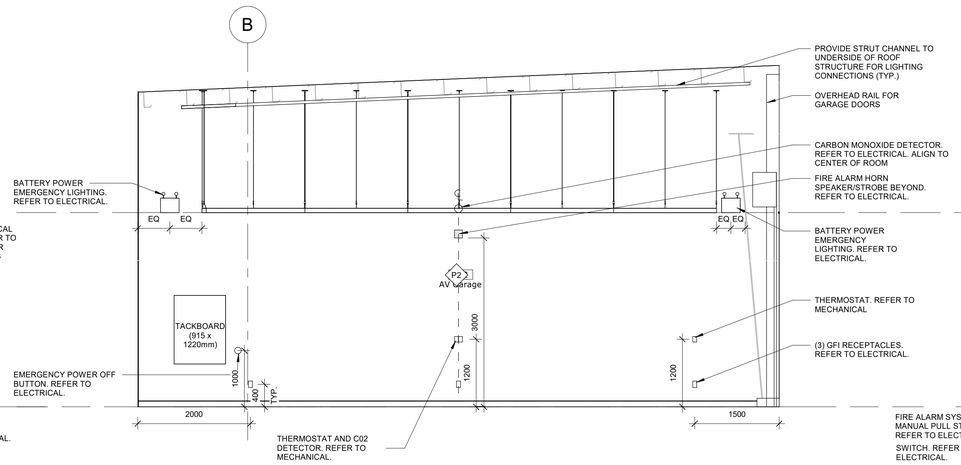
2 A707 INT ELEV - AV GRAD OFFICE EAST
Scale: 1 : 50

3 A707 INT ELEV - AV GRAD OFFICE SOUTH
Scale: 1 : 50

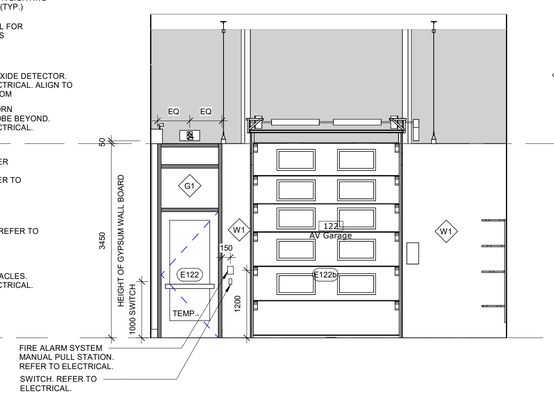
4 A707 INT ELEV - AV GRAD OFFICE WEST
Scale: 1 : 50



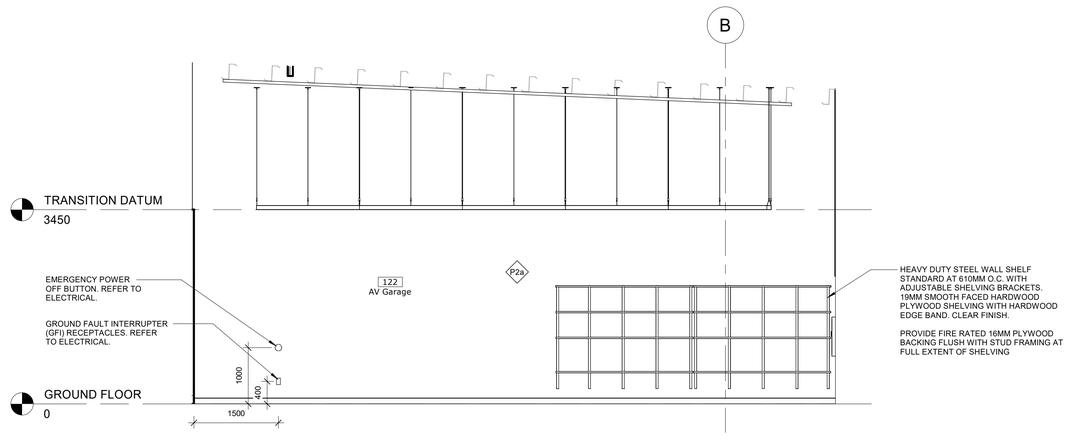
5 A707 INT ELEV - AV GARAGE NORTH
Scale: 1 : 50



6 A707 INT ELEV - AV GARAGE EAST
Scale: 1 : 50



7 A707 INT ELEV - AV GARAGE SOUTH
Scale: 1 : 50



8 A707 INT ELEV - AV GARAGE WEST
Scale: 1 : 50

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Baird Sampson Neuert architects
416.363.8877 bsnarchitects.com

SEAL

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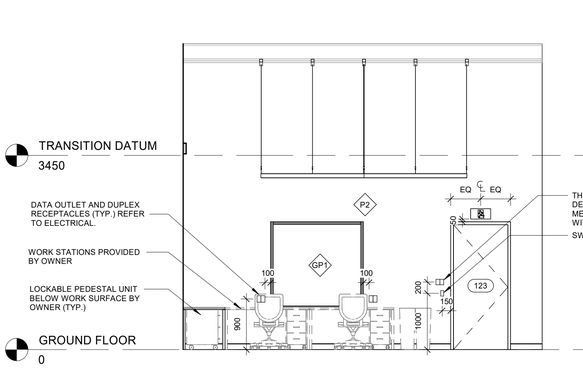
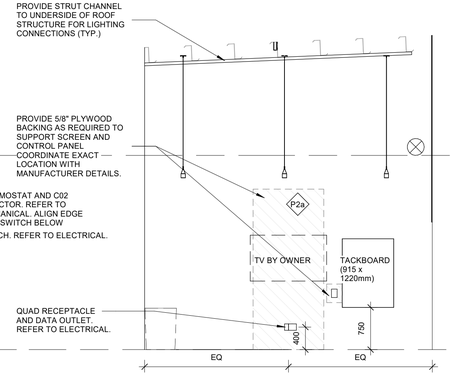
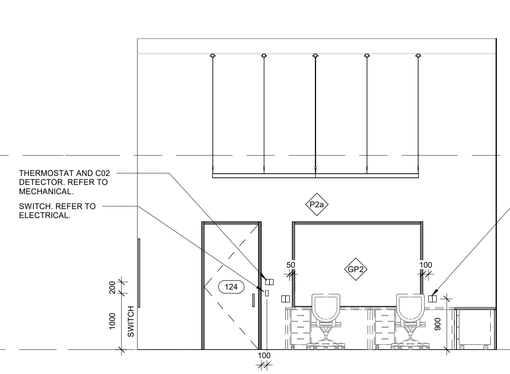


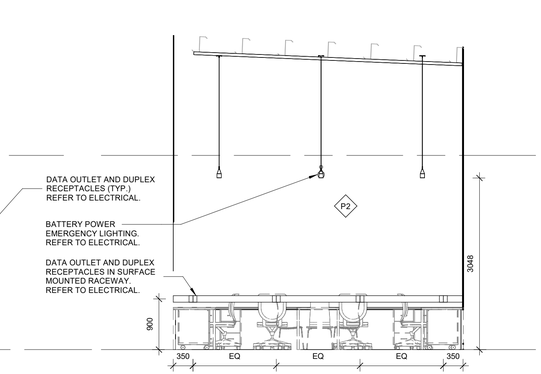
1 A708 INT ELEV - FLEX OFFICE NORTH
Scale: 1 : 50



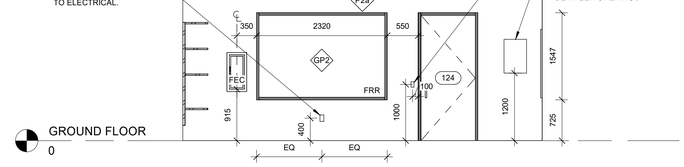
2 A708 INT ELEV - FLEX OFFICE EAST
Scale: 1 : 50



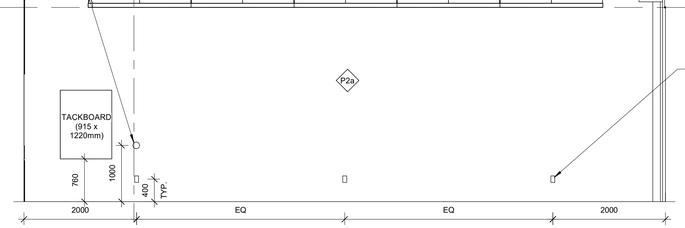
3 A708 INT ELEV - FLEX OFFICE SOUTH
Scale: 1 : 50



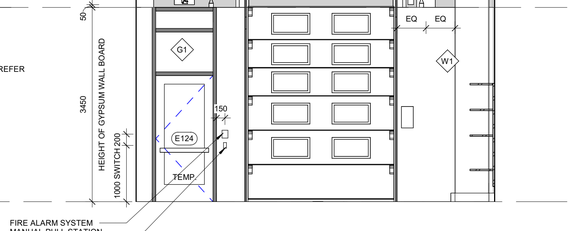
4 A708 INT ELEV - FLEX OFFICE WEST
Scale: 1 : 50



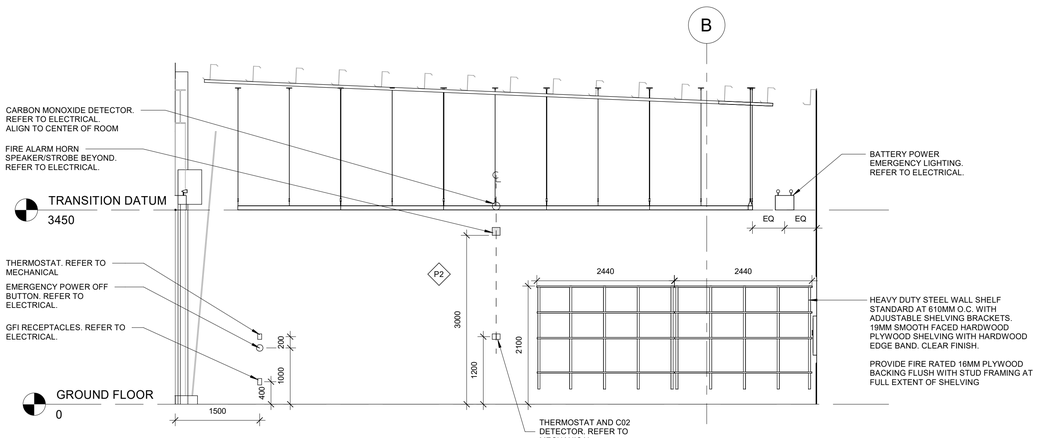
5 A708 INT ELEV - FLEX GARAGE NORTH
Scale: 1 : 50



6 A708 INT ELEV - FLEX GARAGE EAST
Scale: 1 : 50



7 A708 INT ELEV - FLEX GARAGE SOUTH
Scale: 1 : 50



8 A708 INT ELEV - FLEX GARAGE WEST
Scale: 1 : 50

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

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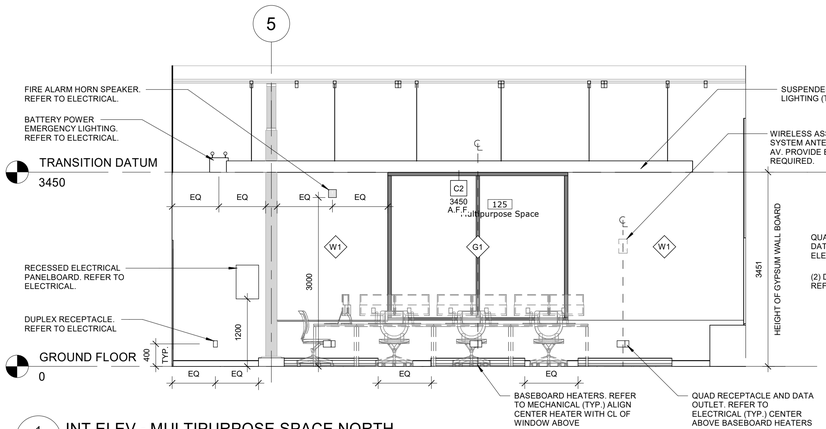
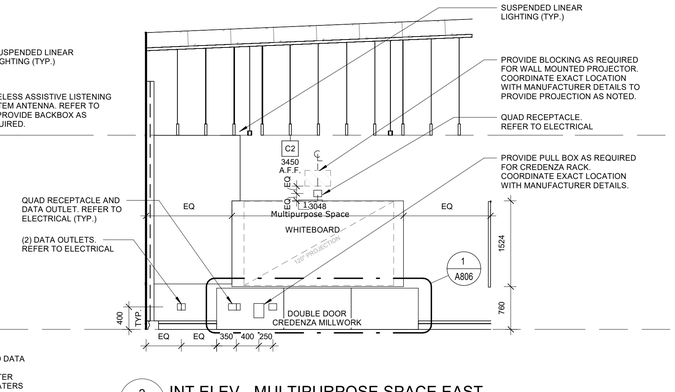
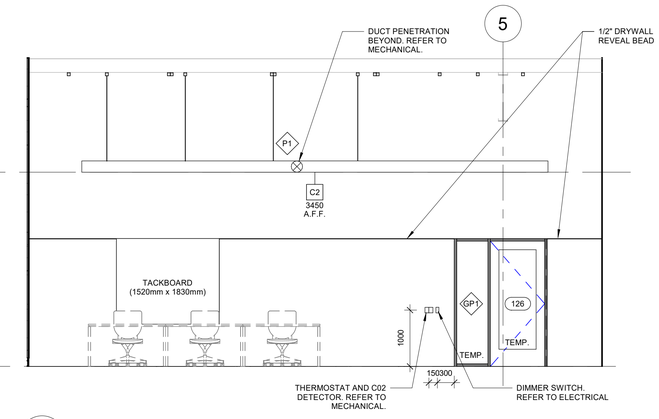


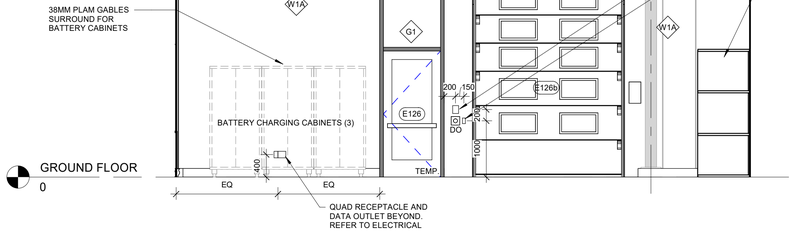
1 / A709 INT ELEV - MULTIPURPOSE SPACE NORTH
Scale: 1 : 50



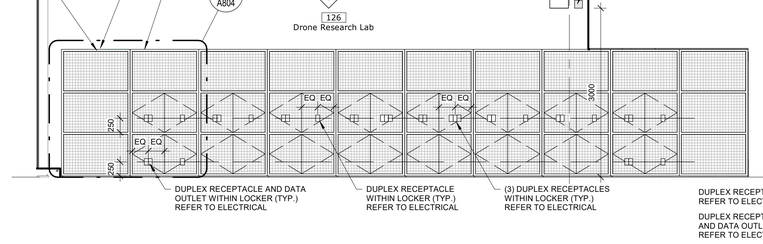
2 / A709 INT ELEV - MULTIPURPOSE SPACE EAST
Scale: 1 : 50



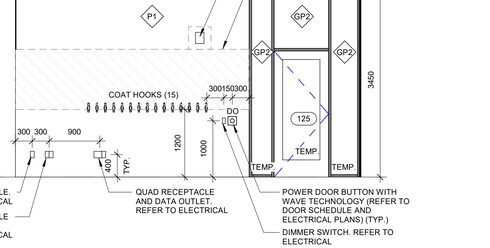
3 / A709 INT ELEV - MULTIPURPOSE SPACE SOUTH
Scale: 1 : 50



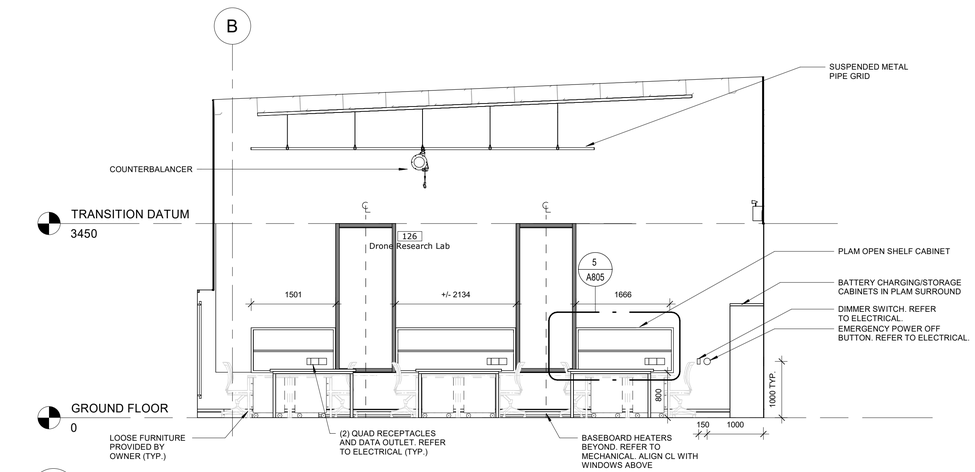
4 / A709 INT ELEV - DRONE RESEARCH LAB SOUTH
Scale: 1 : 50



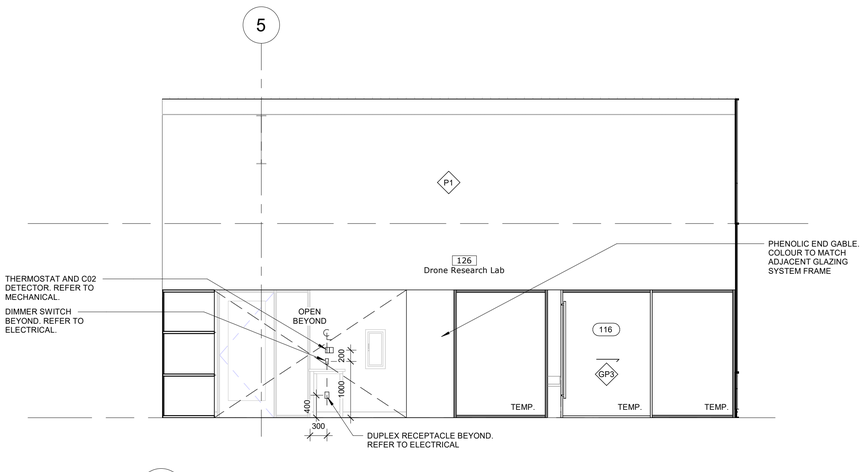
5 / A709 INT ELEV - DRONE RESEARCH LAB WEST
Scale: 1 : 50



6 / A709 INT ELEV - MULTIPURPOSE SPACE WEST
Scale: 1 : 50



7 / A709 INT ELEV - DRONE RESEARCH LAB EAST
Scale: 1 : 50



8 / A709 INT ELEV - DRONE RESEARCH LAB NORTH
Scale: 1 : 50

CLIENT LOGO

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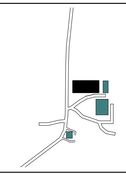

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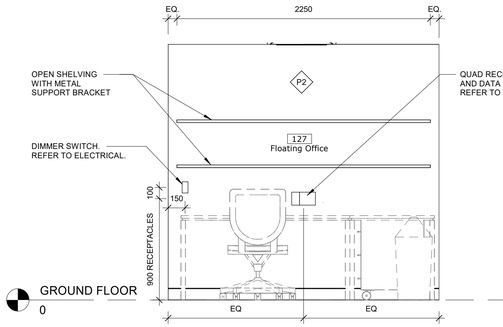
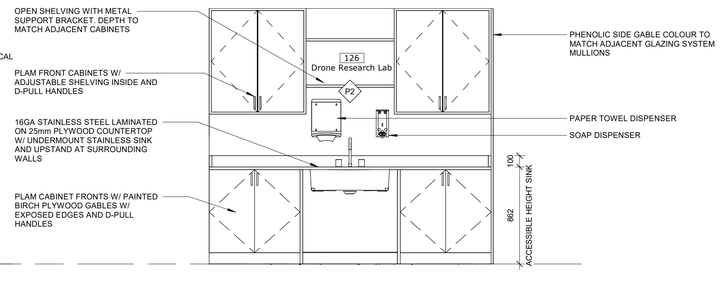
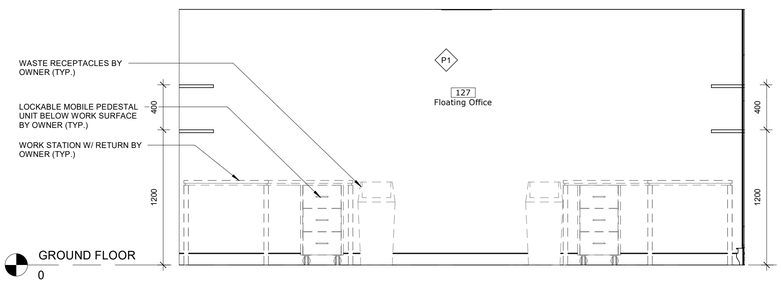


GROUND FLOOR
0

1 / A710 INT ELEV - FLOATING OFFICE WEST
Scale: 1 : 25

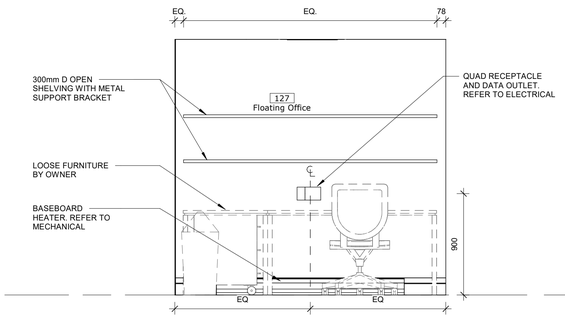


2 / A710 INT ELEV - CROBE SINK AND COUNTER
Scale: 1 : 25

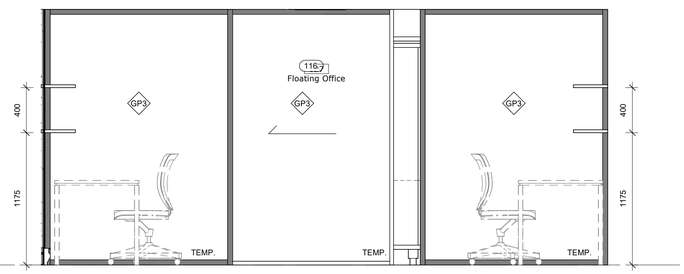


GROUND FLOOR
0

3 / A710 INT ELEV - FLOATING OFFICE NORTH
Scale: 1 : 25



4 / A710 INT ELEV - FLOATING OFFICE EAST
Scale: 1 : 25

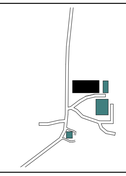


5 / A710 INT ELEV - FLOATING OFFICE SOUTH
Scale: 1 : 25

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



No.	ISSUANCE	DATE
1	Issued for Design Development Costing	2024-03-28
2	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
INTERIOR ELEVATIONS

architects
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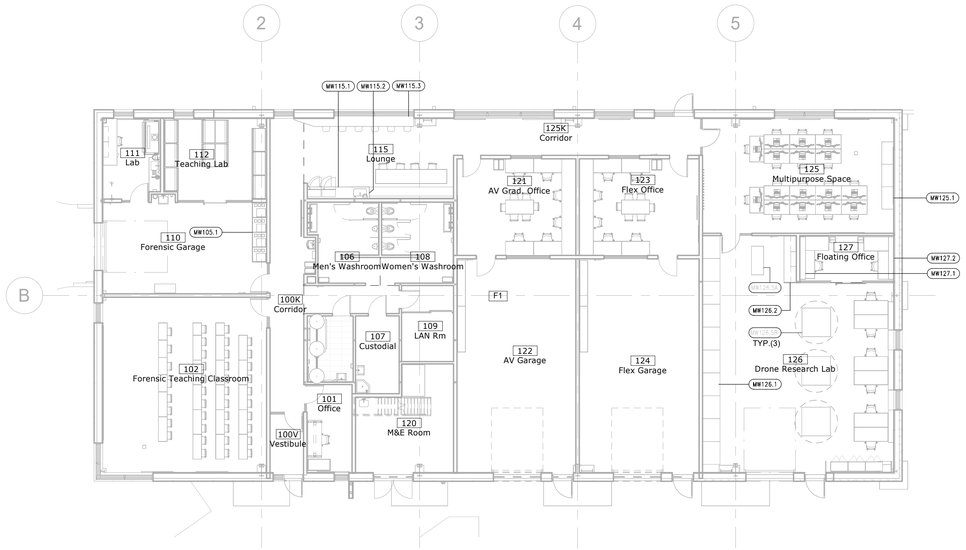
SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 25
DATE :	02/13/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A710



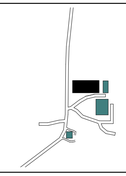
1 / A801 MILLWORK KEY PLAN

Scale: 1 : 150

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

MILLWORK SCHEDULE KEY PLAN

architects
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SEAL

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JESSE DORMODY
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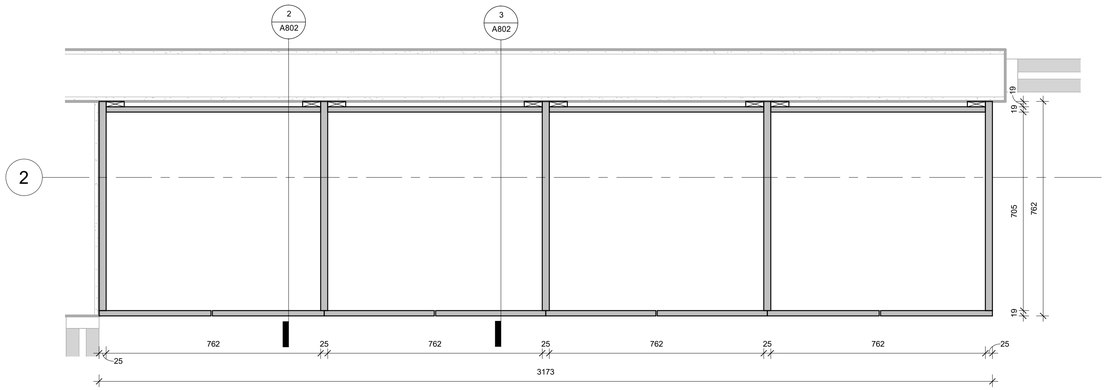
6624

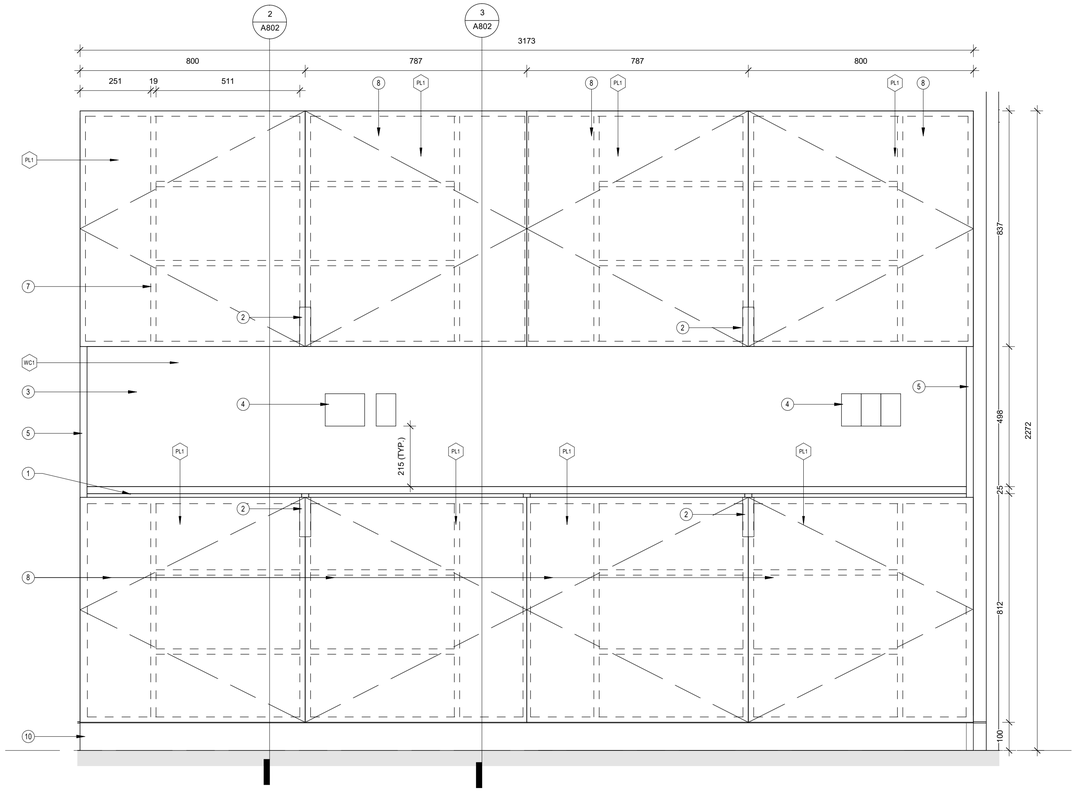
SCALE :	1 : 150
DATE :	09/26/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

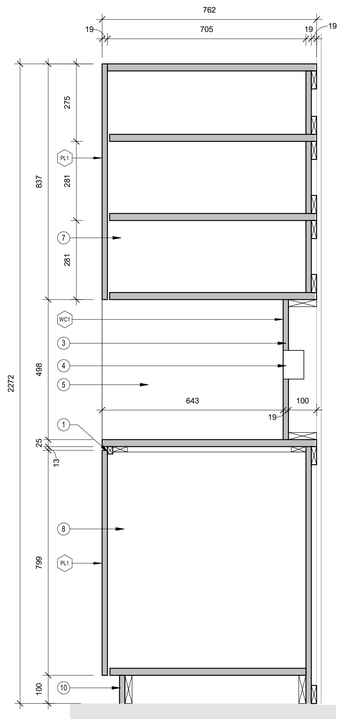
A801



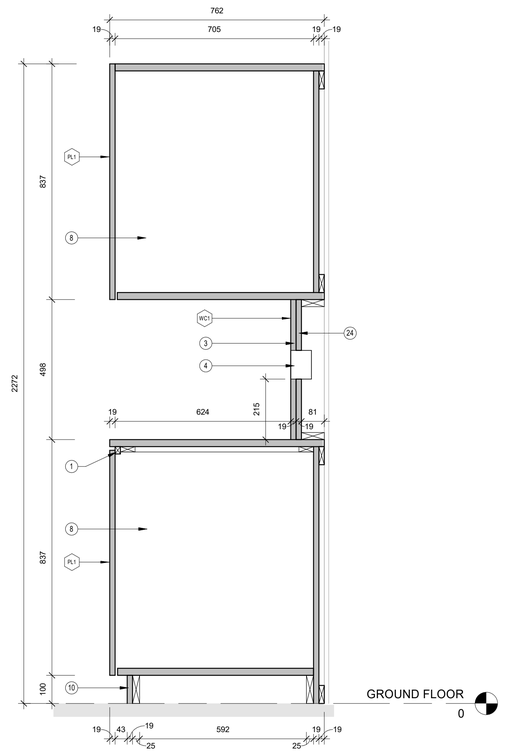
4 A802 MW105.1 - MILLWORK PLAN
Scale: 1 : 10



1 A802 MW105.1 - MILLWORK ELEVATION
Scale: 1 : 10



2 A802 MW105.1 - MILLWORK SECTION
Scale: 1 : 10



3 A802 MW105.1 - MILLWORK SECTION
Scale: 1 : 10

MILLWORK DRAWING NOTES:

1. 13mm REVEAL BETWEEN COUNTER AND LOWER CABINETS.
2. EDGE PULL.
3. OPEN SHELF WITH 6mm PEG BOARD BACK.
4. RECESSED POWER/ DATA RECEPTACLE MOUNTED TO MILLWORK. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
5. 25mm LAMINATE END GABLE.
6. PLAM LOCKABLE CAMERA STORAGE CABINETS. 762W x 788H CLEAR INTERIOR DIMENSION. 3 HINGES PER DOOR (TYP.)
7. GABLE AND FIXED SHELVES.
8. INNER CABINET 25mm HIGH DENSITY PARTICLE BOARD, MELAMINE FINISH. TYPICAL OF ALL CABINETS.
9. OPEN CABINET - NO SHELVING.
10. 19mm PLYWOOD BASE FOR EACH UNIT C/W PLASTIC LAMINATE FINISH.
11. UNDERMOUNTED SINK & FAUCET. REFER TO MECHANICAL DWGS.
12. RECESSED SHELVING PILASTERS & ADJUSTABLE SHELVES.
13. CABINET DOOR D-PULL HANDLE.
14. FIXED OPEN SHELVING WITH METAL SUPPORT BRACKET.
15. STAINLESS STEEL LAMINATED ON 25mm PLYWOOD COUNTERTOP AND UPSTAND AT SURROUNDING WALLS.
16. PHENOLIC SIDE GABLE COLOUR TO MATCH ADJACENT GLAZING SYSTEM MULLIONS.
17. PAINTED PLYWOOD GABLES W/ EXPOSED EDGES.
18. FACE OF FRAME TO HAVE FINISH TO MATCH DOOR FRONTS.
19. CUT OUT IN GABLE FOR CABCOOL FAN.
20. CUT OUT IN CABLE BETWEEN LEFT AND RIGHT BAYS.
21. CUT OUT IN BOTTOM OF CABINET.
22. CUT OUT IN BACK OF CABINET.
23. LINE OF SINK BEYOND.
24. PLYWOOD BACK SUPPORT FOR TV (REFER TO AV AND ELECTRICAL PLANS FOR LOCATION).

MILLWORK FINISHES:

- PL1 PLASTIC LAMINATE FINISH
- SS1 SOLID SURFACE FINISH
- ST1 16GA STAINLESS STEEL
- WC1 PEG BOARD WALL COVERING

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE
MILLWORK DRAWINGS - FORENSIC GARAGE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 10
DATE :	10/01/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

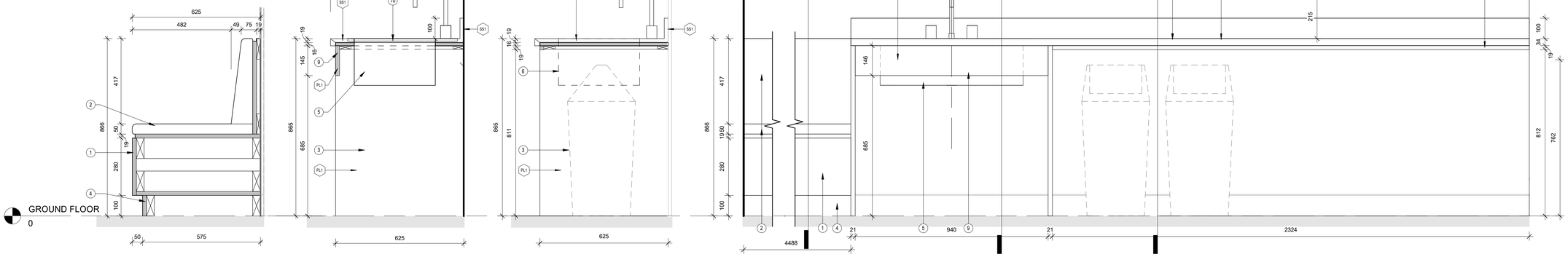
SHEET NO :
A802

MILLWORK DRAWING NOTES:

1. WOOD VENEER FINISH AT EXPOSED EDGES. FACES (TYP.).
2. VINYL SEAT AND BACK CUSHION.
3. 25mm LAMINATE END GABLE.
4. 19mm PLYWOOD BASE C/W PLASTIC LAMINATE FINISH.
5. UNDERMOUNTED SINK & FAUCET. REFER TO MECHANICAL DWGS.
6. LINE OF SINK BEYOND.
7. BUTCHER BLOCK/ LIVE EDGE COUNTER. FASTEN FROM BELOW WITH METAL BRACKET.
8. WALL MOUNTED BRACKET MECHANICALLY FASTENED TO WALL WITH FLUSH FACE FASTENERS. PROVIDE SUPPORT BLOCKING AS REQUIRED.
9. FRONT PLASTIC LAMINATE FASCIA BOARD.
10. SOLID SURFACE COUNTER TOP.
11. POWER RECEPTACLE. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
12. PROVIDE SUPPORT BLOCKING WITHIN WALL FOR BRACKET AS REQUIRED.
13. PROVIDE BACKER ROD SEALANT BETWEEN GLAZING AND BUTCHER BLOCK COUNTER.

MILLWORK FINISHES:

- PL1 PLASTIC LAMINATE FINISH
- SS1 SOLID SURFACE FINISH
- ST1 16GA STAINLESS STEEL
- WC1 PEG BOARD WALL COVERING

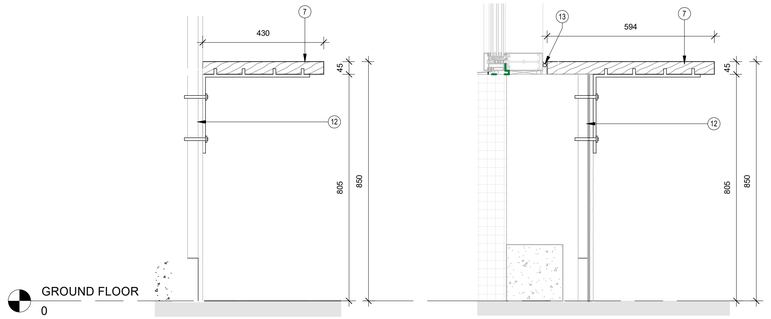


5 A803 MW103.2 SECTION
Scale: 1 : 10

6 A803 MW103.1 SECTION
Scale: 1 : 10

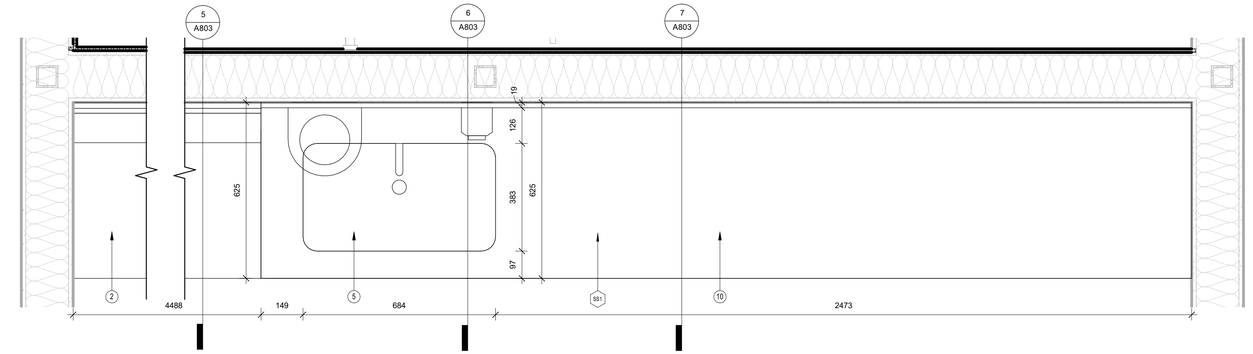
7 A803 MW103.1 SECTION
Scale: 1 : 10

9 A803 MW103.1 MW103.2 ELEVATION
Scale: 1 : 10



2 A803 MW103.3 SECTION @ WALL
Scale: 1 : 10

3 A803 MW103.3 SECTION @ WINDOW
Scale: 1 : 10



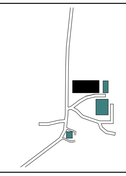
4 A803 MW103.1 MW103.2 PLAN
Scale: 1 : 10

1 A803 MW103.3 PLAN
Scale: 1 : 10

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

TITLE

MILLWORK DRAWINGS - LOUNGE

architects
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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
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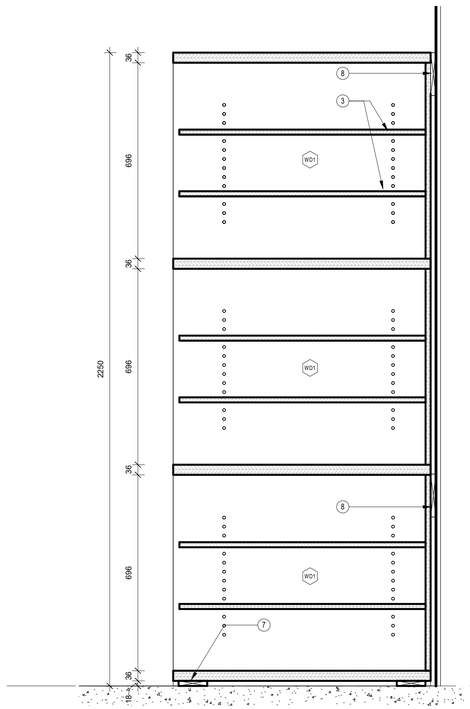
6624

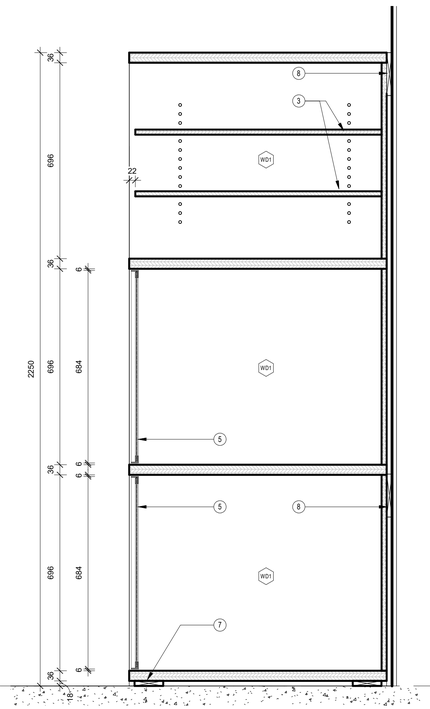
SCALE :	1 : 10
DATE :	10/01/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

A803



3 A804 MW120.1 - SECTION OF TYPE B
Scale: 1 : 10



2 A804 MW120.1 - SECTION OF TYPE A
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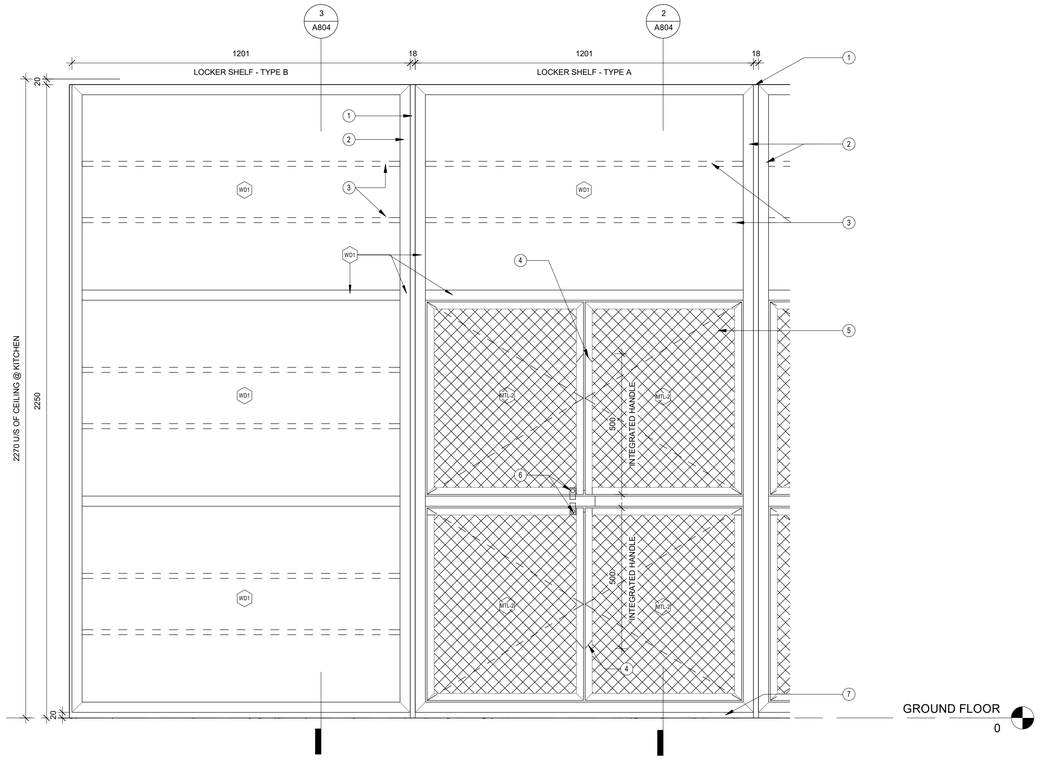
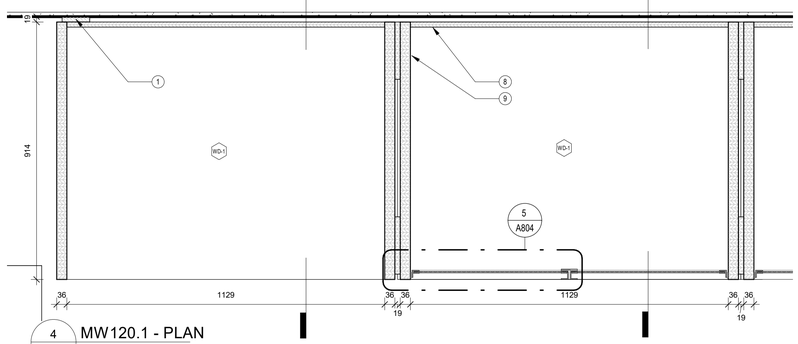
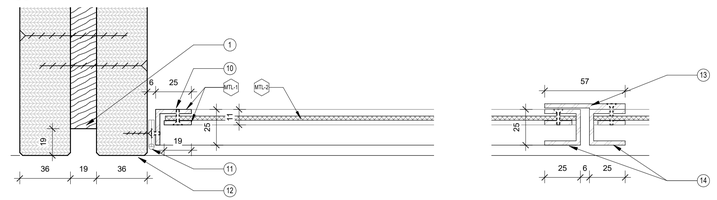


1 A804 MW 120.1 - ELEVATION
Scale: 1 : 10



4 A804 MW120.1 - PLAN
Scale: 1 : 10



5 A804 MW120.1 - DOOR DETAIL
Scale: 1 : 2

MILLWORK DRAWING NOTES:

1. RECESSED POPLAR FILLER PIECE, SET BACK 19MM FROM F/O CABINET
2. 36MM CLEARCOAT BALTIC BIRCH PLY CABINET FRAME W/ EXPOSED EDGES, MITER FRAME AT CORNERS
3. 2X 18MM CLEARCOAT BALTIC BIRCH PLY ADJUSTABLE SHELVES PER OPEN SEGMENT, TYP.
4. STAINLESS STEEL CHANNEL PULL, CUT AWAY TO MATCH PROFILE OF CHANNEL
5. EXPANDED METAL MESH LOCKER DOOR
6. CAM LOCK
7. 19MM RECESSED POPLAR BASE PAINTED BLACK, SHIM AS REQUIRED TO LEVEL CABINETS
8. SECURE LOCKER CABINETS TO CONT. HORIZONTAL 19MM THK POPLAR STRAPPING ALONG GWB SURFACE
9. JOIN BALTIC BIRCH LOCKER CABINETS THRU EQUALLY SPACED, VERTICALLY ALIGNED, COUNTERSUNK SS SCREWS, FROM BOTH SIDES, W/ 19MM POPLAR SPACER
10. CLAMP EXPANDED METAL MESH BETWEEN STAINLESS STEEL ANGLE 3MM X 25MM X 25MM AND STAINLESS STEEL PLATE 3MM X 19MM W/ COUNTERSUNK MACHINE SCREWS SPACED 150MM
11. CONTINUOUS SS PIANO HINGE, 1-1/2" WIDE, RICHELIEU PRODUCT #40072170 OR EQ.
12. EXPOSED BALTIC BIRCH PLYWOOD EDGE TO BE FREE OF GAPS, W/ EDGES CHAMFERED 2MM
13. STAINLESS STEEL 3MM X 55MM ASTRAGAL, SECURED W/ MACHINE SCREW TO RIGHT-SIDE DOOR HANDLE
14. STAINLESS STEEL CHANNEL PULL, 3MM X 25MM X 25MM TO CLAMP EXPANDED METAL MESH, CUT AWAY TO MATCH PROFILE OF CHANNEL AT LOCATION INDICATED ON ELEVATIONS

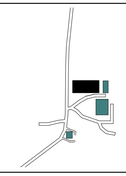
MILLWORK FINISHES:

- PL1 PLASTIC LAMINATE FINISH
- SS1 SOLID SURFACE FINISH
- ST1 16GA STAINLESS STEEL
- WC1 PEG BOARD WALL COVERING
- WD1 BALTIC BIRCH PLYWOOD - CLEARCOAT
- MTL-1 STAINLESS STEEL PLATE
- MTL-2 EXPANDED METAL MESH [MCNICHOL'S EXPANDED METAL MESH PANEL NO. 460N121648]

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN



No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

GROUND FLOOR
0

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
MILLWORK DRAWINGS - CROBE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	10/01/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

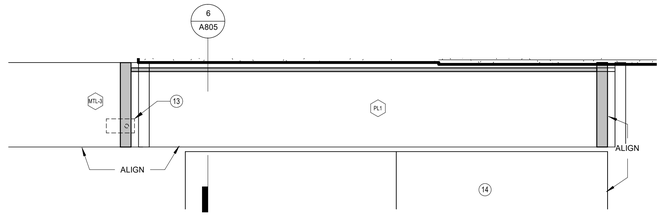
SHEET NO :
A804

MILLWORK DRAWING NOTES:

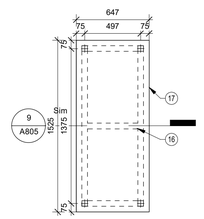
1. 13mm REVEAL BETWEEN COUNTER AND LOWER CABINETS.
2. RECESSED SHELVING PILASTERS & ADJUSTABLE SHELVES.
3. 19mm PLYWOOD BASE FOR EACH UNIT C/W PLASTIC LAMINATE FINISH.
4. 19mm PLAM SHELF
5. 38mm PLAM GABLE
6. CELLBLOCK BATTERY CHARGING CABINET CBSC3672 [1969H x 919W x 561D]
7. CONT. POPLAR STRAPPING TO SUPPORT PLAM GABLE, PAINTED TO MATCH WALL COLOUR
8. DEPTH OF MW120.4 TO BE SET BY DEPTH OF CELLBLOCK CABINET, F/O MILLWORK AND GABLE TO BE 25MM PROUD OF CABINET
9. EDGE PULL - CBH 261 - 100MM - SATIN NICKEL
10. INNER CABINET 25mm HIGH DENSITY PARTICLE BOARD, MELAMINE FINISH. TYPICAL OF ALL CABINETS.
11. ALIGN FACE OF PLAM GABLE W/ INSIDE F/O JAMB EXTENSION
12. ALIGN EDGE OF PLAM CABINET W/ DRYWALL EDGE
13. EXTEND 6MM ALUMINUM POWDER COATED PLATE TO F/O CABINET, SECURE TO CABINET W/ CONCEALED ALUMINUM TAB BELOW
14. CLASSROOM FURNITURE (NIC) AS PER LAYOUT IN PLAN
15. TYPICAL DETAILS FOR PLAM OPEN CABINET IN CROBE LAB, REFER TO PLAN/INTERIOR ELEVATIONS FOR EXTENTS OF REMAINING 2 CABINETS
16. PAINTED HSS FRAME
17. S.S. WRAPPED PLYWOOD TOP
18. LEVELING FLOOR GLIDES FOR UNEVEN SURFACES OR FLOOR ANCHORING LEVELING FOOT PLATES AS REQUIRED. REFER TO PLANS. TYP
19. S.S. WRAPPED WOOD TOP

MILLWORK FINISHES:

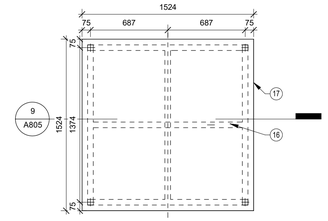
- PL1 PLASTIC LAMINATE FINISH
- SS1 SOLID SURFACE FINISH
- ST1 16GA STAINLESS STEEL
- WC1 PEG BOARD WALL COVERING
- WD1 BALTIC BIRCH PLYWOOD - CLEARCOAT
- MTL-1 STAINLESS STEEL PLATE
- MTL-2 EXPANDED METAL MESH [MCNICHOLAS EXPANDED METAL MESH PANEL NO. 460N121648]
- MTL-3 POWDER COATED ALUMINUM PLATE



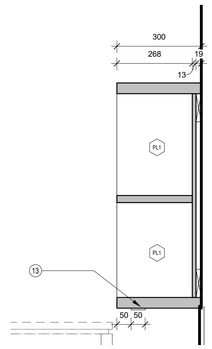
4 A805 MW126.3 PLAN
Scale: 1 : 10



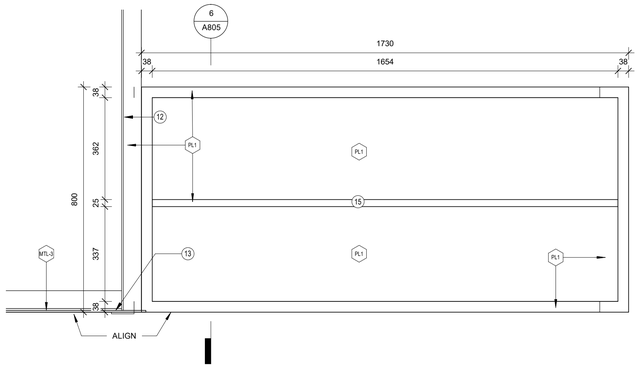
7 A805 MW 126.5A PLAN
Scale: 1 : 25



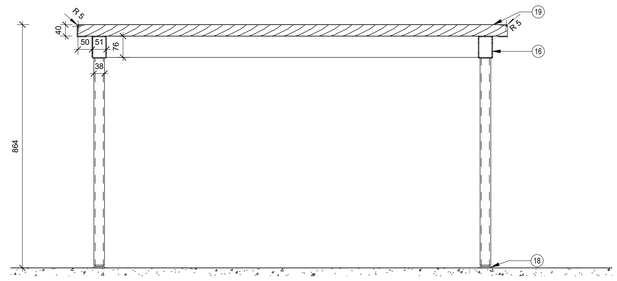
8 A805 MW 126.5B PLAN
Scale: 1 : 25



6 A805 MW126.3 SECTION
Scale: 1 : 10



5 A805 MW126.3 ELEVATION
Scale: 1 : 10



9 A805 MW 126.5 SECTION
Scale: 1 : 10

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3265 Principal's Road, Mississauga, Ontario

TITLE
MILLWORK DRAWINGS - CROBE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	As indicated
DATE :	10/02/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

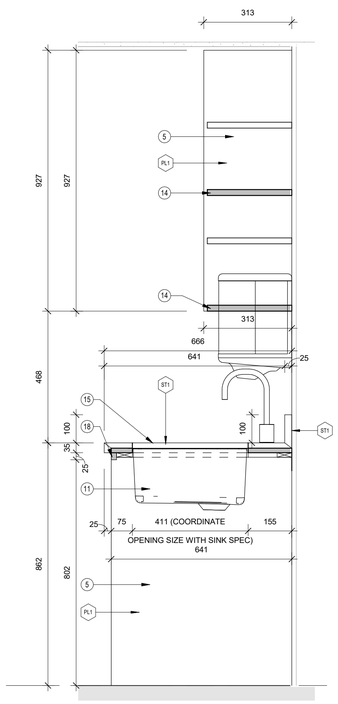
SHEET NO :
A805

MILLWORK DRAWING NOTES:

1. 13mm REVEAL BETWEEN COUNTER AND LOWER CABINETS.
2. EDGE PULL.
3. OPEN SHELF WITH 6mm PEG BOARD BACK.
4. RECESSED POWER/ DATA RECEPTACLE MOUNTED TO MILLWORK. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
5. 25mm LAMINATE END GABLE.
6. PLAM LOCKABLE CAMERA STORAGE CABINETS. 762W x 788H CLEAR INTERIOR DIMENSION. 3 HINGES PER DOOR (TYP.)
7. GABLE AND FIXED SHELVES.
8. INNER CABINET 25mm HIGH DENSITY PARTICLE BOARD, MELAMINE FINISH. TYPICAL OF ALL CABINETS.
9. OPEN CABINET - NO SHELVING.
10. 19mm PLYWOOD BASE FOR EACH UNIT C/W PLASTIC LAMINATE FINISH.
11. UNDERMOUNTED SINK & FAUCET. REFER TO MECHANICAL DWGS.
12. RECESSED SHELVING PILASTERS & ADJUSTABLE SHELVES.
13. CABINET DOOR D-PULL HANDLE.
14. FIXED OPEN SHELVING WITH METAL SUPPORT BRACKET.
15. STAINLESS STEEL LAMINATED ON 25mm PLYWOOD COUNTERTOP AND UPSTAND AT SURROUNDING WALLS.
16. PHENOLIC SIDE GABLE COLOUR TO MATCH ADJACENT GLAZING SYSTEM MULLIONS.
17. PAINTED PLYWOOD GABLES W/ EXPOSED EDGES.
18. FACE OF FRAME TO HAVE FINISH TO MATCH DOOR FRONTS.
19. CUT OUT IN GABLE FOR CABCOOL FAN.
20. CUT OUT IN CABLE BETWEEN LEFT AND RIGHT BAYS.
21. CUT OUT IN BOTTOM OF CABINET.
22. CUT OUT IN BACK OF CABINET.
23. LINE OF SINK BEYOND.
24. PLYWOOD BACK SUPPORT FOR TV (REFER TO AV AND ELECTRICAL PLANS FOR LOCATION).

MILLWORK FINISHES:

- PL1 PLASTIC LAMINATE FINISH
- SS1 SOLID SURFACE FINISH
- ST1 16GA STAINLESS STEEL
- WC1 PEG BOARD WALL COVERING



7 / A806 MW 120.2 - SECTION
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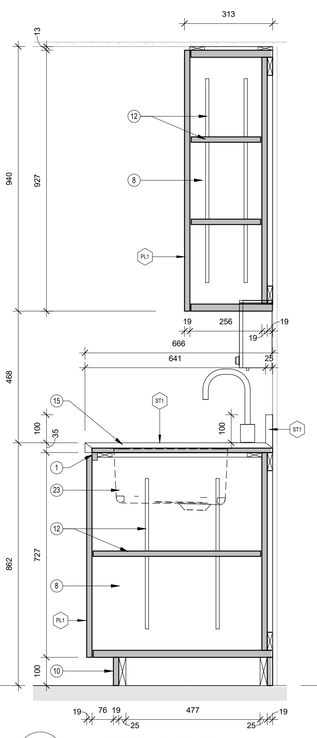

8 / A806 MW 120.2 - SECTION
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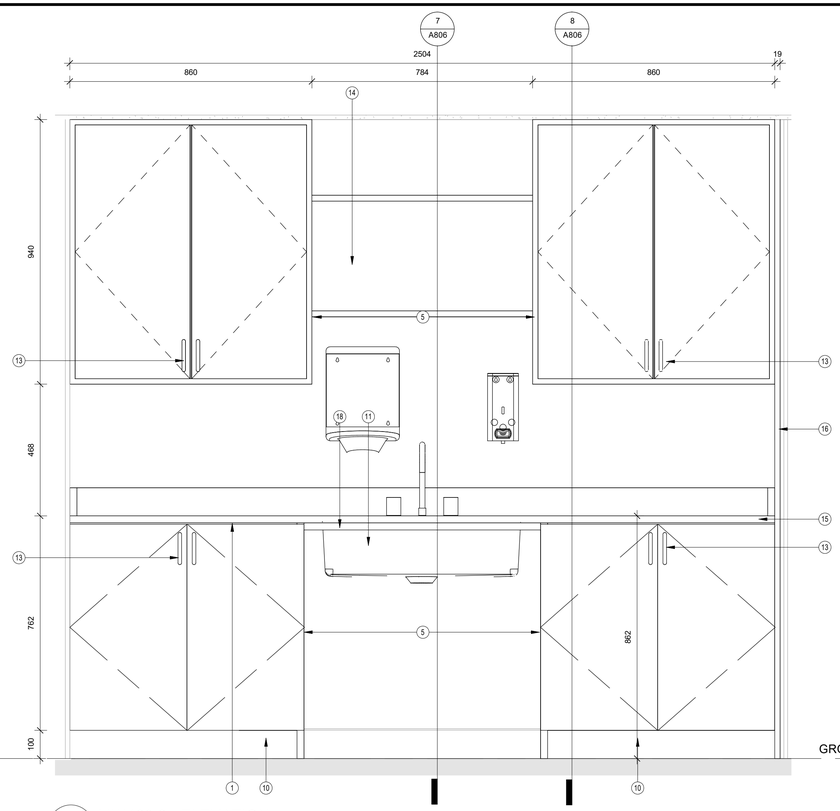

9 / A806 MW120.2 - ELEVATION
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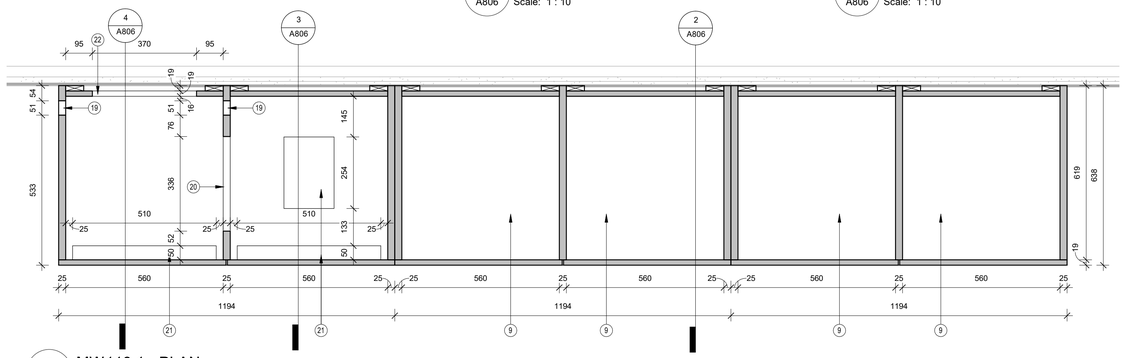
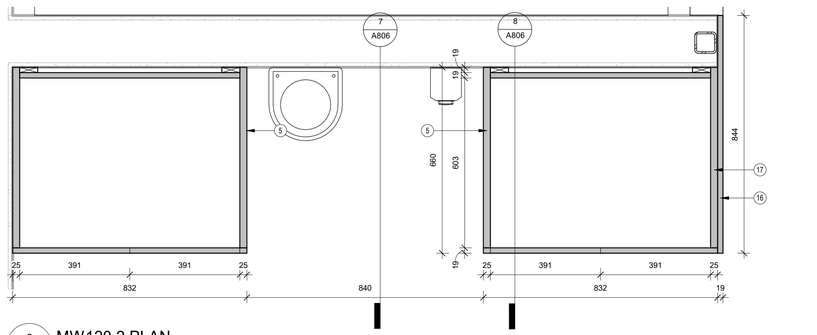
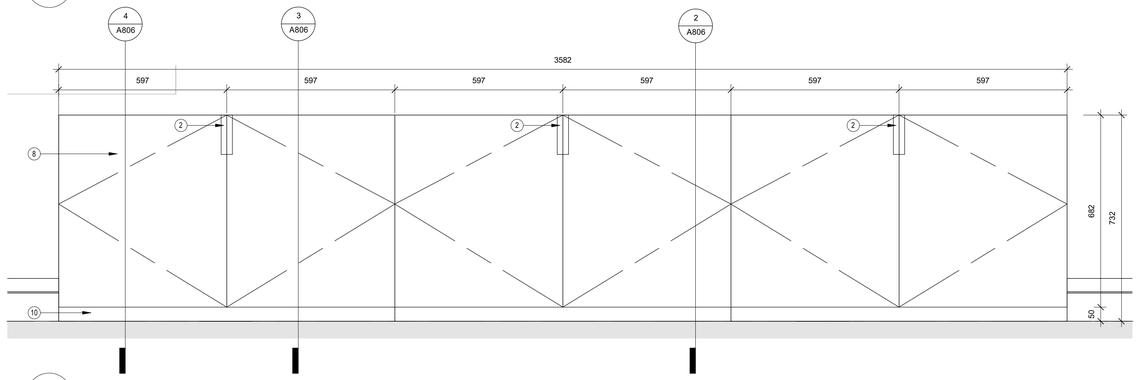


5 / A806 MW118.1 - PLAN
Scale: 1 : 10



6 / A806 MW120.2 PLAN
Scale: 1 : 10



1 / A806 MW118.1 - ELEVATION
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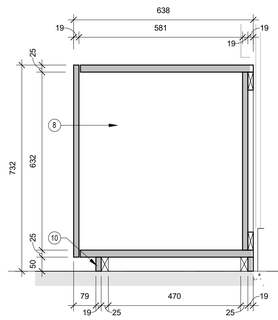

2 / A806 MW118.1 - SECTION
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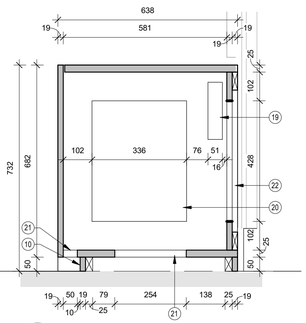

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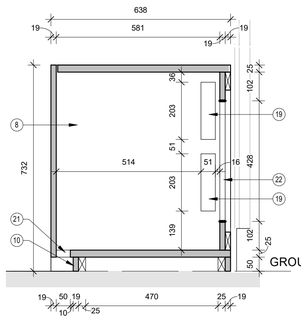


4 / A806 MW118.1 - SECTION
Scale: 1 : 10

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	Issued for Tender	2024-11-25

GROUND FLOOR 0

GROUND FLOOR 0

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building

3265 Principal's Road, Mississauga, Ontario

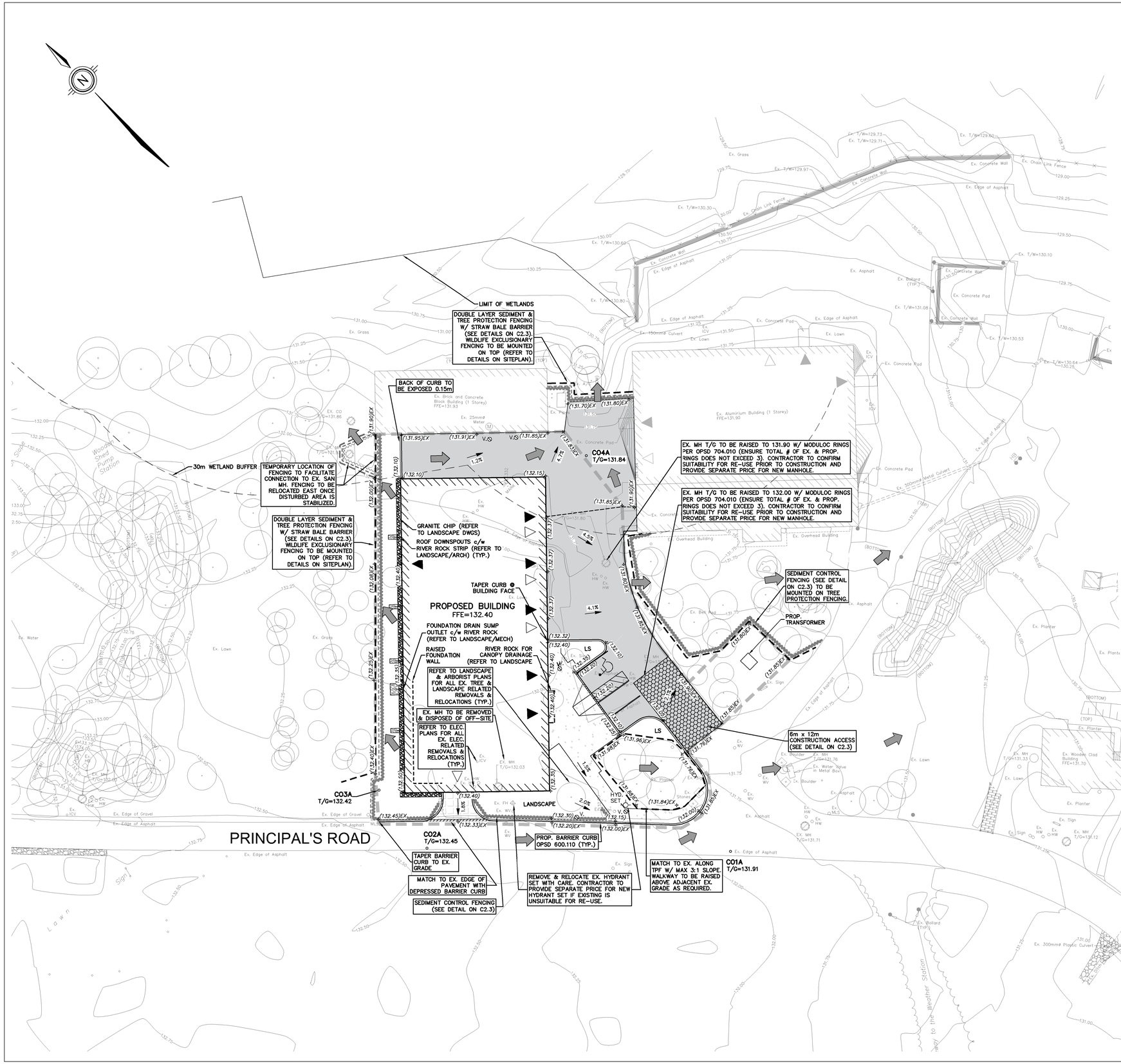
TITLE
MILLWORK DRAWINGS - CROBE

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
JESSE DORMODY
LICENCE
6624

SCALE :	1 : 10
DATE :	10/02/24
PROJECT NO :	2301
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :
A806



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MTE FILE PATH:

November 15, 2024 - 3:36:28 PM - Plotted By: Rui Zhou

LEGEND OF EXISTING FEATURES

326.00	EXISTING CONTOURS
Ex. Drop Curb	EXISTING CURB
(TOP) (BOTTOM)	EXISTING EMBANKMENT (SLOPE AS NOTED)
	EXISTING BUILDING
▲	EXISTING MAN DOOR
△	EXISTING OVERHEAD DOOR
●	EXISTING BOLLARD
	EXISTING DIRECTION OF DRAINAGE/SWALE
	EXISTING BUILDING
	EXISTING RETAINING WALL

LEGEND OF PROPOSED FEATURES

(326.00) T/G=326.00 FFE=326.00	PROPOSED SPOT ELEVATIONS EX =MAINTAIN EXISTING T/G =TOP OF CASTING/GRATE INV =INVERT ELEVATION FFE =FINISHED FLOOR ELEVATION
1.0% →	DIRECTION OF DRAINAGE/SWALE
	DRAINAGE SPLIT (RIDGE)
(TOP) 3:1 (BOTTOM)	EMBANKMENT (SLOPE AS NOTED)
	PROPOSED BUILDING
▲	MAN DOOR
(DROP CURB)	CONCRETE CURB
➡	OVERLAND FLOW ROUTE (MAJOR STORM)
	LIMIT OF GRADING
	SEDIMENT CONTROL FENCE (SEE DETAIL ON C2.3)
	SILT SACK (SEE DETAIL ON C2.3)
	CONSTRUCTION ACCESS (SEE DETAIL ON C2.3)
	TREE PROTECTION HOARDING
	PROPOSED ASPHALT
	PROPOSED TURFSTONE PAVING (REFER TO LANDSCAPE)
	PROPOSED CONCRETE PAVING (REFER TO LANDSCAPE)
LS	LANDSCAPE

PAVEMENT STRUCTURE

MATERIAL		RECOMMENDED THICKNESS	
		LIGHT TRAFFIC	HEAVY TRAFFIC
ASPHALTIC CONCRETE	HL3	40mm	40mm
	HL4 OR HL8	40mm	60mm
GRANULAR 'A' BASE		150mm	150mm
GRANULAR 'B' SUBBASE		250mm	350mm

BASED ON GEOTECHNICAL INVESTIGATION PREPARED BY: DS CONSULTANTS LTD. – NOVEMBER 19, 2020

GRADING CERTIFICATION NOTE:
I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF THE PROPOSED PRE-ENGINEERED BUILDING LOCATED AT 3265 PRINCIPAL'S ROAD IN MISSISSAUGA, ONTARIO AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL TO EXISTING ADJACENT PROPERTIES AND MUNICIPAL SERVICES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED GRADES AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE AND PROPER FACILITY OF THE MUNICIPAL SERVICES WITHOUT ANY DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OR ADJACENT PROPERTIES.

BENCHMARK INFORMATION:
ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BENCHMARK NO. 58, LOCATED ON THE WEST FACE AT THE CORNER OF NO. 3057 MISSISSAUGA ROAD, HAVING A PUBLISHED ELEVATION OF 108.293 METERS.

ALL DRAWINGS , SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

THE CONTRACTOR AND SUB-CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND DATA ON THE WORK AND REPORT ANY DISCREPANCY IN WRITING TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

THIS DRAWING SHALL NOTBE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED AND SEALED BY THE ARCHITECT AND MARKED 'ISSUED FOR CONSTRUCTION'

NOTE:
LOCATIONS AND SIZES OF ANY AND ALL ACCESS PANELS, LIGHTS, SWITCHES, EXIT SIGNS, AND OTHER SUCH DEVICES MUST BE APPROVED BY ARCHITECT PRIOR TO ERECTION OF FRAMING. ALL SUCH ITEMS CAST INTO CONCRETE WALLS OR SLABS MUST SIMILARLY BE APPROVED BEFORE CONCRETE IS POURED.

GENERAL NOTE:

i. I hereby certify that this drawing confirms in all respects to the site development plans Architect or Engineer's Signature (if applicable) and Professional seal

ii. The City of Mississauga requires that all working drawings submitted to the Building Division as part of an application for the issuance of a building permit shall be certified
by the architect or engineer as being in conformity with the site development plan as approved by the City of Mississauga.

iii. All exterior lighting will be directed onto the site and will not infringe upon the adjacent properties.

iv. All rooftop mechanical unit shall be screened from view by the applicant.

v. Parking spaces reserved for people with disabilities must be identified by a sign, installed at the applicant's expense, in accordance with the By-law Requirements and Building Code Requirements.

vi. The applicant will be responsible for ensuring that all plans confirm to Transport Canada's restrictions.

vii. Grades will be met with a 3% maximum slope at the property lines and within the site.

viii. All damaged areas are to be reinstated with topsoil and sod prior to the release of securities.

ix. Signage shown on the site development plans is for information purposes only. All signs will be subject to the provisions of Sign by-law 0054-2002, as amended, and a separate sign application will be required through the Building Division.

x. Any fencing adjacent to municipal lands is to be located 15 cm (6.0 in.) inside the property line.

xi. Only "shielded" lighting fixtures are permitted for all development, except for detached and semi-detached dwellings within 60 m (196.8 ft.) of a residentially zoned property and must confirm to the Engineer Certified Lighting Plan.

xii. The Engineer Certified Ligting Plan must be signed by the consulting Engineer.

xiii. The Owner covenants and agrees to construct and install "shielded" lighting fixtures on the subject lands, in conformity with the Site Plan and Engineer Certified Lighting Plan to the satisfaction of the City of Mississauga.

xiv. The applicant will be responsible for ensuring that all plans confirm to Transport Canada's restrictions.

xv. Where planting is to be located in landscaped areas on top of an underground parking structure, it is the responsibility of the applicant to arrange the coordination of the design of the underground parking structure with the Landscape Architect and the Consulting Engineering. Underground parking structures with landscaping area to be capable of supporting the following loads:
- 15 cm of drainage gravel plus 40 cm topsoil for sod
- 15 cm of drainage gravel plus 60 cm topsoil for shrubs
- 15 cm of drainage gravel plus 90 cm for trees

Or
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 40 cm topsoil for sod
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 60 cm topsoil for shrubs
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 90 cm topsoil for trees

* Terradrain 900 or approved equal

xvi. The structural design of any retaining wall over 0.6 m in height or any retaining wall located on a property line is to be shown on the Site Grading plan for this project and is to be approved by the Consulting Engineer for the project.

xvii. Continuous 15 cm high barrier type poured concrete curbing will be provided between all asphalt and landscaped areas throughout the site.

xviii. All utility companies will be notified for locates prior to the installation of the hoarding that lies within the site and within the limited of the City boulevard area.

PROJECT NAME:
PRE-ENGINEERED
BUILDING
PROJECT ADDRESS:
3265 PRINCIPAL'S ROAD
CITY IDENTIFIER:
11680600 (Z-24)
LEGAL DESCRIPTION:
PT LTS 3, 5 RANGE 1NDS,. LT 4, PT LTS 3,5 RANGE 2 NDS. PT LTS 3, 4 RANGE 3 NDS,
PT BLK M PL 550, PT RDAL BTN RANGE 2 & RANGE 3 NDS - 43R31817 PTS 4-6, 43R-18295 PT 1
SITE PLAN APPLICATION NUMBER:
SP 21/004 W8

No.	DATE	DESCRIPTION
4.	2024-11-15	ISSUED FOR TENDER
3.	2024-09-17	ISSUED FOR PERMIT
2.	2024-06-12	RE-ISSUED FOR SPA
1.	2024-02-02	ISSUED FOR SPA

PRE-ENGINEERED BUILDING

University of Toronto Mississauga
3359 Mississauga Road

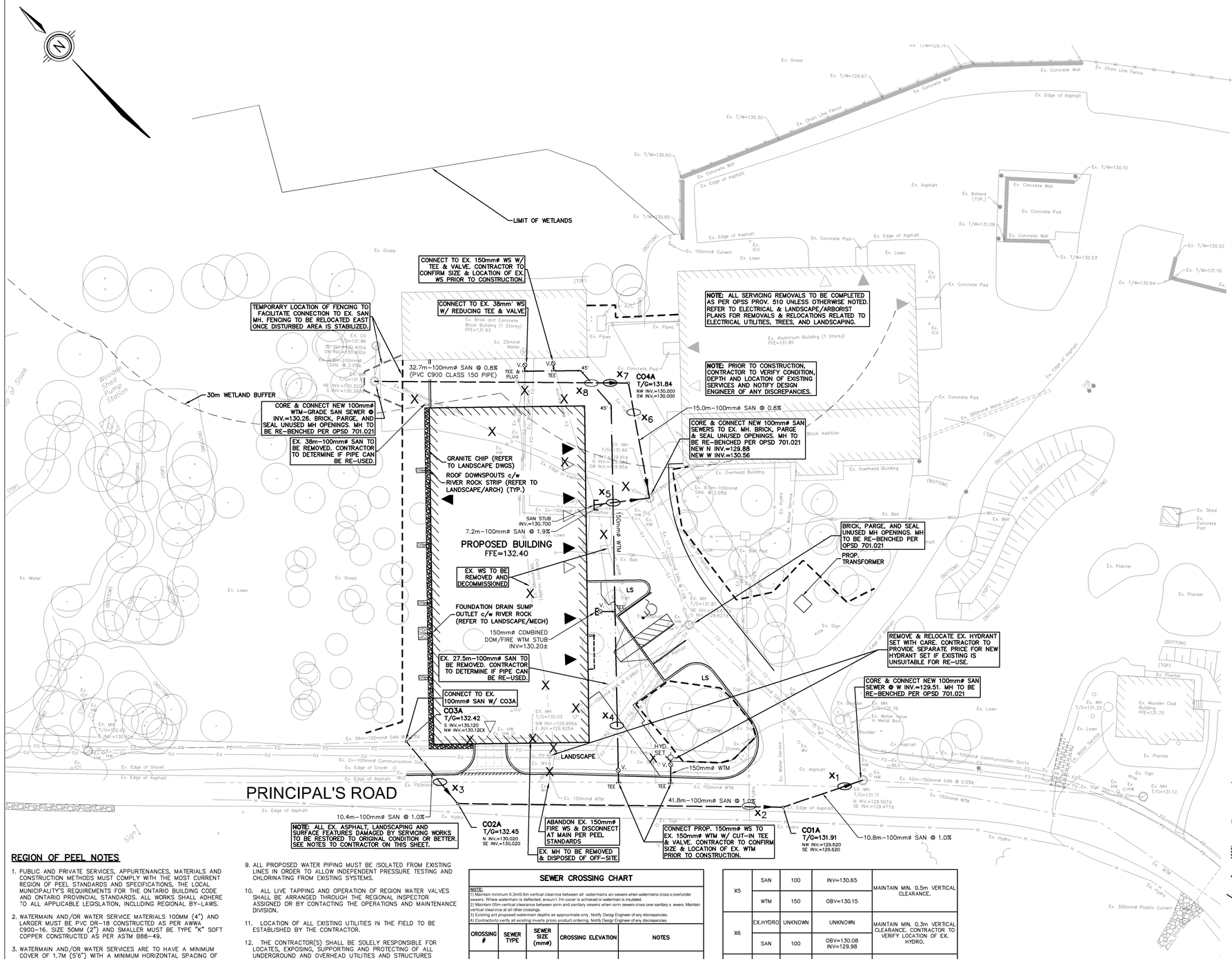
MTE
Engineers, Scientists, Surveyors

LICENSED PROFESSIONAL ENGINEER
2024-11-15
R. D. ZHOU
100567167
PROVINCE OF ONTARIO

Baird Sampson Neuert architects
117 Peter Street, Suite 305
Toronto, Ontario
Canada M5V 1P9
T. (416) 363-8877
F. (416) 363-4029
mail@bsnarchitects.com

SITE GRADING, EROSION & SEDIMENT CONTROL PLAN

SCALE:	1 : 250	C2.1
DRAWN:	SDU	
CHECKED:	RDZ	
DATE:	04/28/21	
JOB:	38225-103	



LEGEND OF EXISTING FEATURES

- EXISTING SANITARY SEWER (Ex. 300mmø SAN, Ex. MH)
- EXISTING WATERMAIN (Ex. 200mmø WTM, Ex. HYD. SET)
- EXISTING STORM SEWER (Ex. 375mmø STM, Ex. MH)
- EXISTING CURB (Ex. Drop Curb)
- EXISTING EMBANKMENT (SLOPE AS NOTED) (TOP / BOTTOM)
- EXISTING BUILDING
- EXISTING MAN DOOR
- EXISTING OVERHEAD DOOR
- EXISTING BOLLARD
- EXISTING BUILDING
- EXISTING RETAINING WALL
- EXISTING GAS
- EXISTING HYDRO
- EXISTING BELL
- EXISTING COMMUNICATION DUCT (FO)

LEGEND OF PROPOSED FEATURES

- SANITARY SEWER (MH, 14.6m–200mmø SAN @ 1.5%)
- WATERMAIN (200mmø WTM, HYD. SET, V., TEE)
- SEWER CROSSING (REFER TO CROSSING CHART) (X1)
- PROPOSED BUILDING
- MAN DOOR
- CONCRETE CURB (DROP CURB)
- REMOVALS (X)
- TREE PROTECTION HOARDING
- LANDSCAPE (LS)
- PROPOSED TURFSTONE PAVING (REFER TO LANDSCAPE)
- PROPOSED CONCRETE PAVING (REFER TO LANDSCAPE)

REGION OF PEEL NOTES

1. PUBLIC AND PRIVATE SERVICES, APPURTENANCES, MATERIALS AND CONSTRUCTION METHODS MUST COMPLY WITH THE MOST CURRENT REGION OF PEEL STANDARDS AND SPECIFICATIONS, THE LOCAL MUNICIPALITY'S REQUIREMENTS FOR THE ONTARIO BUILDING CODE AND ONTARIO PROVINCIAL STANDARDS. ALL WORKS SHALL ADHERE TO ALL APPLICABLE LEGISLATION, INCLUDING REGIONAL BY–LAWS.
2. WATERMAIN AND/OR WATER SERVICE MATERIALS 100MM (4") AND LARGER MUST BE PVC DR–18 CONSTRUCTED AS PER AWWA C900–16. SIZE 50MM (2") AND SMALLER MUST BE TYPE "K" SOFT COPPER CONSTRUCTED AS PER ASTM B88–49.
3. WATERMAIN AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 1.7M (5'6") WITH A MINIMUM HORIZONTAL SPACING OF 1.2M (4') FROM THEMSELVES AND ALL OTHER UTILITIES.
4. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING ETC. MUST BE PROVIDED WITH AT LEAST A 50MM (2") OUTLET ON 100MM (4") AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100MM (4") DIAMETER MINIMUM ON A HYDRANT.
5. ALL CURB STOPS TO BE 3.0M (10') OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
6. HYDRANT AND VALVE SET TO REGION STANDARD 1–6–1. DIMENSION A AND B, 0.7M (2') AND 0.9M (3') AND TO HAVE PUMPER NOZZLE.
7. WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED SITE PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
8. WATERMAINS MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.3M (12") OVER/0.5M (20") UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
9. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEMS.
10. ALL LIVE TAPPING AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED OR BY CONTACTING THE OPERATIONS AND MAINTENANCE DIVISION.
11. LOCATION OF ALL EXISTING UTILITIES IN THE FIELD TO BE ESTABLISHED BY THE CONTRACTOR.
12. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATES, EXPOSING, SUPPORTING AND PROTECTING OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF THE WORK, WHETHER SHOWN ON THE PLANS OR NOT AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO THE SAME.
13. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO THE UTILITIES PRIOR TO CROSSING SUCH UTILITIES, FOR THE PURPOSE OF INSPECTION BY THE CONCERNED UTILITY. THIS INSPECTION WILL BE FOR THE DURATION OF THE CONSTRUCTION, WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTION.
14. ALL PROPOSED WATER PIPING MUST BE ISOLATED THROUGH A TEMPORARY CONNECTION THAT SHALL INCLUDE AN APPROPRIATE CROSS–CONNECTION CONTROL DEVICE, CONSISTENT WITH THE DEGREE OF HAZARD, FOR BACKFLOW PREVENTION OF THE ACTIVE DISTRIBUTION SYSTEM, CONFORMING TO REGION OF PEEL STANDARDS 1–7–7 OR 1–7–8.
15. ALL WATER METERS MUST BE INSTALLED IN HEATED AND ACCESSIBLE SPACE.

SEWER CROSSING CHART

NOTE:
1) Maintain minimum 0.3m/0.5m vertical clearnce between all watermains an sewers.when watermains cross o overlunder sewers. WHere watermain is deflected, ensure1.7m cover is achieved or watermain is insulated.
2) Maintain 05m vertical clearance between sorm and sanitary sewers when sorm sewers cross over sanitary s ewers. Maintain vertical clearance at all other crossings.
3) Existing art proposed watermain depths as approximate only. Notify Desig Engineer of any discrepancies.
4) Contractorto verify all existing inverts prios product ordering. Notify Desig Engineer of any discrepancies.

CROSSING #	SEWER TYPE	SEWER SIZE (mmø)	CROSSING ELEVATION	NOTES
X1	EX.WTM	150	INV=129.95±	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. WTM.
	SAN	100	OBV=129.62	
X2	EX.HYDRO	UNKNOWN	UNKNOWN	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. HYDRO.
	SAN	100	OBV=129.76 INV=129.66	
X3	EX.WTM	150	INV=130.65±	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. WTM.
	SAN	100	OBV=130.15	
X4	EX. COM	UNKNOWN	UNKNOWN	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. COMMUNICATION DUCTS.
	WTM	150	OBV=130.25	
X5	SAN	100	INV=130.65	MAINTAIN MIN. 0.5m VERTICAL CLEARANCE.
	WTM	150	OBV=130.15	
X6	EX.HYDRO	UNKNOWN	UNKNOWN	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. HYDRO.
	SAN	100	OBV=130.08 INV=129.98	
X7	EX.HYDRO	UNKNOWN	UNKNOWN	MAINTAIN MIN. 0.3m VERTICAL CLEARANCE. CONTRACTOR TO VERIFY LOCATION OF EX. HYDRO.
	SAN	100	OBV=130.12 INV=130.02	
X8	SAN	100	INV=130.04	DEFLECT WTM UNDER SANITARY, MAINTAIN MIN. 0.5m VERTICAL CLEARANCE.
	WTM	150	OBV=129.54	

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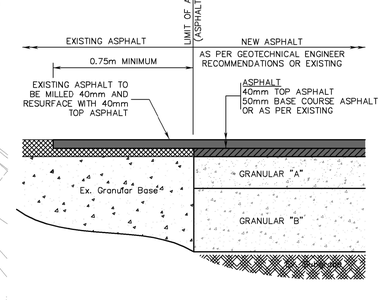
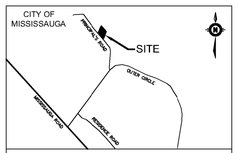
ASPHALT LAP JOINT DETAIL

N.T.S.



NOTES TO CONTRACTOR:

1. INSPECTION
CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REWEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
2. CONFIRMATION OF EXISTING INVERTS
72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING SEWERS AT CONNECTION POINTS WITH THE ENGINEER PRESENT. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.
3. RESTORATION
CONTRACTOR TO RESTORE TO ORIGINAL CONDITION OR BETTER ALL EXISTING ASPHALT, LANDSCAPING, CONCRETE SIDEWALKS AND CURBS, AND ABOVE GROUND FEATURES DAMAGED BY THE INSTALLATION OF NEW UNDERGROUND SERVICES. NEW ASPHALT TO BE MATCHED INTO EXISTING ASPHALT USING ASPHALT LAPJOINT AS PER DETAIL ON THIS DRAWING.



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- 15 cm of drainage gravelolus 60 cm topsoil for shrubs
- 15 cm of drainage gravelolus 90 cm for trees
Or
- Prefabricated sheet drainsystem* with a compressive strength of 1003 Kpa plus 40 cm topsoil or sod
- Prefabricated sheet drainsystem* with a compressive strength of 1003 Kpa plus 60 cm topsoil or shrubs
- Prefabricated sheet drainsystem* with a compressive strength of 1003 Kpa plus 90 cm topsoil or trees
* Terradrain 900 or approved equal

xvi. The structural design of ay retaining wall over 0.6 m in height or any retaining wall located on a property line is to be shown on the Site Grading plan for this project and is to be aproved by the Consulting Engineer for the project.

xvii. Continuous 15 cm high berrier type poured concrete curbig will be provided between all asphalt and landsqaped areas throughout the site.

xviii. All utility companies will e notified for locates prior to the installation of the hoarding that lies within the sie and within the limited of the Cit boulevard area.

PROJECT NAME:
PRE-ENGINEERED BUILDING
PROJECT ADDRESS:
3265 PRINCIPAL'S ROAD
CITY IDENTIFIER:
11680600 (Z-24)
LEGAL DESCRIPTION:
PT LTS 3, 5 RANGE 1NDS, LT 4, PT LTS 3,5 RANGE 2 NDS. PT LTS 3, 4 RANGE 3 NDS.
PT BLK M PL 550, PT RDAL BTN RANGE 2 & RANGE 3 NDS - 43R31817 PTS 1-6, 43R-18295 PT 1
SITE PLAN APPLICATION NUMBER:
SP 21/004 W8

No.	DATE	DESCRIPTION
4.	2024-11-15	ISSUED FOR TENDER
3.	2024-09-17	ISSUED FOR PERMIT
2.	2024-06-12	RE-ISSUED FOR SPA
1.	2024-02-02	ISSUED FOR SPA

PRE-ENGINEERED BUILDING

University of Toronto Mississauga

3359 Mississauga Road

MTE
Engineers, Scientists, Surveyors

LICENSED PROFESSIONAL ENGINEER
2024-11-15
R. D. ZHOU
100567167
PROVINCE OF ONTARIO

Baird Sampson Neuert architects
117 Peter Street, Suite 305
Toronto, Ontario
Canada M5V 1P9
T. (416) 363-8877
F. (416) 363-4029
mail@bsnarchitects.com

SITE SERVICING PLAN

SCALE:	1 : 250
DRAWN:	SDU
CHECKED:	RDZ
DATE:	04/28/21
JOB:	38225-103

C2.2

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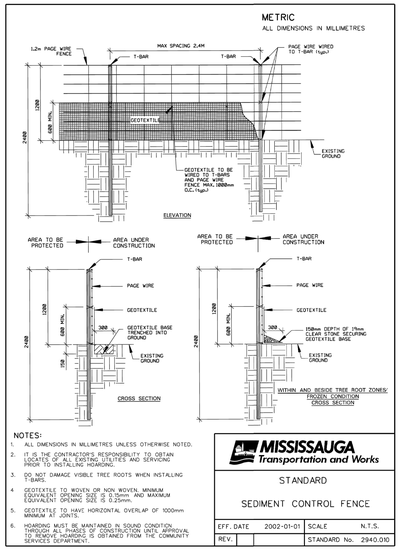

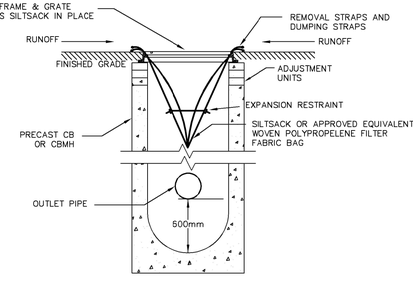

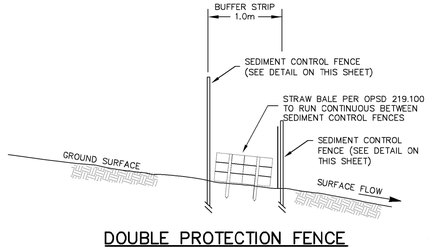

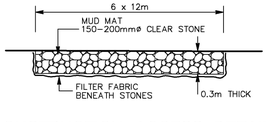

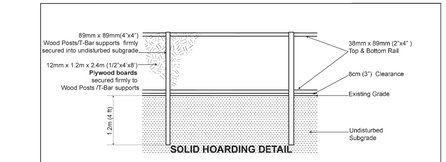

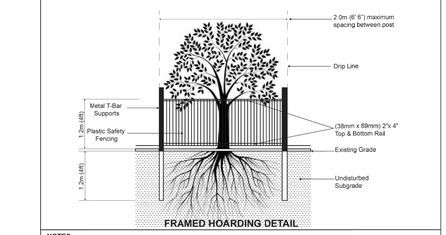

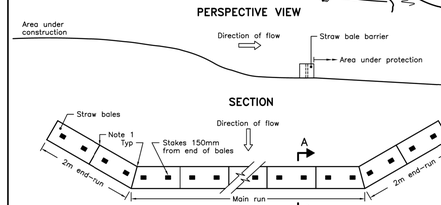

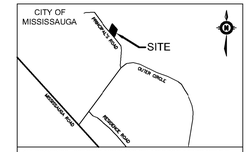

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CONSTRUCTION NOTES AND SPECIFICATIONS

1. GENERAL

1.1. THESE PLANS ARE NOT FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY ENGINEER AND APPROVED BY THE LOCAL MUNICIPALITY.

1.2. THESE PLANS ARE TO BE USED FOR SERVICING AND GRADING ONLY; ANY OTHER INFORMATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THESE PLANS MUST NOT BE USED TO SITE THE PROPOSED BUILDING.

1.3. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENGINEER.

1.4. THESE PLANS ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF MTE CONSULTANTS INC.

1.5. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST:

1.5.1. CHECK AND VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS WHICH INCLUDES BUT IS NOT LIMITED TO THE BENCHMARK ELEVATIONS, EXISTING SERVICE CONNECTIONS AND EXISTING INVERTS. REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING.

1.5.2. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES.

1.5.3. VERIFY THAT THE FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS (WHICH MAY APPEAR ON THIS PLAN) COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS.

1.5.4. CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF THE MOST RECENT REVISION.

1.6. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO EXISTING WORKS. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT–OF–WAY TO LOCAL MUNICIPALITY STANDARDS

1.7. ALL WORKS ON A MUNICIPAL RIGHT–OF–WAY WITH THE EXCEPTION OF WATERMAIN TAPPING, TO BE INSTALLED BY THE OWNER'S CONTRACTOR AT OWNER'S EXPENSE IN ACCORDANCE WITH THE LOCAL MUNICIPALITY'S "PROCEDURE FOR OFF–SITE WORKS BY PRIVATE CONTRACTOR". THE OWNER AND CONTRACTOR ARE TO ENSURE OFF–SITE WORKS PERMIT IS IN PLACE PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL AFFECTED PROPERTY TO ORIGINAL CONDITION. ALL BOULEVARD AREAS SHALL BE RESTORED WITH 150mm TOPSOIL AND SOD.

1.8. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN FULL COMPLIANCE WITH THE ONTARIO PROVINCIAL BUILDING CODE (PART 7, PLUMBING), THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AND THE REQUIREMENTS OF THE CITY OF MISSISSAUGA AND THE REGION OF PEEL; WHICH CODES AND REGULATIONS SHALL SUPERSEDE ALL OTHERS.

1.9. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE, DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.

1.10. PLAN TO BE READ IN CONJUNCTION WITH SWM BRIEF AND DRAWING C2.1 AND C2.2 PREPARED BY MTE CONSULTANTS INC.

1.11. SITE PLAN INFORMATION TAKEN FROM PLAN PREPARED BY BAIRD SAMPSON NEUERT ARCHITECTS, RECEIVED NOVEMBER 2024.

1.12. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLAN PREPARED BY SPEIGHT, VAN NOSTRAND & GIBSON LIMITED, DATED JUNE 8, 2020. MTE ASSUMES THAT ALL TOPOGRAPHICAL INFORMATION IS AN ACCURATE REPRESENTATION OF CURRENT CONDITIONS.

1.13. CONTRACTOR TO OBTAIN WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNER PRIOR TO ENTERING UPON NEIGHBOURING LANDS TO UNDERTAKE ANY WORK. COPIES OF THESE LETTERS OF CONSENT SHALL BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO ANY WORK BEING PERFORMED. FAILURE TO COMPLY WITH THE ABOVE IS AT CONTRACTOR'S OWN RISK.

1.14. SITE SERVICING CONTRACTOR TO TERMINATE ALL SERVICES 1 METRE FROM FOUNDATION WALL.

1.15. FILTER FABRIC TO BE TERRAFIX 200R OR APPROVED EQUAL.

1.16. MAXIMUM GRASSED SLOPE TO BE 3:1. SLOPES GREATER THAN 3:1 TO BE LANDSCAPED WITH LOW MAINTENANCE GROUND COVER.

1.17. SIDE SLOPES OF ALL STOCKPILES OR EXTRACTION FACES TO BE MAINTAINED AT 70 DEGREES OR LESS BETWEEN EARLY APRIL AND LATE AUGUST TO DETER BANK SWALLOWS FROM NESTING.

1.18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNALS, DELINEATORS, MARKERS, AND BARRIERS. ALL SIGNS, ETC. SHALL CONFORM TO THE STANDARDS OF THE LOCAL MUNICIPALITY AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

1.19. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

1.20. CONTRACTOR TO MAINTAIN A 'CONFINED TRENCH CONDITION' IN ALL SEWER AND SERVICE TRENCHES.

1.21. FOLLOWING COMPLETION OF PROPOSED WORKS AND PRIOR TO OCCUPANCY INSPECTION, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCHBASIN AND CATCHBASIN MANHOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.

2. SANITARY SEWERS

2.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

2.2. SANITARY SEWERS 150mmø AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR28 ASTM–D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.

2.3. SANITARY CLEANOUTS TO BE IN ACCORDANCE WITH SANITARY CLEANOUT DETAIL ON THIS SHEET OR APPROVED EQUIVALENT.

2.4. MANHOLES TO BE 1200mmø PRECAST WITH ALUMINIUM STEPS AT 300mm CENTRES AS PER OPSD 701.010 UNLESS OTHERWISE SPECIFIED.

2.5. MANHOLES TO BE BENCHED PER OPSD 701.021.

2.6. SANITARY MANHOLE LIDS TO BE PER OPSD 401.010 –TYPE 'A'.

2.7. MANHOLE FRAMES, CASTINGS AND LIDS TO BE QUALITY GREY IRON ASTM A48 CLASS 30B.

2.8. ADJUSTMENT UNITS FOR SANITARY STRUCTURES TO BE IN ACCORDANCE WITH OPSD 704.010 OR 704.011.

2.9. FACTORY FABRICATED WYES SHALL BE USED FOR ALL SERVICE CONNECTIONS.

2.10. SANITARY SEWERS AND SERVICES TO HAVE MINIMUM 1.2m COVER ON TOP OF PIPE.

2.11. CONTRACTOR RESPONSIBLE FOR TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSS 410 INCLUDING CCTV AND MANDREL TESTING

3. WATERMAINS

3.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRANULAR "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

3.2. WATERMAINS 100mmø AND LARGER SHALL BE PVC C900 CLASS 150 INSTALLED WITH MINIMUM 1.7 METRES OF COVER. FITTINGS 100mmø AND LARGER SHALL BE PVC CLASS 150 (DR18) CSA B137.3.

3.3. WATERMAIN FITTINGS TO BE SUPPLIED WITH MECHANICAL JOINT RESTRAINTS. FOR WATERMAIN PIPE SIZES 150mmø OR LESS ALL PIPE JOINTS TO BE RESTRAINED WITHIN 5.0m FROM ALL FITTINGS, IN EACH DIRECTION, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. ALL TEES TO HAVE MINIMUM 2.0m SOLID PIPE LENGTH ON EACH RUN OF THE TEE, OR PROVIDE A THRUST BLOCK PER OPSD 1103.010.

3.4. ALL METALLIC FITTINGS (EXCLUDING CURB/MAIN STOP AND BRASS FITTINGS) AND APPURTENANCES INCLUDING SADDLES, VALVES, TEES, BENDS ETC ARE TO BE WRAPPED WITH AN APPROVED PETROLATUM SYSTEM CONSISTING OF PASTE, MASTIC AND TAPE. PARTICULAR ATTENTION SHALL BE PAID TO ANODE INSTALLATION. CONTRACTOR TO REFER TO THE MOST RECENT EDITION OF THE LOCAL MUNICIPALITY AND AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS FOR MUNICIPAL SERVICES.

3.5. WATERMAIN VALVES 100mmø AND LARGER SHALL BE AS PER AWWA C509 – MUELLER A2360–23 OR APPROVED EQUIVALENT (OPEN LEFT) INCLUDING VALVE BOX AND 2.3Kg ANODE INCLUDING ANODE PROTECTION INSTALLED PER LOCAL MUNICIPALITY STANDARDS.

3.6. PVC WATERMAIN SHALL HAVE TWU STRANDED COPPER, AWG8 TRACER WIRE STRAPPED TO TOP AT 5 METRE INTERVALS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT ALL HYDRANTS AND CAD WELDED TO THE LOWER FLANGE OF THE HYDRANT.

3.7. HYDRANTS SHALL BE CANADA VALVE "CENTURY" OR APPROVED EQUIVALENT WITH 2–64mm HOSE CONNECTIONS INCLUDING 5.5Kg ANODE.

3.8. MAIN STOPS, CURB STOPS AND COUPLINGS SHALL BE AWWA C–800 COPPER TO COPPER FLANGED OR COMPRESSION CONNECTION OR APPROVED EQUIVALENT.

3.9. SERVICE BOXES TO BE FERGUSON ECLIPSE TYPE FIGURE 222 SIZE NO. 9 OR APPROVED EQUIVALENT COMPLETE WITH ROD AND PLUG.

3.10. WATER CONNECTIONS MAY BE PLACED IN THE SAME TRENCH WITH A STORM OR SANITARY CONNECTION ONLY IF A MINIMUM VERTICAL SEPARATION OF 500mm IS MAINTAINED BETWEEN THE WATER SERVICE AND ANY OTHER PIPE, IN ACCORDANCE WITH SECTION 7.3.5.7.(2)(a)(i) OF THE ONTARIO BUILDING CODE.

3.11. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 1.7m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL CONTACT DESIGN ENGINEER FOR "WATER PIPE INSULATION DETAIL".

3.12. ALL WATERMAIN TO BE PRESSURE TESTED IN ACCORDANCE WITH OPSS 441. DISINFECT ALL WATERMAIN IN ACCORDANCE WITH AWWA C 651–99 INCLUDING CHLORINATION, BACKFLOW PREVENTOR AND 24 HOUR DUPLICATE SAMPLING. ALL TESTING AND DISINFECTION TO BE COMPLETED UNDER THE SUPERVISION OF THE ENGINEER. **(CONTRACTOR TO SUBMIT WATER COMMISSIONING PLAN IN ACCORDANCE WITH REGION OF PEEL STANDARDS. THIS PLAN MUST BE APPROVED BY THE LOCAL MUNICIPALITY PRIOR TO ANY WATERMAIN WORK).**

3.13. PRIOR TO OCCUPANCY, CONTRACTOR MUST COMMISSION FIRE FLOW TEST FOR PRIVATE ON–SITE HYDRANT. PROVIDE RESULT TO DESIGN ENGINEER.

4. EROSION AND SEDIMENT CONTROL

4.1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE COVER.

4.2. ALL SEDIMENT CONTROL FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.

4.3. EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT 2.5m MINIMUM FROM PROPERTY LINE.

4.4. EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MHs AND CBs.

4.5. CONSTRUCTION ACCESS (MUD MAT) TO BE PROVIDED ON–SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. CONSTRUCTION ACCESS (MUD MAT) SHALL BE A MINIMUM OF 3.0m WIDE, 15.0m LONG (LENGTH MAY VARY DEPENDING ON SITE LAYOUT) AND 0.3m DEEP AND SHALL CONSIST OF 200mm CLEAR STONE MATERIAL OR APPROVED EQUIVALENT. PROPOSED EROSION FENCING TO TIE INTO MUD MAT. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE EFFECTIVENESS AT ALL TIMES.

4.6. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.

4.7. EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED.

4.8. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND THE LOCAL MUNICIPALITY'S DEPARTMENT OF PUBLIC WORKS.

4.9. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.

4.10. CONTRACTOR MUST REMOVE EROSION AND SEDIMENTATION FENCING PRIOR TO COMPLETION OF PROJECT. CONTRACTOR TO HAVE EROSION AND SEDIMENTATION FENCE INSPECTED WHEN VEGETATION HAS ESTABLISHED, BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.

4.11. ADDITIONAL EROSION AND SEDIMENT CONTROL MATERIALS (I.E. SILT FENCE, STRAW BALES, CLEAR STONES ETC.) ARE TO BE KEPT ON SITE FOR EMERGENCIES AND REPAIRS.

4.12. EROSION AND SEDIMENT CONTROL METHODS ARE TO BE CONTINUOUSLY EVALUATED; AND UPGRADES ARE TO BE IMPLEMENTED, WHEN NECESSARY.

4.13. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR CONTROLLING SEDIMENT & EROSION WITHIN THE SITE FOR THE TOTAL PERIOD OF THE CONSTRUCTION. THE SEDIMENT LADEN WATER WILL NOT BE ALLOWED TO DISCHARGE TO THE CREEK.

4.14. AN AFTER HOURS CONTACT NUMBER IS TO BE VISIBLY POSTED ON–SITE FOR EMERGENCIES. ALL THE PLANS SHOULD HAVE NAME AND CONTACT INFO OF THE PERSON RESPONSIBLE FOR ESC MEASURES.

4.15. ANY SEDIMENT SPILL FROM THE SITE MUST BE REPORTED TO MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE (CALL SPILL ACTION CENTRE AT 1 800 268 6060).

5. MAINTENANCE RECOMMENDATIONS

5.1. REMOVE SEDIMENT AND CONTAMINANTS ANNUALLY AND REINSTATE STORM WATER MANAGEMENT FACILITY ACCORDING TO THE DESIGN OUTLINED ON THIS PLAN.

5.2. EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FENCE.

5.3. OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL

REGION OF PEEL WATERMAIN NOTES

STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO CITY REQUIREMENTS.

1. WATERMAINS

1.1. ALL WATERMAINS AND WATER SERVICE MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO THE CURRENT REGION OF PEEL PUBLIC WORKS STANDARDS AND SPECIFICATIONS.

1.2. WATERMAINS 100mm AND LARGER SHALL BE PVC C900 CLASS 150 INSTALLED WITH MINIMUM 1.7 METRES OF COVER. FITTINGS 100mm AND LARGER SHALL BE PC CLASS 150 (DR18) CSA B137.3.

1.3. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 1.7m COVER ON TOP OF PIPE, WITH A MINIMUM HORIZONTAL SPACING OF 1.2m FROM THEMSELVES AND OTHER UTILITIES. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL CONTACT DESIGN ENGINEER FOR "WATER PIPE INSULATION DETAIL".

1.4. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING etc. MUST BE PROVIDED WITH AT LEAST A 50mm (2") OUTLET TO 100mm (4') AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100mm (4") DIAMETER MINIMUM.

1.5. ALL CURB STOPS TO BE 3.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.

1.6. HYDRANT AND VALVE SET TO REGION STANDARD 1–6–1. DIMENSION 'A' AND 'B', 0.7m (2') AND 0.9m (3') AND TO HAVE PUMPER NOZZLE.

1.7. WATERMAINS TO BE INSTALLED TO GRADES SHOWN ON APPROVED PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.

1.8. WATERMAINS MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.3m (12") OVER/0.5m (20") UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.

1.9. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEMS.

1.10. ALL LIVE TAPPING AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED OR BY CONTACTING THE OPERATIONS AND MAINTENANCE DIVISION.

NOTES:
1. INSTALL 135mm SLIDE TYPE VALVE BOX AND COVER (MARKED SEWER) OVER PVC CAP, NOT GLUED.
2. USE EAST JORDAN IRON WORKS PRODUCT NO. 85508024 WITH 6800 SERIES DROP LID OR APPROVED EQUIVALENT.
3. FOR USE IN PAVED AREAS

SANITARY CLEANOUT DETAIL

N.T.S.

DOUBLE PROTECTION FENCE w/ STRAW BALE DETAIL

N.T.S.

NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN LOCATES OF ALL EXISTING UTILITIES AND SERVICING PRIOR TO INSTALLING HOARDING.
3. DO NOT DAMAGE VISIBLE TREE ROOTS WHEN INSTALLING T-BARS.
4 GEOTEXTILE TO WOVEN OR NON WOVEN. MINIMUM EQUIVALENT OPENING SIZE IS 0.15mm AND MAXIMUM EQUIVALENT OPENING SIZE IS 0.25mm.
5. GEOTEXTILE TO HAVE HORIZONTAL OVERLAP OF 1000mm MINIMUM AT JOINTS.
6. HOARDING MUST BE MAINTAINED IN SOUND CONDITION THROUGH ALL PHASES OF CONSTRUCTION UNTIL APPROVAL TO REMOVE HOARDING IS OBTAINED FROM THE COMMUNITY SERVICES DEPARTMENT.

MISSISSAUGA
Transportation and Works

STANDARD

SEDIMENT CONTROL FENCE

EFF. DATE	2002-01-01	SCALE	N.T.S.
REV.		STANDARD No.	2940.010

MAINTENANCE SCHEDULE

- –INSPECT AFTER EVERY MAJOR RAIN EVENT.
- –INSPECT EVERY 3 WEEKS MINIMUM.
- –SILTSACK SHOULD NEVER BE OVER HALF FULL.
- –FULL BAG CAN BE REMOVED, DUMPED, CLEANED AND REUSED (TO REMOVE INSERT 25mm REBAR INTO REMOVAL FLAP POCKETS) (TO DUMP INSERT 25mm REBAR INTO BOTH DUMPING STRAPS)

TEMPORARY SILTSACK SILTATION CONTROL IN CB

N.T.S.

DESIGNATED ACCESS FOR ALL CONSTRUCTION TRAFFIC.

INSTALL 'MUD MAT', AS PER DETAIL BELOW, PRIOR TO ANY OTHER CONSTRUCTION. MAT TO BE MAINTAINED IN GOOD WORKING ORDER UNTIL GRADING WORKS ARE COMPLETED AND GRANULAR "A" & "B" HAVE BEEN PLACED.

CONSTRUCTION ACCESS DETAIL

N.T.S.

NOTES:
1. Hoarding details to be determined following initial site inspection.
2. Private tree hoarding to be approved by Development & Design ;
City tree hoarding to be approved by Community Services Dept.
3. Hoarding must be supplied, installed and maintained by the applicant throughout all phases of construction. **Inspection must be conducted by the Development and Design Division prior to removing any/all private hoarding.**
4. Do not allow water to collect and pond behind or within hoarding.
5. **T-bar supports are acceptable alternative to 4x4 posts. U-shaped metal supports will not be accepted.**
6. **Plywood** must be utilized for 'solid' hoarding. OSB/Chipboard will not be accepted for solid hoarding. Plywood sheets must be installed on "construction" side of frame.
7. Applicant is responsible to ensure utility locates are completed within city boulevard prior to installing framed hoarding.

TREE PRESERVATION HOARDING

MISSISSAUGA

SCALE : N.T.S DATE : June 2017

NOTES:
1 Straw bales to be butted tightly against adjoining bales to prevent sediment flow through barrier.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1
LIGHT–DUTY STRAW BALE BARRIER	OPSD 219.100	

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THE CONTRACTOR AND SUB-CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND DATA ON THE WORK AND REPORT ANY DISCREPANCY IN WRITING TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED AND SEALED BY THE ARCHITECT AND MARKED 'ISSUED FOR CONSTRUCTION'

NOTE:
LOCATIONS AND SIZES OF ANY AND ALL ACCESS PANELS, LIGHTS, SWITCHES, EXIT SIGNS, AND OTHER SUCH DEVICES MUST BE APPROVED BY ARCHITECT PRIOR TO ERECTION OF FRAMING. ALL SUCH ITEMS CAST INTO CONCRETE WALLS OR SLABS MUST SIMILARLY BE APPROVED BEFORE CONCRETE IS POURED.

GENERAL NOTE:

i. I hereby certify that this drawing confirms in all respects to the site development plans Architect or Engineer's Signature (if applicable) and Professional seal

ii. The City of Mississauga requires that all working drawings submitted to the Building Division as part of an application for the issuance of a building permit shall be certified
by the architect or engineer as being in conformity with the site development plan as approved by the City of Mississauga.

iii. All exterior lighting will be directed onto the site and will not infringe upon the adjacent properties.

iv. All rooftop mechanical unit shall be screened from view by the applicant.

v. Parking spaces reserved for people with disabilities must be identified by a sign, installed at the applicant's expense, in accordance with the By-law Requirements and Building Code Requirements.

vi. The applicant will be responsible for ensuring that all plans confirm to Transport Canada's restrictions.

vii. Grades will be met with a 3% maximum slope at the property lines and within the site.

viii. All damaged areas are to be reinstated with topsoil and sod prior to the release of securities.

ix. Signage shown on the site development plans is for information purposes only. All signs will be subject to the provisions of Sign by-law 0054-2002, as amended, and a separate sign application will be required through the Building Division.

x. Any fencing adjacent to municipal lands is to be located 15 cm (6.0 in.) inside the property line.

xi. Only "shielded" lighting fixtures are permitted for all development, except for detached and semi-detached dwellings within 60 m (196.8 ft.) of a residentially zoned property and must conform to the Engineer Certified Lighting Plan.

xii. The Engineer Certified Lighting Plan must be signed by the consulting Engineer.

xiii. The Owner covenants and agrees to construct and install "shielded" lighting fixtures on the subject lands, in conformity with the Site Plan and Engineer Certified Lighting Plan to the satisfaction of the City of Mississauga.

xiv. The applicant will be responsible for ensuring that all plans confirm to Transport Canada's restrictions.

xv. Where planting is to be located in landscaped areas on top of an underground parking structure, it is the responsibility of the applicant to arrange the coordination of the design of the underground parking structure with the Landscape Architect and the Consulting Engineering. Underground parking structures with landscaping area to be capable of supporting the following loads:
- 15 cm of drainage gravel plus 40 cm topsoil for sod
- 15 cm of drainage gravel plus 60 cm topsoil for shrubs
- 15 cm of drainage gravel plus 90 cm for trees

Or
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 40 cm topsoil for sod
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 60 cm topsoil for shrubs
- Prefabricated sheet drain system* with a compressive strength of 1003 Kpa plus 90 cm topsoil for trees

* Terradrain 900 or approved equal

xvi. The structural design of any retaining wall over 0.6 m in height or any retaining wall located on a property line is to be shown on the Site Grading plan for this project and is to be approved by the Consulting Engineer for the project.

xvii. Continuous 15 cm high barrier type poured concrete curbing will be provided between all asphalt and landscaped areas throughout the site.

xviii. All utility companies will be notified for locates prior to the installation of the hoarding that lies within the site and within the limited of the City boulevard area.

PROJECT NAME:
PRE-ENGINEERED
BUILDING
PROJECT ADDRESS:
3265 PRINCIPAL'S ROAD
CITY IDENTIFIER:
11680600 (Z-24)
LEGAL DESCRIPTION:
PT LTS 3, 5 RANGE 1NDS,. LT 4, PT LTS 3,5 RANGE 2
NDS. PT LTS 3, 4 RANGE 3 NDS,
PT BLK M PL 550, PT RDAL BTN RANGE 2 & RANGE 3
NDS - 43R31817 PTS 4-6, 43R-18295 PT 1
SITE PLAN APPLICATION NUMBER:
SP 21/004 W8

No.	DATE	DESCRIPTION
4.	2024-11-15	ISSUED FOR TENDER
3.	2024-09-17	ISSUED FOR PERMIT
2.	2024-06-12	RE-ISSUED FOR SPA
1.	2024-02-02	ISSUED FOR SPA

PRE-ENGINEERED
BUILDING

University of Toronto Mississauga

3359 Mississauga Road

MTE
Engineers, Scientists, Surveyors

LICENSED PROFESSIONAL ENGINEER
2024-11-15
R. D. ZHOU
100567167
PROVINCE OF ONTARIO

Baird Sampson
Neuert
architects

117 Peter Street, Suite 305
Toronto, Ontario
Canada M5V 1P9
T. (416) 363-8877
F. (416) 363-4029
mail@bsnarchitects.com

NOTES AND DETAILS
PLAN

SCALE:	1 : 250
DRAWN:	SDU
CHECKED:	RDZ
DATE:	04/28/21
JOB:	38225-103

C2.3

LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PLANTING Refer to L200 Planting Plan
- NATIVE SEED MIX
- NHS WOODLAND BUFFER PLANTING AREA
- NHS WOODLAND COMPENSATION PLANTING AREA
- CVC WETLAND & NHS WOODLAND COMPENSATION PLANTING AREA
- TURFSTONE PAVING
- CONCRETE PAVING
- GRANULAR MAINTENANCE EDGE
- UNIT BLOCK MAINTENANCE EDGE
- RIVER ROCK STRIP
- B — Concrete Filled Steel HSS Bollard Refer to Architectural
- EXISTING TREE TO REMAIN AND BE PROTECTED
- EXISTING TREE TO BE REMOVED
- ELC / CVCA DRIPLINE BOUNDARY
- 30m WETLAND BOUNDARY OFFSET
- 10m WETLAND BOUNDARY OFFSET
- WETLAND BOUNDARY
- EXISTING TREE PROTECTION ZONE
- TREE PROTECTION HOARDING
- SALAMANDER EXCLUSION FENCE
- BIKE RACK UTM Standard
- PRECAST CONCRETE BENCH
- Waste Receptacles UTM Standard – By Owner
- LB — Light Bollard Refer to Electrical
- AC — Accessible Signage Refer to Site Plan
- DRAINAGE TILE

PROTECTION AND PRESERVATION OF EXISTING VEGETATION NOTE:

All existing trees (singles and groups) which are to remain shall be fully protected with hoarding erected beyond the drip line of the tree canopy to the satisfaction of the Planning and Building Department prior to the issuance of the building permit. Areas within the hoarding shall remain undisturbed and shall not be used for the storage of building materials and equipment.

The Planning and Building Department will inspect the hoarding of trees on private property, while the Community Services Department will inspect the hoarding of public trees. Hoarding must remain in place until an inspection by the City and an appropriate removal time has been agreed upon.

The developer or agents shall take every precaution necessary to prevent damage to the existing vegetation to be retained. Where limbs or portions of trees are removed to accommodate construction, they will be removed in accordance with accepted arboriculture practice. Where root systems of protected trees adjacent to construction are exposed or damaged they shall be neatly trimmed and the area backfilled with appropriate material to prevent desiccation.

No open trenching shall occur through tree preservation zones (TPZ). Only directional boring can be used for service installation in these areas.

Where necessary, vegetation will be given an overall pruning to restore the balance between roots and top growth, or to restore its appearance.

Trees that have died or have been damaged beyond repair shall be removed and replaced at the owners' expense with trees of a size and species approved by the Planning and Building Department.

OWNER'S NOTE:

We agree to implement the approved Site Plan and Landscape Plans within 18 months after the execution of the Site Plan Undertaking and will retain the Landscape Architect to make periodic site inspections. Upon completion of the works we will forward to the City of Mississauga a copy of the Completion Notification Certificate from the Landscape Architect and the applicable inspection fee.

The Landscape Architect or Consulting Engineer will provide certification that:

– the recommendations outlined in the Acoustic Vibration Study have been implemented in accordance with the study;
– the Engineering Certificate lighting Plan and the LID techniques for this project have been installed in accordance with the approved plans.

Any revision to the Site Plan, Landscape Plans and Engineer Certified Lighting Plan (if applicable) will be submitted to the Planning and Building Department, Development and Design Division, City of Mississauga for review and approval, prior to the commencement of the works.

We hereby authorize the City, its authorized agents, servants or employees to enter upon our land to carry out inspections from time to time and agree to indemnify the City and its authorized agents and save them harmless from any and all actions arising out of the exercise by the City, its authorized agents, servants, or employees of the rights hereby given to them. We undertake to notify the City forthwith of any change of ownership of the said lands.

Signature of Owner:

Name of Owner:

Address:

Date:

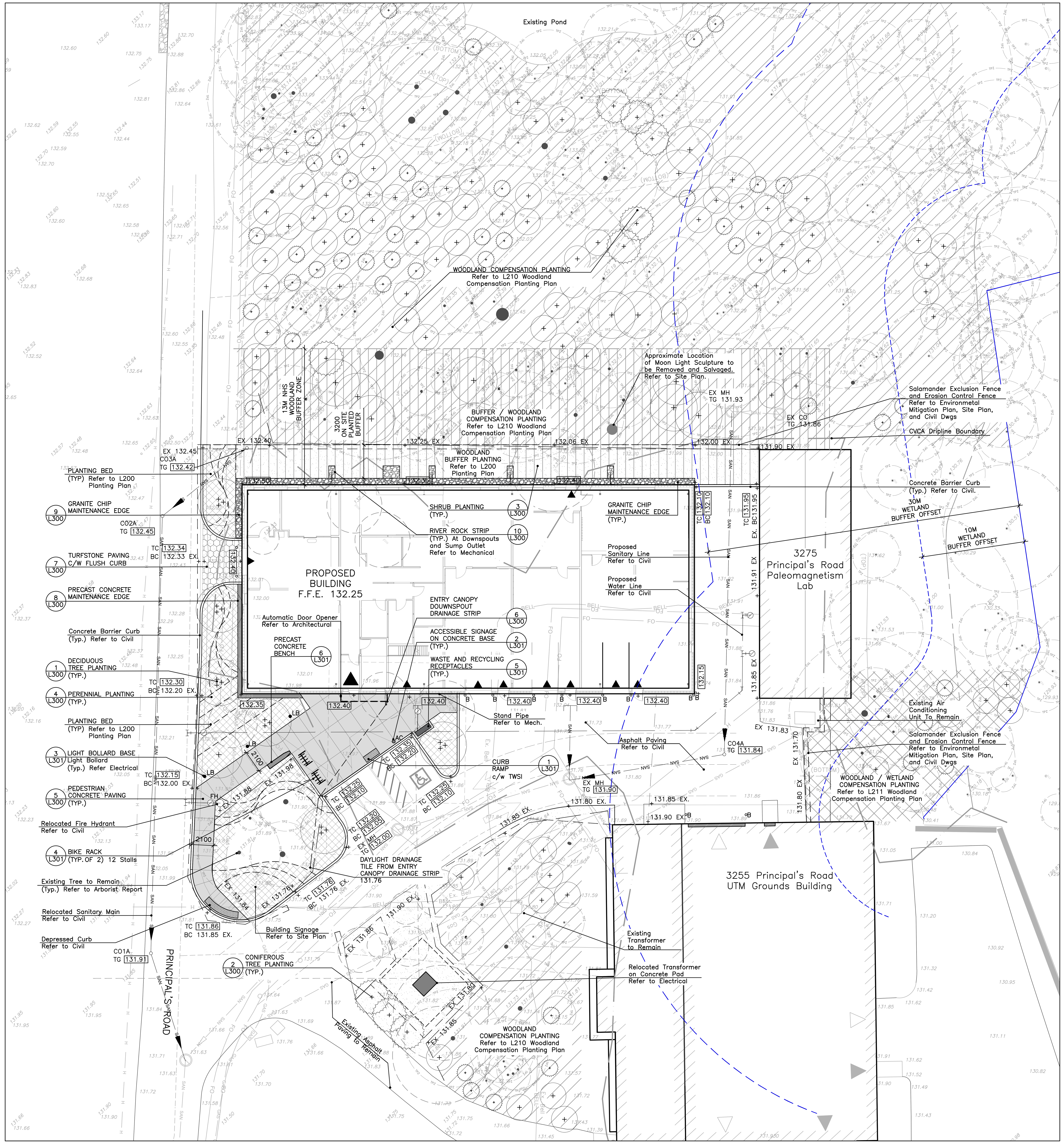
GRADING NOTE:

I hereby certify that this Landscape Plan conforms to the Site Grading Plan for this Application.

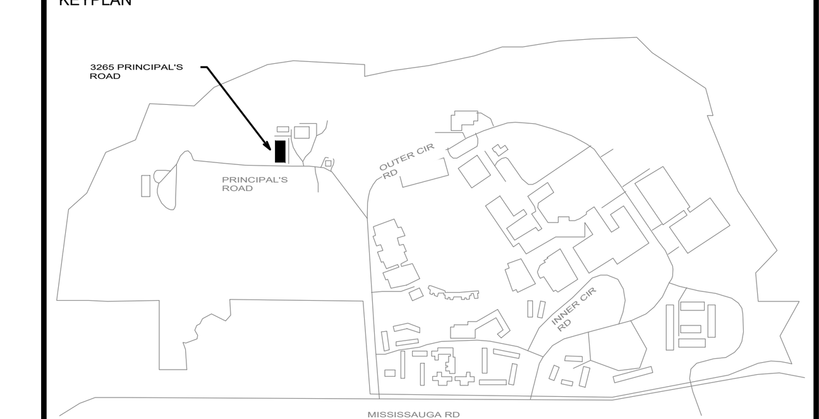
Signature of Landscape Architect   Print Name: BRAD FLEISHER

Date:

04/09/2024



KEYPLAN



TRUE NORTH   PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
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4	Issued for Class B Costing	2024-03-01
5	Issued for Review	2024-07-11
6	Issued for Building Permit	2024-09-06
7	100% Construction Documentation	2024-11-05
8	Issued for Tender	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3359 Mississauga Road

TITLE

LANDSCAPE PLAN

FRP inc. landscape.architects
1877 Davenport Road
Toronto, M6N 1B9
www.frpinc.ca

SEAL

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — B. J. FLEISHER — OALA — MEMBER

SCALE :	1:200
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO : L100

PLANTING NOTES:

1. All plant material is to meet the standards as outlined in the Canadian Standards for Nursery Stock, current edition.
2. For all contractor purchased materials plant sizes will be as measured on site. Nursery waybills will not be acceptable for determination of plant sizes.
3. Protect plant material from frost, excessive heat, wind and sun during transportation.
4. All planting beds have subsoil scarified to a depth of 450mm.
5. All planting soil to be amended with leafmulch equivalent to 13% dry weight of the soil.
6. Warranty period for all planting is one year from substantial completion. Warranty replacements of all plant material will be undertaken by the contractor as requested by the landscape architect at any time during the warranty period.
7. For burlapped root balls, cut away top one third of wrapping and wire basket without damaging root ball. Do not pull burlap or rope from under root ball. For potted plants remove entire container.
8. Backfill soil in 150mm lifts. Tamp each lift to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated into soil, backfill to finish grade.
9. Shrubs shown in groups are to be planted in continuous plant beds as shown on planting detail.
10. Plant material installed following leaf drop in the fall will be accepted after the start of the next growing season provided that acceptance conditions are fulfilled.
11. Any planting or landscaping work that is rejected at the final inspection will be corrected in a timely manner at contractor's expense.
12. Rejected plant material must be removed from the site within one working day.

LEGEND

- CONIFEROUS TREE
- DECIDUOUS TREE
- MULTI–STEM TREE
- SHRUBS
- EPHEMERAL PLANT GROUPINGS
- PERENNIAL / GROUNDCOVER MASSING
- SEED
- MULCH
- NHS WOODLAND BUFFER PLANTING Refer to L200 / L210 Plans
- NHS WOODLAND COMPENSATION PLANTING Refer to L210 / L211 Plans
- CVC WETLAND & NHS WOODLAND COMPENSATION PLANTING Refer to L211 Plan
- EXISTING TREE PROTECTION ZONE
- ELC / CVCA DRIPLINE BOUNDARY
- 30m WETLAND BOUNDARY OFFSET
- 10m WETLAND BOUNDARY OFFSET

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	CONDITION	COMMENTS
	TREES					
CC	Cercis canadensis	Eastern Redbud	4	45mm	WB	Treeform
OV	Ostrya virginiana	Ironwood	1	60mm	WB	
TO	Thuja occidentalis	Eastern White Cedar	3	1.8m ht.	BB	
		Total	**8**			
	SHRUBS					
AC	Amelanchier canadensis	Shadblow Serviceberry	2	2.25m ht.	WB	3-Stem Clump
Cs	Cornus sericea	Red Oiser Dogwood	6	60cm, 3 gal	Potted	
Cra	Cornus racemosa	Gray Dogwood	9	125cm, 3 gal.	Potted	
Dl	Diervilla lonicera	Bush Honeysuckle	8	60cm, 3 gal		
Hv	Hamamelis virginiana	Witchhazel	5	125cm, 3 gal.	Potted	Clump
Lb	Lindera benzoin	Spicebush	6	125cm, 3 gal.		Clump
Rc	Ribes cynosbati	Eastern Prickly Gooseberry	8	60cm, 3 gal	Potted	
Ro	Rubus odoratus	Flowering raspberry	10	60cm, 3 gal	Potted	
Va	Viburnum acerifolium	Mapleleaf viburnum	8	60cm, 3 gal	Potted	
		Total	**62**			
	PERENNIALS					
aqc	Aquilegia canadensis	Wild Columbine	135	1 gal	Potted	
ep	Echinacea purpurea	Purple Coneflower	85	1 gal	Potted	
rh	Rudbeckia hirta	Black Eyed Susan	35	1 gal	Potted	
sc	Symphyotrichum cordifolium	Heart leaved aster	135	1 gal	Potted	
	GROUNDCOVERS					
cp	Carex pensylvanica	Oak Sedge	670	1 gal	Potted	
	FERNS					
pa	Polystichum acrostichoides	Christmas Fern	275	1 gal	Potted	
	GRASSES					
ss	Schizachyrium scoparium	Little Bluestem	30	1 gal	Potted	
sh	Sporobolus heterolepis	Prairie Dropseed	190	1 gal	Potted	
	EPHEMERALS					
dc	Dicentra cucullaria	Dutchman's Breeches	175	1 gal	Potted	Plant in Groups of 5-7
tg	Trillium grandiflorum	White Trillium	225	1 gal	Potted	Plant in Groups of 5-7

SEED MIXTURE - CVC 1 - UPLAND MIX Seed at a rate of 250g/90m2

Scientific Name	Common Name	%
Anemone canadensis	Canada Anemone	1%
Asclepias syriaca	Common Milkweed	2%
Carex granularis	Limestone Meadow Sedge	15%
Elymus virginicus var. virginicus	Virginia Wildrye	40%
Euthamia graminifolia	Grass Leaved Goldenrod	1%
Monarda fistulosa var. fistulosa	Wild Bergamot	1%
Oenethera biennis	Common Evening Primrose	25%
Rudbeckia hirta	Black Eyed Susan	10%
Solidago canadensis var. canadensis	Canada Goldenrod	1%
Solidago juncea	Early Goldenrod	1%
Solidago nemoralis ssp. Nemoralis	Gray-stemmed Goldenrod	1%
Symphyotrichum novae-angliae	New England Aster	1%
Verbena urticifolia	White Vervain	1%

Cover Crop for Seed Mixture Seed at a rate of 150g/100m2

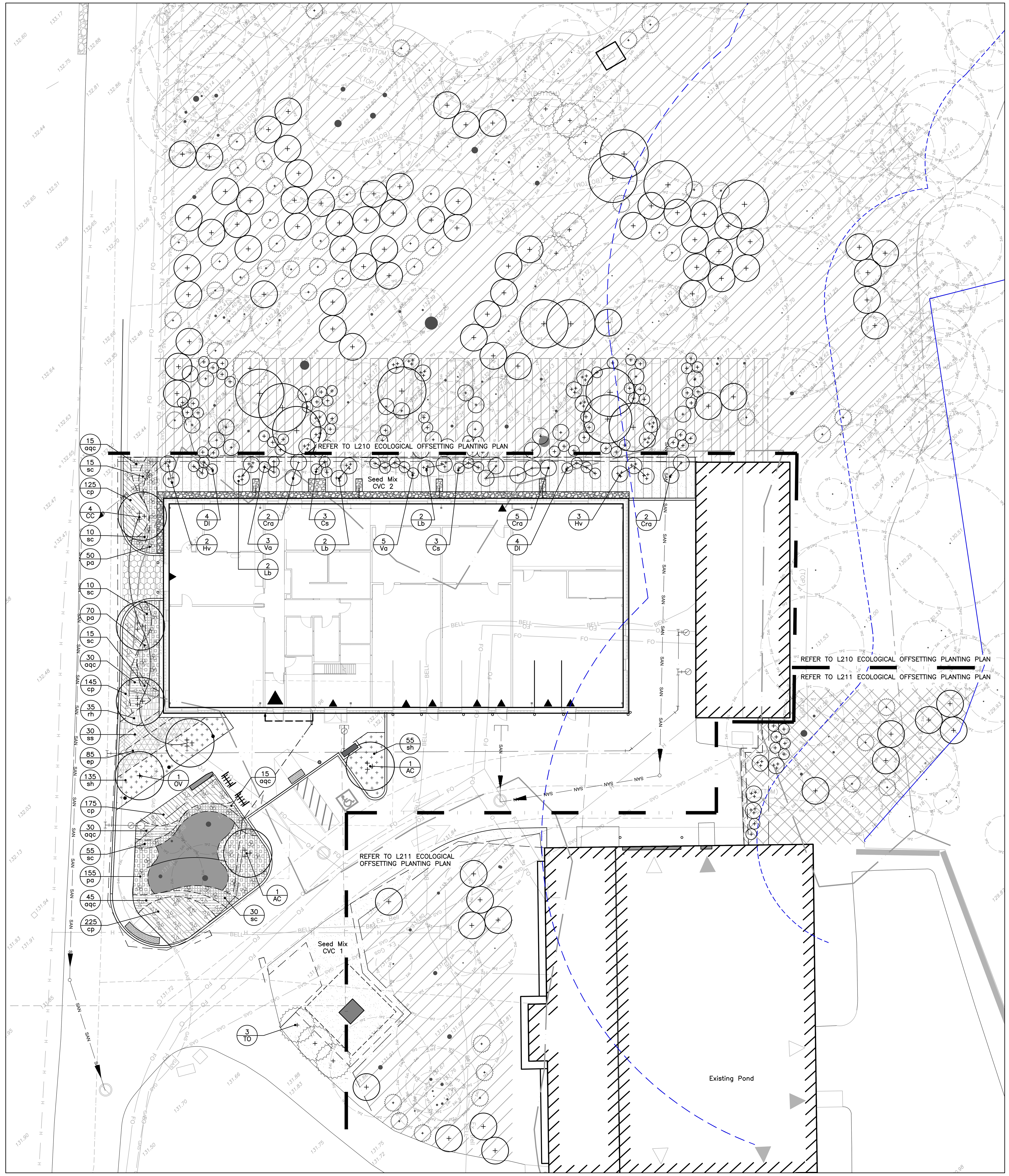
Avena sativa	Oats	40%
Hordeum vulgare	Barley	45%

SEED MIXTURE - CVC 2 - LOWLAND MIX (Semi-Moist)

Scientific Name	Common Name	%
Carex vulpinoidea	Fox Sedge	25%
Elymus virginicus var. virginicus	Virginia Wildrye	35%
Juncus tenuis	Path Rush	5%
Poa palustris	Fowl Bluegrass	25%
Scirpus atrovirens	Dark-green Bulrush	5%
Verbena hastata	Blue Vervain	5%

Cover Crop for Seed Mixture Seed at a rate of 150g/100m2

Avena sativa	Oats	40%
Hordeum vulgare	Barley	45%



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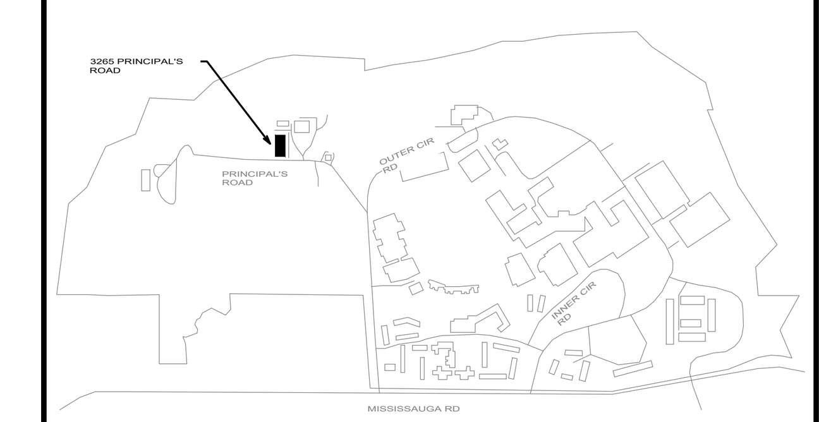


TRUE NORTH   PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for 100% Schematic Design Review	2023-12-22
3	Issued for Site Plan Approval	2024-02-02
4	Issued for Class B Costing	2024-03-01
5	Issued for Review	2024-07-11
6	Issued for Building Permit	2024-09-06
7	100% Construction Documentation	2024-11-05
8	Issued for Tender	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

3359 Mississauga Road

TITLE

SITE PLANTING PLAN

FRP Inc. landscape architects

SEAL

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — B. J. FLEISHER — MEMBER

SCALE :	1:200
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO : **L200**

LEGEND

CONIFEROUS TREES	EXISTING TREE PROTECTION ZONE
DECIDUOUS TREES	ELC / CVCA DRIPLINE BOUNDARY
SHRUBS	30m WETLAND BOUNDARY OFFSET
	10m WETLAND BOUNDARY OFFSET
	WETLAND BOUNDARY
	13m WOODLAND BUFFER
NHS WOODLAND BUFFER PLANTING Refer to L200 / L210 Plans	TREE PROTECTION HOARDING
NHS WOODLAND COMPENSATION PLANTING Refer to L210 / L211 Plans	CVC WETLAND & NHS WOODLAND COMPENSATION PLANTING Refer to L211 Plan

ECOLOGICAL OFFSETTING PLANT LIST

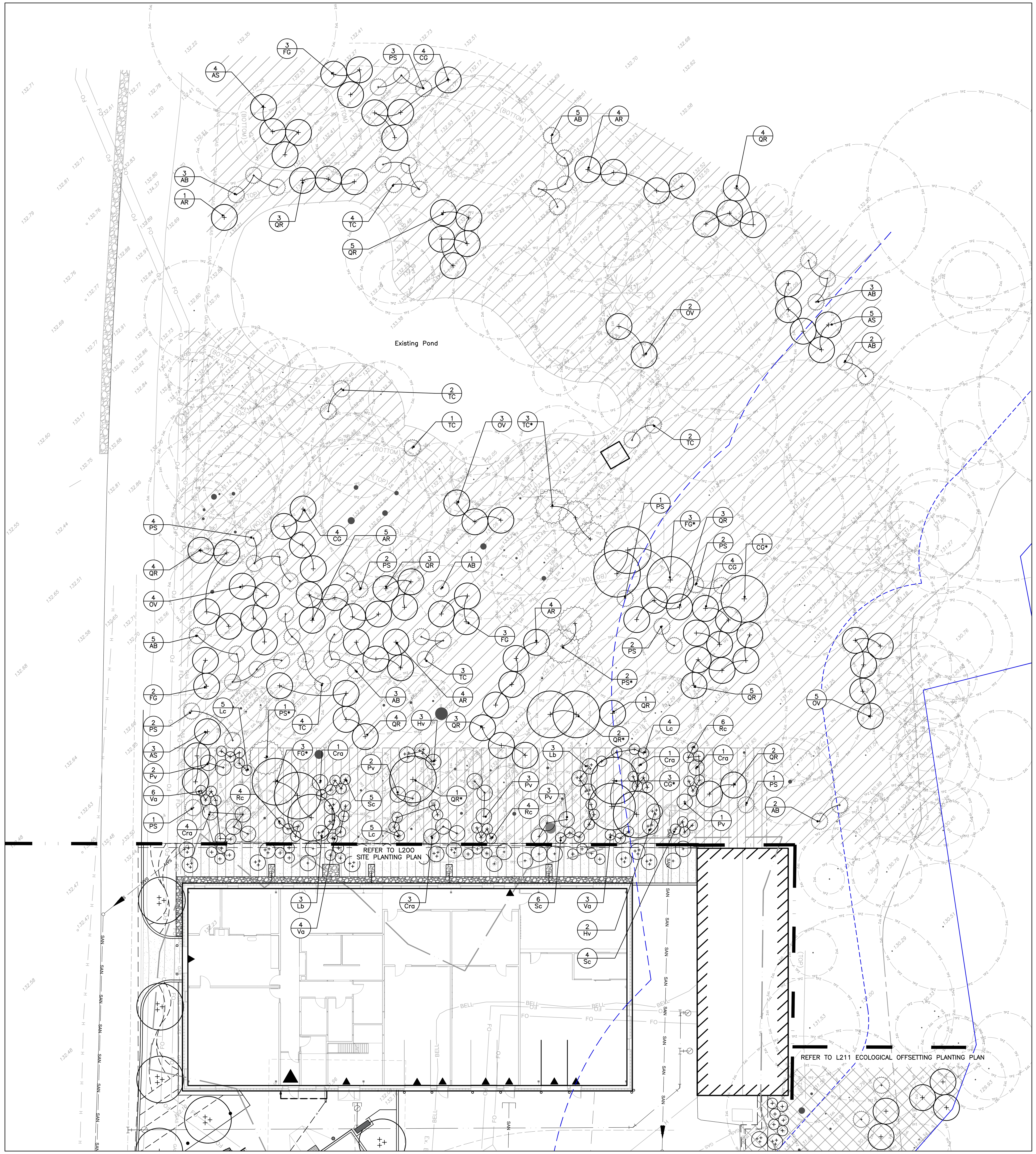
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	CONDITION	COMMENTS
	TREES					
AB	Abies balsamea	Balsam Fir	24	1.5m ht.	Branched whip	
AR	Acer rubrum	Red Maple	18	1.5m ht.	Branched whip	
AS	Acer saccharum	Sugar Maple	12	1.5m ht.	Branched whip	
CG	Carya glabra	Pignut Hickory	14	1.5m ht.	Branched whip	
CG*	Carya glabra	Pignut Hickory	4	60mm	BB	*Tree Removal Compensation
FG	Fagus grandifolia	American Beech	13	1.5m ht.	Branched whip	
FG*	Fagus grandifolia	American Beech	6	60mm	BB	*Tree Removal Compensation
OV	Ostrya virginiana	Ironwood	20	1.5m ht.	Branched whip	
PS	Pinus strobus	Eastern White Pine	21	1.5m ht.	Branched whip	
PS*	Pinus strobus	Eastern White Pine	3	1.8m ht.	WB	*Tree Removal Compensation
QR	Quercus rubra	Northern Red Oak	40	1.5m ht.	Branched whip	
QR*	Quercus rubra	Northern Red Oak	3	60mm	BB	*Tree Removal Compensation
TC	Tsuga canadensis	Eastern Hemlock	19	1.5m ht.	Branched whip	
TC*	Tsuga canadensis	Eastern Hemlock	3	1.8m ht.	WB	*Tree Removal Compensation
		Total	**200**			
	SHRUBS					
Cra	Cornus racemosa	Gray Dogwood	10	125cm, 3 gal.	Potted	
Hv	Hamamelis virginiana	Witchhazel	9	125cm, 3 gal.	Potted	Clump
Lb	Lindera benzoin	Spicebush	6	125cm, 3 gal.	Potted	Clump
Lc	Lonicera canadensis	American Fly Honeysuckle	14	60cm, 3 gal	Potted	
Pv	Prunus virginiana	Chokecherry	11	125cm, 3 gal.	Potted	
Rc	Ribes cynosbati	Eastern Prickly Gooseberry	16	60cm, 3 gal	Potted	
Sc	Sambucus canadensis	American Black Elderberry	15	60cm, 3 gal	Potted	
Va	Viburnum acerifolium	Mapleleaf viburnum	19	60cm, 3 gal	Potted	
		Total	**100**			

ECOLOGICAL OFFSETTING NOTES:

1. Field Adjustments may be required for all proposed plant material based on presence of existing vegetation to remain. Refer to Environmental Impact Study prepared by Sumac Environmental Consulting.
2. Tree Planting to be minimum 2.5m o.c. spacing.
3. Tall shrub planting to be minimum 1.5m o.c. spacing.
4. Low shrub planting to be minimum 1.0m o.c. spacing.
5. Bat boxes to be located on site by a qualified Biologist. Refer to sheet L211 Ecological Offsetting Planting Plan for details, and Environmental Impact Study prepared by Sumac Environmental Consulting for recommendations.
6. All disturbed areas associated with planting operations within existing Natural Heritage System Boundary and Wetland Buffer Offset to be reinstated with 100mm of topsoil, CVC-1 native upland seed mix and cover crop.

SEED MIXTURE - CVC 1 - UPLAND MIX	Seed at a rate of 250g/90m2	
Scientific Name	**Common Name**	**%**
Anemone canadensis	Canada Anemone	1%
Asclepias syriaca	Common Milkweed	2%
Carex granularis	Limestone Meadow Sedge	15%
Elymus virginicus var. virginicus	Virginia Wildrye	40%
Euthamia graminifolia	Grass Leaved Goldenrod	1%
Monarda fistulosa var. fistulosa	Wild Bergamot	1%
Oenethera biennis	Common Evening Primrose	25%
Rudbeckia hirta	Black Eyed Susan	10%
Solidago canadensis var. canadensis	Canada Goldenrod	1%
Solidago juncea	Early Goldenrod	1%
Solidago nemoralis ssp. Nemoralis	Gray-stemmed Goldenrod	1%
Symphyotrichum novae-angliae	New England Aster	1%
Verbena urticifolia	White Vervain	1%

Cover Crop for Seed Mixture	Seed at a rate of 150g/100m2	
Avena sativa	Oats	40%
Elymus canadensis	Canada Wildrye	15%
Hordeum vulgare	Barley	45%



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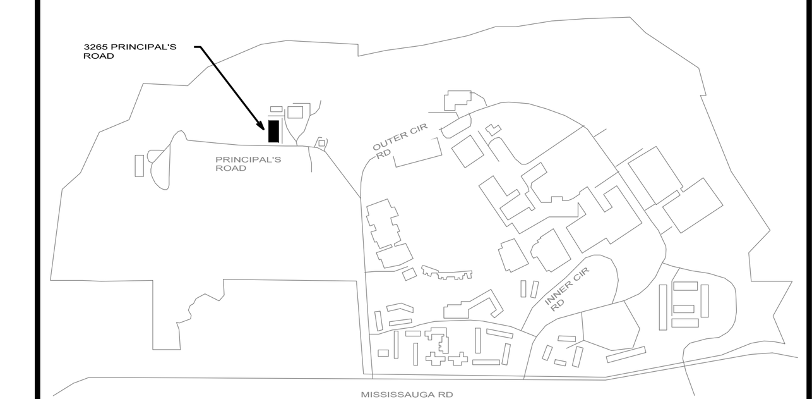

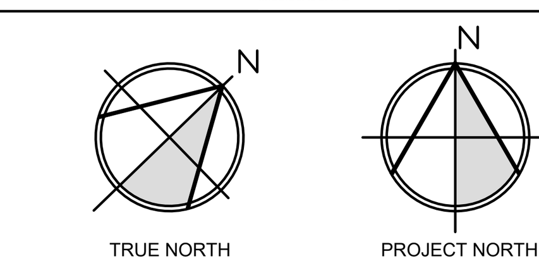

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NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

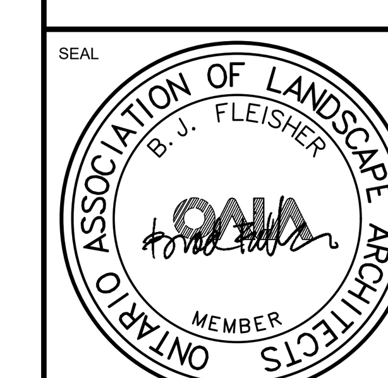
3359 Mississauga Road

TITLE

ECOLOGICAL OFFSETTING PLANTING PLAN

FRP Inc. landscape architects

SEAL



SCALE :	1:200
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO :

L210

LEGEND

	CONIFEROUS TREES		EXISTING TREE PROTECTION ZONE
	DECIDUOUS TREES		ELC / CVCA DRIPLINE BOUNDARY
	SHRUBS		30m WETLAND BOUNDARY OFFSET
	NHS WOODLAND BUFFER PLANTING Refer to L200 / L210 Plans		10m WETLAND BOUNDARY OFFSET
	NHS WOODLAND COMPENSATION PLANTING Refer to L210 / L211 Plans		WETLAND BOUNDARY
			13m WOODLAND BUFFER
			TREE PROTECTION HOARDING
			CVC WETLAND & NHS WOODLAND COMPENSATION PLANTING Refer to L211 Plan

Two-chamber Rocket Box

Materials (makes one house)
2" diameter (2⅜" outside diameter) steel pole, 20' long
Two 1" x 4" (¾" x 3½" finished) x 8' boards*
Two 1" x 8" (¾" x 7¼" finished) x 8' boards*
Two 1" x 10" (¾" x 9¼" finished) x 6' boards*
24" x 24" x ¾" piece of AC exterior plywood
Box of 100 exterior-grade screws, 1⅝"
Box of 100 exterior-grade screws, 1¼"
16 to 32 exterior-grade screws, 2"
20 to 30 roofing nails, ⅞"
One quart water-based primer, exterior grade
Two quarts flat, water-based stain or paint, exterior grade
Asphalt shingles or dark galvanized metal
One tube paintable latex caulk
Two ¼" x 4½" carriage bolts, washers and nuts

* Western red cedar or poplar preferred

Recommended tools
Table saw or circular saw
Caulk gun
Hammer
Tape measure
Square
Jigsaw, keyhole saw or router
Sandpaper or sander
Rasp or wood file
Variable-speed reversing drill
1½" hole saw or spade bit
⅛" and ¼" drill bits
Screwdriver bit for drill

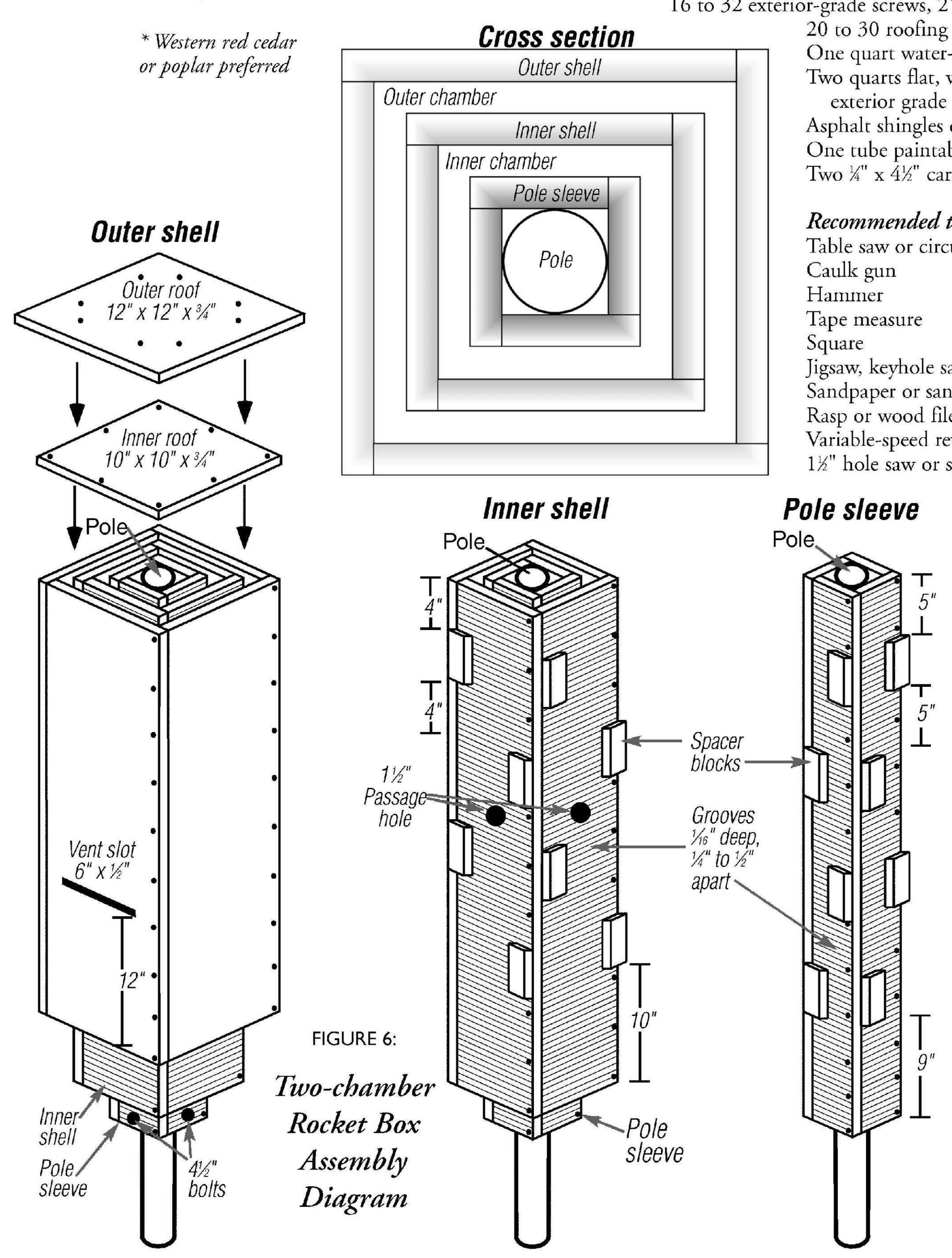


FIGURE 6:
Two-chamber Rocket Box Assembly Diagram

Construction

1. Measure, mark and cut out parts according to Figure 7. Dimensions must be exact for correct fit. Cut out two vent slots and four passage holes as shown.
2. Cut 1/16"-deep horizontal grooves ¼" to ½" apart on one side of all 36" and 45" boards and on both sides of all 42" boards. Sand to remove splinters.
3. Drill two ⅛" holes through each ¾" x 1½" x 4" spacer block to prevent splitting.
4. Assemble four pole sleeve boards into a hollow, square box as shown using 1⅝" screws and caulk. Pre-drill holes to prevent splitting. Countersinking holes may also help.

BAT BOX — NTS — 1

5. Attach spacer blocks to pole sleeve as shown (four per side) using two 1¼" screws per block. Bottom spacer blocks are 9" up from bottom of pole sleeve. Top spacer blocks are 5" from top. Alternate spacer blocks on left and right sides, 5" apart.
6. Assemble four inner shell boards into a hollow, square box as in step 4.
7. Slide pole sleeve into inner shell until top edges are flush. Bat passage holes will be towards the top. Mark location of spacer blocks. Secure inner shell to pole sleeve with 2" screws through the spacer blocks to ensure no screws protrude into roosting chambers. Pre-drill holes first to avoid splitting spacer blocks (countersinking holes may also help).
8. Attach spacer blocks (4 per side) to inner shell as shown, using two 1¼" screws per block. Bottom spacer blocks are 10" up from the bottom edge of the inner shell. Top spacers are 4" from top. Alternate spacers left and right sides, 4" apart.
9. Assemble four outer-shell boards into a hollow, square box as in step 4. Vent slots are on opposing sides and oriented towards the bottom.
10. Slide finished outer shell over inner shell, so that 6" of inner shell protrudes below outer shell. Mark locations of spacer blocks. Secure outer shell to inner shell as in step 7 (pre-drill holes first). Ensure that no screws protrude into the roosting chambers.
11. Caulking first, attach inner roof to box with 1¼" screws. Carefully drive screws into top edges of shells to prevent screws from entering roosting chambers.
12. Center and attach outer roof to inner roof with 1¼" screws, caulking first.
13. Paint or stain exterior three times (use primer for first coat). Cover roof with shingles or dark galvanized metal.
14. Slide completed rocket box over pole. One inch up from the bottom edge of pole sleeve, drill a ¼" hole all the way through pole and sleeve. Rotate box and pole 90° and drill another ¼" hole, 2 inches from the bottom, through pole and sleeve. Secure box to pole with two 4½" bolts, washers and nuts. Orient vent slots north and south during installation.

Optional modifications to the rocket box

1. For extra mounting height, insert a 4½" bolt and nut about halfway up through pole sleeve after completing step 5.
2. For extra heat-holding capacity, create a compartment in upper half of pole sleeve with a 2½"-square piece of leftover plywood. Fill upper half of sleeve with sand, gravel or dirt, and seal with another piece of plywood flush with top.
3. In warmer climates, a larger outer roof with more overhang can be used for additional shading.

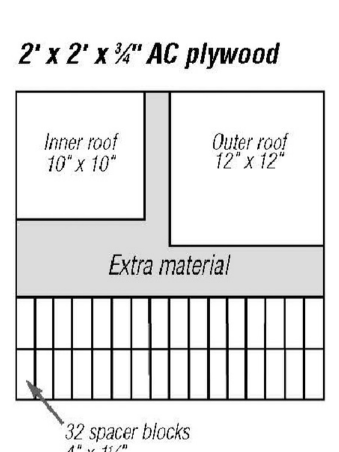
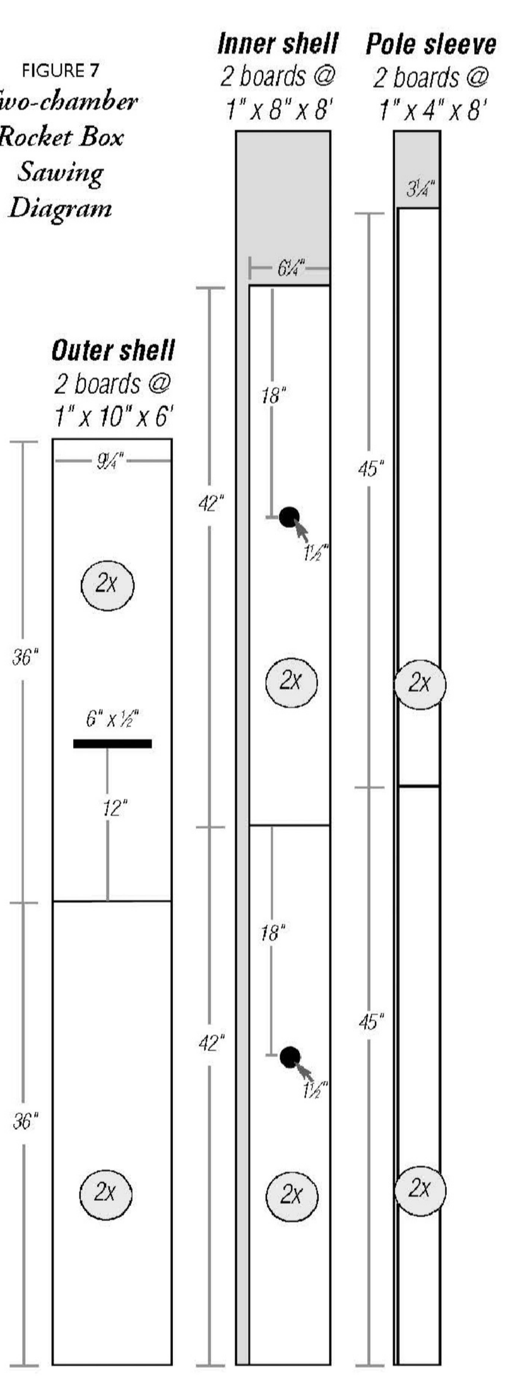
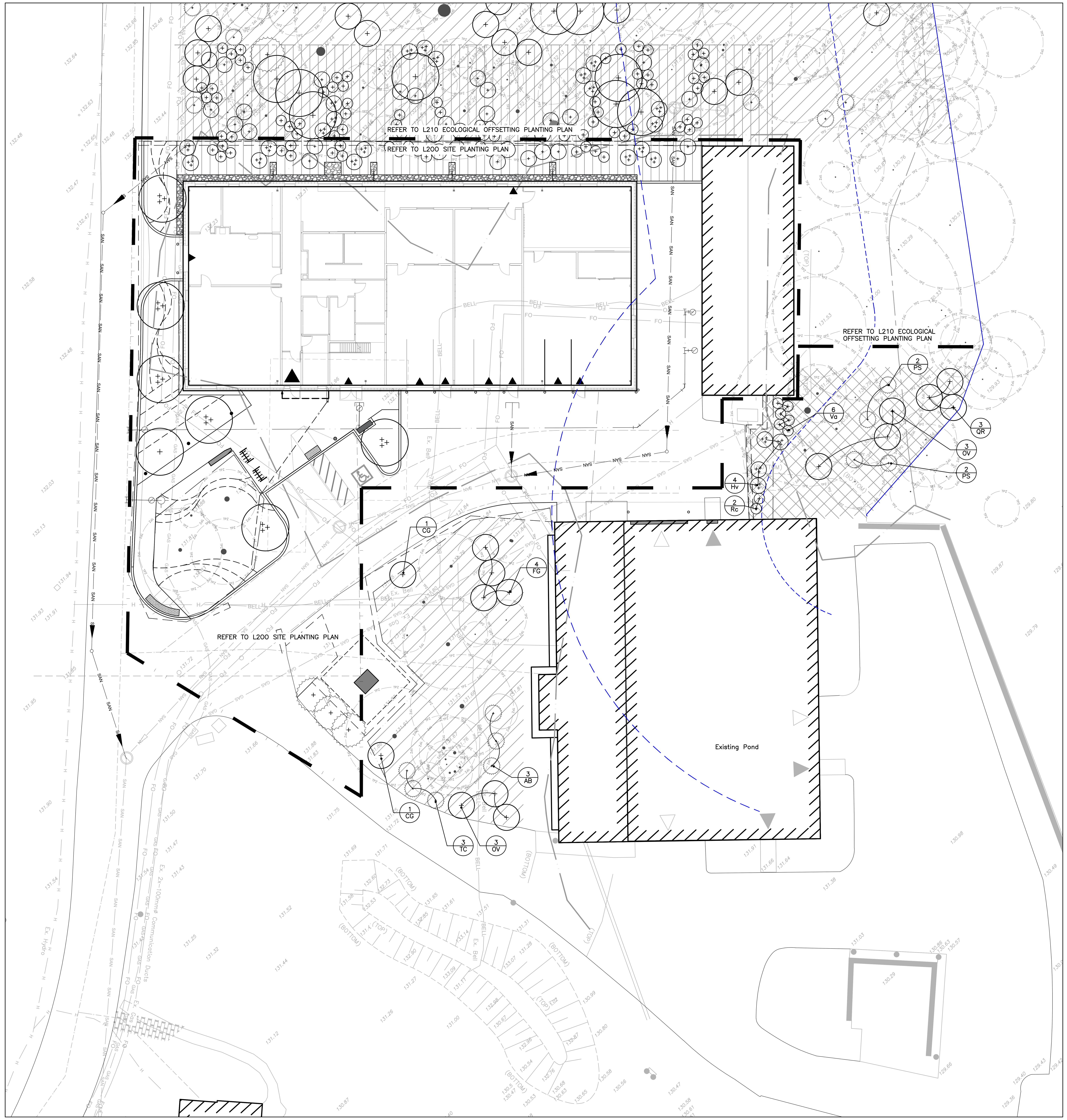


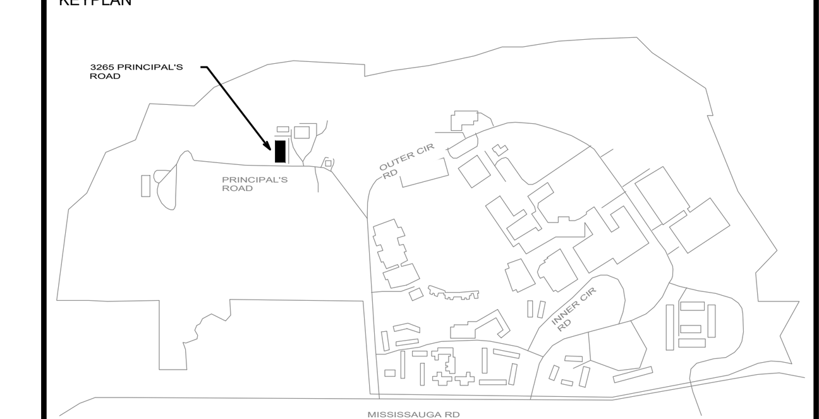
FIGURE 7
Two-chamber Rocket Box Sawing Diagram



BAT BOX — NTS — 2



KEYPLAN



TRUE NORTH — PROJECT NORTH

No.	ISSUANCE	DATE
1	Issued for Class C Costing	2023-12-06
2	Issued for 100% Schematic Design Review	2023-12-22
3	Issued for Site Plan Approval	2024-02-02
4	Issued for Class B Costing	2024-03-01
5	Issued for Review	2024-07-11
6	Issued for Building Permit	2024-09-06
7	100% Construction Documentation	2024-11-05
8	Issued for Tender	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3359 Mississauga Road

TITLE
ECOLOGICAL OFFSETTING PLANTING PLAN

FRP Inc. landscape architects

SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — B. J. FLEISHER — MEMBER

SCALE :	1:200
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO : L211

LEGEND

(symbol)	DECIDUOUS TREE
(symbol)	SHRUBS
(symbol)	SEED
(symbol)	EXISTING WOODY VEGETATION Refer to Environmental Impact Study
(symbol)	WOODLAND DRIPLINE

LAND-BASED OFFSETTING NOTES:

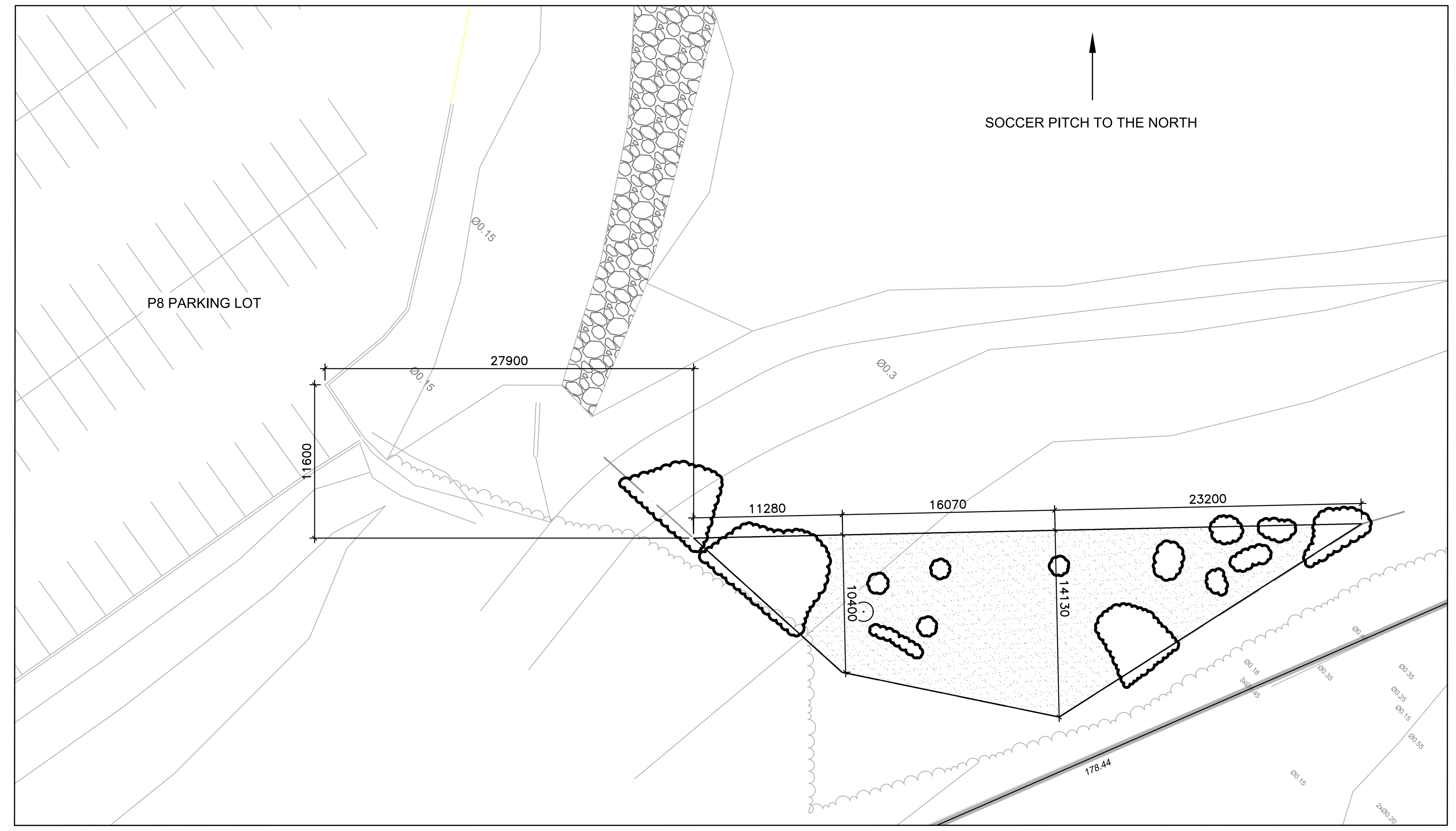
1. Field adjustments may be required for all proposed plant material based on presence of existing vegetation to remain. Refer to Environmental Impact Study prepared by Sumac Environmental Consulting.
2. Total Land-Based Offsetting Area to be 422 sq.m.
3. Tree Planting to be minimum 2.5m o.c. spacing.
4. Tall shrub planting to be minimum 1.5m o.c. spacing and low shrub planting to be minimum 1.0m o.c. spacing.

PLANT LIST

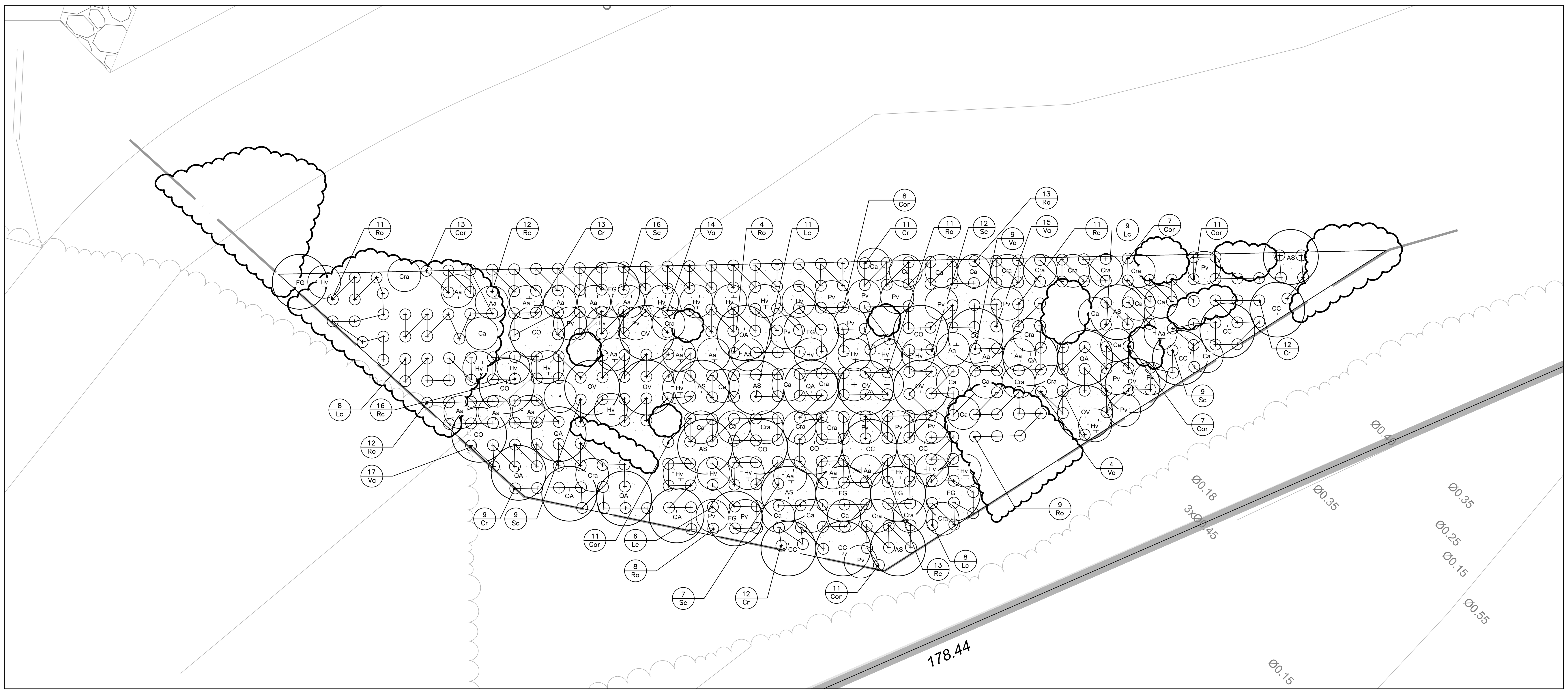
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	CONDITION	COMMENTS
	TREES					
AS	Acer saccharum	Sugar Maple	7	60mm	BB	
CO	Carya ovata	Shagbark Hickory	7	60mm	BB	
FG	Fagus grandifolia	American Beech	7	60mm	BB	
OV	Ostrya virginiana	Ironwood	7	60mm	BB	
PT	Carpinus caroliniana	Musclewood	7	60mm	BB	
QA	Quercus alba	White Oak	9	60mm	BB	
		Total	**44**			
	TALL SHRUBS					
Aa	Amelanchier arborea	Common serviceberry	20	125cm, 3 gal.	Potted	Clump
Ca	Cornus alternifolia	Alternate Leaved Dogwood	20	125cm, 3 gal.	Potted	
Cra	Cornus racemosa	Gray Dogwood	18	125cm, 3 gal.	Potted	
Hv	Hamamelis virginiana	Witchhazel	22	125cm, 3 gal.	Potted	Clump
Pv	Prunus virginiana	Chokecherry	20	125cm, 3 gal.	Potted	
		Total	**100**			
	LOW SHRUBS					
Cr	Cornus rugosa	Round-Leaved Dogwood	57	60cm, 3 gal	Potted	
Cor	Corylus cornuta	Beaked Hazelnut	68	60cm, 3 gal	Potted	
Lc	Lonicera canadensis	American Fly Honeysuckle	42	60cm, 3 gal	Potted	
Rc	Ribes cynosbati	Eastern Prickly Gooseberry	52	60cm, 3 gal	Potted	
Ro	Rubus odoratus	Flowering raspberry	68	60cm, 3 gal	Potted	
Sc	Sambucus canadensis	Common Elderberry	53	60cm, 3 gal	Potted	
Va	Viburnum acerifolium	Mapleleaf viburnum	59	60cm, 3 gal	Potted	
		Total	**399**			

SEED MIXTURE - CVC 1 - UPLAND MIX	Seed at a rate of 250g/90m2	
Scientific Name	**Common Name**	**%**
Anemone canadensis	Canada Anemone	1%
Asclepias syriaca	Common Milkweed	2%
Carex granularis	Limestone Meadow Sedge	15%
Elymus virginicus var. virginicus	Virginia Wildrye	40%
Euthamia graminifolia	Grass Leaved Goldenrod	1%
Monarda fistulosa var. fistulosa	Wild Bergamot	1%
Oenethera biennis	Common Evening Primrose	25%
Rudbeckia hirta	Black Eyed Susan	10%
Solidago canadensis var. canadensis	Canada Goldenrod	1%
Solidago juncea	Early Goldenrod	1%
Solidago nemoralis ssp. Nemoralis	Gray-stemmed Goldenrod	1%
Symphyotrichum novae-angliae	New England Aster	1%
Verbena urticifolia	White Vervain	1%

Cover Crop for Seed Mixture	Seed at a rate of 150g/100m2	
Avena sativa	Oats	40%
Elymus canadensis	Canada Wildrye	15%
Hordeum vulgare	Barley	45%



LAND-BASED OFFSETTING LAYOUT 1:300



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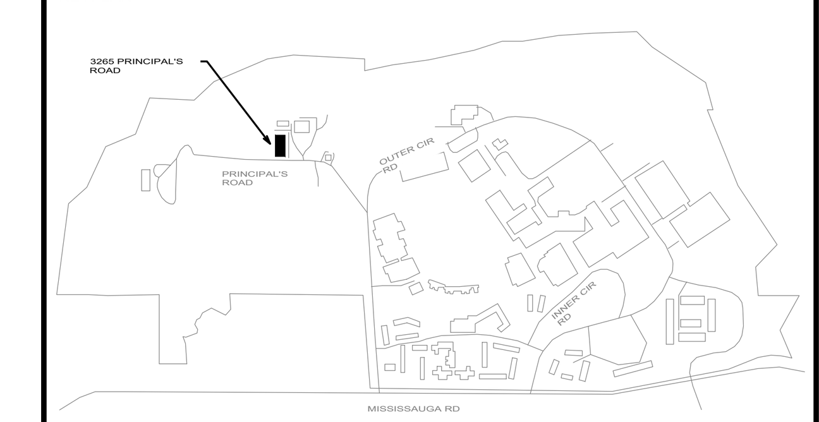

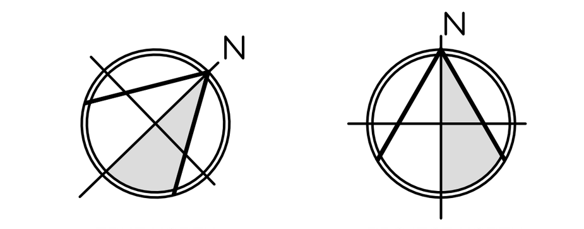

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

University of Toronto Mississauga

PROJECT

Pre-Engineered Building

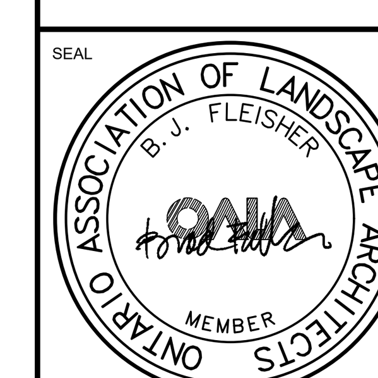
3359 Mississauga Road

TITLE

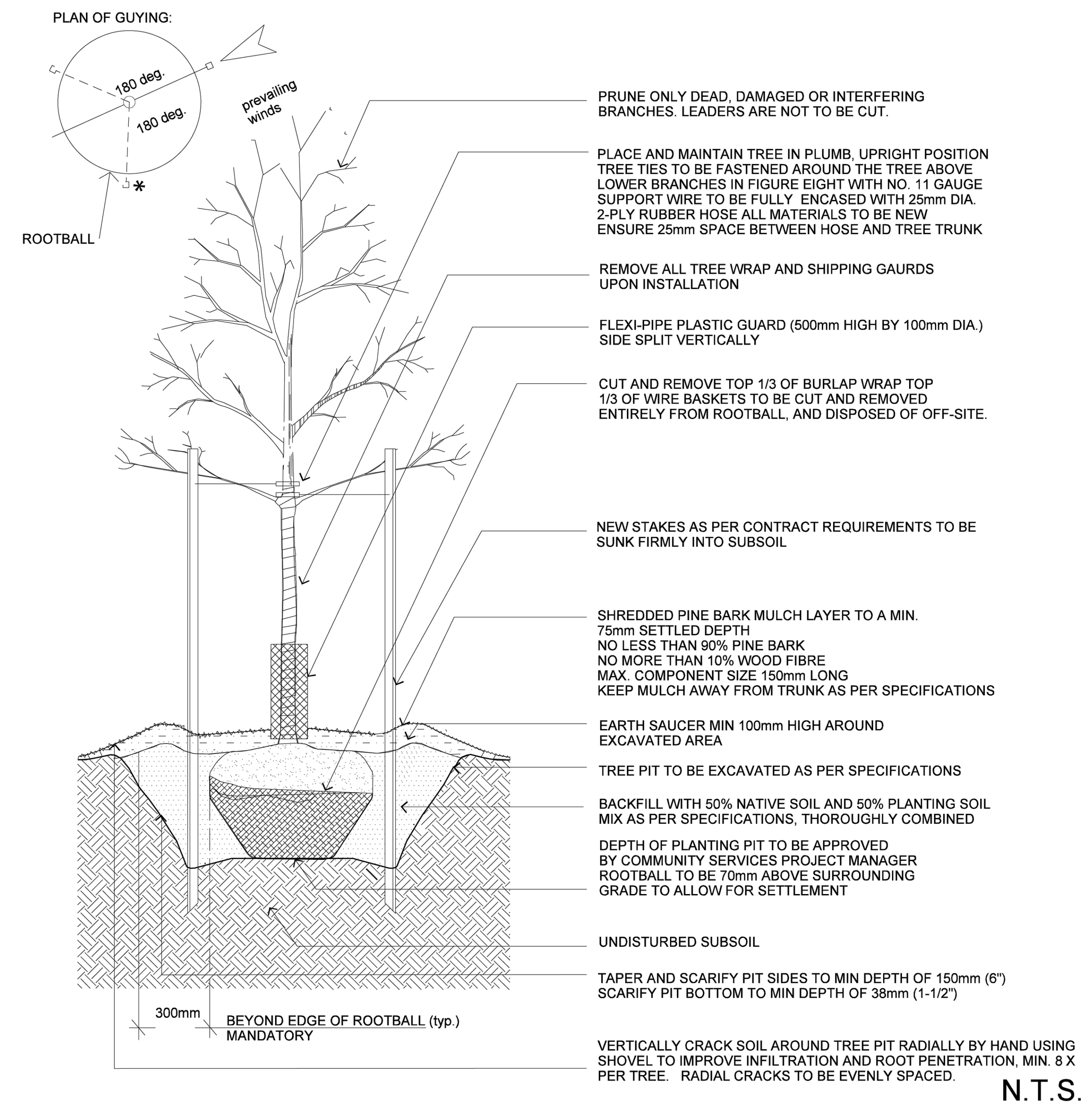
LAND-BASED OFFSETTING PLANTING PLAN

FRP Inc. landscape architects

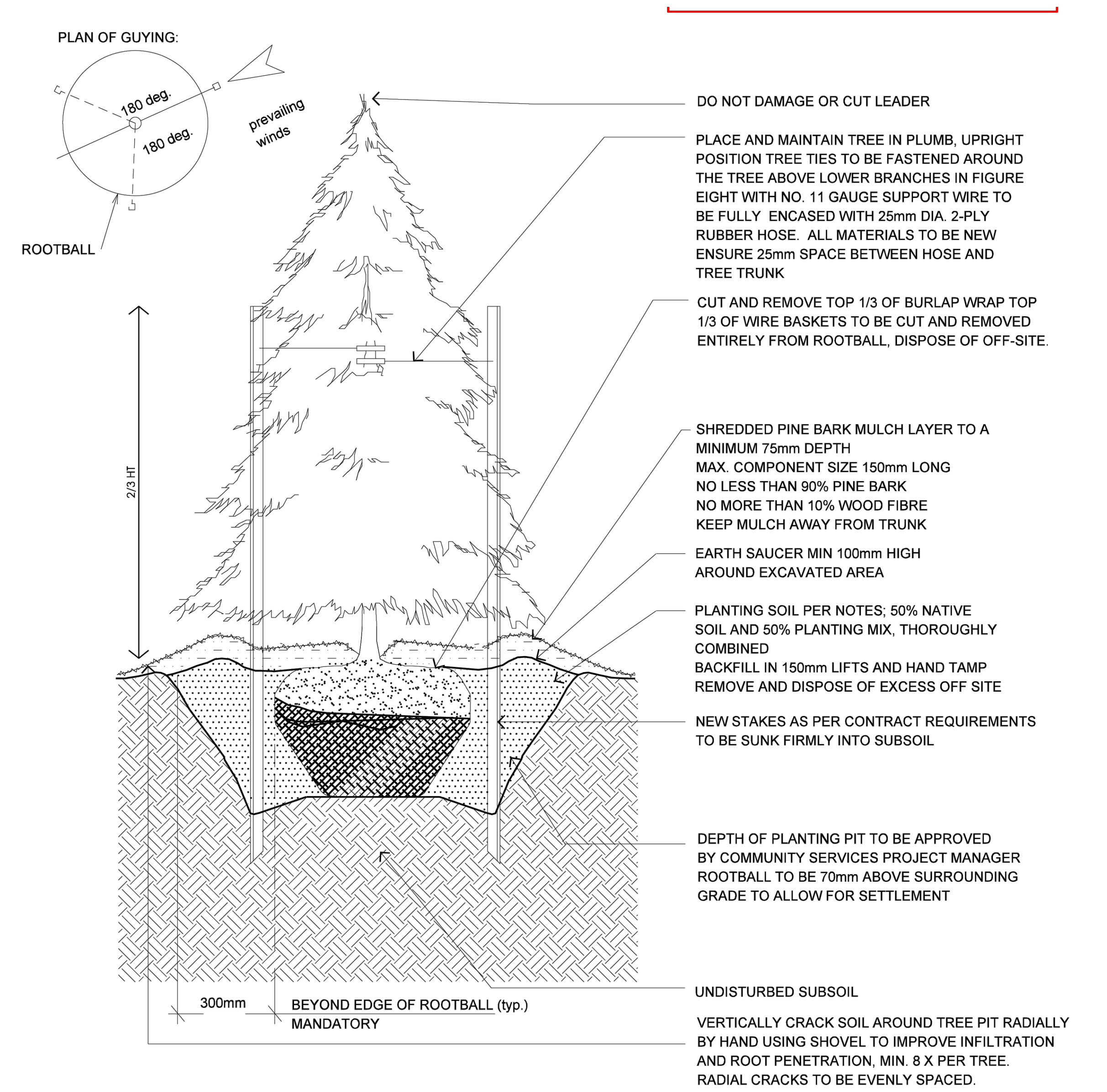
SEAL



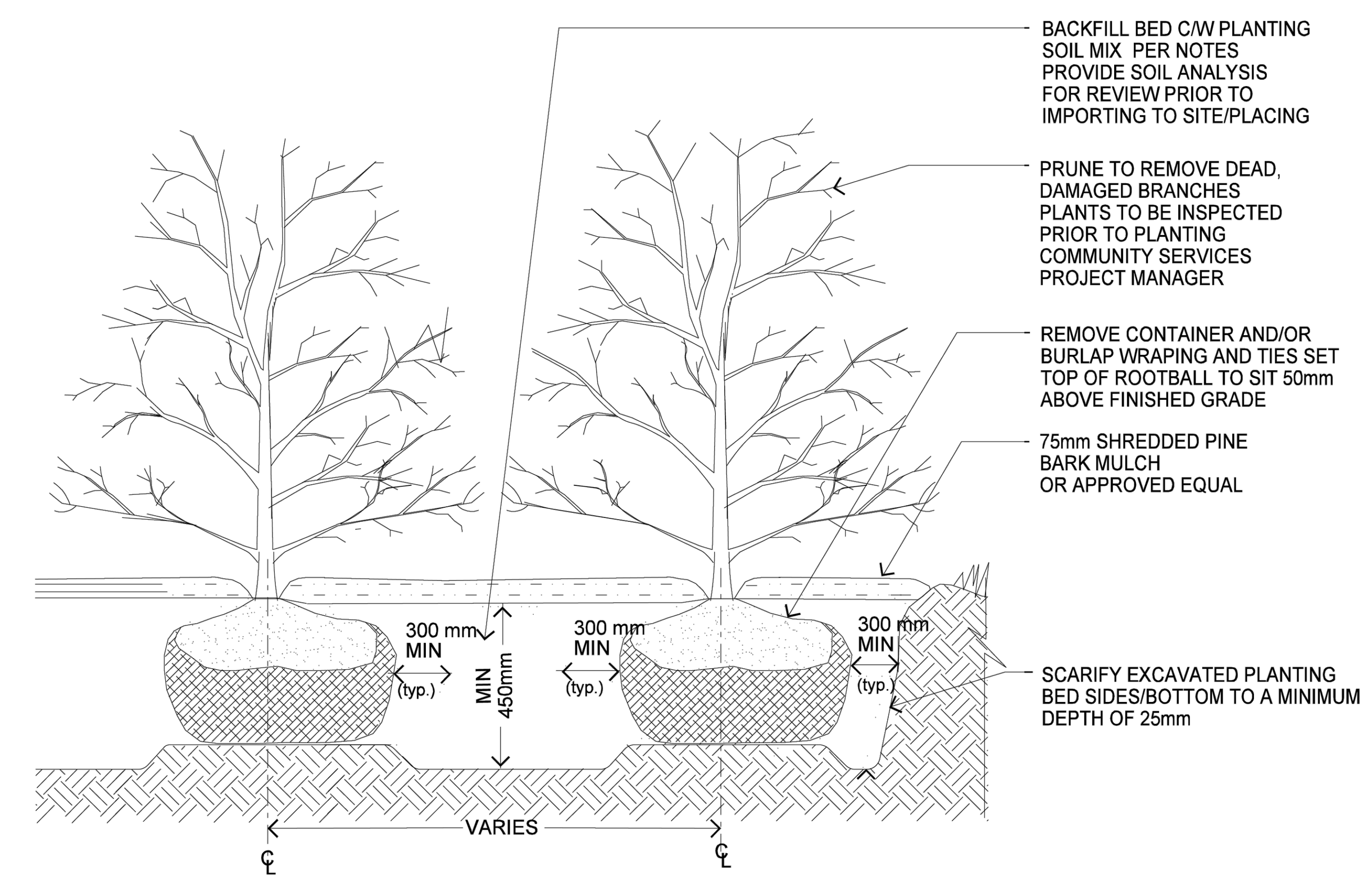
SCALE :	1:100
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF
SHEET NO :	L220



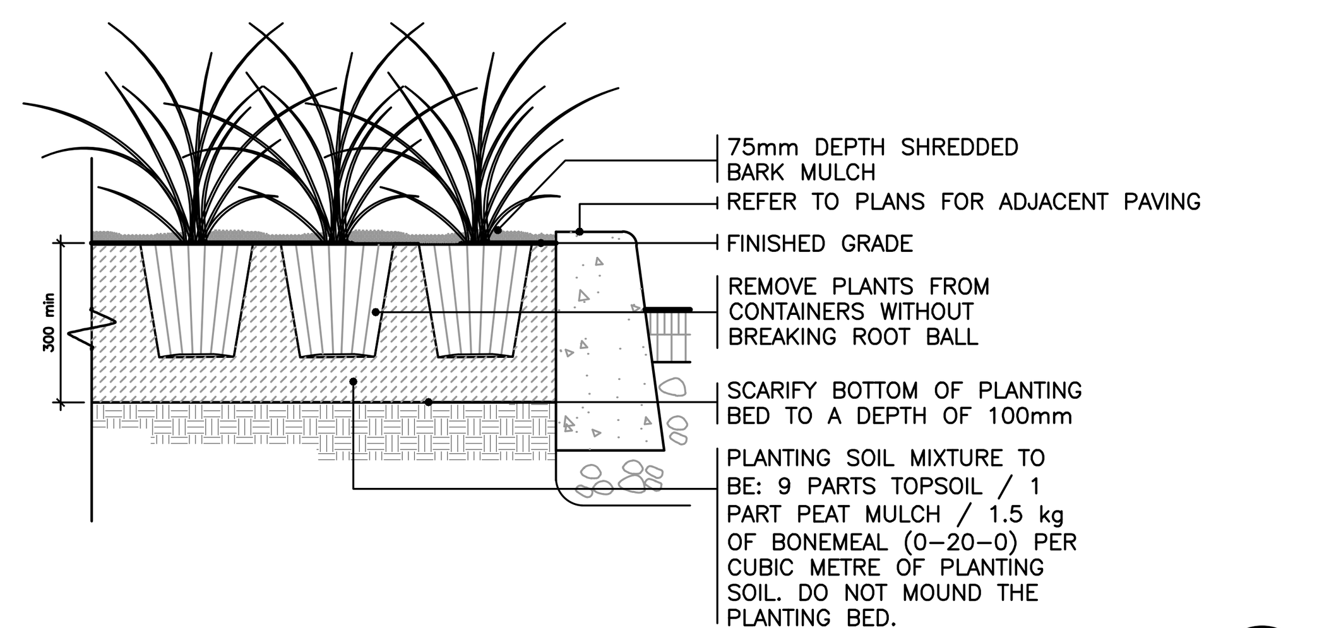
DECIDUOUS TREE PLANTING — NTS — 1
City of Mississauga Standard Detail 02950–1



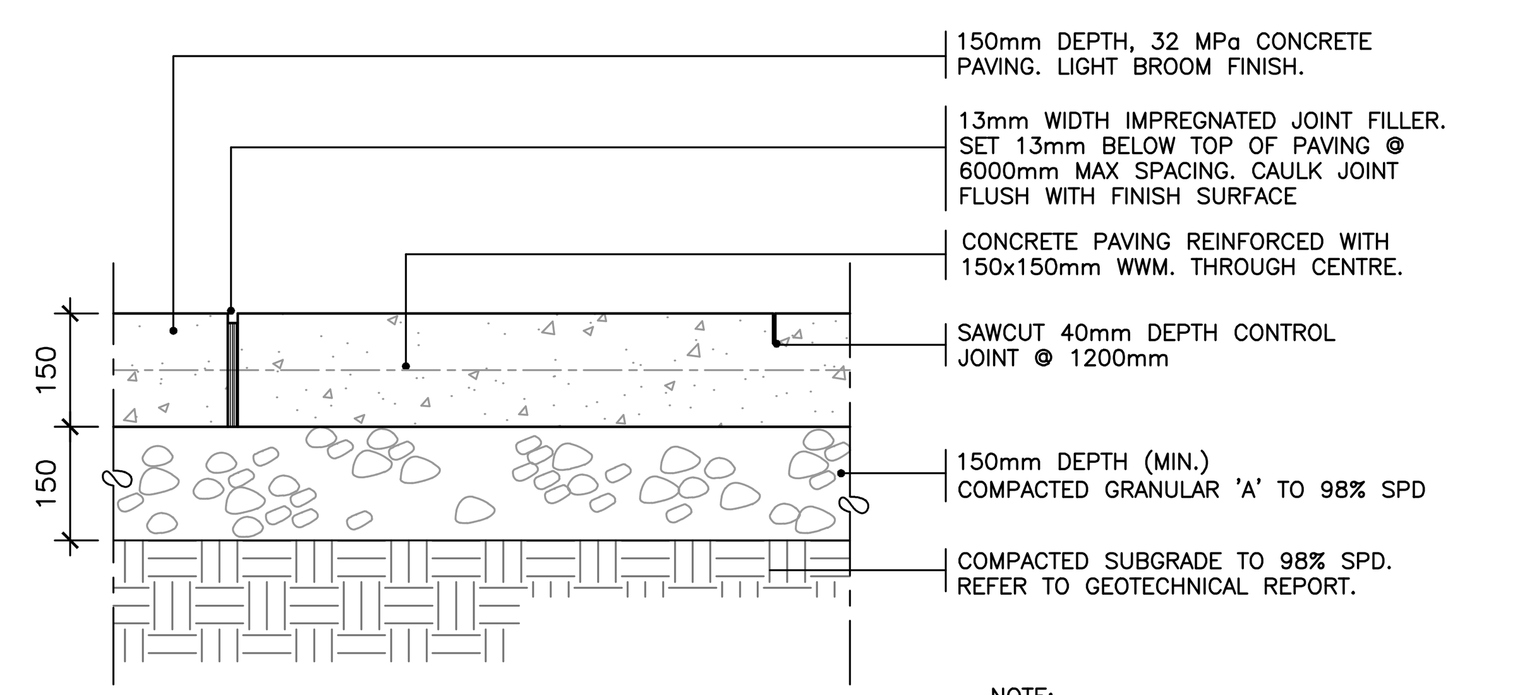
CONIFEROUS TREE PLANTING — NTS — 2
City of Mississauga Standard Detail 09950–2



SHRUB PLANTING — NTS — 3
City of Mississauga Standard Detail 02950–6

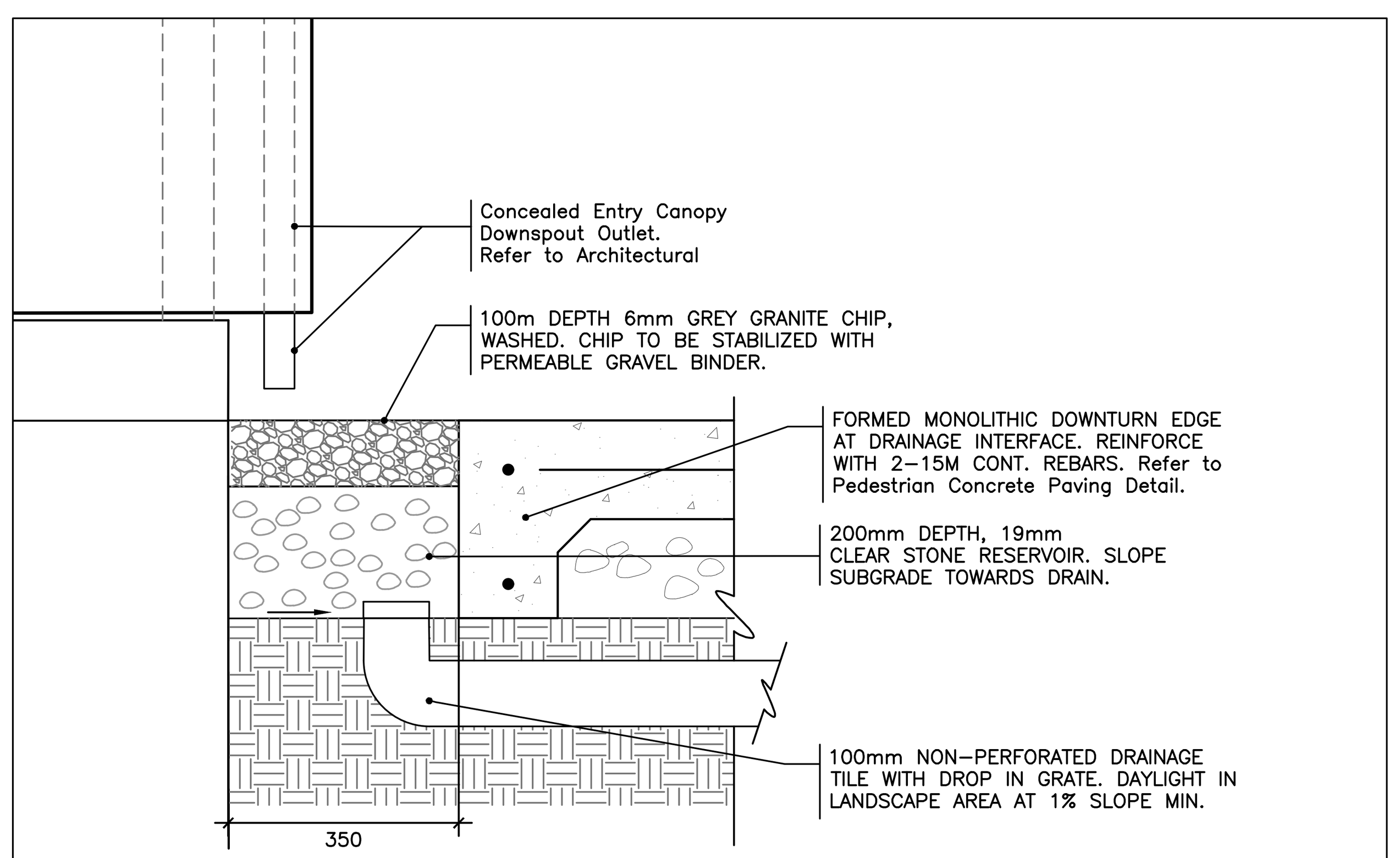


PERENNIAL PLANTING — NTS — 4

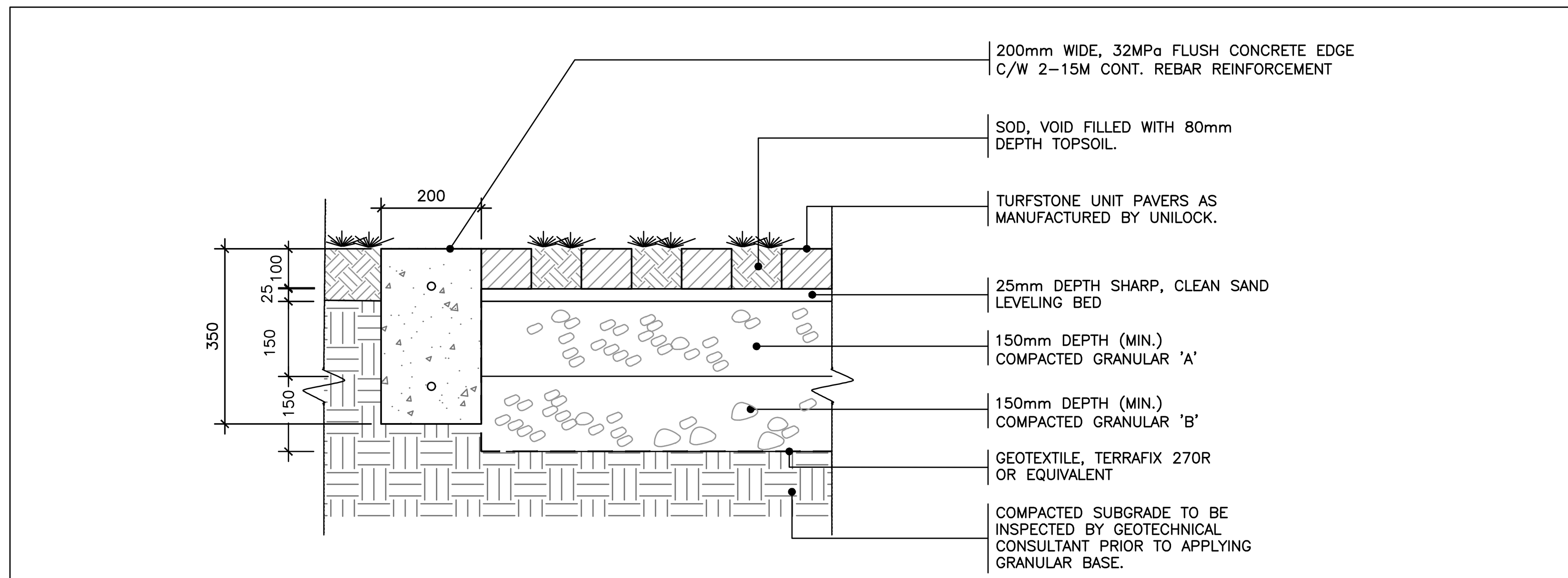


NOTE:
GRANULAR COMPACTION AT ALL DOORS TO BE 100% SPD. COMPACTION AREA TO EXTEND MINIMUM 2.4M BEYOND BUILDING FACE AND 1.2M BEYOND DOORS IN BOTH DIRECTIONS.

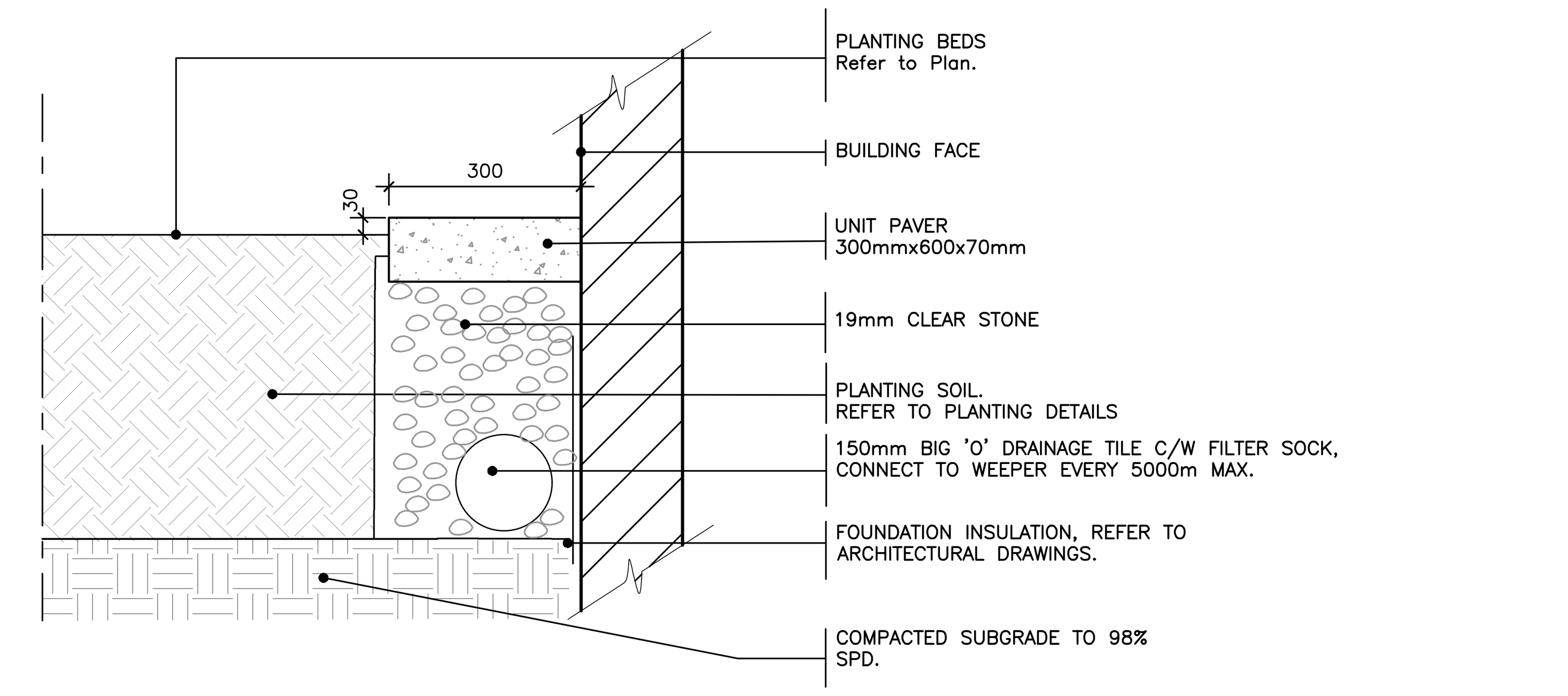
CONCRETE PAVING — 1:10 — 5



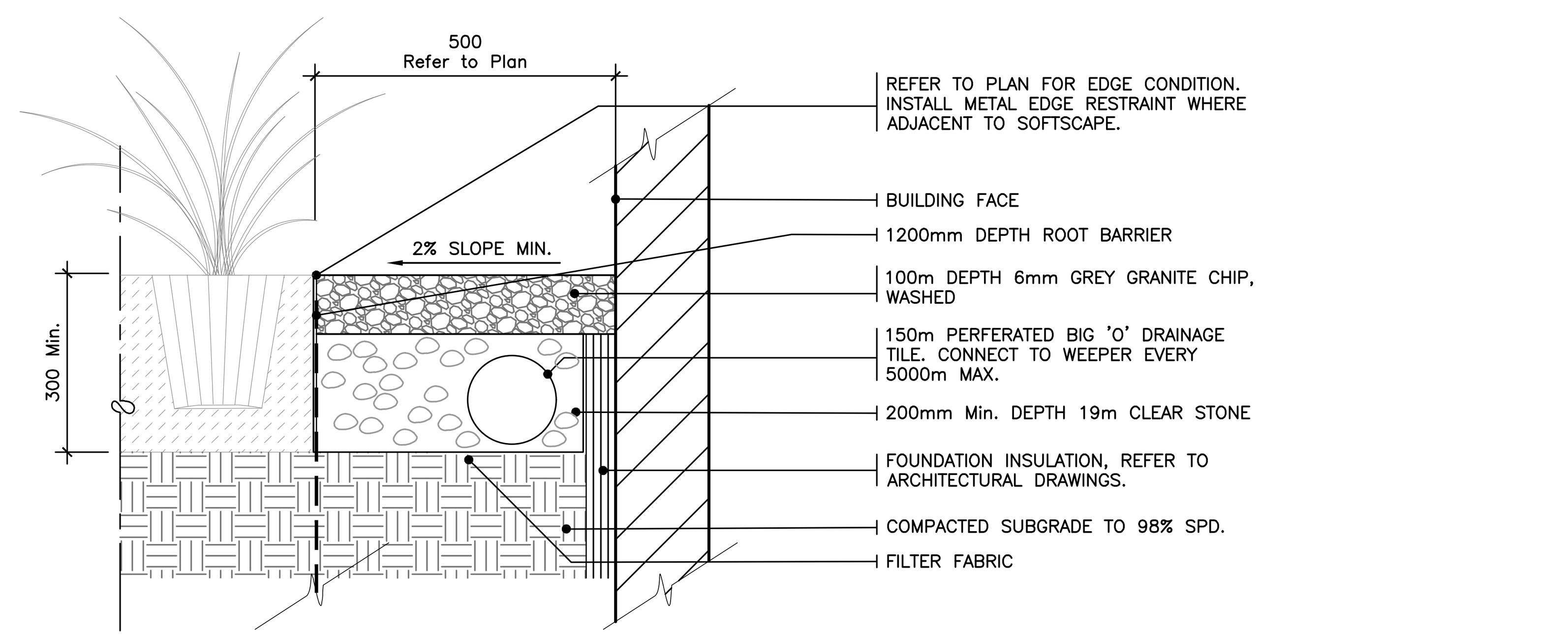
ENTRY CANOPY DOWNSPOUT DRAINAGE STRIP — 1:10 — 6



TURFSTONE PAVING — 1:10 — 7

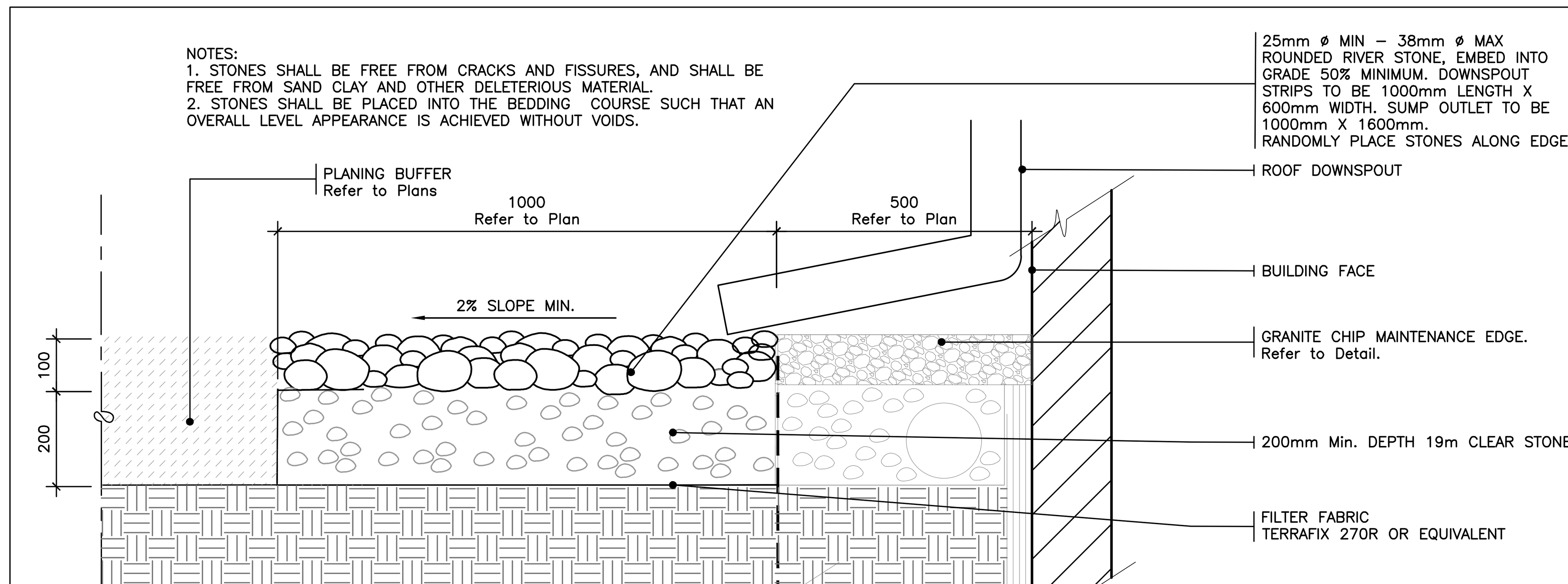


PRECAST CONCRETE MAINTENANCE EDGE — 1:10 — 8



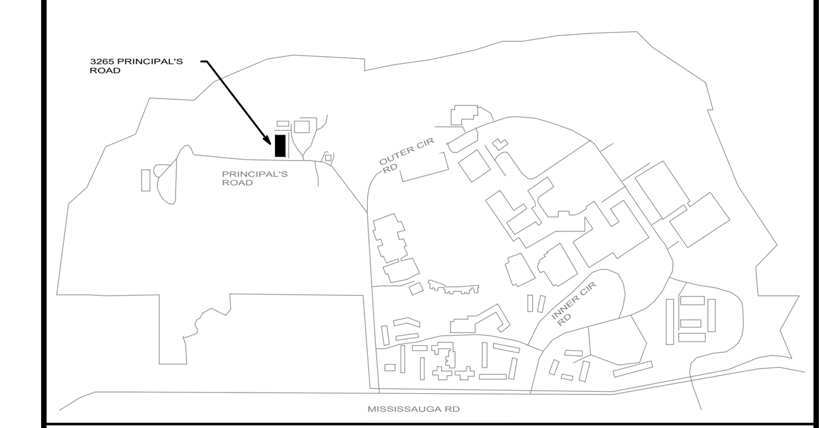
GRANITE CHIP MAINTENANCE EDGE — 1:10 — 9

NOTES:
1. STONES SHALL BE FREE FROM CRACKS AND FISSURES, AND SHALL BE FREE FROM SAND CLAY AND OTHER DELETERIOUS MATERIAL.
2. STONES SHALL BE PLACED INTO THE BEDDING COURSE SUCH THAT AN OVERALL LEVEL APPEARANCE IS ACHIEVED WITHOUT VOIDS.



RIVER ROCK STRIP — 1:10 — 10

KEYPLAN



TRUE NORTH PROJECT NORTH

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

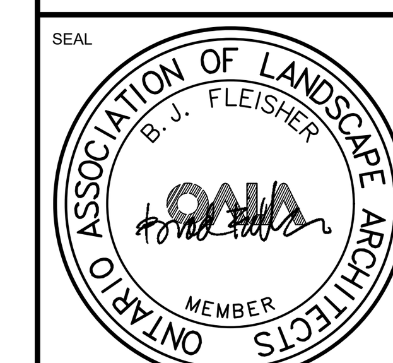
CLIENT
University of Toronto Mississauga

PROJECT
Pre-Engineered Building
3359 Mississauga Road

TITLE
LANDSCAPE DETAILS

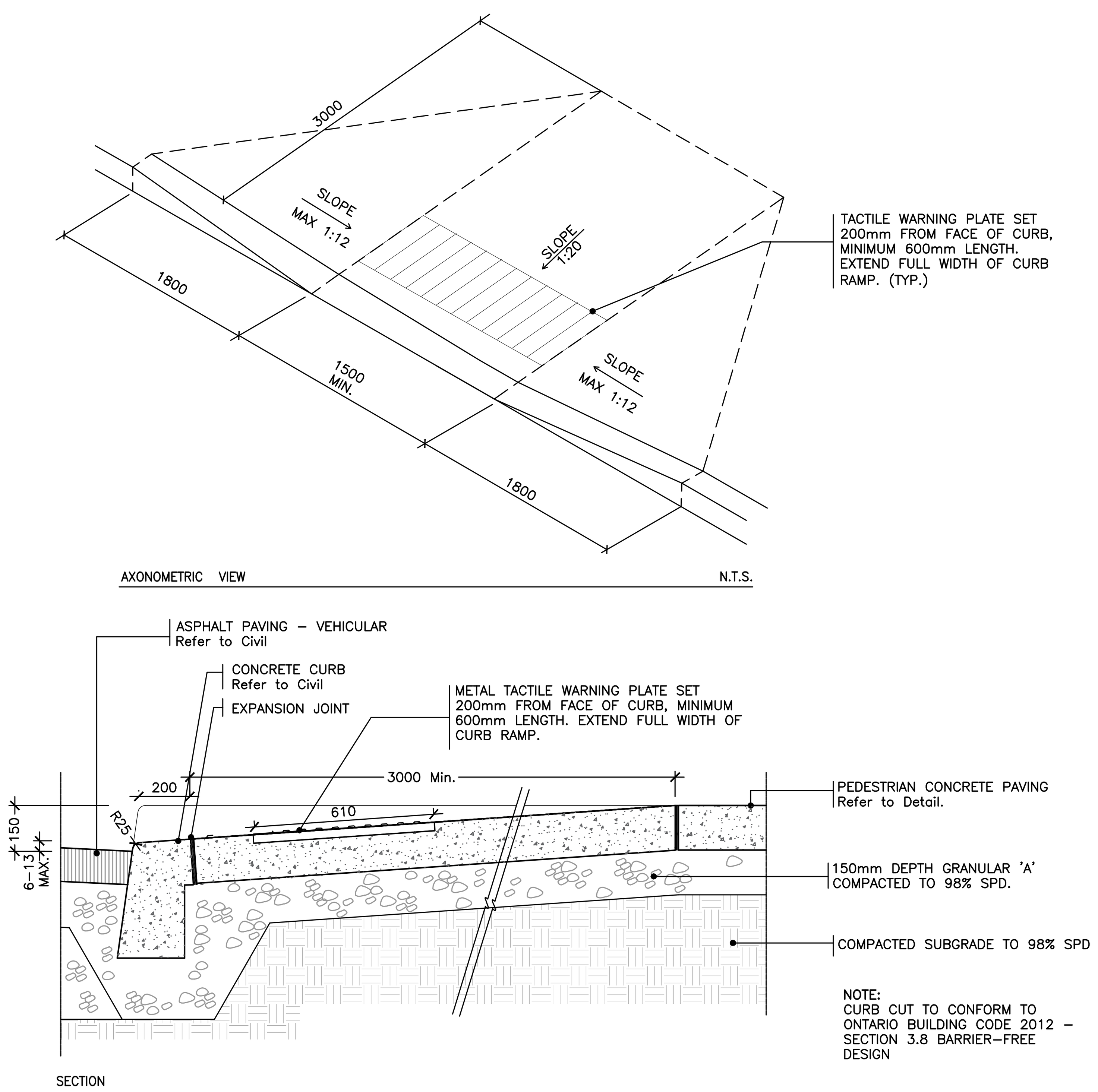
FRP inc. landscape.architects
1877 Davenport Road
Toronto, M6N 1B9
www.frpinc.ca

SEAL

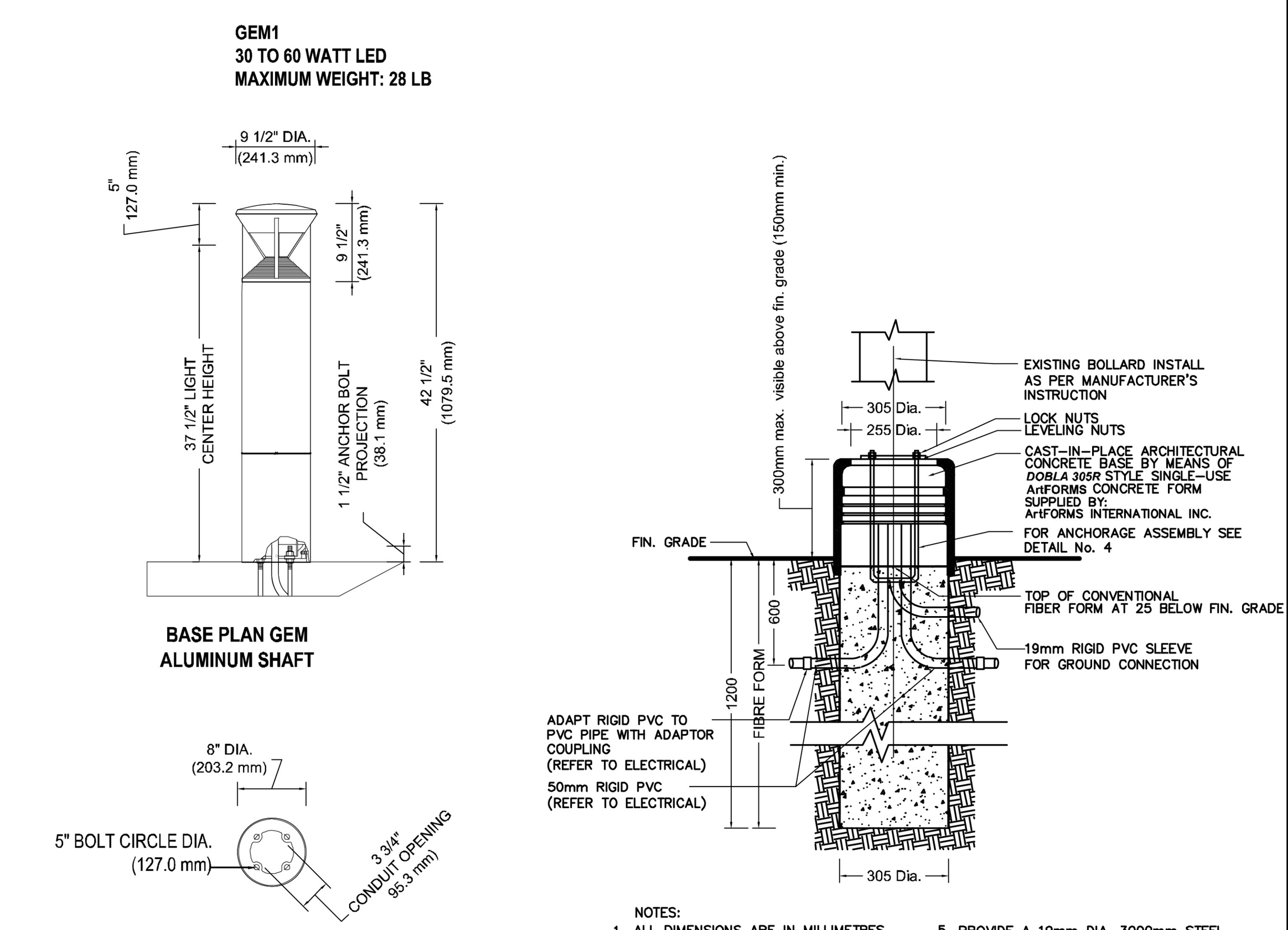


SCALE :	As Shown
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO :
L300



CURB RAMP — NTS — 1



LED BOLLARD DETAILS

(GEM1 BOLLARD, MANUFACTURED BY KIM LIGHTING)

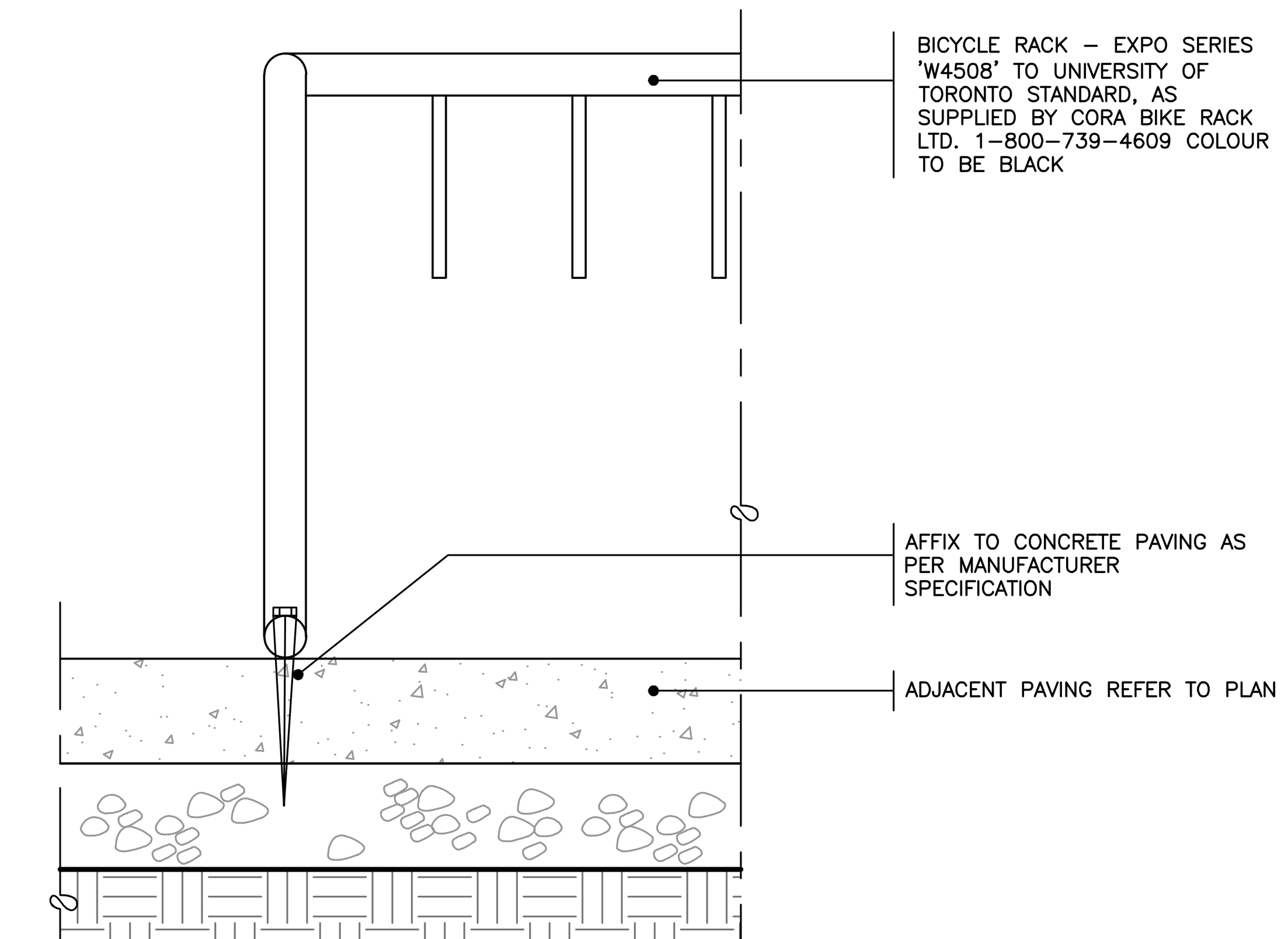
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
2. TOP OF FOUNDATION SHALL BE TROWELLED SMOOTH AND LEVEL.
3. CONCRETE SHALL BE 30mPa. CLASS 'C1'. CONCRETE SHALL BE VIBRATED.
4. MINIMUM OF TWO SLEEVES REQUIRED FOR EACH CONCRETE FOUNDATION UNLESS OTHERWISE SHOWN. FOR THREE SLEEVE REQUIREMENTS, SEE LAYOUT DRAWINGS.
5. PROVIDE A 19mm DIA. 3000mm STEEL COPPER COATED GROUND ROD ADJACENT TO POLES AS SPECIFIED ON LAYOUT DRAWING AND CONNECT TO METAL POLE WITH BARE COPPER CONDUCTOR.
6. CONTRACTOR TO VERIFY OPENING SIZE IN BOLLARD BASE PLATE PRIOR TO SETTING CONDUIT SLEEVES.
7. BURIAL DEPTH SUBJECT TO SOIL CONDITIONS, REFER TO SOIL REPORT IF AVAILABLE.
8. FORM RELEASE AGENT HAS BEEN FACTORY–APPLIED TO INSIDE SURFACE OF "ArtForm".

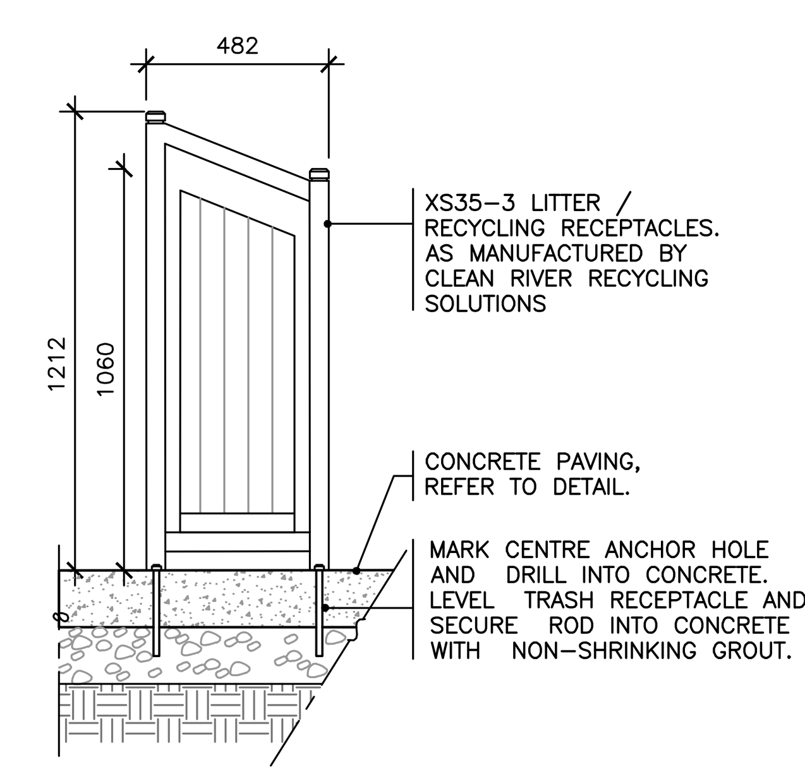
ARCHITECTURAL CONCRETE FOOTING (ARTFORM) FOR NEW AND EXISTING LIGHTING BOLLARDS

UNIVERSITY OF TORONTO MISSISSAUGA	**Exterior lighting** UTM Standards for New Construction and Renovations.		DRAWING TITLE: LED BOLLARD DETAILS CONCRETE FOOTING (ARTFORM)	
	No.	DATE	REVISION	
	1.	MAY, 2012	V 1.0	DEVELOPED BY: S. RASHEED
				Layout No. **26 56 00 - 8**

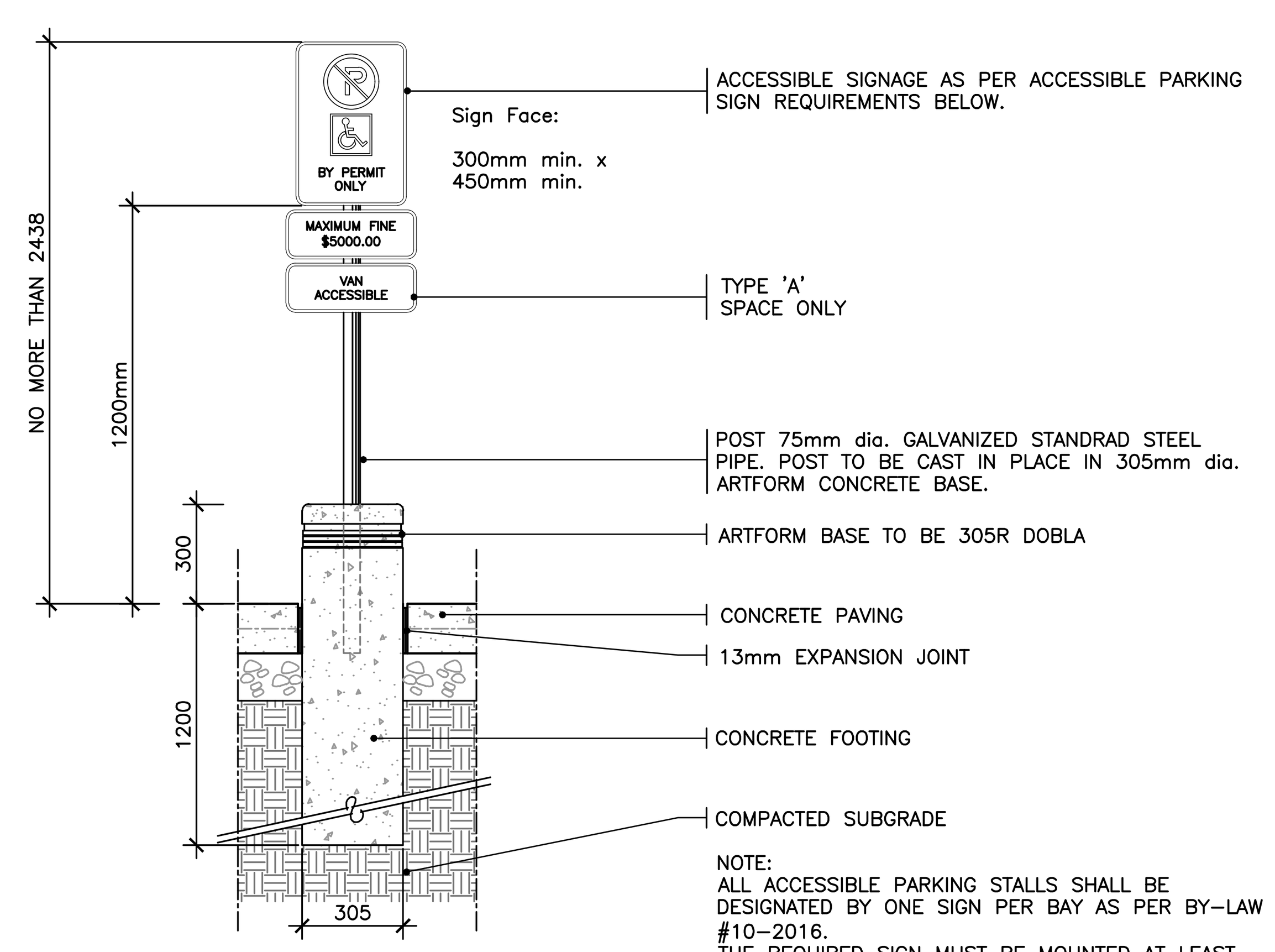
LIGHT BOLLARD BASE — NTS — 3



BIKE RACK — NTS — 4



WASTE / RECYCLING RECEPTACLES — 5



NOTE: ALL ACCESSIBLE PARKING STALLS SHALL BE DESIGNATED BY ONE SIGN PER BAY AS PER BY–LAW #10–2016. THE REQUIRED SIGN MUST BE MOUNTED AT LEAST 0.6m AND NOT MORE THAN 2.0m FROM THE HEIGHT OF 1.2m ABOVE THE TOP OF THE CURB ELEVATION. SIGN MUST NOT OBSTRUCT THE SIDEWALK.

THE CORPORATION OF THE CITY OF MISSISSAUGA

ACCESSIBLE PARKING SIGN REQUIREMENTS

ACCESSIBLE PARKING BY-LAW # 10-2016

Accessible Parking Signs shall be mounted on a level wall surface or mounted on a permanent post, pillar, or other suitable surface, conforming to the requirements or regulations made under the Highway Traffic Act and the Accessibility for Ontarians with Disabilities Act, and be located:

- At a height of 1200 mm (47 in.) from the ground/floor surface to the bottom edge of the sign;
- If mounted on a post, the post shall be colour contrasted with the background environment;
- For perpendicular parking centred on the parking space; and
- For parallel parking located toward the end of the parking space, on the opposite side from the access aisle.

Each **Type 'A' Parking Space** shall have two (2) 150 mm x 300 mm (6 inches x 11 ¾ inches) signs, on the same sign post/wall mount and located immediately below the sign described in sections 9 and 11, with the words "Van Accessible" followed underneath with "Maximum Fine $5,000.00", as illustrated in Schedule "C" of Accessible Parking By-law 10-2016.

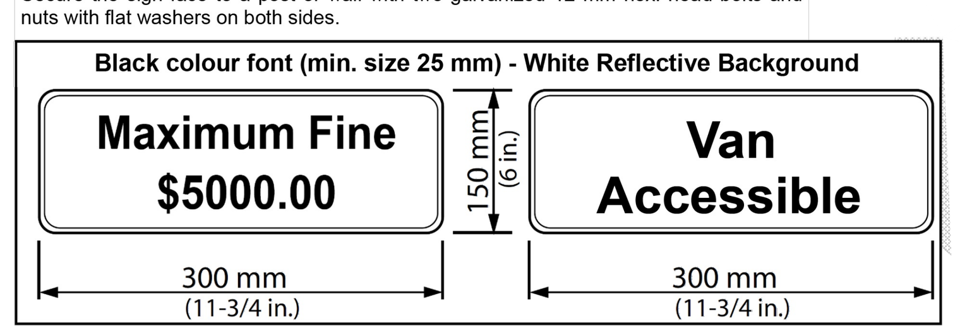
Each **Type 'B' Parking** Space shall have a 150 mm x 300 mm (6 inches x 11 ¾ inches) sign, on the same sign post/wall mount and located immediately below the sign described in sections 9 and 11, with the words "Maximum Fine $5,000.00", as illustrated in Schedule "C" of Accessible Parking By-law 10-2016.

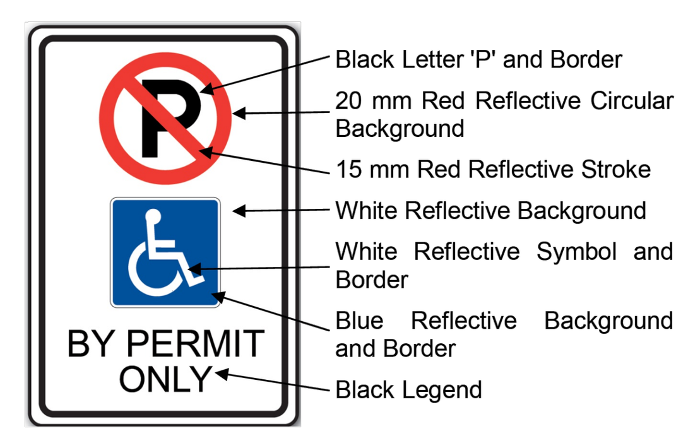
Sign Face:

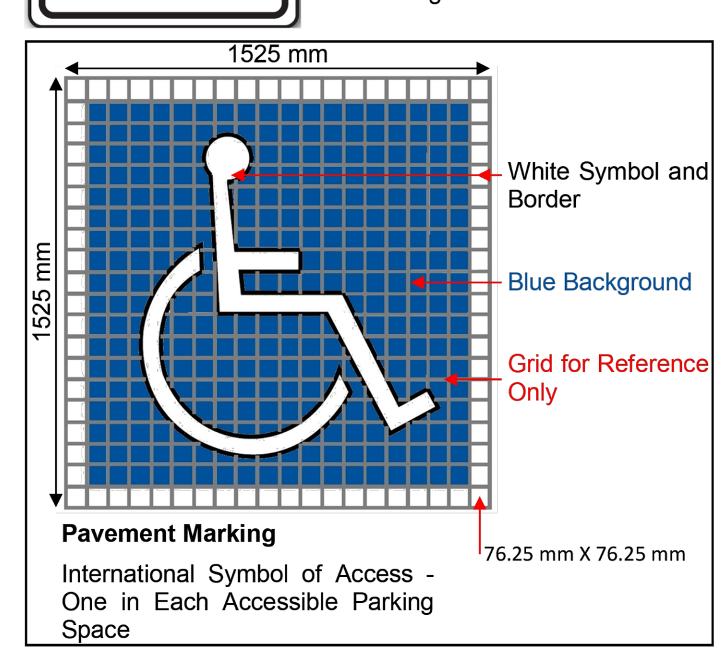
- 0.064 mm gauge aluminum sign blank
- white background
- holes-metro punched

Mounting:

Secure the sign face to a post or wall with two galvanized 12 mm hex. head bolts and nuts with flat washers on both sides.







MISSISSAUGA

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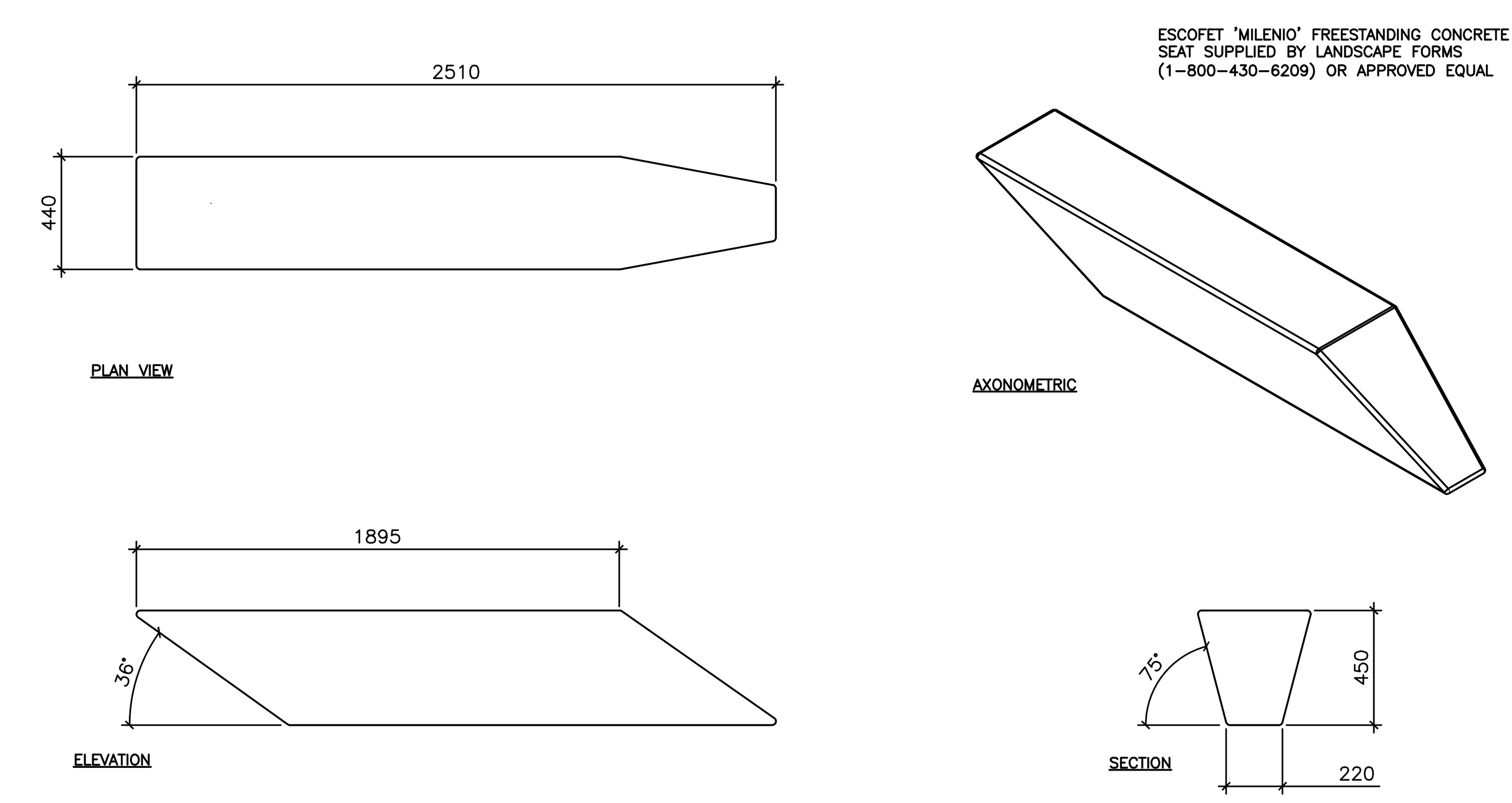
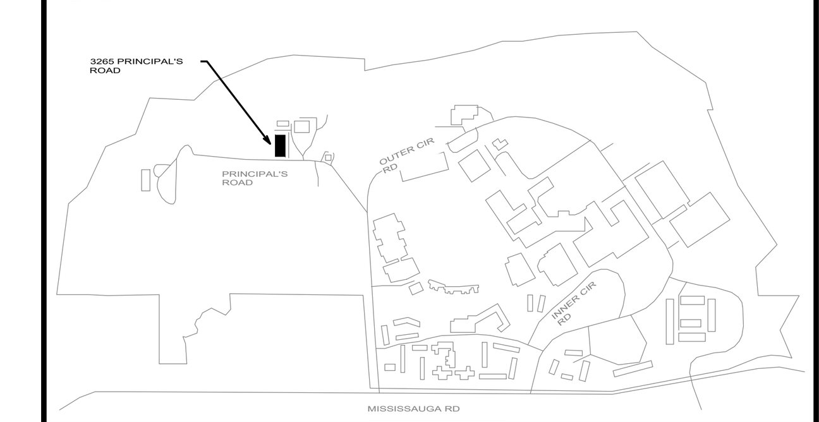
ACCESSIBLE SIGNAGE ON CONCRETE BASE — NTS — 2



PRECAST CONCRETE BENCH – Freestanding — NTS — 6

KEYPLAN



TRUE NORTH — PROJECT NORTH

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

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PROJECT

Pre-Engineered Building

3359 Mississauga Road

TITLE

LANDSCAPE DETAILS

FRP Inc. landscape architects

SEAL

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — B. J. FLEISHER — MEMBER

SCALE :	As Shown
DATE :	November 2023
PROJECT NO :	231533
DRAWN BY :	JB/KH
CHECKED BY :	KH/BF

SHEET NO : **L301**

DRAWING LIST

DWG NO.	DRAWING NAME
M001	MECHANICAL LEGEND, DRAWING LIST
M100	PLUMBING – UNDERSLAB
M101	PLUMBING – GROUND FLOOR AND MEZZANINE
M102	PLUMBING – ROOF
M301	HVAC – GROUND FLOOR AND MEZZANINE
M302	HVAC – ROOF
M500	MECHANICAL DETAILS
M501	MECHANICAL DETAILS
M502	REFRIGERANT PIPING DIAGRAM
M800	MECHANICAL SCHEDULES

LEGEND

NEW	EXISTING	DEMOLISHED	DESCRIPTION
			FIRE DAMPER – D/F
			MANUAL BALANCING DAMPER – D/B
			STANDARD 'DOUBLE-LINE' DUCTWORK
			STANDARD 'SINGLE-LINE' DUCTWORK
			FLEXIBLE DUCT WITH TAKE-OFF C/W MANUAL BALANCING DAMPER
			RETURN AIR GRILLE
			SQUARE DIFFUSER
			ROUND DIFFUSER
			LINEAR DIFFUSER
			VAV-BOX
			HEAT PUMP/FAN COIL/EVAPORATOR
			EXHAUST FAN
T	T		THERMOSTAT
$	$		FAN SWITCH/CONTROLLER
			CONTROL WIRING
			CAP
			TRANSFER-AIR DUCTWORK
			SANITARY DRAIN IN CEILING SPACE
			SANITARY DRAIN BELOW FLOOR/BURIED
C	C		CONDENSATE DRAIN
P	P		PUMPED SANITARY DRAIN
V	V		SANITARY VENT
			DOMESTIC COLD WATER
			DOMESTIC HOT WATER
			DOMESTIC HOT WATER RECIRCULATION
			GATE VALVE
CBV	CBV	CBV	CIRCUIT BALANCING VALVE
FD			FLOOR DRAIN – F.D.
C.O.	C.O.	C.O.	UNDER FLOOR CLEANOUT
C.O.	C.O.	C.O.	IN-FLOOR CLEANOUT
F	F	F	FIRE LINE
SP	SP	SP	SPRINKLER LINE
F.H.C.	F.H.C.	F.H.C.	FIRE HOSE CABINET
FE	FE	FE	FIRE EXTINGUISHER
U	U	U	UPRIGHT SPRINKLER HEAD
			PENDANT SPRINKLER HEAD
			SEMI-RECESSED SPRINKLER HEAD
			RECESSED SPRINKLER HEAD
			MISC. MECHANICAL COMPONENTS
MAX. AIR QUANTITY 000 / MIN. AIR QUANTITY 000 — 0 SIZE		MAX. AIR QUANTITY 400 — 6 SIZE	TERMINAL BOX DESIGNATION
SIZE 00"x00" / AIR QUANTITY 0000 — A TYPE		AIR QUANTITY 120	DIFFUSER OR GRILLE DESIGNATION
C.T.E.			CONNECT TO EXISTING
		R	RELOCATED EQUIPMENT

No.	ISSUANCE	DATE
1	ISSUED FOR DESIGN DEVELOPMENT	01/03/2024
2	ISSUED FOR PERMIT	13/09/2024
3	ISSUED FOR TENDER	26/11/2024

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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

MECHANICAL LEGEND, DRAWING LIST

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
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LICENSED PROFESSIONAL ENGINEER
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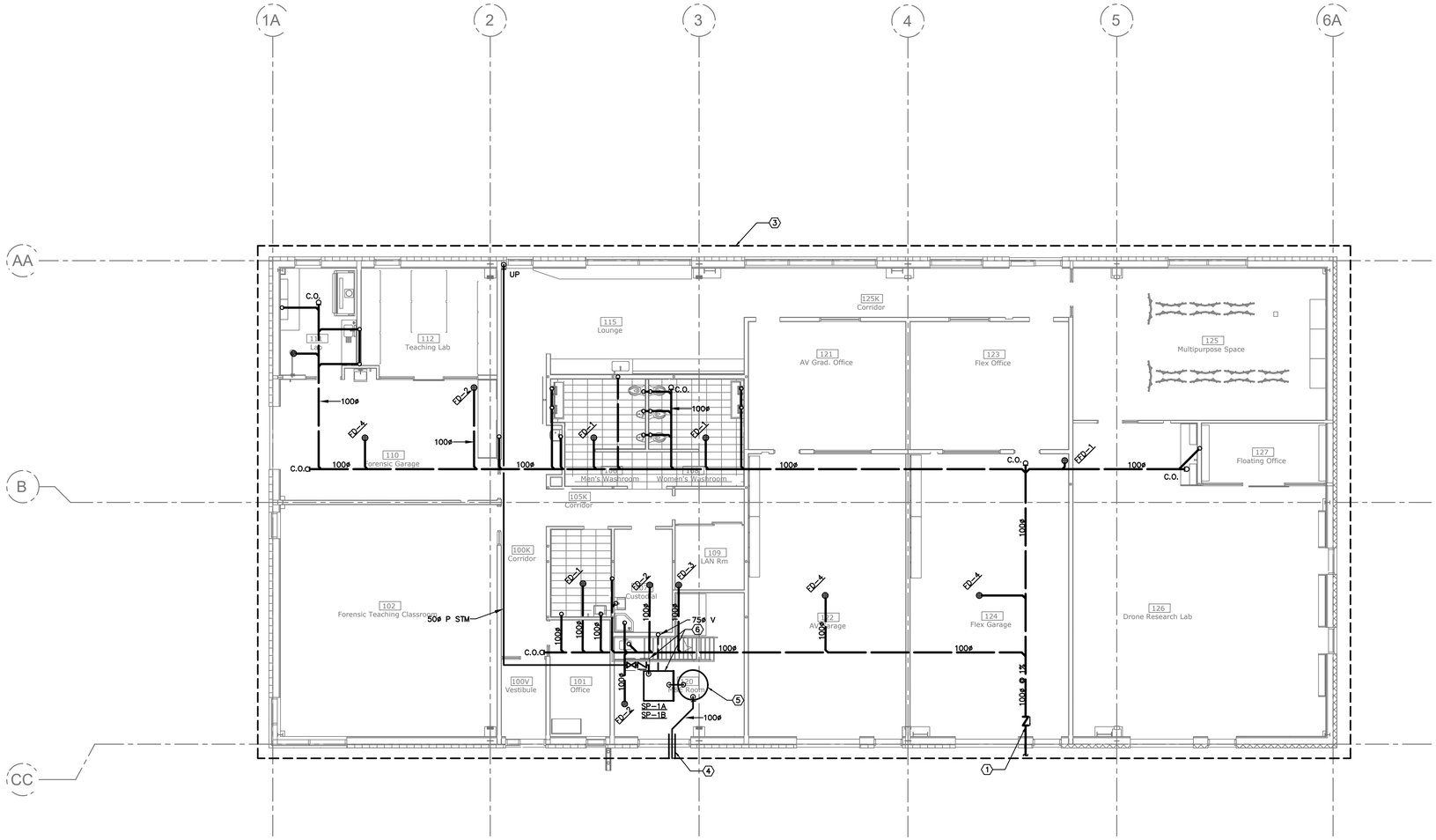
L. TURRIN
100215842
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	M001
PROJECT NO : 2023-0059	
DRAWN BY : LT	
CHECKED BY : MS	



GENERAL NOTES:

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- PROVIDE TRAP SEAL PRIMERS FOR ALL TRAPS OF FLOOR DRAINS.

DRAWING NOTES:

1. PROVIDE BACKWATER VALVE ON LEAVING SANITARY CONNECTION.
2. PROVIDE BACKWATER VALVE ON LEAVING STORM WATER CONNECTION.
3. 100ø WEEPING TILE SYSTEM LOCATED APPROXIMATELY 1200MM BELOW GRADE.
4. 100ø SOLID DRAIN PIPE SHALL CONNECT TO PERIMETER WEEPING TILE SYSTEM. SHALL BE PROPERLY SEALED THROUGH FOUNDATION WALL.
5. 900mm DIAMETER X 3000mm DEEP SAND TRAP PIT.
6. 1200x1200x3500 GROUNDWATER SUMP PIT COMPLETE WITH DUPLEX SUMP PUMP, CONTROLS, FLOATS. REFER TO DETAIL 3 ON DRAWING M-500 FOR MORE INFORMATION. PROVIDE ACCESS HATCH FOR CHECK VALVES AND ISOLATION VALVES

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3359 MISSISSAUGA ROAD

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PLUMBING - UNDERSLAB

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PROJECT NO : 2023-0059	
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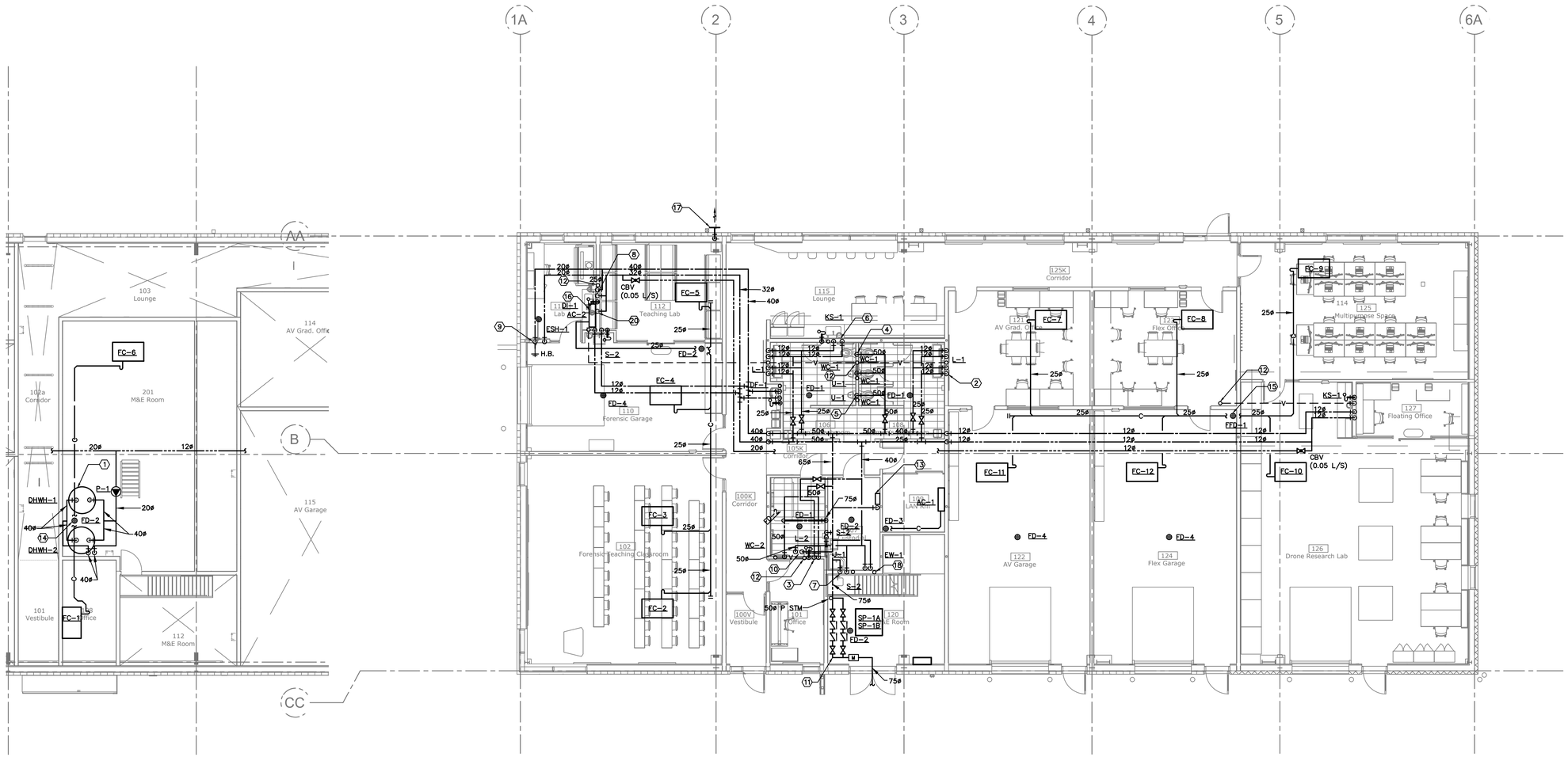

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- PROVIDE ALL SANITARY VENTING TO BE SIZED AND INSTALLED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
- PROVIDE WATER HAMMER ARRESTORS IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-WH201 AND MANUFACTURER'S INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL BE STAINLESS STEEL CONSTRUCTION WITH NESTING BELLOWS PRECHARGED WITH AIR – WADE "SHOCKSTOP" OR EQUAL.
- PROVIDE TRAP SEAL PRIMERS FOR ALL TRAPS OF FLOOR DRAINS.

DRAWING NOTES:

1. PROVIDE AND INSTALL NEW ELECTRIC DOMESTIC HOT WATER TANK IN MECHANICAL MEZZANINE C/W 20ø DRAIN LINE. DRAIN LINE TO BE PIPED FLOOR DRAIN. REFER TO DETAIL 2 ON DRAWING M-500 FOR MORE INFORMATION.
2. EXTEND 12ø HOT AND COLD WATER LINES DOWN TO NEW 'L-1', 30ø VENT LINE UP FROM 'L-1' AND 40ø SANITARY LINE DOWN FROM 'L-1'. (TYPICAL)
3. EXTEND 12ø HOT AND COLD WATER LINES DOWN TO NEW 'L-2', 30ø VENT LINE UP FROM 'L-2' AND 40ø SANITARY LINE DOWN FROM 'L-2'. (TYPICAL)
4. EXTEND 40ø COLD WATER LINE DOWN TO NEW 'WC-1', 50ø VENT LINE UP FROM 'WC-1' AND 75ø SANITARY LINE DOWN FROM 'WC-1'. (TYPICAL)
5. EXTEND 40ø COLD WATER LINE DOWN TO NEW 'U-1', 50ø VENT LINE UP FROM 'U-1' AND 75ø SANITARY LINE DOWN FROM 'U-1'. (TYPICAL)
6. EXTEND 20ø HOT AND COLD WATER LINE DOWN TO NEW 'KS-1', 30"ø VENT LINE UP FROM 'KS-1' AND 40ø SANITARY LINE DOWN FROM KS-1'. (TYPICAL)
7. EXTEND 12ø HOT AND COLD WATER LINE DOWN TO NEW 'J-1' AND TWO (2) 'S-2', 50ø VENT LINE UP FROM 'J-1' AND TWO (2) 'S-2' AND 40ø SANITARY LINE DOWN FROM 'J-1' AND TWO (2) 'S-2',
8. EXTEND HOT AND COLD WATER, SANITARY DRAIN, AND VENT TO NEW LABORATORY SINK AND EYEWASH STATION. REFER TO ARCHITECTURAL DRAWINGS FOR PRODUCT SPECIFICATION. CONTRACTOR SHALL PROVIDE ROUGH-IN CONNECTIONS AND ALLOW FOR FINAL HOOK-UP. (TYPICAL)
9. EXTEND 12ø HOT AND COLD WATER LINE DOWN TO NEW EMERGENCY SHOWER, PROVIDE MIXING VALVE AND PROVIDE TEMPERED WATER TO EMERGENCY SHOWER FIXTURE. PROVIDE FLOOR DRAIN.
10. 40ø DOMESTIC HOT AND COLD WATER LINE UP TO MECHANICAL MEZZANINE.
11. PROVIDE WATER METER AND BACKFLOW PREVENTER ON INCOMING DOMESTIC WATER LINE. PROVIDE EXPANSION TANK ET-1,
12. PLUMBING VENT UP TO ROOF. (TYPICAL)
13. PROVIDE ELECTRONIC TRAP SEAL PRIMER.
14. VRF COIL CONDENSATE DRAIN LINE TO TERMINATE INDIRECTLY INTO JANITOR'S SINK.
15. VRF COIL CONDENSATE DRAIN LINE TO TERMINATE INDIRECTLY AT FUNNEL FLOOR DRAIN.
16. PROVIDE DISTILLED WATER SYSTEM C/W 12mm DCW CONNECTION AND DEDICATED FAUCET.
17. GROUNDWATER STORM DISCHARGE AT GRADE FROM PUMPED STORM LINE BELOW.
18. VENT FROM SUMP PIT.
19. RESERVED.
20. PROVIDE 12ø COLD WATER CONNECTION DOWN TO NEW WATER PURIFICATION SYSTEM DI-1, CONNECT TO FAUCET, REFER TO ARCHITECTURAL SPECIFICATIONS FOR FAUCET.

PROVIDE PLUMBING VENTING AS PER OBC

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

PLUMBING - GROUND FLOOR AND MEZZANINE

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

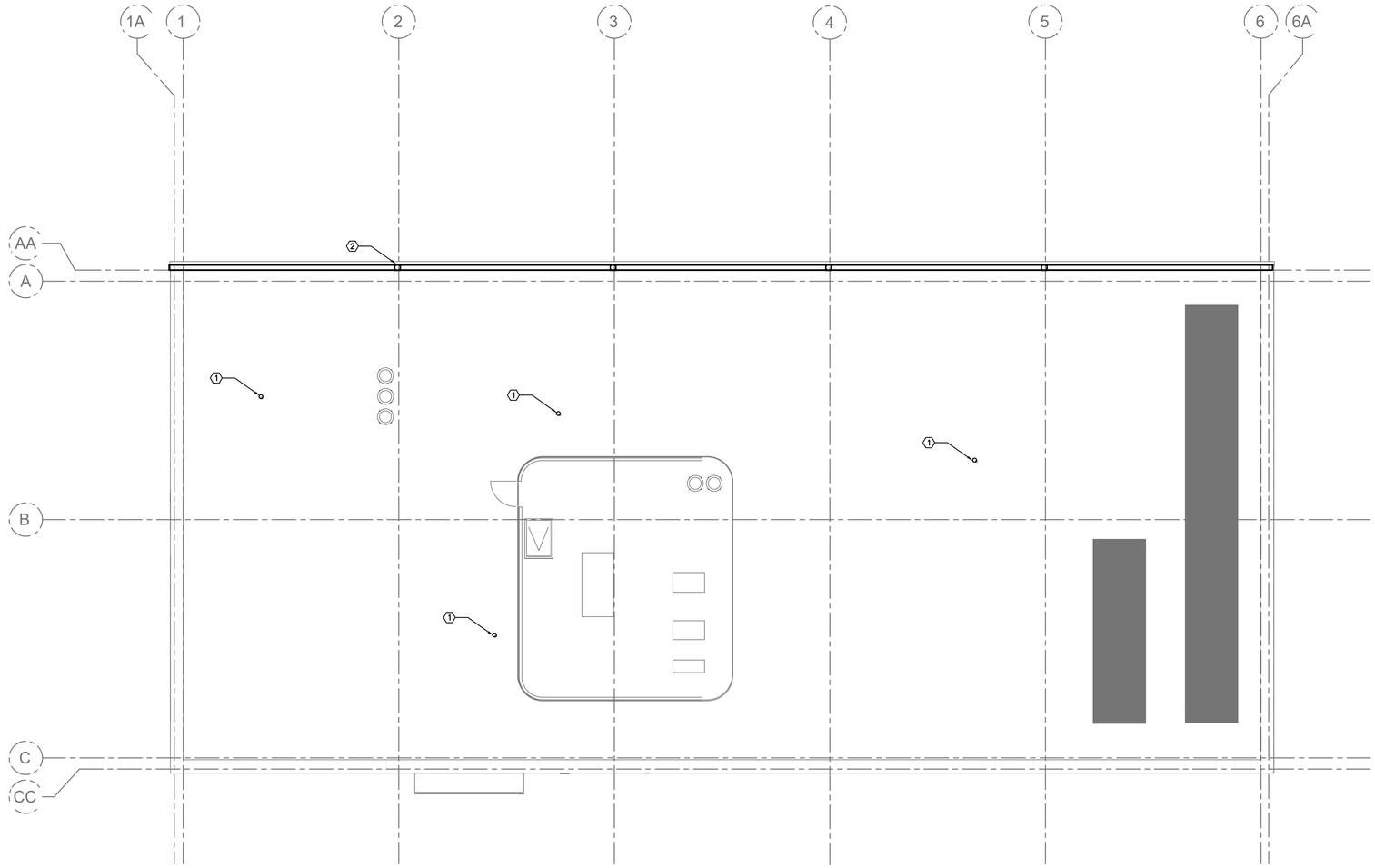
SEAL

LICENSED PROFESSIONAL ENGINEER
26/11/2024
L. TURRIN
100215842
PROVINCE OF ONTARIO

SCALE :	1:100
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	LT
CHECKED BY :	MS

SHEET NO :

M101



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- PROVIDE ALL SANITARY VENTING TO BE SIZED AND INSTALLED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.

DRAWING NOTES:

1. PLUMBING VENT. (TYPICAL)
2. PERIMETER ROOF GUTTER COMPLETE WITH RAINWATER LEADERS. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. (TYPICAL 4)

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PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

PLUMBING - ROOF

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SCALE : 1:100	SHEET NO :
DATE : FEB 2024	M102
PROJECT NO : 2023-0059	
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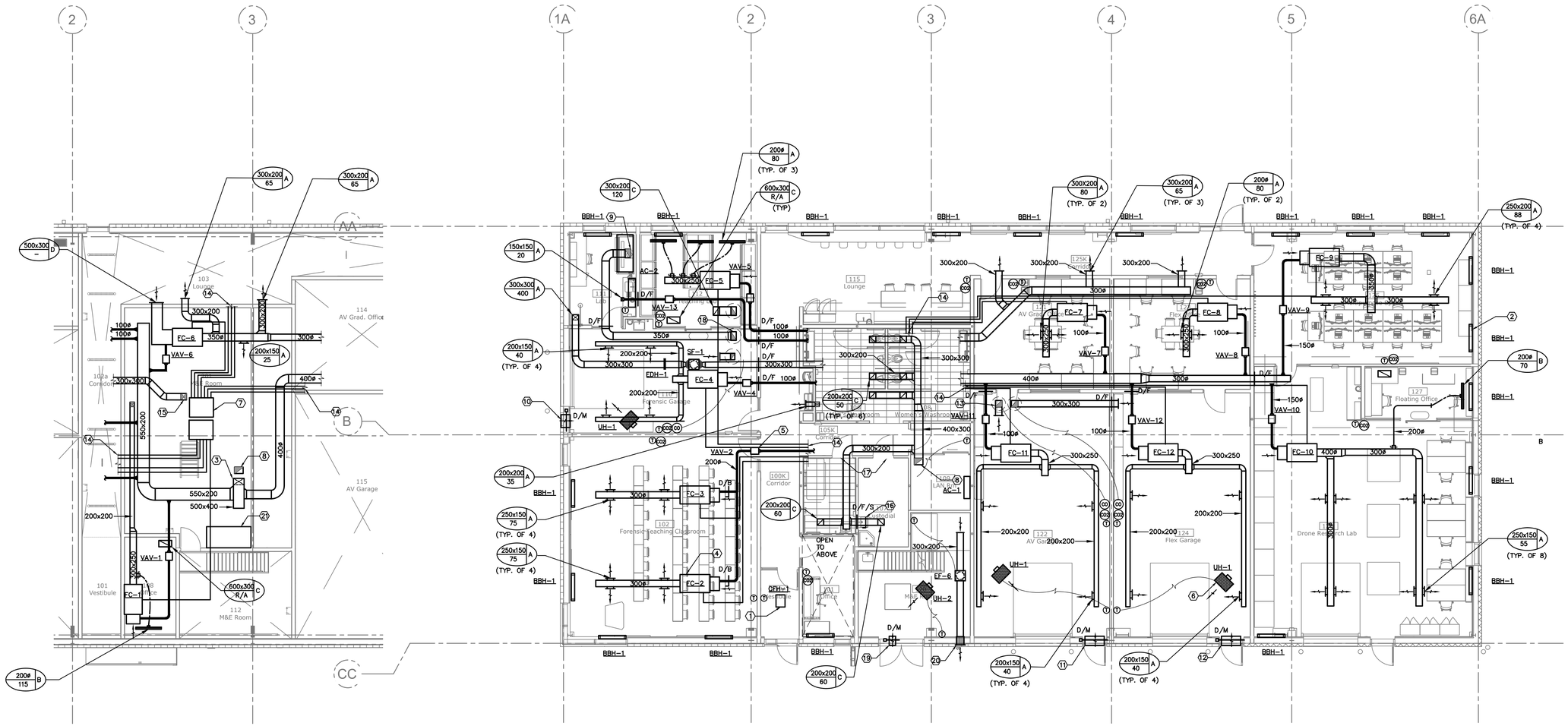
CHECKED BY : MS	



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- CONTRACTOR SHALL BALANCE THE SYSTEM BASED ON THE AIR VALUES AS SHOWN.

DRAWING NOTES:

1. PROVIDE CEILING FAN HEATER C/W REMOTE THERMOSTAT. (TYPICAL)
2. PROVIDE SEPARATE PRICE FOR SUPPLY AND INSTALLATION OF ALL BASEBOARD HEATERS (TYPICAL).
3. MAKE-UP AIR DUCT UP TO ROOF.
4. PROVIDE VRF SYSTEM INCLUDING INDOOR FAN COIL UNITS, CONDENSING UNIT, BRANCH SELECTOR BOX, REFRIGERANT PIPING, AND ALL CONTROLS. REFER TO DETAIL MXX FOR MORE INFORMATION. (TYPICAL)
5. PROVIDE VAV BOXES AS SHOWN. VAV BOX SHALL BE INTERLOCKED WITH ROOM CO2 SENSOR FOR DEMAND CONTROL VENTILATION. (TYPICAL)
6. PROVIDE ELECTRIC UNIT HEATER. (TYPICAL)
7. VRF HEAT RECOVERY BRANCH SELECTOR BOX. (TYPICAL 2)
8. EXHAUST DUCT UP TO ROOF. (TYPICAL)
9. LABORATORY EXHAUST FUME HOOD DUCTED UP TO ROOF MOUNTED EXHAUST FAN.
10. 600x300 INTAKE AIR LOUVER, RAINPROOF, BIRDSCREEN. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH GARAGE EXHAUST FAN.
11. 900x300 INTAKE AIR LOUVER, RAINPROOF, BIRDSCREEN. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH GARAGE EXHAUST FAN.
12. 900x300 INTAKE AIR LOUVER, RAINPROOF, BIRDSCREEN. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH GARAGE EXHAUST FAN.
13. GARAGE EXHAUST FAN SHALL BE INTERLOCKED WITH CARBON MONOXIDE AND NITROUS DIOXIDE DETECTION SYSTEM. (TYPICAL 3)
14. REFRIGERANT PIPING. (TYPICAL)
15. SUPPLY INTAKE DUCT UP TO ROOF COMPLETE WITH GOOSENECK.
16. PROVIDE BACKDRAFT DAMPER.
17. PROVIDE 20mm DOOR UNDERCUT FOR TRANSFER AIRFLOW
18. SLOPE LABORATORY EXHAUST DUCTWORK AND PROVIDE DRAIN IN DUCTWORK AT LOWEST POINT. DRAIN SHALL TERMINATE AT NEARBY FLOOR DRAIN.
19. 300x300 INTAKE AIR LOUVER, RAINPROOF, BIRDSCREEN. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH EXHAUST FAN.
20. 300x200 EXHAUST LOUVER, RAINPROOF, BIRDSCREEN.
21. OPERATOR WORK STATION (OWS) FOR BUILDING AUTOMATION SYSTEM.

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

HVAC - GROUND FLOOR AND MEZZANINE

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

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SCALE : 1:100	SHEET NO :
DATE : FEB 2024	M301
PROJECT NO : 2023-0059	
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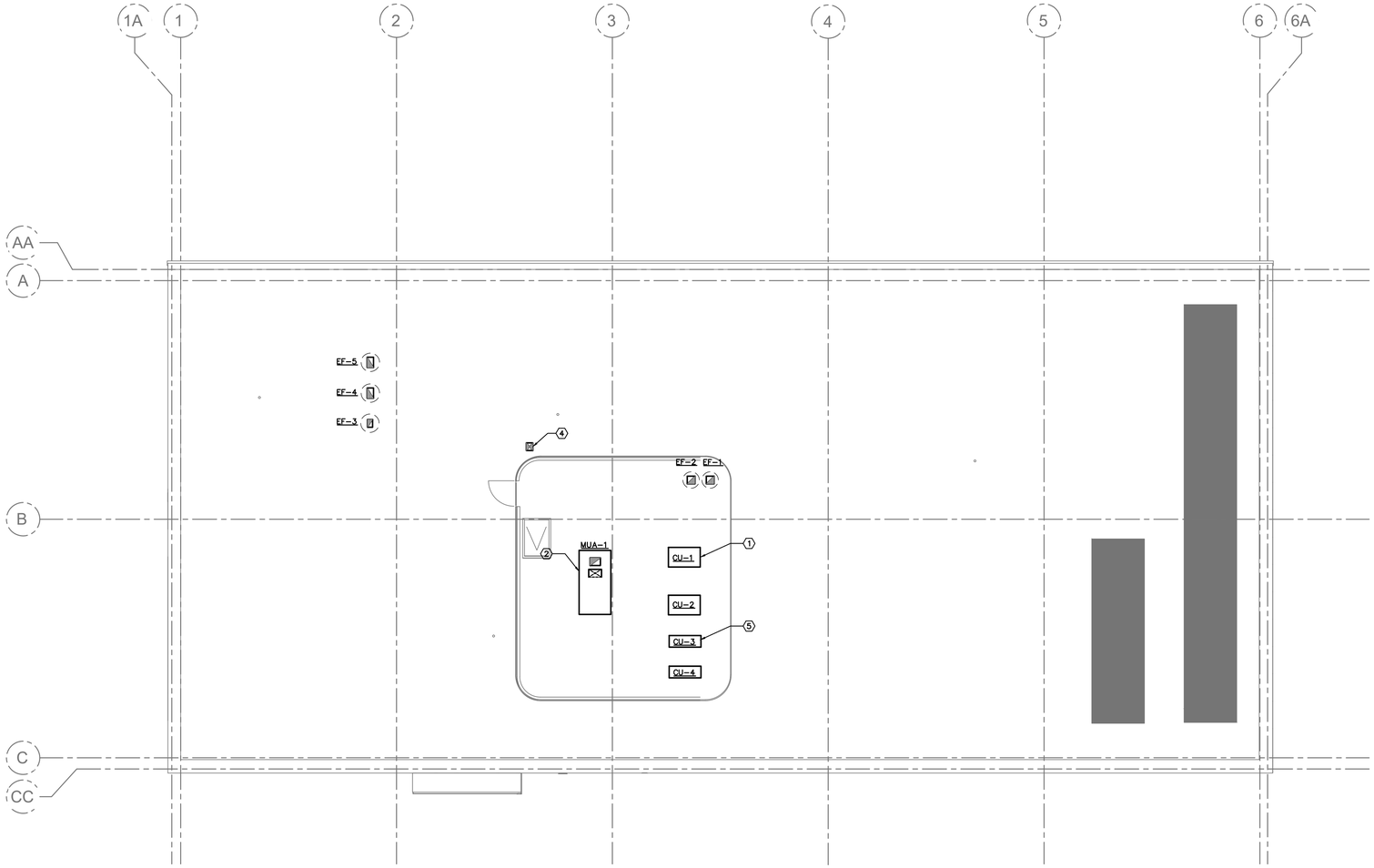

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DRAWING NOTES:

1. VRF CONDENSER UNITS. (TYPICAL).
2. PROVIDE DEDICATED OUTDOOR AIR SYSTEM MUA-1 COMPLETE WITH ROOF CURB, DUCTWORK, CONTROLS.
3. PROVIDE ROOF MOUNTED EXHAUST FAN COMPLETE WITH ROOF CURB, DUCTWORK, AND ALL CONTROLS. (TYPICAL)
4. SUPPLY INTAKE DUCTWORK WITH GOOSENECK
5. CONDENSER UNITS. CONTRACTOR TO ENSURE ALL NECESSARY CLEARANCES ARE ACCOMMODATED. (TYPICAL)

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3359 MISSISSAUGA ROAD

TITLE

HVAC - ROOF

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SCALE : 1:100	SHEET NO :
DATE : FEB 2024	M302
PROJECT NO : 2023-0059	
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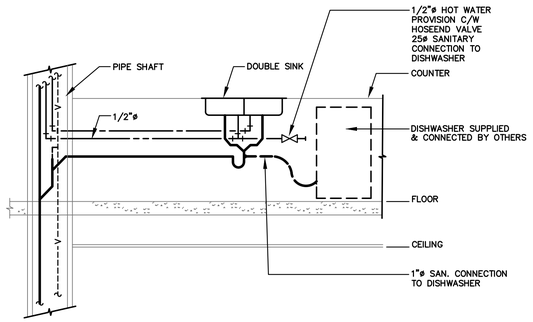
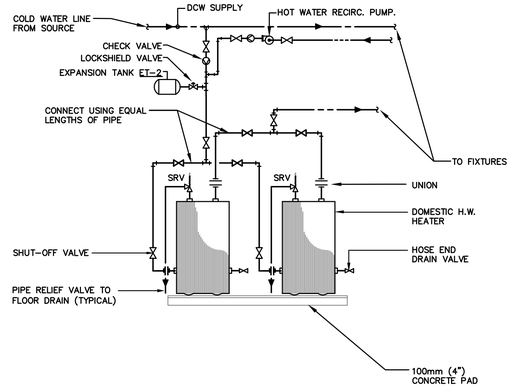


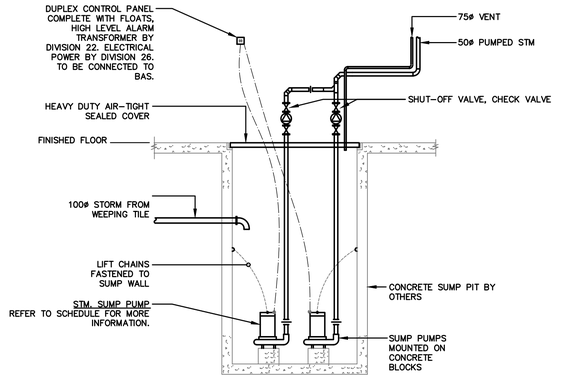
1 M-500 DISHWASHER PIPING CONNECTION DETAIL

N.T.S.



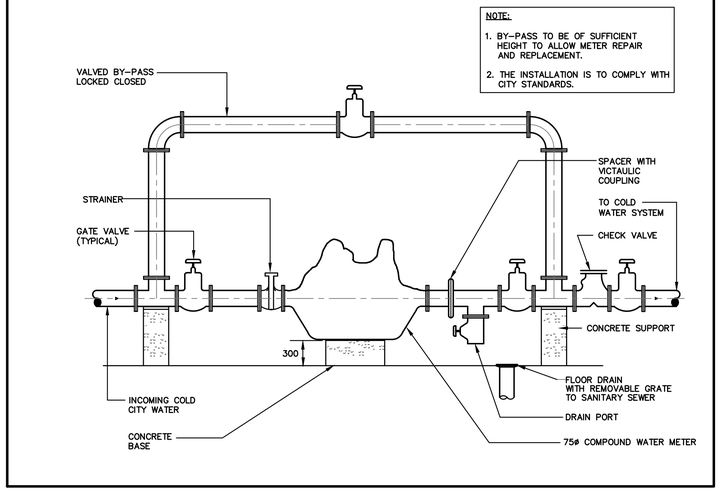
2 M-500 FLOOR MOUNT ELECTRIC DOMESTIC HOT WATER TANK DETAIL

N.T.S.



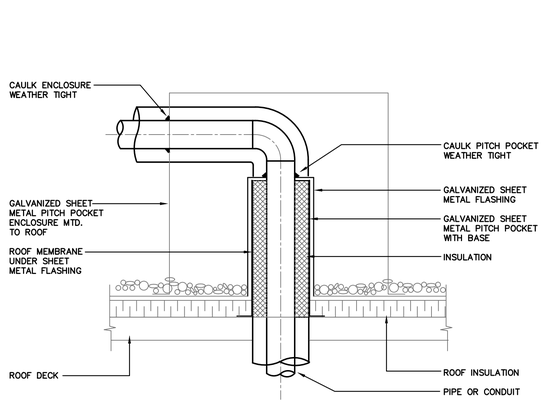
3 M-500 GROUNDWATER SUMP PUMP DETAIL

N.T.S.



4 M-500 WATER METER

N.T.S.



5 M-500 PITCH POCKET DETAIL

N.T.S.

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

MECHANICAL DETAILS

THEHIDIGROUP
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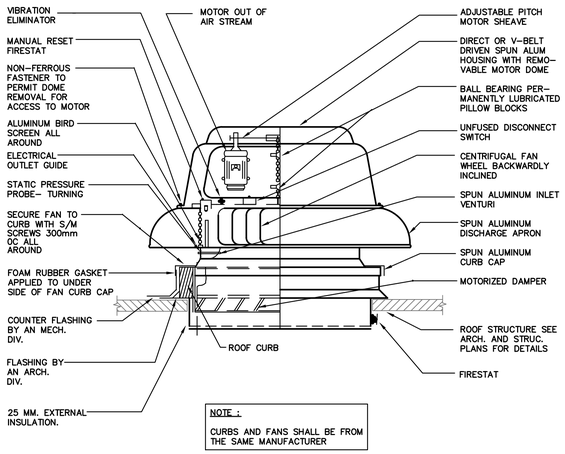
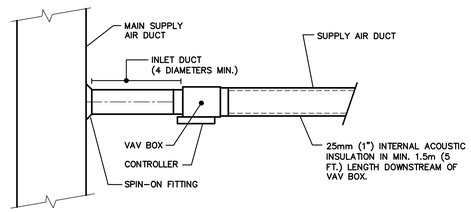


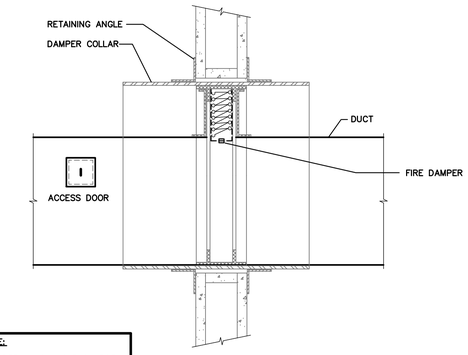
1 M-501 ROOF MTG. CENTRIFUGAL EXHAUST FAN

N.T.S.



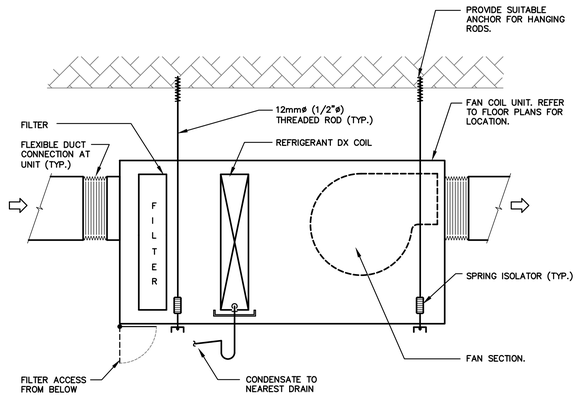
2 M-501 VAV BOX DETAIL

N.T.S.



3 M-501 FIRE DAMPER INSTALLATION DETAIL

N.T.S.



4 M-501 VRF INDOOR UNIT INSTALLATION DETAIL

N.T.S.

5 M-501 ROUND DUCT SUPPLY AIR GRILLE LOCATION

N.T.S.

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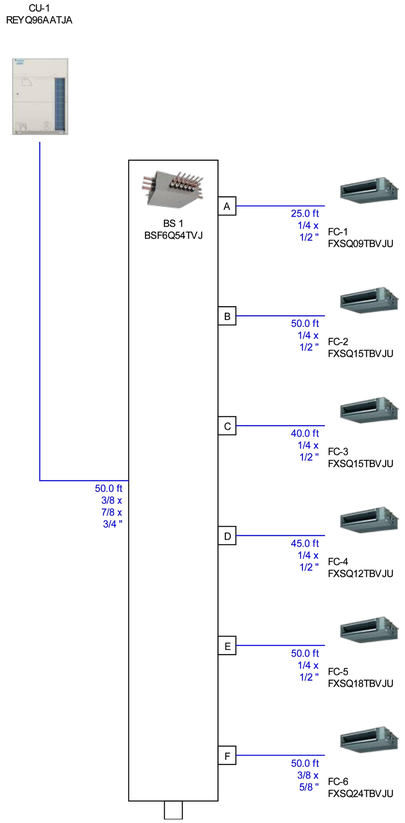
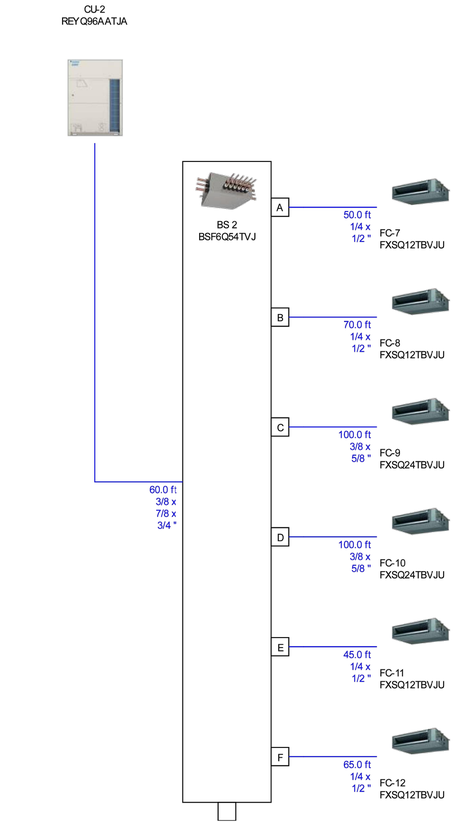
3. Piping Diagrams

Piping CU-1



Piping CU-2



No.	ISSUANCE	DATE
1	ISSUED FOR DESIGN DEVELOPMENT	01/03/2024
2	ISSUED FOR PERMIT	13/09/2024
3	ISSUED FOR TENDER	26/11/2024

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

REFRIGERANT PIPING DIAGRAMS

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
26/11/2024
L. TURRIN
100215842
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO : M502
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : LT	
CHECKED BY : MS	

VARIABLE REFRIGERANT FLOW (VRF) SCHEDULE

INDOOR UNITS														OUTDOOR UNITS															
TAG	LOCATION	MANUFACTURER	MODEL No.	FLOW RATE (L/S)	ESP (Pa)	COOLING CAPACITY (MBH)		HEATING CAPACITY (MBH)	MCA (A)	MOCP (A)	ELEC. (V/PH/Hz)	WEIGHT (KG)	FILTER	TAG	MANUFACTURER	MODEL No.	AMBIENT TEMPERATURE (°C)	COOLING CAPACITY (MBH)	AMBIENT TEMPERATURE (°C)	HEATING CAPACITY (MBH)	ELEC. (V/PH/Hz)	MCA (A)	MOP (A)	WEIGHT (KG)	BRANCH SELECTOR BOX	ELEC. (V/PH/Hz)	MCA (A)	REFRIGERANT	EMERGENCY POWER	REMARKS
						TOTAL	SENSIBLE																						
FC-1	OFFICE 109	DAIKIN	FXSQ09TBVJU	150	0.3	8.5	6.1	10.0	1.8	15	208/1/60	35.1	MERV 13	CU-1	DAIKIN	REYQ96AATJA	35	78.3	8.3	93.0	208/3/60	34.1	35	325	BSF6Q54TVJ	208/1/60	0.6	R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-2	FORENSIC TEACHING CLASSROOM 104	DAIKIN	FXSQ18TBVJU	300	0.3	15.7	12.0	19.3	1.9	15	208/1/60	35.1	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-3	FORENSIC TEACHING CLASSROOM 104	DAIKIN	FXSQ18TBVJU	300	0.3	15.7	12.0	19.3	1.9	15	208/1/60	35.1	MERV 13						-20	73.2								R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-4	FORENSIC GARAGE 105	DAIKIN	FXSQ12TBVJU	160	0.3	10.5	8.4	13.2	1.8	15	208/1/60	35.1	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-5	TEACHING LAB 108	DAIKIN	FXSQ15TBVJU	250	0.3	13.1	10.0	16.4	1.8	15	208/1/60	35.1	MERV 13						-25	64.4								R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-6	LOUNGE 103	DAIKIN	FXSQ24TBVJU	350	0.3	21.1	15.2	26.0	1.9	15	208/1/60	37.5	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-7	AV. GRAD OFFICE 110	DAIKIN	FXSQ12TBVJU	160	0.3	10.5	8.4	13.2	1.8	15	208/1/60	35.1	MERV 13	CU-2	DAIKIN	REYQ96AATJA	35	76.4	8.3	92.0	208/3/60	34.1	35	325	BSF6Q54TVJ	208/1/60	0.6	R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-8	FLEX OFFICE 112	DAIKIN	FXSQ12TBVJU	160	0.3	10.5	8.4	13.2	1.8	15	208/1/60	35.1	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-9	MULTIPURPOSE SPACE 114	DAIKIN	FXSQ24TBVJU	350	0.3	21.1	15.2	26.0	1.9	15	208/1/60	37.5	MERV 13						-20	72.0								R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-10	DRONE RESEARCH LAB 115	DAIKIN	FXSQ30TBVJU	515	0.3	26.4	19.8	32.7	3.0	15	208/1/60	46.1	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-11	AV GARAGE 111	DAIKIN	FXSQ12TBVJU	160	0.3	10.5	8.4	13.2	1.8	15	208/1/60	35.1	MERV 13						-25	63.2								R-410A	N	BACNET, VIBRATION ISOLATION HANGERS
FC-12	FLEX GARAGE 113	DAIKIN	FXSQ12TBVJU	160	0.3	10.5	8.4	13.2	1.8	15	208/1/60	35.1	MERV 13															R-410A	N	BACNET, VIBRATION ISOLATION HANGERS

NOTES: PROVIDE INDIVIDUAL POWER CONNECTIONS FOR EACH INDOOR AND OUTDOOR UNIT.
APPROVED ALTERNATES: LG, MITS, YORK (JCI)

VARIABLE AIR VOLUME BOX SCHEDULE

TAG	MANUFACTURER	MODEL No.	INLET SIZE (MM)	FLOW (L/S)		REMARKS
				DESIGN MIN	DESIGN MAX	
VAV-1	EH PRICE	SDV-8000	100	10	20	CONNECT TO BAS
VAV-2	EH PRICE	SDV-8000	200	80	245	CONNECT TO BAS
VAV-4	EH PRICE	SDV-8000	100	10	30	CONNECT TO BAS
VAV-5	EH PRICE	SDV-8000	150	40	125	CONNECT TO BAS
VAV-6	EH PRICE	SDV-8000	100	15	45	CONNECT TO BAS
VAV-7	EH PRICE	SDV-8000	100	15	45	CONNECT TO BAS
VAV-8	EH PRICE	SDV-8000	100	15	45	CONNECT TO BAS
VAV-9	EH PRICE	SDV-8000	150	40	125	CONNECT TO BAS
VAV-10	EH PRICE	SDV-8000	150	30	90	CONNECT TO BAS
VAV-11	EH PRICE	SDV-8000	100	15	40	CONNECT TO BAS
VAV-12	EH PRICE	SDV-8000	100	15	40	CONNECT TO BAS
VAV-13	EH PRICE	SDV-8000	100	10	20	CONNECT TO BAS

NOTES:

DI WATER SYSTEM

DI-1

PROVIDE MILLI-DI SYSTEM, RESISTIVITY > 1 MΩ CM @ 25°C, FLOW RATE 0.5 L/MIN TO 0.7 L/MIN, BATTERY POWERED. FOR FAUCET REFER TO ARCHITECTURAL SPECIFICATIONS

APPROVED ALTERNATE: THERMAL SCIENTIFIC "B-PURE WATER PURIFICATION SYSTEM".

ELECTRIC HEATER SCHEDULE

TAG	MANUFACTURER	MODEL No.	ARRANGEMENT	HEATING CAPACITY (kW)	ELEC (V/PH/Hz)	LENGTH (INCHES)	REMARKS
CFH-1	OUELLET	OACP2008	CEILING FAN HEATER	2	208/1/60	–	REMOTE THERMOSTAT, CONTROL RELAY
BBH-1	RUNTAL	EB3-208D	BASEBOARD HEATER	1.5	208/1/60	36	LINE VOLTAGE WALL THERMOSTAT, SEPARATE PRICE
EDH-1	GREENHECK	IDHE	DUCT HEATER	12	208/3/60	–	SCR CONTROL, AIRFLOW SWITCH, DUCT THERMOSTAT, SIZE TO MATCH DUCT SIZE

NOTES:

EXPANSION TANK SCHEDULE

TAG	SERVICE	LOCATION	MANUFACTURER	MODEL No.	ACCEPTANCE VOLUME (L)	TEMPERATURE (°C)		PRE-CHARGED PRESSURE (kPa)	FLUID	DIMENSIONS (MM)		PRESSURE RATING (kPa)	WEIGHT (KG)	REMARKS
						MIN	MAX			D	H			
ET-1	DOMESTIC COLD WATER	M&E ROOM 121	WATTS	PLT-20	27	4.44	26.6	140	WATER	320	500	1034	7	BLADDER TANK
ET-2	DOMESTIC HOT WATER	M&E ROOM 201	WATTS	PLT-5	5.6	4.44	26.6	140	WATER	200	325	1034	3	BLADDER TANK

NOTES:

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL No.	HEATER SPECIFICATIONS					REMARKS
			AIR FLOW (CFM)	CAPACITY (kW)	MOTOR (HP)	ELEC. (V/PH/Hz)	WEIGHT (KG)	
UH-1	OUELLET	OAS10008AM	700	10	1/30	208/1/60	20	24V RELAY FOR REMOTE THERMOSTAT
UH-2	OUELLET	OAS05008AM	700	5	1/30	208/1/60	20	24V RELAY FOR REMOTE THERMOSTAT

NOTES:

SUPPLY FAN SCHEDULE

TAG	FAN TYPE CLASS	MANUFACTURER	MODEL No.	AIR FLOW (L/S)	FAN SPEED (RPM)	ESP (Pa)	MOTOR SIZE (HP)	ELEC. (V/PH/Hz)	VFD/ STARTER	WEIGHT (KG)	EMERGENCY OR NORMAL POWER	LOCAL OR BAS CONTROL	MAXIMUM FAN SOUND POWER LEVEL OF SPECIFIED EQUIPMENT MAX. PWL IN DB RE 10W^(-12) ACTIVE BAND INLET SOUND POWER LABEL								REMARKS
													63	125	250	500	1000	2000	4000	8000	
SF-1	IN-LINE	PENNBARRY	SQX122-0541GP	400	1684	100	0.5	120/1/60		35	N		73	71	72	66	64	71	62	56	VIBRATION ISOLATION HANGERS, INTERLOCKED WITH FUME HOOD EXHAUST

NOTES:

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

MECHANICAL SCHEDULES

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SEAL

LICENSED PROFESSIONAL ENGINEER
26/11/2024
L. TURRIN
100215842
PROVINCE OF ONTARIO

SCALE :	N.T.S.
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	LT
CHECKED BY :	MS

SHEET NO :

M800

MAKE–UP (VENTILATION) AIR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL No.	SUPPLY FAN						EXHAUST FAN						HEATING PERFORMANCE – HEAT PUMP				COOLING PERFORMANCE – HEAT PUMP						BACKUP HEAT (ELECTRIC)		ELECTRICAL		
			AIR FLOW (L/S)	ESP (Pa)	SPEED (RPM)	MOTOR POWER (HP)	BHP (HP)	VFD/ STARTER	AIR FLOW (L/S)	ESP (kPa)	SPEED (RPM)	MOTOR POWER (HP)	BHP (HP)	VFD/ STARTER	HEATING CAPACITY (kW)	AIR SIDE			TOTAL COOLING CAPACITY (kW)	SENSIBLE COOLING CAPACITY (kW)	EER	AIR SIDE			PRE–WHEEL HEATING CAPACITY (kW)	POST–HEATING CAPACITY (kW)	VOLTAGE	MCA	MAXIMUM FUSE SIZE
																AIR FLOW (L/S)	EAT (°C)	LAT (°C)				AIR FLOW (L/S)	EAT DB/WB (°C)	LAT DB/WB (°C)					
MUA–1	ADDISON	PROH 72 B1	860	500	2147	1.5	1.28	VFD	425	125	2261	1	0.27	VFD	15.00	860	6.2	20.8	21.2	14.1	15.6	860	28.3/21.1	14.1/14.0	20	30	575/3/60	95.7	100

TAG	ENERGY RECOVERY WHEEL – SUPPLY								ENERGY RECOVERY WHEEL – EXHAUST					MAXIMUM FAN SOUND POWER LEVEL OF SPECIFIED EQUIPMENT MAX. PWL IN DB RE 10W^(–12)								MAXIMUM FAN SOUND POWER LEVEL OF SPECIFIED EQUIPMENT MAX. PWL IN DB RE 10W^(–12)								FILTERS	WEIGHT (KG)	REFRIGERANT	EMERGENCY OR NORMAL POWER	REMARKS
	AIR FLOW (L/S)	TOTAL ENERGY RECOVERED (kW)		EFFECTIVENESS (%)		EAT DB/WB (°C)		LAT DB/WB (°C)		AIR FLOW (L/S)	EAT DB/WB (°C)		LAT DB/WB (°C)		ACTIVE BAND SOUND POWER LABEL (SUPPLY)								ACTIVE BAND SOUND POWER LABEL (EXHAUST)											
		SUMMER	WINTER	SUMMER SENS/TOTAL	WINTER SENS/TOTAL	SUMMER	WINTER	SUMMER	WINTER		SUMMER	WINTER	SUMMER	WINTER	63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000					
MUA–1	860	10.7	21.4	93/92	96/95	32.2/23.9	–20/–20.5	28.3/21.1	–3.8/–4.6	425	23.8/17.2	21.1/12.2	31.2/23.1	–16/–15.9	49	56	67	66	67	68	65	59	43	51	60	58	57	55	54	46	MERV 13	1150	R454B	N	HOT GAS REHEAT, 600mm ROOF CURB, BACNET CONTROLLER

NOTES:

EXHAUST FAN SCHEDULE

TAG	FAN TYPE CLASS	MANUFACTURER	MODEL No.	AIR FLOW (L/S)	FAN SPEED (RPM)	ESP (Pa)	MOTOR SIZE (HP)	ELEC. (V/PH/Hz)	WEIGHT (KG)	EMERGENCY OR NORMAL POWER	LOCAL OR BAS CONTROL	MAXIMUM FAN SOUND POWER LEVEL OF SPECIFIED EQUIPMENT MAX. PWL IN DB RE 10W^(–12)								REMARKS
												ACTIVE BAND INLET SOUND POWER LABEL								
												63	125	250	500	1000	2000	4000	8000	
EF–1	ROOF MOUNTED	PENNBARRY	DX13R–SC	330	1522	125	1/4	120/1/60	20	N	LOCAL	70	71	74	62	58	55	51	45	ROOF CURB, GRAVITY OPERATED BACKDRAFT DAMPER, DISCONNECT SWITCH, SPEED CONTROLLER, BACNET
EF–2	ROOF MOUNTED	PENNBARRY	DX13R–SC	330	1522	125	1/4	120/1/60	20	N	LOCAL	70	71	74	62	58	55	51	45	ROOF CURB, GRAVITY OPERATED BACKDRAFT DAMPER, DISCONNECT SWITCH, SPEED CONTROLLER, BACNET
EF–3	ROOF MOUNTED	PENNBARRY	DX11R–SC	165	1440	125	1/5	120/1/60	19	N	LOCAL	68	72	68	56	56	53	45	36	ROOF CURB, GRAVITY OPERATED BACKDRAFT DAMPER, DISCONNECT SWITCH, SPEED CONTROLLER, BACNET
EF–4	LABORATORY EXHAUST FAN	PENNBARRY	VPLUME 105–5 1X1	470	3728	200	3/4	575/3/60	220	N	LOCAL	89	87	85	85	82	77	77	76	ROOF CURB, GRAVITY OPERATED BACKDRAFT DAMPER, DISCONNECT SWITCH, DISCHARGE NOZZLE, BACNET
EF–5	ROOF MOUNTED	PENNBARRY	DX11Q–SC	120	1369	125	1/5	120/1/60	19	N	LOCAL	68	74	63	56	54	52	46	38	ROOF CURB, GRAVITY OPERATED BACKDRAFT DAMPER, DISCONNECT SWITCH, SPEED CONTROLLER, BACNET
EF–6	IN–LINE CENTRIFUGAL	PENNBARRY	Z10H–INLINE–SC	125	1086	150	390W	120/1/60	14	N	LOCAL	63	63	59	54	51	51	47	42	VIBRATION ISOLATION HANGERS, BACKDRAFT DAMPER

NOTES:

DIFFUSER & GRILLE SCHEDULE

TAG	UNIT				DAMPER		MATERIAL	FINISH	REMARKS
	MANUFACTURER	MODEL No.	APPLICATION	DUTY	PART OF UNIT	REMOTE IN DUCT			
A	EH PRICE	520D	SUPPLY	–	Y	N	STEEL	BY ARCHITECT	DOUBLE DEFLECTION
B	E.H. PRICE	SDS100	SUPPLY	–	Y	N	ALUMINUM	BY ARCHITECT	C/W SDB PLENUM, CABLE OPERATED FACE DAMPER, 1200MM LONG, DOUBLE SLOT, 25mm SLOT, REFER TO DRAWING FOR NECK SIZE
C	EH PRICE	80 SERIES	RETURN/EXHAUST	–	Y	N	ALUMINUM	BY ARCHITECT	
D	E.H. PRICE	530	RETURN	–	–	–	ALUMINUM	BY ARCHITECT	DOUBLE DEFLECTION

NOTES:

DOMESTIC WATER HEATER SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL NO.	CAPACITY (L)	RECOVERY RATE @ 100°F RISE (L/HR)	HEATER ELEMENT (kW)	ELEC. (V/PH/Hz)	WEIGHT (DRY) (KG)	REMARKS
DHWH–1	DOMESTIC HOT WATER	A.O. SMITH	DVE52–12	189	189	12.3	208/3/60	120	MANIFOLD KIT, BMS GATEWAY MODULE
DHWH–2	DOMESTIC HOT WATER	A.O. SMITH	DVE52–12	189	189	12.3	208/3/60	120	MANIFOLD KIT, BMS GATEWAY MODULE

NOTES:

PUMP SCHEDULE

TAG	SERVICE	LOCATION	MANUFACTURER	MODEL No.	PUMP SPECIFICATIONS				ELEC. (V/PH/Hz)	EMERGENCY POWER	PRESSURE RATING (kPa)	FLUID	WEIGHT (KG)	REMARKS
					FLOW (L/S)	HEAD (kPa)	SPEED (RPM)	MOTOR POWER (HP)						
P–1	DOMESTIC HOT WATER RECIRCULATION PUMP	M&E ROOM 201	WILO	STAR S 33 ZF	0.1	90	1700	1/4	120/1/60	N	965	WATER	–	
SP–1	WEEPING TILE SUMP PIT	M&E ROOM 121	SULZER	EF 10D–2	3.15	135	1750	2	575/3/60	N	–	GROUNDWATER	26	DUPLEX SUMP PUMP SYSTEM COMPLETE WITH CONTROLS, FLOATS, CONNECT TO BAS, PIT SHALL BE 1200x1200x3500 DEEP

NOTES:

SPLIT TYPE AC/HEAT PUMP UNIT SCHEDULE

INDOOR UNITS												OUTDOOR UNITS										REFRIGERANT	EMERGENCY POWER	REMARKS
TAG	SERVICE	LOCATION	MANUFACTURER	MODEL No.	FLOW RATE –MEDIUM FLOW (L/S)	ESP (Pa)	COOLING CAPACITY (kW)		HEATING CAPACITY (kW)	MOTOR POWER (kW)	ELEC. (V/PH/Hz)	WEIGHT (KG)	TAG	MANUFACTURER	MODEL No.	AMBIENT TEMPERATURE (°C)	HEAT REJECTION (kW/H)	ELEC. (V/PH/Hz)	SEER	EER	MCA (A)	MOP (A)	WEIGHT (KG)			
							TOTAL	SENSIBLE																		
AC–1	120 LAN ROOM	120 LAN ROOM	DAIKIN	FTKF24AXVJU	285	–	6.56	4.80	–	–	208/1/60	14	CU–3	DAIKIN	RKF24AXVJU	35	6.56	208/1/60	21	12	14.23	20	46	R32	N	BACNET ADAPTER, LOW AMBIENT COOLING, MAXIMUM REFRIGERANT LENGTH 99 FT, WIND BAFFLE
AC–2	107 LAB	107 LAB	DAIKIN	FTXM12WVJU9	185	–	3.51	–	3.98		208/1/60	13	CU–4	DAIKIN	RXM12WVJU9	35	3.51	208/1/60	25.2	13.2	12.3	–	44	R32	N	BACNET ADAPTER, LOW AMBIENT COOLING, MAXIMUM REFRIGERANT LENGTH 82 FT, WIND BAFFLE, MINI UNIVOLT CONDENSATE PUMP KIT

NOTES: PROVIDE INDIVIDUAL POWER CONNECTIONS TO EACH INDOOR AND OUTDOOR UNIT.

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PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

MECHANICAL SCHEDULES

THEHIDIGROUP
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SEAL

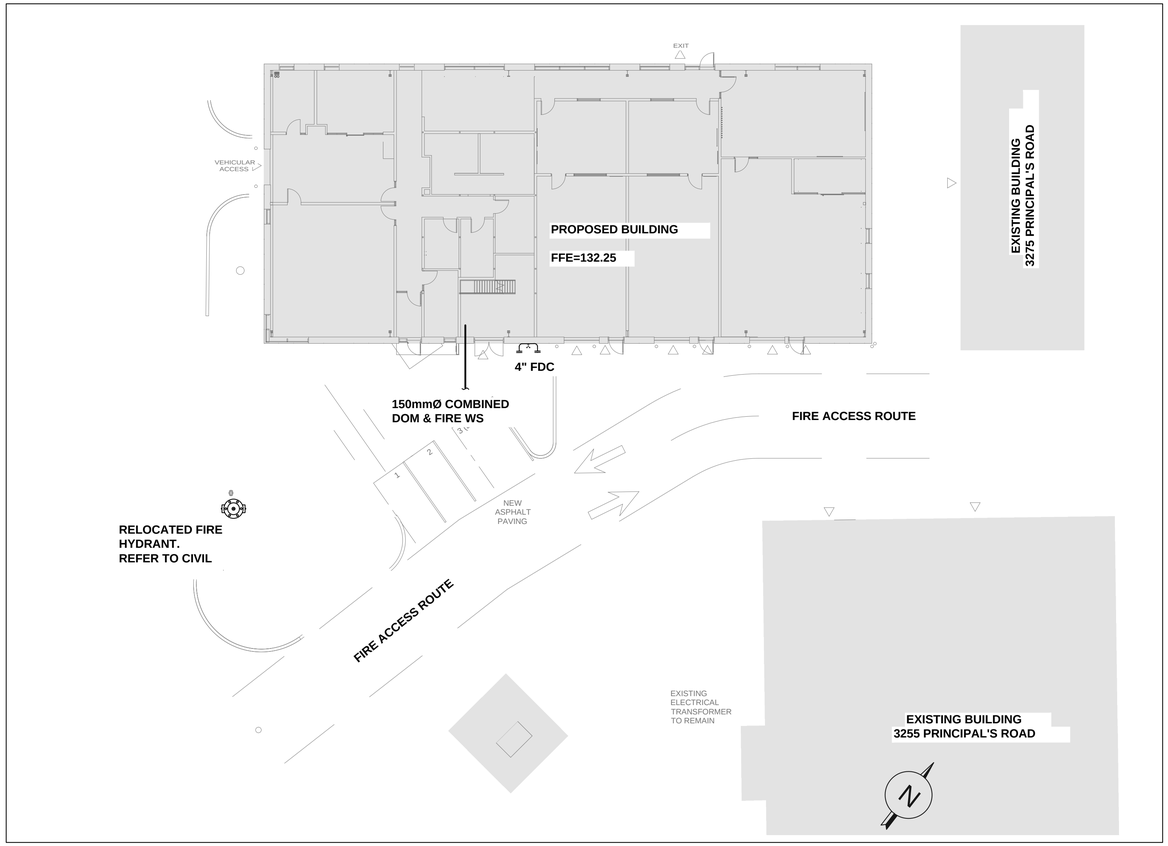
LICENSED PROFESSIONAL ENGINEER
26/11/2024
L. TURRIN
100215842
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	M801
PROJECT NO : 2023-0059	
DRAWN BY : LT	
CHECKED BY : MS	

PRE-ENGINEERED BUILDING
UNIVERSITY OF TORONTO

3265 PRINCIPAL'S ROAD,

MISSISSAUGA ONTARIO



SITE PLAN
SCALE = 1:300

FIRE PROTECTION DRAWING LIST	
DWG. No.	DRAWING TITLE
FP- 1.1	SITE PLAN AND GENERAL NOTES
FP- 1.2	SPECIFICATION
FP- 2.1	NFPA FIGURES AND GENERAL DETAILS
FP- 2.2	NFPA FIGURES AND GENERAL DETAILS
FP- 2.3	RISER SCHEMATIC & SUPERVISED SCHEDULE
FP- 3	PROPOSED SPRINKLER LAYOUT GROUND FLOOR
FP- 4	PROPOSED SPRINKLER LAYOUT MEZZANINE FLOOR

DESIGN DATA

1. SPRINKLER SYSTEM DESIGN IS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE (2012), AUTHORITY HAVING JURISDICTION REQUIREMENTS, AND WITH NFPA 13 (2013).
2. HYDRAULIC REQUIREMENTS ARE IN COMPLIANCE WITH NFPA 13 AND SPRINKLER SPECIFICATIONS.

- CALCULATION #1 - WET PIPE SYSTEM- GROUND FL

DESIGN CRITERIA

- LAR
  ORDINARY GROUP 2, 0.2GPM/1950SQ.FT(DRY),1500SQ.FT(WET) PLUS 250GPM (TOTAL INSIDE AND OUTSIDE HOSE)
- DESIGN AREA REDUCTION
  USING QUICK RESPONSE HEADS(11.2.3.2.3 NFPA 13) INCLUDING E/C SPRINKLERS ARE USED THROUGHOUT THE SYSTEM, THE SYSTEM AREA SHALL BE PERMITTED TO BE REDUCED WITHOUT REVISING OF THE DENSITY WHEN ALL OF THE FOLLOWING CONDITIONS MEET THE CRITERIA.
  1. WET PIPE SYSTEM
  2. LIGHT OR ORDINARY HAZARD
  3. MAX 20'-0" CEILING HEIGHT

CODES AND STANDARDS

- ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE (2012) , NFPA 13 (2013), NFPA 14(2013), NFPA20 (2016)

NFPA DETAILS AND GENERAL NOTES.

- SPRINKLER CONTRACTOR PROVIDE ADDITIONAL DRAINS AND INSPECTOR TEST CONNECTION WHERE IT IS REQUIRED.
- SPRINKLERS PROTECTION RESIDENTIAL AREAS INSTALLED NEAR SPECIFIC HEAT SOURCE IDENTIFIED IN TABLE 8.3.2.5(C) SHALL BE INSTALLED IN ACCORDANCE WITH TABLE 8.3.2.5(C)
- FLOW SWITCHES AND CONTROL VALVES ARE TO BE CONNECTED TO FIRE ALARM SYSTEM(BY OTHERS)
- ALL PIPING IS ON THE FOLLOWS:

  WET SYSTEMS:
  STEEL PIPE : ALL PIPE SCHED 40 BLACK WITH FLANGED, SCREWED, OR GROOVED ENDS , C =120

- PROVIDE WIRE GUARDS TO SPRINKLER HEADS WHERE SUSCEPTIBLE TO DAMAGE
- ALL HANGERS SHALL BE INSTALLED AND SPACED IN ACCORDANCE WITH NFPA 13 (2013)
- TEST/ DRAIN CONNECTION TO DISCHARGE TO A SUITABLE LOCATION
- TAMPER AND WATER FLOW SWITCHS ARE PROVIDED, BUT WIRING BY OTHERS
- SPARE SPRINKLERS SHALL BE PROVIDED IN ACCORDANCE WITH NFPA ADJACENT TO THE MAIN RISER. THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATING INSTALLED AND SHALL BE AS FOLLOWS AND ASSOCIATED WRENCHES IN THE BUILDING SHALL BE FURNISHE FOR THE CABINETS
  1. FOR PROTECTED FACILITIES HAVING UNDER 300 SPRINKLERS- NO FEWER THAN SIX SPRINKLERS
  2. FOR PROTECTED FACILITIES HAVING 300 TO 1000 SPRINKLERS- NO FEWER THAN 12 SPRINKLERS
  3. FOR PROTECTED FACILITIES HAVING OVER 1000 SPRINKLERS- NO FEWER THAN 24 SPRINKLERS
  4. FIRE STOP IS REQUIRED WHERE PENETRATE IN A RATED WALL/ FLOOR AND MUST BE EQUAL TO THE RATING OF THE WALL/FLOOR BEING PENETRATED WITH ULC LISTED FIRE STOP. - OWNERS PROVIDE AND MAINTAIN ADEQUATE HEAT(4°C ,40°F) IN AREAS WHERE WET SYSTEM IS INSTALLED TO PREVENT FREEZING SYSTEM
  5. PIPING IS TO BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13 FOR 2HOURS AT 200 PSI AT THE SYSTEM RISER ALL TESTING MUST BE WITNESSED AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE OWNER
  6. FIRE PROTECTION SYSTEM INSTALLER SHALL CO-ORDINATE WITH ALL ARCHITECTURAL, MECHANICAL AND ELECTRICAL DISCIPLINES
  7. WHERE PIPING PENETRATES RATED WALL AND FLOORS. THE PENETRATION SHALL BE FIRE STOPPED WITH A ULC LISTED FIRE STOP SYSTEM.

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
2	ISSUED FOR TENDER	2024-11-15
3	RE-ISSUED FOR TENDER	2024-11-19

DISCLAIMER:

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PROJECT

PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

SITE PLAN AND GENERAL NOTES

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
A. ABEDINI
100220666
Nov19/24
PROVINCE OF ONTARIO

SCALE : N.T.S	SHEET NO :
DATE : AUG 2024	FP 1.1
PROJECT NO : 2023-0059	
DRAWN BY : SK	
CHECKED BY : AA	

SPECIFICATION

1. GENERAL SPECIFICATIONS

1.1. THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEERS AND SHALL NOT BE ALTERED WITHOUT APPROVAL. DRAWINGS SHALL BE RETURNED UPON REQUEST.

1.2. BEFORE SUBMITTING TENDER FOR THIS WORK, EXAMINE THE SITE, LOCAL SERVICES AND LOCAL CONDITIONS, MECHANICAL DRAWINGS, LOCATION OF EXISTING EQUIPMENT AND SPACE ALLOWANCES TO ASCERTAIN THAT THE WORK CAN BE SATISFACTORILY CARRIED OUT AS SHOWN ON THESE DRAWINGS AND AS HEREIN SPECIFIED. BEFORE COMMENCING WORK, EXAMINE THE WORK AND REPORT AT ONCE, ANY DEFECT OF INTERFERENCE AFFECTING THE WORK OF THIS SECTION OR THE GUARANTEE OF SAME. NO EXTRA WILL SUBSEQUENTLY BE ALLOWED TO COVER ANY THOROUGH INSPECTION OF THE GROUNDS, EXISTING CONDITIONS, DRAWINGS AND SPECIFICATION. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

1.3. THESE DRAWINGS ARE FOR PERMIT, AND FOR PRICING, AND MUST BE ADHERED TO FOR INSTALLATION. IF CONTRACTOR WISHES TO ALTER DRAWINGS, THEN CONTRACTOR IS RESPONSIBLE FOR OBTAINING RE-APPROVALS.

1.4. CONTRACTOR TO SUPPLY AND INSTALL A COMPLETE AND FULLY OPERATIONAL AUTOMATIC SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS AND AS INDICATED IN THE SPECIFICATIONS AND CONFORMING TO N.F.P.A. REQUIREMENTS, O.B.C. REQUIREMENTS AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES.

1.5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL CODES, STANDARDS BY-LAWS AND AUTHORITIES HAVING JURISDICTION.

1.6. SYSTEMS TO BE INSTALLED AS PER N.F.P.A. STANDARDS, AND LOCAL AUTHORITIES

1.7. ALL WORK SHALL CONFORM TO C.S.A., E.S.A. CODES, AND LOCAL, MUNICIPAL AND PROVINCIAL LAWS AND REGULATIONS.

1.8. SPRINKLER CONTRACTOR TO CO-ORDINATE INSTALLATION WITH EXISTING SITE CONDITIONS AND ACCEPT RESPONSIBILITY FOR AND COST OF MAKING ADJUSTMENTS TO PIPING TO AVOID INTERFERENCE WITH MECHANICAL, ELECTRICAL AND OTHER BUILDING COMPONENTS.

1.9. SPRINKLER CONTRACTOR TO INCLUDE FOR OFFSETS IN SPRINKLER PIPING AND MUST SUPPLY AND INSTALL TRAPEZE HANGERS WHERE REQUIRED. HANGERS FOR MAINS TO BE INSTALLED AT PANEL POINTS OF JOISTS.

1.10. ALL MATERIALS USED IN THE INSTALLATION OF THE SPRINKLER SYSTEM SHALL BE CANADIAN MADE, UNLESS SPECIFICALLY APPROVED IN WRITING PRIOR TO INSTALLATION BY THE ARCHITECTS AND/OR ENGINEERS RESPONSIBLE FOR THE SYSTEM DESIGN.

1.11. ALL MATERIALS, PIPING, FITTINGS, VALVES, APPARATUS, SPRINKLERS AND FIRE PROTECTION EQUIPMENT SUPPLIED SHALL BE LISTED (ULC OR FM), AND IN COMPLIANCE WITH NFPA 13 AND 14 STANDARDS.

1.12. ALL SPRINKLERS SHALL BE U.L.C. LISTED AND SHALL BE THE TYPE AND TEMPERATURE RATING SPECIFIED ON THE DRAWINGS. SPRINKLERS OF SUITABLE TEMPERATURE RATING SHALL BE INSTALLED NEAR HEATING EQUIPMENT AS SPECIFIED IN N.F.P.A. STANDARD # 13 (2013 EDITION).

1.13. CONTRACTOR TO ALLOW IN PRICE FOR SUFFICIENT PIPE AND FITTINGS TO INSTALL PENDENT SPRINKLERS WITHIN A 2 FT. RADIUS OF THE LOCATION SHOWN ON DRAWINGS.

1.14. PROVIDE SPARE SPRINKLER HEADS AND WRENCH IN A METAL CABINET, MOUNTED ON THE WALL NEAR THE MAIN SPRINKLER VALVE HEADER. AMOUNT AS PER N.F.P.A. STANDARD # 13.

1.15. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL TEST THE SYSTEM AND SUBMIT TO THE ENGINEER COMPLETED CONTRACTORS TEST CERTIFICATES STATING THAT THE SYSTEMS HAVE BEEN INSTALLED, TESTED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION IN ACCORDANCE WITH N.F.P.A.#13, LATEST EDITION.

1.16. PENDENT SPRINKLERS INSTALLED WHERE SUSPENDED CEILING TILES OR DRYWALL OCCUR ARE TO BE CONCEALED TYPE C/W ESCUTCHEON PLATES SUPPLIED WITH THE DESIRED COLOUR AND FINISH AS STIPULATED BY THE ARCHITECT AND/OR INTERIOR DESIGNER. (WHERE APPLICABLE)

1.17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS AND FOR CO-ORDINATION WITH ALL SITE CONDITIONS. BEFORE COMMENCING WORK, EXAMINE THE SITE AND THE EXISTING CONDITIONS AND REPORT IMMEDIATELY TO THE ENGINEER ANY DEFECT OR INTERFERENCE AFFECTING THE COMPLETION OF THE WORK OR THE GUARANTEE OF THIS CONTRACTOR.

1.18. RECORD AS-BUILT" DRAWINGS: BE RESPONSIBLE FOR CLEARLY MARKING, AS THE JOB PROGRESSES, ALL CHANGES AND DEVIATIONS FROM THE ROUTING OF SERVICES AND THE LOCATION OF EQUIPMENT SHOWN ON THE CONTRACT DOCUMENTS ON A BOUND SET OF WHITE PRINTS. KEEP THE PRINTS AVAILABLE AT THE SITE FOR PERIODIC INSPECTION THROUGHOUT THE DURATION OF THE WORK. NOTE THAT MARKED-UP WHITE PRINTS SHALL INCORPORATE ALL REVISIONS MADE BY CHANGE ORDERS, ADDENDA, FIELD INSTRUCTION. ETC. HAND THE AS-BUILT DRAWINGS TO THE ENGINEER AT THE END OF THE PROJECT.

1.19. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE CO-OPERATIVE. PERFORM ALL WORK WHICH IS SHOWN, SPECIFIED OR REASONABLY IMPLIED ON THE DRAWINGS, BUT NOT MENTIONED IN THE SPECIFICATIONS OR VICE-VERSA, AS THOUGH FULLY COVERED BY BOTH.

1.20. WARRANT THE MECHANICAL WORK TO BE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ISSUED OF CERTIFICATE OF SUBSTANTIAL PERFORMANCE OF THE WORK. PROVIDE EXTENDED WARRANTY WHERE SPECIFIED IN ALL SUBSEQUENT SECTIONS OF THE SPECIFICATION.

1.21. MAINTAIN LIABILITY INSURANCE WHICH WILL FULLY PROTECT THE OWNER AND THE CONTRACTORS FROM ANY AND ALL CLAIMS UNDER THE WORKPLACE SAFETY & INSURANCE BOARD ACT.

1.22. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE LAYOUT OF WORK AND FOR ANY DAMAGE CAUSED TO THE PROPERTY OF THE OWNER OR OTHER TRADES THROUGH THE IMPROPER LOCATION OF MATERIALS, EQUIPMENT, OR CARRYING OUT OF THE WORK.

1.23. PROVIDE PIPE HANGERS OR SUPPORTS ON ALL PIPING. HANGER RODS MUST BE VERTICAL WITHOUT BENDS OR OFFSETS AND WORKMANSHIP MUST BE SUCH THAT FINISHED PIPING IS TRUE, BOTH WITH MANUFACTURER'S LINE AND GRADE. METAL STRAPS, WIRES, PERFORATED BANDS, CHAIN OR SOLID RING HANGERS USED AS PIPE HANGERS OR SUPPORTS WILL NOT BE ACCEPTABLE.

1.24. WHERE NEW PIPES PASS THROUGH EXISTING CONCRETE SLABS AND CONCRETE OR MASONRY WALLS, CORE DRILL OR SAW CUT AN OPENING. SIZE OPENINGS TO LEAVE 13 mm (1/2") CLEARANCES AROUND PIPES. PACK AND SEAL THE VOID BETWEEN THE OPENING AND THE PIPES FOR THE LENGTH OF THE OPENING WITH DOW CORNING SERIES 2000. "FIRESTOP" SEALANT U.L.C. APPROVED MATERIAL PACKED AND SECURED IN SUCH A MANNER THAT THE PACKING IN VERTICAL HOLES AND OPENINGS WILL NOT FALL OUT.

1.25. WHERE DISSIMILAR METALS ARE IN CLOSE PROXIMITY TO EACH OTHER, THEY SHALL BE SEPARATED BY MEANS OF WATERPROOF GASKETS OR OF APPROVED MATERIALS. SCREWS, BOLTS, RIVETS AND OTHER FASTENING DEVICES SHALL BE MADE OF THE SAME MATERIALS OR OF MATERIALS HAVING THE SAME CHARACTERISTICS AS THE METALS WHICH THEY FASTEN, IN ORDER TO PREVENT ELECTROLYTIC ACTION. PROVIDE HEAVY BRASS ADAPTORS FOR CONNECTIONS BETWEEN STEEL AND COPPER PIPES.

1.26. NO INSTALLATION SHALL BE CONCEALED OR RENDERED INACCESSIBLE BY DRYWALL, BOARDING OR OTHER BUILDING CONSTRUCTION, UNTIL IT HAS BEEN INSPECTED BY THE ENGINEER AND LOCAL AUTHORITIES HAVING JURISDICTION AND FOUND TO CONFORM TO CONTRACT DOCUMENT AND REGULATIONS. WHEN REQUESTING AN INSPECTION, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WORKING DAYS NOTICE IN ADVANCE.

1.27. DIMENSIONS AND/OR MEASUREMENTS INDICATED ON THE DRAWINGS ARE TO BE VERIFIED AT SITE AND ANY MAJOR DISCREPANCIES TO BE REPORTED PRIOR TO FABRICATION AND INSTALLATION. (IF APPLICABLE)

1.28. EXACT LOCATION AND ELEVATION OF MAINS TO BE DETERMINED BY CONTRACTOR TO SUIT SITE CONDITIONS.

1.29. CONTRACTOR TO CO-ORDINATE LOCATION OF SPRINKLERS WITH RESPECT TO SURFACE MOUNTED LIGHT FIXTURES AND MAINTAIN MINIMUM CLEARANCE AS REQUIRED BY NFPA 13 TO AVOID ANY OBSTRUCTION TO SPRAY PATTERN OF SPRINKLERS.

1.30. MINIMUM WALL THICKNESS OF SPRINKLER PIPING TO BE EQUIVALENT TO SCHEDULE 10S.

1.31. A COPY OF N.F.P.A STANDARD #25 IS TO BE PROVIDED AND LEFT IN A VISIBLE LOCATION IN THE SPRINKLER ROOM.

1.32. PROVIDE SHOP DRAWINGS FOR THE FOLLOWING: (WHERE APPLICABLE)

1.32.1. SPRINKLERS, ESCUTCHEON PLATES, FLEXIBLE HOSES, GUARDS, SLEEVES, AND OTHER SPECIALTY APPARATUS
1.32.2. DOUBLE CHECK VALVE/DETECTOR CHECK VALVE/BACKFLOW PREVENTORS
1.32.3. CONTROL VALVES - SPRINKLER
1.32.4. ALARM VALVES AND ALL COMPONENTS
1.32.5. CHECK VALVES, RISER CHECK VALVES C/W ACCESSORIES
1.32.6. SUPERVISORY DEVICES
1.32.7. PRESSURE AND FLOW SWITCHES
1.32.8. HANGERS AND SEISMIC SUPPORTS (WHERE APPLICABLE)
1.32.9. PIPE, FITTINGS AND VALVES
1.32.10. FIRE DEPARTMENT CONNECTIONS
1.32.11. EXCESS PRESSURE PUMPS
1.32.12. RELIEF VALVES
1.32.13. FIRE STOPPING, 3M FIRE WRAP, ELECTRICAL TRACING, ETC.
1.32.14. FIRE EXTINGUISHERS AND CABINETS

1.33. A COPY OF N.F.P.A STANDARD #25 IS TO BE PROVIDED AND LEFT IN A VISIBLE LOCATION IN THE SPRINKLER ROOM.

2. SCOPE OF WORK

2.1. CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL WORK CONTAINED THROUGHOUT ALL DRAWINGS AND SPECIFICATIONS.
2.2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND CARRYING ALL INSTALLATIONS IN ACCORDANCE WITH THE LATEST SET OF FIRE PROTECTION DRAWINGS.
2.3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST CURRENT SET OF ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL, INTERIOR DESIGN AND TO COORDINATE ALL WORK WITH THE SCOPE OF WORK ILLUSTRATED IN ALL DRAWINGS.
2.4. CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, BY-LAWS AND REQUIREMENTS STIPULATED BY THE AUTHORITY HAVING JURISDICTION (AHJ)
2.5. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING THEIR OWN QUALITY CONTROL INSPECTIONS AND SPOT CHECKS OF PREVIOUSLY COMPLETED WORK, TO ENSURE ALL SYSTEM COMPONENTS ARE FREE OF ANY DEFECTS AND TO ENSURE ALL DEFICIENCIES AND WORK HAS BEEN COMPLETED
2.6. CONTRACTOR SHALL KEEP ONE CLEAN FULL SET OF DRAWINGS ON SITE, TO BE MARKED UP TO REFLECT ANY AND ALL CHANGES MADE TO THE DESIGN. THIS AS-BUILT DRAWING SHALL BE MADE AVAILABLE TO ANC AND/OR AHJ (IF REQUESTED) UPON ARRIVAL AND PRIOR TO ANY INSPECTIONS BEING CONDUCTED.
2.7. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE HIDI GROUP PRIOR TO INSTALLATION OF ANY WALLS, PARTITIONS, CEILINGS OR OTHER ASSEMBLIES THAT WOULD CONCEAL THE COMPLETED WORK. CONTRACTOR IS RESPONSIBLE FOR REQUESTING (AS PER THE TERMS STIPULATED IN THE SPECIFICATIONS) TIMELY INSPECTIONS (WHERE APPLICABLE) BY THE HIDI GROUP AND/OR AHJ.
2.8. UPON COMPLETION OF ALL WORK, CONTRACTOR SHALL COMPLETE THE NECESSARY TESTING AND COMMISSIONING, AS STIPULATED IN NFPA 13, 14, 25 THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE AND AS REQUESTED BY THE LOCAL FIRE DEPARTMENT (AHJ).

3. SCOPE OF WORK NOT INCLUDED

3.1. ELECTRICAL WIRING (UNLESS SPECIFICALLY NOTED)
3.2. FIRE ALARM SYSTEM
3.3. ANY PIPING AND MECHANICAL WORK NOT RELATED TO SPRINKLER AND STANDPIPE
3.4. CONNECTION / WIRING FROM ANY SUPERVISORY DEVICES TO THE FIRE ALARM CONTROL PANEL / SYSTEM.
3.5. UNDERGROUND WATER SERVICE
3.6. ANY PIPE, FITTING OR APPARATUS UPSTREAM OF THE FIRE PROTECTION DOUBLE CHECK VALVE ASSEMBLY.

4. MATERIALS SUPPLIED

4.1. ALL PIPE, FITTINGS, HANGERS, ACCESSORIES AND OTHER MISCELLANEOUS PARTS SUPPLIED SHALL COMPLY WITH O.B.C., APPLICABLE NFPA STANDARDS, AND AS SPECIFIED THROUGHOUT MECHANICAL DIVISION 15 SPECIFICATIONS AND ANC BOOKLET SPECIFICATIONS (SECTIONS....)

4.2. SPRINKLERS
4.2.1. ALL SPRINKLER EQUIPMENT SHALL BE OF ONE MANUFACTURER FROM THE FOLLOWING:
4.2.1.1. VICTAULIC
4.2.1.2. VIKING
4.2.1.3. TYCO
4.2.1.4. RELIABLE, OR APPROVED EQUAL. ALL SHALL BE U.L.C. LISTED FOR THEIR SPECIFIC APPLICATION.

4.3. FLEXIBLE HOSES
4.3.1. FLEXIBLE HOSES SHALL BE ¾" VICTUALIC MODEL AH-2.
4.3.2. CONTRACTOR MAY USE 1 INCH DIA. FLEXIBLE DROPS WITH A MAXIMUM LENGTH OF 4 FEET WITH A MAXIMUM OF 4, 90 DEGREE BENDS. FLEXIBLE PIPING IF USED IS TO BE STAINLESS STEEL WITH BRAIDED CONNECTION, SINGLE PIECE WELDED CONSTRUCTION WITH NO O-RINGS OR GASKETS, ULC LISTED AND FM APPROVED

4.4. PIPING
4.4.1. REFER TO ANC SPECS AND GENERAL INSTALLATION NOTES CONTAINED ON FP-1.
4.4.2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER SLEEVING FOR ALL PIPING PENETRATIONS THROUGH WALLS AND FLOOR ASSEMBLIES.
4.4.3. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRE STOPPING ASSOCIATED WITH FIRE PROTECTION PIPING AND APPARATUS.

4.5. EQUIPMENT
4.5.1. ALL EQUIPMENT SUPPLIED AND INSTALLED SHALL BE U.L.C. LISTED.
4.5.2. ALL EQUIPMENT SHALL BE LISTED TO A MINIMUM OF 300 PSIG WORKING PRESSURE.
4.5.3. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND KEPT DEFECT FREE.
4.5.4. REFER TO ANC BOOKLET SPECIFICATIONS FOR DETAILS RELATED TO THE FIRE PUMP AND CONTROLLER AND OTHER ACCESSORIES
4.5.5. CONTRACTOR IS RESPONSIBLE TO INCLUDE FOR ALL CONCRETE PADS AND OTHER REQUIRED STRUCTURAL SUPPORTS RELATED TO FIRE PROTECTION.

5. TESTING, COMMISSIONING AND FINAL

5.1. CONTRACTOR SHALL CARRYOUT ALL TESTING AND COMMISSIONING AND QUALITY CONTROL AND RECTIFY ANY AND ALL DEFICIENCIES THAT MAY EXIST. ONCE SATISFACTORY AND DEFICIENT FREE, CONTRACTOR SHALL REQUEST IN WRITING TO HAVE THE HIDI CONDUCT A FINAL INSPECTION OF ALL WORK AND TO DEMONSTRATE SATISFACTORY OPERATION OF SUPERVISORY DEVICES AND ANY OTHER EQUIPMENT/APPARATUS.
5.2. CONTRACTOR SHALL PROVIDE ALL NECESSARY HYDRAULIC PLATES, STARTUP REPORTS, MANUALS, PRESSURE TEST AND OTHER VALVE/APPARATUS TEST CERTIFICATES.
5.3. IN ADDITION TO THE ABOVE LISTED, UPON COMPLETION OF ALL TESTING AND COMMISSIONING, CONTRACTOR SHALL PROVIDE 3 SETS OF MAINTENANCE AND OPERATING MANUALS, AS WELL AS ELECTRONIC AND HARD COPIES OF RECORD DRAWINGS.

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
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3	RE-ISSUED FOR TENDER	2024-11-19

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PROJECT

PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

SPECIFICATION

THE HIDI GROUP
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SEAL

LICENSED PROFESSIONAL ENGINEER
A. ABEDINI
100220666
Nov19/24
PROVINCE OF ONTARIO

SCALE : N.T.S	SHEET NO :
DATE : AUG 2024	FP 1.2
PROJECT NO : 2023-0059	
DRAWN BY : SK	
CHECKED BY : AA	

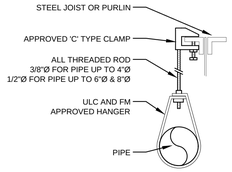
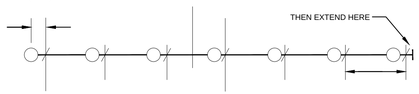


TABLE 9.2.2.1(A) MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN.) 2013 EDITION

	NOMINAL PIPE SIZE (IN.)										
	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
STEEL PIPE EXCEPT THREADED LIGHT WALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A	N/A	N/A
DUCTILE IRON PIPE	N/A	N/A	N/A	N/A	N/A	N/A	15-0	N/A	15-0	N/A	15-0	15-0

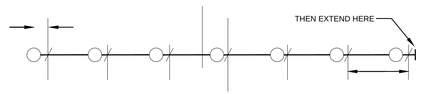
MAXIMUM
36 IN.(0.9 M) FOR 1 IN.PIPE
48 IN.(1.2 M) FOR 1 1/4" IN.PIPE
60 IN.(1.5M) FOR 1 1/2" IN.PIPE



GREATER THAN 36 IN.(0.9 M) FOR 1 IN.PIPE
GREATER THAN 48 IN.(1.2 M) FOR 1 1/4" IN.PIPE
GREATER THAN 60 IN.(1.5M) FOR 1 1/2" IN.PIPE

FIGURE A 9.2.3.4. DISTANCE FROM SPRINKLER TO HANGER.

FOR ANY PIPE SIZE:
12 IN.(305MM) MAXIMUM FOR STEEL PIPE
6 IN.(152MM) MAXIMUM FOR STEEL PIPE



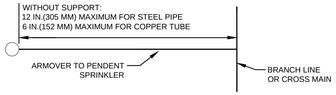
FOR ANY PIPE SIZE:
GREATER THAN 12 IN (305 MM)
FOR STEEL PIPE 6 IN. (152 MM)
FOR COPPER PIPE

FIGURE A 9.2.3.4.4(A) DISTANCE FROM SPRINKLER TO HANGER WHERE MAXIMUM PRESSURE EXCEEDS 100 PSI(6.9 BAR) AND BRANCH LINE ABOVE CEILING SUPPLIES PENDENT SPRINKLERS BELOW CEILING.

1 FP 2.1 TYPICAL HANGER INSTALLATION

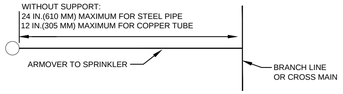
SCALE: N.T.S.

FIGURE A 9.2.3.5.2



MAXIMUM LENGTH OF UNSUPPORTED ARMOVER WHERE MAXIMUM PRESSURE EXCEEDS 100PSI(6.9BAR) AND BRANCH LINE ABOVE CEILING SUPPLIES PENDENT SPRINKLERS BELOW CEILING

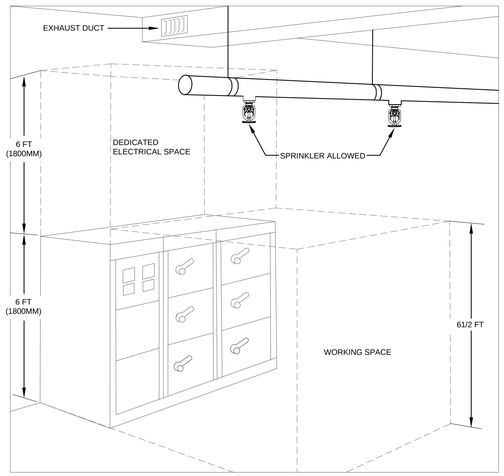
FIGURE A 9.2.3.5.



MAXIMUM LENGTH OF UNSUPPORTED ARMOVER

2 FP 2.1 UNSUPPORTED ARMOVER LENGTH

SCALE: N.T.S.



- SPRINKLERS AND SPRINKLER PIPING IS PERMITTED IN AND IS PERMITTED TO PASS THROUGH AN ELECTRICAL ROOM AS LONG AS THE PIPING IS NOT WITHIN THE " DEDICATED ELECTRICAL SPACE"
- DEDICATED ELECTRICAL SPACE IS DEFINED AS THE SPACE EQUAL TO THE WIDTH AND THE DEPTH OF THE EQUIPMENT EXTENDING FROM THE FLOOR TO A HEIGHT OF 1.8M ABOVE THE EQUIPMENT OR STRUCTURAL CEILING, WHICHEVER IS LOWER.
- FOREIGN(SPRINKLER PIPING) SYSTEMS ARE ALLOWED IN THE AREA ABOVE THE DEDICATED ELECTRICAL SPACE AS LONG AS THE ELECTRICAL EQUIPMENT IS PROPERLY PROTECTED AGAINST LEAKS OR BREAKS IN THE FOREIGN SYSTEM.
- SO THE SPRINKLER PIPING CAN RUN ABOVE THE DEDICATED ELECTRICAL SPACE 1.8M ABOVE EQUIPMENT AS LONG AS THE EQUIPMENT BELOW IS PROTECTED FROM LEAKS
- SPRINKLERS SHALL NOT BE REQUIRED IN ELECTRICAL ROOMS WHERE ALL OF THE FOLLOWING CONDITIONS ARE MET.
  1. THE ROOM IS DEDICATED TO ELECTRICAL EQUIPMENT ONLY.
  2. ONLY DRY-TYPE OR LIQUID-TYPE WITH LISTED K-CLASS FLUID ELECTRICAL EQUIPMENT IS USED
  3. EQUIPMENT IS INSTALLED IN A 2 HR FIRE RATED ENCLOSURE INCLUDING PROTECTION FOR PENETRATIONS
  4. STORAGE IS NOT PERMITTED IN THE ROOM

3 FP 2.1 SPRINKLERS WITHIN ELECTRICAL ROOM

SCALE: N.T.S.

NOTE:

1. PROVIDE ADDITIONAL SPRINKLER HEADS FOR MECHANICAL ROOMS TO ACCOMMODATE DUCTWORKS.
2. HIGH TEMPERATURE RATING SPRINKLER TO BE INSTALLED WITHIN 7FT. OF UNIT HEATER.
3. ALL OF SPRINKLERS ON MECHANICAL ROOMS TO BE C/W 1" OUTLET.
4. SPRINKLER BRANCH LINE TO PROVIDE SPRINKLER PROTECTION (HEADS C/W WIRE GUARDS) LOCATED BELOW ALL EXPOSED DUCTWORK AS REQUIRED TO MEET NFPA 13 AND LOCAL AUTHORITY STANDARDS AND REQUIREMENTS. DETERMINE EXTENT OF COVERAGE ON SITE AND EXTEND PIPING AS REQUIRED.

4 FP 2.1 TEMPERATURE ZONE AT UNIT HEATER(FIGURE 8.3.2.5)

SCALE: N.T.S

INDOOR VERTICAL INSTALLATION

INDOOR HORIZONTAL INSTALLATION

WILKINS MODEL 350A OR EQUIVALENT

5 FP 2.1 6" DOUBLE CHECK DETECTOR ASSEMBLY

SCALE: N.T.S

NOTE:

UPRIGHT SPRINKLERS SHALL BE INSTALLED UNDER ALL MECHANICAL DUCTS THAT EXCEED 4 FT. IN WIDTH.
UPRIGHT SPRINKLER UNDER MECHANICAL MUST BE INSTALLED AT 12" FROM THE EDGE OF THE UNIT

6 FP 2.1 SPRINKLER UNDER DUCTS

SCALE: N.T.S.

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
2	ISSUED FOR TENDER	2024-11-15
3	RE-ISSUED FOR TENDER	2024-11-19

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PROJECT

PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

NFPA FIGURES AND GENERAL NOTES

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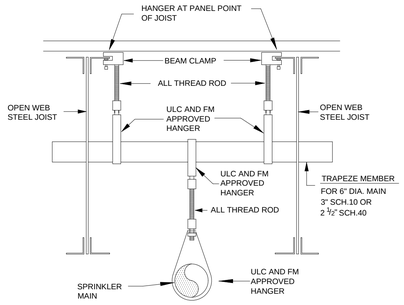
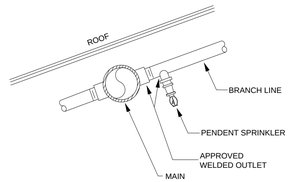
SCALE : N.T.S	SHEET NO : FP 2.1
DATE : AUG 2024	
PROJECT NO : 2023-0059	
DRAWN BY : SK	
CHECKED BY : AA	



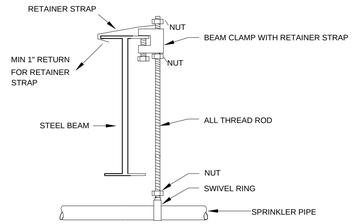
ALL 6" DIAMETER AND LARGER MAINS RUNNING PARALLEL TO JOISTS TO BE HUNG BY TRAPEZE AS PER NFPA 13

MINIMUM TRAPEZE MEMBER SIZE SHALL BE ONE OF THE BELOW LISTED:
- 3" SCH 10 OR GREATER
- 2½" SCH 40 OR GREATER
- 3" X 3" X ¼ ANGLE
- 3½" X 2½" X 5/16 ANGLE

7 FP 2.2 **MAIN TRAPEZE HANGER DETAIL(PIPE PARALLEL TO JOISTS)**
SCALE: N.T.S. (AS PER NFPA13)



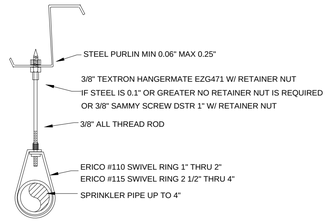
8 FP 2.2 **LINE RISER DETAILS**
SCALE: N.T.S.



CLAMP & THREAD ROD SIZES:

- 1" TO 4" PIPE USE 3/8" MATERIAL
- 5" TO 8" PIPE USE 1/2" MATERIAL

9 FP 2.2 **BEAM CLAMP HANGER**
SCALE: N.T.S.



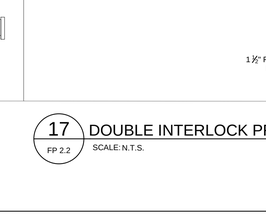
10 FP 2.2 **TYPICAL PIPE HANGER DETAILS-1**
SCALE: N.T.S.

11 FP 2.2 **TYPICAL PIPE HANGER DETAILS-2**
SCALE: N.T.S.

12 FP 2.2 **TYPICAL PIPE HANGER DETAILS-3**
SCALE: N.T.S.

STANDARD SPRAY UPRIGHT & PENDENT SPRINKLER OBSTRUCTIONS
PER FIGURE 8.6.5.1.2(b) & FIGURE 8.6.5.1.2(c) OF NFPA 13, 2013 EDITION

13 FP 2.2 **OBSTRUCTIONS AGAINST WALL**
SCALE: N.T.S. (AS PER NFPA13)



DISTANCE FROM SPRINKLER TO SIDE OF CEILING OBSTRUCTION (DIMENSION A)	MAX DISTANCE OF DEFLECTOR ABOVE OBSTRUCTION (DIMENSION B)
LESS THAN 1'-0"	0"
1'-0" TO LESS THAN 1'-6"	2 1/2"
1'-6" TO LESS THAN 2'-0"	3 1/2"
2'-0" TO LESS THAN 2'-6"	5 1/2"
2'-6" TO LESS THAN 3'-0"	7 1/2"
3'-0" TO LESS THAN 3'-6"	9 1/2"

(DIMENSION A)	(DIMENSION B)
3'-6" TO LESS THAN 4'-0"	12"
4'-0" TO LESS THAN 4'-6"	14"
4'-6" TO LESS THAN 5'-0"	16"
5'-0" TO LESS THAN 5'-6"	18"
5'-6" TO LESS THAN 6'-0"	20"
6'-0" TO LESS THAN 6'-6"	24"
6'-6" TO LESS THAN 7'-0"	30"
7'-0" TO LESS THAN 7'-6"	35"

STANDARD SPRAY UPRIGHT & PENDENT SPRINKLER OBSTRUCTIONS
PER TABLE 8.6.5.1.2 & FIGURE 8.6.5.1.2(a) OF NFPA 13, 2013 EDITION

14 FP 2.2 **POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE**
SCALE: N.T.S.

15 FP 2.2 **FIRE DEPARTMENT CONNECTION**
SCALE: N.T.S.

16 FP 2.2 **SPRINKLER HEADERS**
SCALE: N.T.S.

17 FP 2.2 **DOUBLE INTERLOCK PREACTION SYSTEM**
SCALE: N.T.S.

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
2	ISSUED FOR TENDER	2024-11-15
3	RE-ISSUED FOR TENDER	2024-11-19

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PROJECT

PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

NFPA FIGURES AND GENERAL NOTES

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SCALE :	N.T.S
DATE :	AUG 2024
PROJECT NO :	2023-0059
DRAWN BY :	SK
CHECKED BY :	AA

SHEET NO :

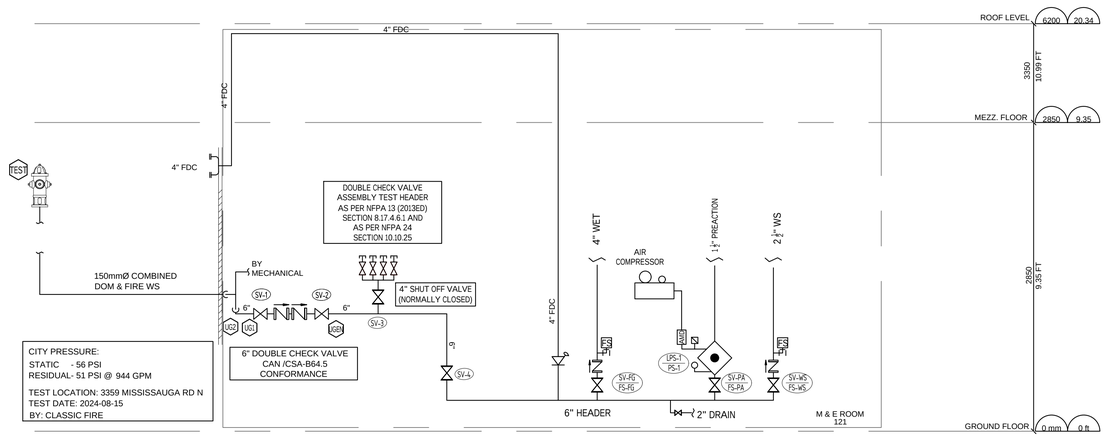
FP 2.2

FIRE PROTECTION SYSTEM SUPERVISED VALVE SCHEDULE

VALVE NUMBER	DESCRIPTION	LOCATION
SV-1	DOUBLE CHECK VALVE ASSEMBLY IN	M&E ROOM
SV-2	DOUBLE CHECK VALVE ASSEMBLY OUT	M&E ROOM
SV-3	SHUT - OFF VALVE DCVA TEST	M&E ROOM
SV-4	MAIN SHUT - OFF SPRINKLER HEADER	M&E ROOM
SV-FG	WET SPR. SYSTEM ISOLATION (GROUND & MEZZ FLOOR)	M&E ROOM
SV-PA	PREACTION SPR. SYSTEM ISOLATION (GROUND FLOOR)	M&E ROOM
SV-WS	WINDOW SPR. SYSTEM ISOLATION (GROUND FLOOR)	M&E ROOM
LPS-1	LOW AIR PRESSURE GROUND LEVEL (PREACTION)	M&E ROOM

FIRE PROTECTION SYSTEM FLOW SWITCH SCHEDULE

VALVE NUMBER	DESCRIPTION	LOCATION
FS-FG	WET SPR. SYSTEM FLOW SWITCH (GROUND &MEZZ FLOOR)	M&E ROOM
FS-PA	PREACTION SPR. SYSTEM FLOW SWITCH	M&E ROOM
FS-WS	WINDOW SPR. SYSTEM FLOW SWITCH	M&E ROOM
PS-1	WATER FLOW PS GROUND LEVEL (PREACTION)	M&E ROOM



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
2	ISSUED FOR TENDER	2024-11-15
3	RE-ISSUED FOR TENDER	2024-11-19

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PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

RISER SCHEMATIC & SUPERVISED SCHEDULE

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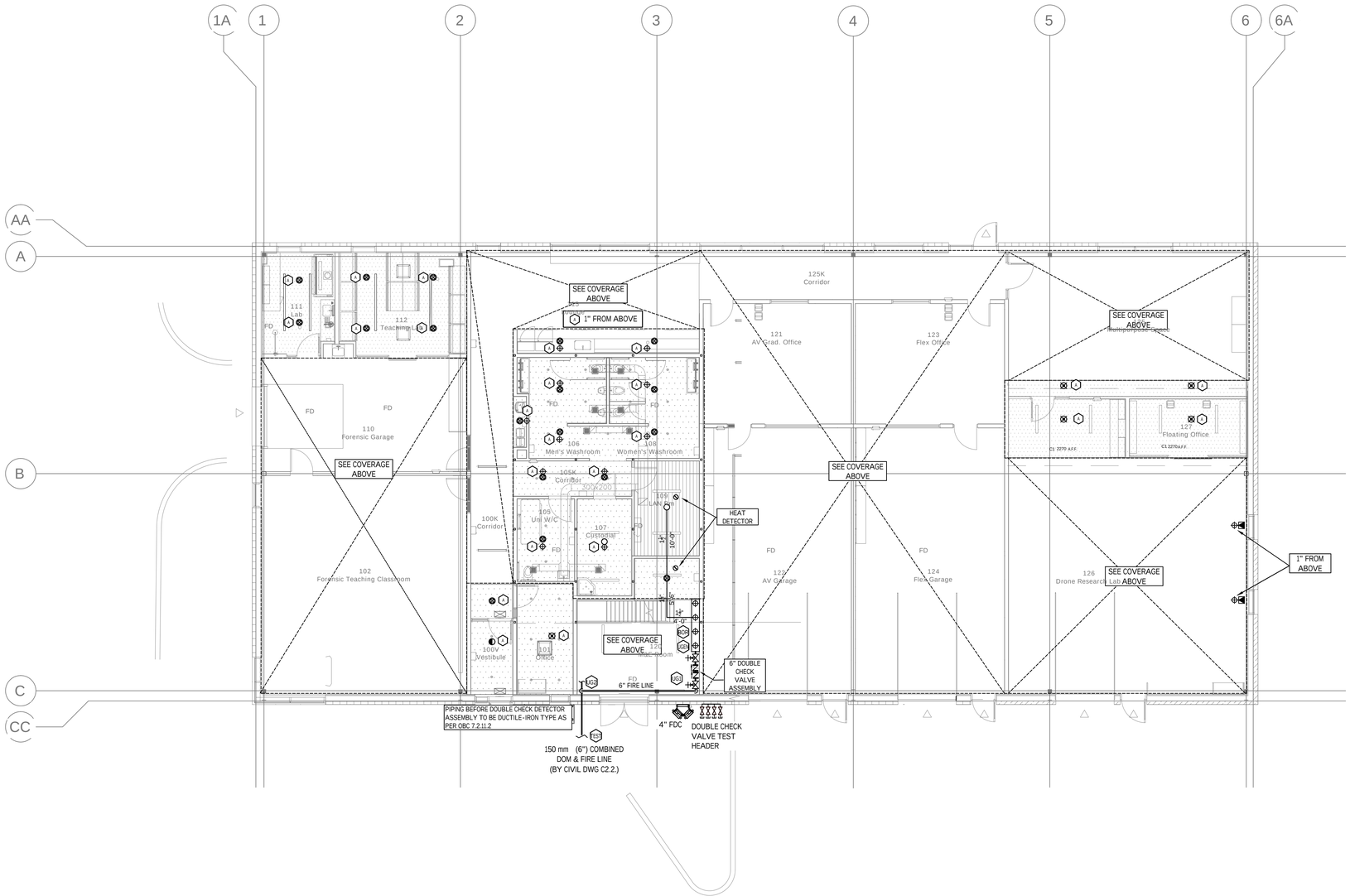
SCALE :	N.T.S
DATE :	AUG 2024
PROJECT NO :	2023-0059
DRAWN BY :	SK
CHECKED BY :	AA

SHEET NO :

FP 2.3



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR REVIEW	2024-09-03
2	ISSUED FOR PERMIT	2024-09-06
3	ISSUED FOR TENDER	2024-11-15
4	RE-ISSUED FOR TENDER	2024-11-19

SPRINKLER HEAD COUNT & LEGEND

C/W GUARD

S/R=STANDARD RESPONSE
S/C=STANDARD COVERAGE
F/R=FAST RESPONSE
Q/R=QUICK RESPONSE
E/C=EXTENDED COVERAGE

	THREAD SIZE	K-FACTOR	TEMP RATING	STYLE(MODEL)	RESPONSE	QTY
○	½"	5.6	155°F	PENDENT S/C	Q/R	2
⊠	¾"	11.2	165°F	CONCEALED PENDENT E/C	Q/R	5
⊗	½"	5.6	155°F	CONCEALED PENDENT S/C(VK5.6)	Q/R	18
◐	1"	5.6	155°F	DRY CONCEALED PENDENT S/C	Q/R	1
▼	½"	5.6	155°F	WINDOW SPRINKLERS HORIZONTALSIDEWALL	F/R	2
SYMBOL	DESCRIPTION					QTY.

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PROJECT

PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

PROPOSED SPRINKLER LAYOUT
- GROUND FLOOR

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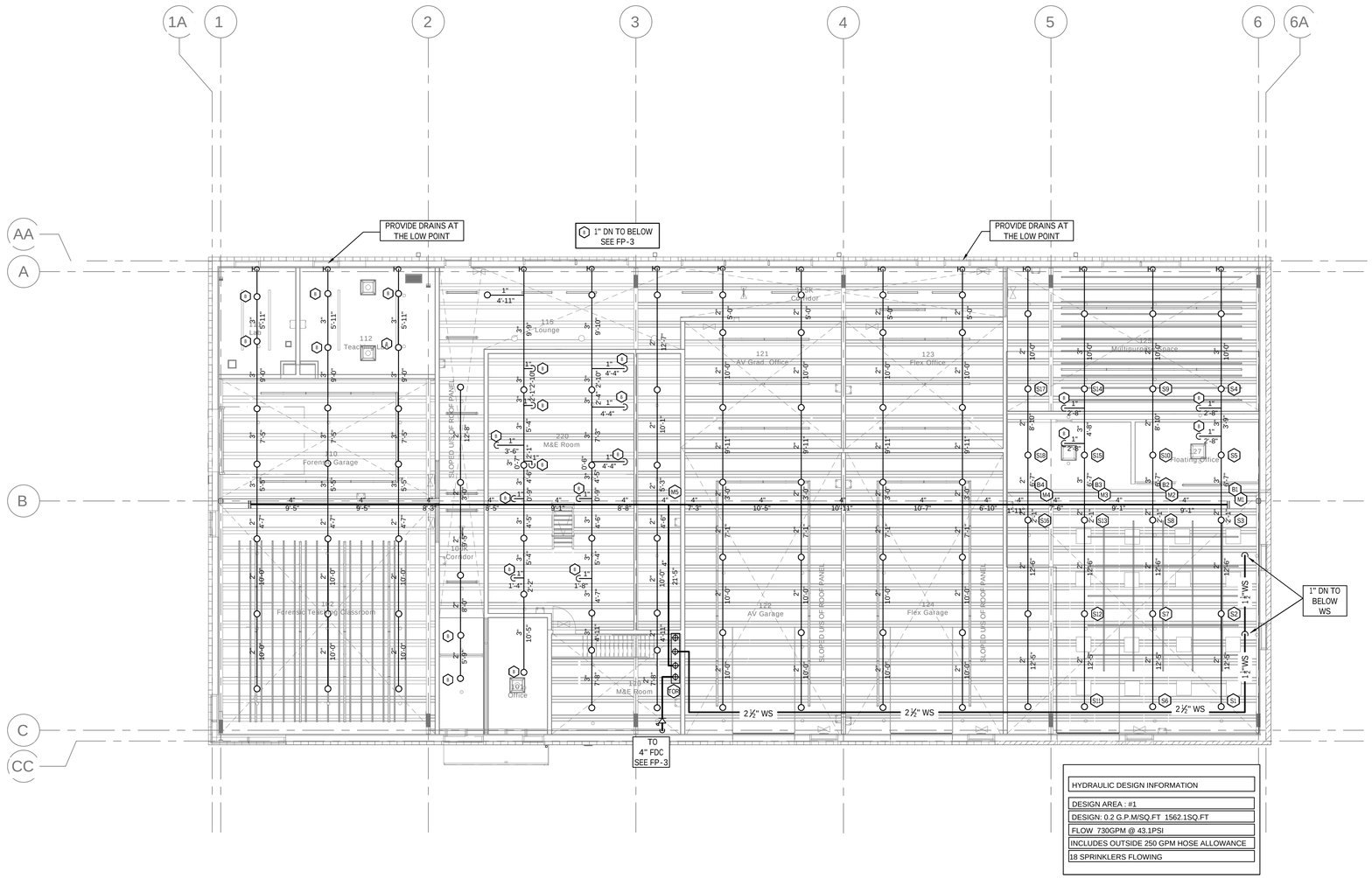
SCALE :	1:100
DATE :	AUG 2024
PROJECT NO :	2023-0059
DRAWN BY :	SK
CHECKED BY :	AA

SHEET NO :

FP 3



HYDRAULIC DESIGN INFORMATION
DESIGN AREA : #1
DESIGN: 0.2 G.P.M/SQ.FT 1562.1SQ.FT
FLOW 730GPM @ 43.1PSI
INCLUDES OUTSIDE 250 GPM HOSE ALLOWANCE
18 SPRINKLERS FLOWING

TRUE NORTH

PROJECT NORTH

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1	ISSUED FOR REVIEW	2024-09-03
2	ISSUED FOR PERMIT	2024-09-06
3	ISSUED FOR TENDER	2024-11-15
4	RE-ISSUED FOR TENDER	2024-11-19

SPRINKLER HEAD COUNT & LEGEND

○ C/W GUARD

S/R=STANDARD RESPONSE
S/C=STANDARD COVERAGE
F/R=FAST RESPONSE
Q/R=QUICK RESPONSE
E/C=EXTENDED COVERAGE

	THREAD SIZE	K-FACTOR	TEMP RATING	STYLE(MODEL)	RESPONSE	QTY
○	½"	5.6	155°F	PENDENT S/C	Q/R	98
⊠	¾"	11.2	165°F	CONCEALED PENDENT E/C	Q/R	-
⊗	½"	5.6	155°F	CONCEALED PENDENT S/C(VK5.6)	Q/R	-
◐	1"	5.6	155°F	DRY CONCEALED PENDENT S/C	Q/R	-
▼	½"	5.6	155°F	WINDOW SPRINKLERS HORIZONTALSIDEWALL	F/R	-
SYMBOL	DESCRIPTION					QTY.

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PRE-ENGINEERED BUILDING

3265 PRINCIPAL'S ROAD MISSISSAUGA

TITLE

PROPOSED SPRINKLER LAYOUT
- MEZZ FLOOR

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SCALE :	1:100
DATE :	AUG 2024
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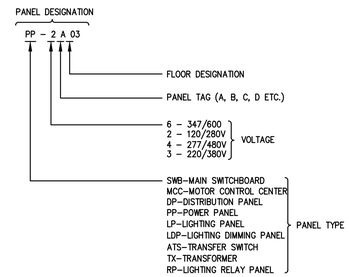
FP 4

LIGHTING LEGEND

	2' x 2'	LED/FLUORESCENT LUMINAIRE – RECESSED, CEILING, SURFACE, OR SUSPENDED (NEW or EXISTING IN RELOCATED POSITION)
	1' x 4'	
	2' x 4'	
	EXISTING BASE BUILDING FLUORESCENT LUMINAIRE TO REMAIN	
	EXISTING BASE BUILDING FLUORESCENT LUMINAIRE TO BE REMOVED	
	LED/FLUORESCENT LUMINAIRE – WALL MOUNTED	
	LUMINAIRES – RECESSED FOR CEILING MOUNTED DOWNLIGHT	
	SINGLE HEAD	MULTI–HEAD LUMINAIRES – RECESSED OR CEILING MOUNTED
	DOUBLE HEAD	
	TRIPLE HEAD	
	LUMINAIRES – WALL MOUNTED	
	LUMINAIRE – WALL WASHER/ ADJUSTABLE LUMINAIRE	
	LUMINAIRE – STEP LIGHT	
	LUMINAIRE – SUSPENDED / PENDANTS	
	POLE MOUNTED LUMINAIRE	
	ILLUMINATED BOLLARD	
	LINEAR TRACK c/w TRACK HEADS. QUANTITY OF TRACK HEADS AS PER LUMINAIRE SCHEDULE.	
EM	DENOTES LUMINAIRE ON EMERGENCY POWER	
NL NL	LUMINAIRE USED AS NIGHT LIGHT	
	COVE, UNDERCABINET, AND/OR INTEGRATED LINEAR LIGHTING STRIP. LENGTH TO BE FIELD MEASURED.	
BATTERY POWER EMERGENCY LIGHTING:		
	WALL MOUNTED	EMERGENCY REMOTE LIGHTING HEAD. QUANTITY OF HEADS AS INDICATED.
	CEILING MOUNTED	
	EMERGENCY LIGHTING BATTERY UNIT c/w REMOTE LIGHTING HEADS AS INDICATED.	
BU–# BU–#	TAG '#' INDICATES CIRCUITING FOR REMOTE HEADS.	
EXIT SIGNS:		
	CEILING MOUNTED	EXIT SIGN. MOUNTING AS INDICATED. DIRECTION AS INDICATED.
	END MOUNTED	
	WALL MOUNTED	
#	TAG '#' DENOTES EXIT SIGN TYPE WHERE MULTIPLE TYPES ARE USED. REFER TO LUMINAIRE SCHEDULE.	
SWITCHES AND SENSORS:		
$#	DENOTES SWITCH. TAG '#' INDICATES SWITCH TYPE/ACCESSORIES. '3' – 3–WAY SWITCH '4' – 4–WAY SWITCH 'K' – KEY SWITCH 'LV' – LOW VOLTAGE SWITCH 'M' – MASTER SWITCH	
D#	DENOTES DIMMER SWITCH. TAG '#' INDICATES SWITCH TYPE/ACCESSORIES. '3' – 3–WAY DIMMER SWITCH '4' – 4–WAY DIMMER SWITCH 'LV' – LOW VOLTAGE DIMMER SWITCH	
$$$	DENOTES SWITCHES GANGED UNDER COMMON COVERPLATE (2, 3 & 4 SHOWN)	
V	VARIABLE SPEED SWITCH	
OS OS	CEILING or WALL MOUNTED OCCUPANCY SENSOR.	
OS#	'#' DENOTES OCCUPANCY SENSOR TYPE. REFER TO OCCUPANCY SENSOR SCHEDULE	
PC	PHOTOCELL	
TS	TIME SWITCH	

PANEL AND CIRCUIT NUMBER DESIGNATIONS



EXAMPLE: 2A03–10–3–R1 DENOTES ELECTRICAL EQUIPMENT IS CONNECTED TO: PANEL 2A03, CIRCUIT #10, SWITCH GROUP #3, RELAY #1

ELECTRICAL LEGEND

	120V, SINGLE PHASE DIRECT CONNECTION
	208V, SINGLE PHASE DIRECT CONNECTION
	208V, THREE PHASE DIRECT CONNECTION
	600V, SINGLE PHASE DIRECT CONNECTION
	600V, THREE PHASE DIRECT CONNECTION
	DISCONNECT SWITCH – NON–FUSED
F	DISCONNECT SWITCH – FUSED
XX	DISTRIBUTION BOX. 'JB' DENOTES JUNCTION BOX OR PULL BOX, 'LB' DENOTES LIGHTING JUNCTION BOX, 'PB' DENOTES POWER DISTRIBUTION BOX.
	ELECTRICAL PANELBOARD – SURFACE MOUNTED
	ELECTRICAL PANELBOARD – RECESSED
	UTILITY PANELBOARD (ie: FIRE, COMMS etc.) – SURFACE MOUNTED
	UTILITY PANELBOARD (ie: FIRE, COMMS etc.) – RECESSED
	COMBINATION MOTOR STARTER
	LOOSE MOTOR STARTER
	CONTACTOR
	TRANSFORMER – FLOOR MOUNTED. SIZE AND TYPE AS INDICATED.
	TRANSFORMER – SUSPENDED. SIZE AND TYPE AS INDICATED.
	DUPLEX RECEPTACLE – 5–15R
	DUPLEX RECEPTACLE – CEILING MOUNTED. 5–15R UNLESS NOTED OTHERWISE.
	DUPLEX RECEPTACLE – FLOOR MOUNTED. 5–15R UNLESS NOTED OTHERWISE.
	DUPLEX RECEPTACLE – 5–20R
	SPLIT RECEPTACLE – 5–15R
	SPLIT RECEPTACLE – 5–20R
	GROUND FAULT INTERRUPTER (GFI) RECEPTACLE 5–20R, 5mA UNLESS NOTED OTHERWISE.
	DUPLEX RECEPTACLE – 5–15R. ONE HALF CONTROLLED BY WALL SWITCH
#	SPECIAL RECEPTACLE – # INDICATES TYPE
#	SINGLE SPECIALTY TWISTLOCK RECEPTACLE – # INDICATES TYPE
S	STOVE RECEPTACLE – 14–50R, 125/250V, 50A
DR	DRYER RECEPTACLE – 14–30R, 125/250V, 30A
	QUAD RECEPTACLE
	QUAD RECEPTACLE – FLOOR MOUNTED
	DUPLEX RECEPTACLE WITH USB OR HDMI
	EMERGENCY POWER OFF BUTTON – RED MUSHROOM PUSH BUTTON TO DE–ENERGIZE CORRESPONDING CONTACTORS WHEN PUSHED. MUST TURN AND PULL BUTTON TO RESET. PROVIDE RED LAMICOID INDICATING "EMERGENCY POWER OFF" EPO BUTTONS TO BE ENCLOSED IN A CLEAR LIFT COVER.
SR	SURFACE RACEWAY
	SERVICE POLE
	FEED FOR POWER TO SYSTEM FURNITURE – WALL
	FEED FOR POWER TO SYSTEM FURNITURE – FLOOR
1.0 kW	ELECTRIC BASEBOARD HEATER, SIZE AS SHOWN (208V/1PH) ALL BASEBOARDS COMPLETE WITH BUILT–IN THERMOSTAT
PT	ELECTRIC PIPE TRACE HEATING CABLE – SIZE AS NOTED REFER TO PIPE TRACE SCHEDULE
DCS	DRYER CURRENT SENSOR
LIGHTNING PROTECTION/GROUNDING DEVICES:	
	CONNECTION POINT
	DOWNLEAD
	LIGHTNING TERMINAL
G	GROUNDING ROD

MISCELLANEOUS LEGEND

AFI	DENOTES ARC FAULT INTERRUPTER
AFF	DENOTES ABOVE FINISHED FLOOR
AV	DENOTES AUDIO/VISUAL DEVICE
CH	DENOTES DEVICES MOUNTED 12" ABOVE FINISHED COUNTER HEIGHT UNLESS SPECIFICALLY NOTED OTHERWISE
CP	DENOTES CHILD PROOF
EX	DENOTES EXISTING DEVICE TO REMAIN
EXP	DENOTES EXPLOSION PROOF
GFI	DENOTES GROUND FAULT INTERRUPTER
HK	DENOTES HOUSE KEEPING
HP	DENOTES HOSPITAL GRADE
IG	DENOTES ISOLATED GROUND
K	DENOTES KEY OPERATED
MW	DENOTES MICROWAVE
NL	DENOTES NIGHT LIGHT
O/H	DENOTES OVERHEAD
R	DENOTES EXISTING TO BE REMOVED AND HANDED OVER TO OWNER
RE	DENOTES EXISTING TO BE RELOCATED
RL	DENOTES EXISTING SHOWN IN RELOCATED POSITION
RF	DENOTES REFRIGERATOR
R/A	DENOTES RETURN AIR
S/A	DENOTES SUPPLY AIR
TL	DENOTES TWIST LOCK
TR	DENOTES TAMPER RESISTANT
U/G	DENOTES UNDERGROUND
U/S	DENOTES UNDERSIDE
WG	DENOTES WIRE GUARD
WP	DENOTES WEATHER PROOF
WT	DENOTES WATER TIGHT
X	DENOTES 'REFER TO DRAWING NOTE' NUMBER
	HIDDEN LINE DENOTES EXISTING DEVICE(S) TO REMAIN, UNLESS SPECIFICALLY NOTED OTHERWISE
	SOLID LINE DENOTES NEW DEVICE(S) TO BE PROVIDED UNDER THIS CONTRACT
x	DENOTES EXISTING DEVICE(S) TO BE 'REMOVED'
DWG. E–XX / DWG. E–XXX	DENOTES MATCHLINE
1 A–00	DENOTES CROSS SECTION DETAIL CALL OUT
1 A–00	DENOTES DETAIL CALL OUT
XX–X DP–XXXX	DENOTES MECHANICAL EQUIPMENT TAG DENOTES PANEL FEED

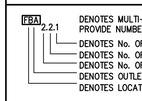
FIRE ALARM LEGEND

	FIRE ALARM SYSTEM MANUAL PULL STATION
H	FIRE FIGHTER'S HANDSET
F F	FIRE ALARM STROBE LIGHT – CEILING, WALL MOUNTED
	FIRE ALARM BELL – WALL MOUNTED
	FIRE ALARM HORN SPEAKER – CEILING, WALL MOUNTED
	FIRE ALARM HORN SPEAKER/STROBE – CEILING, WALL MOUNTED
#	IONIZATION SMOKE DETECTOR – CEILING, WALL MOUNTED SB–DENOTES C/W SOUNDER BASE, RB–DENOTES C/W RELAY BASE
	DUCT TYPE SMOKE DETECTOR W/REMOTE INDICATION
	PHOTOELECTRIC BEAM TYPE SMOKE DETECTOR
	HEAT DETECTOR – 130° FIXED TEMPERATURE TYPE – CEILING, WALL MOUNTED
	HEAT DETECTOR – COMBINATION FIXED 135F & RATE OF RISE CEILING, WALL MOUNTED
	HEAT DETECTOR – RATE OF RISE – CEILING, WALL MOUNTED
	SMOKE ALARM C/W INTEGRAL STROBE LIGHT (RESIDENTIAL) – CEILING, WALL MOUNTED
CO	COMBINATION SMOKE ALARM/CARBON MONOXIDE (CO) DETECTOR
CO	CARBON MONOXIDE DETECTOR (CO) – CEILING, WALL MOUNTED
	REMOTE PILOT LIGHT FOR SMOKE DETECTOR – CEILING, WALL MOUNTED
FS	FIRE ALARM CONNECTION TO FLOW SWITCH
SV	FIRE ALARM CONNECTION TO SUPERVISED VALVE
PS	FIRE ALARM CONNECTION TO PRESSURE SWITCH
WA	FIRE ALARM CONNECTION TO WET ALARM VALVE
DA	FIRE ALARM CONNECTION TO DRY ALARM VALVE
FAC	FIRE ALARM CONNECTION TO ITEMS AS INDICATED
FDNE	'FIRE DO NOT ENTER' SIGN
	FIRE ALARM – ADDRESSABLE INPUT MODULE
	FIRE ALARM – ADDRESSABLE OUTPUT MODULE
I	FIRE ALARM LINE ISOLATION MODULE
EOL	FIRE ALARM END OF LINE RESISTOR
	FIRE ALARM CONNECTION TO SMOKE DAMPER

SYSTEMS LEGEND

DATA OUTLETS:		
#	WALL MOUNTED	COMPLETE WITH BACKBOX, PULL CORD AND 27mm CONDUIT BACK TO THE NEAREST COMMUNICATIONS ROOM, CLOSET, OR LOCAL CABLE TRAY, UNLESS SPECIFICALLY NOTED OTHERWISE
#	FLOOR MOUNTED	
#	CEILING MOUNTED	"#" DENOTES NUMBER OF OUTLETS
VOICE (TELEPHONE) OUTLETS:		
#	WALL MOUNTED	COMPLETE WITH BACKBOX, PULL CORD AND 27mm CONDUIT BACK TO THE NEAREST COMMUNICATIONS ROOM, CLOSET, OR LOCAL CABLE TRAY, UNLESS SPECIFICALLY NOTED OTHERWISE
#	FLOOR MOUNTED	
#	CEILING MOUNTED	"#" DENOTES NUMBER OF OUTLETS
COMBINATION DATA/VOICE OUTLETS:		
#	WALL MOUNTED	COMPLETE WITH BACKBOX, PULL CORD AND 27mm CONDUIT BACK TO THE NEAREST COMMUNICATIONS ROOM, CLOSET, OR LOCAL CABLE TRAY, UNLESS SPECIFICALLY NOTED OTHERWISE
#	FLOOR MOUNTED	
#	CEILING MOUNTED	"#" DENOTES NUMBER OF OUTLETS
TV OUTLETS:		
TV	WALL MOUNTED	COMPLETE WITH BACKBOX, PULL CORD AND 27mm CONDUIT BACK TO THE NEAREST COMMUNICATIONS ROOM, CLOSET, OR LOCAL CABLE TRAY, UNLESS SPECIFICALLY NOTED OTHERWISE
	CEILING MOUNTED	
AUDIO/VISUAL LOCATION:		
AV	WALL MOUNTED	AUDIO/VISUAL
	CEILING MOUNTED	
WIRELESS ACCESS POINT (WAP) LOCATION:		
W	WALL MOUNTED	WIRELESS ACCESS POINT (WIFI)
	CEILING MOUNTED	
PUBLIC ADDRESS SYSTEM LOCATION:		
P	WALL MOUNTED	DENOTES LOCATION OF PUBLIC ADDRESS SYSTEM SPEAKER.
P	CEILING MOUNTED	
SECURITY AND ACCESS DEVICES:		
CTV	WALL OR CEILING MOUNTED	CLOSED CIRCUIT TELEVISION (SECURITY CAMERA)
MD	WALL MOUNTED	MOTION DETECTOR – SECURITY
MD	CEILING MOUNTED	
GB	WALL MOUNTED	GLASS BREAK SENSING DEVICE
	CEILING MOUNTED	
CR	CARD READER	
DC	DOOR CONTACT	
ES	ELECTRIC STRIKE	
EL	ELECTRIC LATCH	
ML	ELECTRO–MAGNETIC LOCKING DEVICE. (MAG LOCK)	
REX	REQUEST TO EXIT DEVICE	
KP	SECURITY KEY PAD	
DB	DOOR BELL	
BZ	DOOR BUZZER	
CH	DOOR CHIME	
BARRIER–FREE WASHROOM DEVICES:		
DO	DOOR OPERATOR	
BF	BARRIER–FREE DOOR OPERATOR ACTUATOR BUTTON	
DB	DURESS ALARM BUTTON	
IC	INTERCOM DEVICE	
	SYSTEM PUSH BUTTON LOCATION	
EA	EMERGENCY ASSISTANCE – AUDIBLE & VISUAL SIGNAL	
PTL	PUSH–TO–LOCK DOOR DEVICE	
MISCELLANEOUS DEVICES:		
M M	MUSIC SPEAKER – CEILING, WALL MOUNTED	
SM	SOUND MASKING SPEAKER	

MULTI–GANG DEVICE DESIGNATIONS



DISTRIBUTION LEGEND

	TRANSFORMER. VOLTAGE AND RATING AS INDICATED.
	ISOLATION TRANSFORMER C/W ELECTROSTATIC SHIELD
	CURRENT TRANSFORMER (CT)
	POTENTIAL TRANSFORMER (PT)
	MOLDED CASE CIRCUIT BREAKER (FIXED)
	AIR CIRCUIT BREAKER (FIXED)
	AIR CIRCUIT BREAKER (DRAW OUT)
	HIGH VOLTAGE CIRCUIT BREAKER
	CONTACTOR – NORMALLY OPEN, – NORMALLY CLOSED
	FUSE
	DISCONNECT SWITCH (FUSED)
	DISCONNECT SWITCH (UNFUSED)
	LOAD BREAKER SWITCH
	TRANSFER SWITCH
	FEEDER
	BUS
	BUS DUCT RISER
	GENERATOR
K	KIRK KEY INTERLOCK
M	UTILITY METER
	UTILITY METER SOCKET
M	UTILITY METER CABINET
M	METERING POINT
DMS	DIGITAL METERING SYSTEM
SPD	SURGE PROTECTIVE DEVICE
NGR	NEUTRAL GROUND
GFP	GROUND FAULT PROTECTION DEVICE
	GROUNDING CONNECTION
	LIGHTNING ARRESTER
	LIGHT INDICATOR (ie: VOLTAGE)
	STRESS CONE
R	RELAY
A	AMMETER
V	VOLTMETER
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	PANEL BOARD (SINGLE TUB)
	PANEL BOARD (DOUBLE TUB)

ELECTRICAL DRAWINGS LIST:

DWG. No.	DRAWING TITLE	ISSUED
E001	ELECTRICAL LEGEND AND DRAWING LIST	YES
E100	ELECTRICAL SITE PLAN	YES
E101	ELECTRICAL SITE LIGHTING PLAN	YES
E201	LIGHTING LAYOUT	YES
E301	ELECTRICAL POWER & SYSTEMS GROUND FLOOR PLAN	YES
E302	ELECTRICAL POWER & SYSTEMS MEZZANINE LEVEL PLAN	YES
E303	ELECTRICAL POWER & SYSTEMS ROOF PLAN	YES
E500	ELECTRICAL SINGLE LINE DIAGRAM	YES
E501	IT + SECURITY RISER DIAGRAM	YES
E502	AV REQUIREMENTS	YES
E701	MECHANICAL SCHEDULE	YES
E702	LUMINAIRE & FLOOR BOX SCHEDULE	YES
E703	FIRE ALARM SCHEDULE	YES
E801	LIGHTING CONTROL DETAILS	YES
E802	ELECTRICAL DETAILS I	YES
E803	ELECTRICAL DETAILS II	YES

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
3	ISSUED FOR SD	2023-12-21
4	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
5	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
6	ISSUED FOR PERMIT	2024-09-06
7	ISSUED FOR ESA	2024-10-21
8	ISSUED FOR 100% CD	2024-11-05
9	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

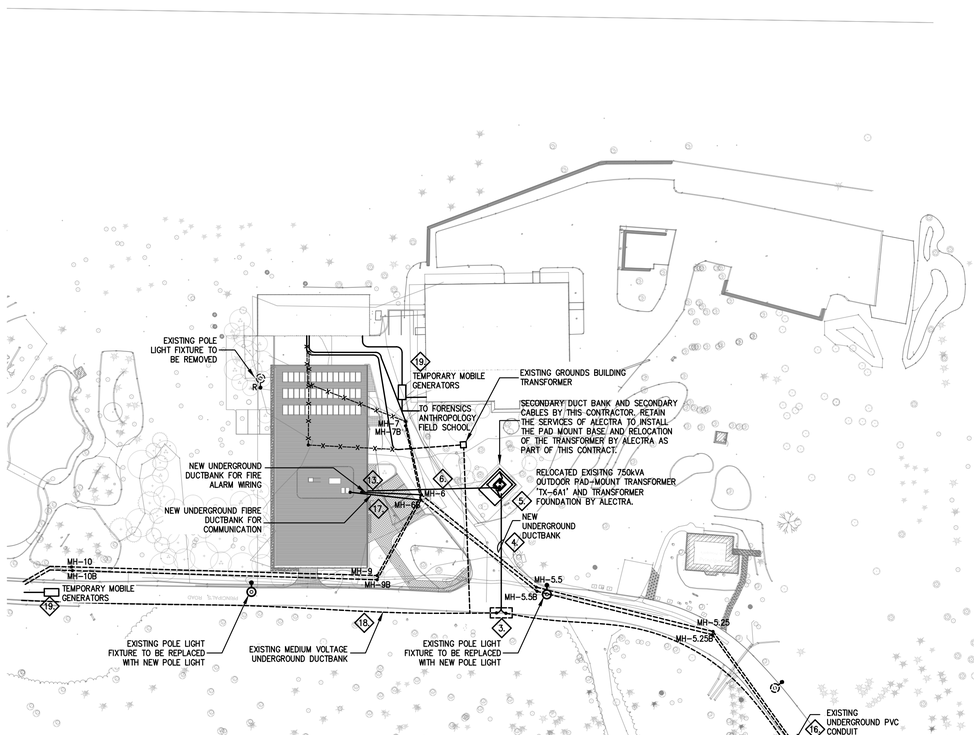
ELECTRICAL LEGEND AND DRAWING LIST

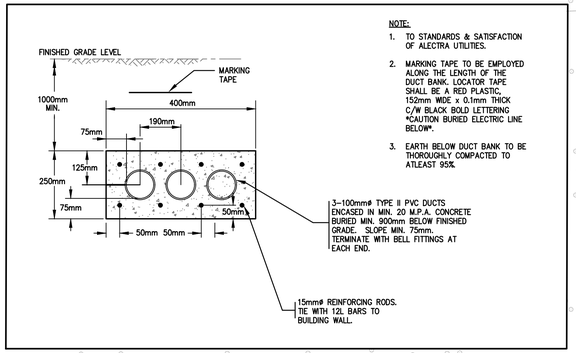
THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

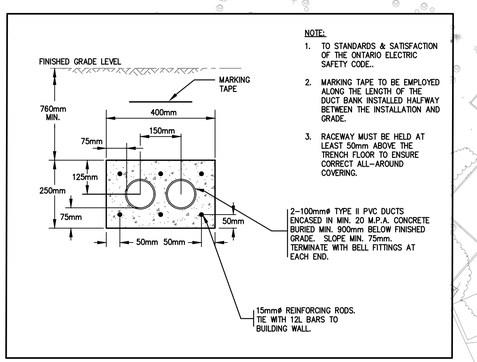
SCALE : N.T.S.	SHEET NO : E001
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	





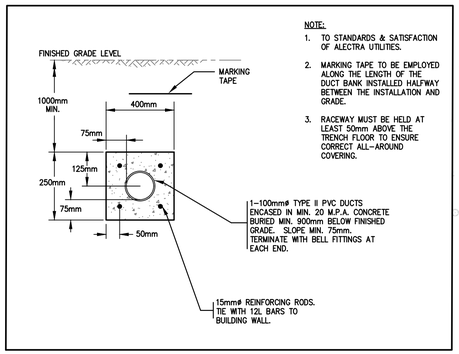
NOTE:
1. TO STANDARDS & SATISFACTION OF ALECTRA UTILITIES.
2. MARKING TAPE TO BE EMPLOYED ALONG THE LENGTH OF THE DUCT BANK. LOCATOR TAPE SHALL BE A RED PLASTIC, 152mm WIDE x 0.1mm THICK C/W BLACK BOLD LETTERING "CAUTION BURIED ELECTRIC LINE BELOW".
3. EARTH BELOW DUCT BANK TO BE THOROUGHLY COMPACTED TO ATLEAST 95%.

1 E100 **1X3 PRIMARY DUCT BANK**
SCALE: NTS



NOTE:
1. TO STANDARDS & SATISFACTION OF THE ONTARIO ELECTRIC SAFETY CODE..
2. MARKING TAPE TO BE EMPLOYED ALONG THE LENGTH OF THE DUCT BANK INSTALLED HALFWAY BETWEEN THE INSTALLATION AND GRADE.
3. RACEWAY MUST BE HELD AT LEAST 50mm ABOVE THE TRENCH FLOOR TO ENSURE CORRECT ALL-AROUND COVERING.

2 E100 **1X2 SECONDARY DUCT BANK**
SCALE: NTS



NOTE:
1. TO STANDARDS & SATISFACTION OF ALECTRA UTILITIES.
2. MARKING TAPE TO BE EMPLOYED ALONG THE LENGTH OF THE DUCT BANK INSTALLED HALFWAY BETWEEN THE INSTALLATION AND GRADE.
3. RACEWAY MUST BE HELD AT LEAST 50mm ABOVE THE TRENCH FLOOR TO ENSURE CORRECT ALL-AROUND COVERING.

3 E100 **1X1 FIRE ALARM DUCTBANK**
SCALE: NTS

NOTES

1. EXISTING S&C ELECTRIC TYPE 'PMH-9' PAD-MOUNTED GEAR LABELLED 'SC2116.' RETAIN THE SERVICES OF ALECTRA TO INSTALL, AS PART OF THIS CONTRACT. NEW 13.8kV CABLES BETWEEN LOAD TERMINALS OF EXISTING SPARE FUSED INTERRUPTER SWITCH 'C107223' IN EXISTING GEAR AND EXISTING RELOCATED 750kVA TRANSFORMER VIA EXISTING AND NEW DUCTS. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION. PROVIDE NEW S&C ELECTRIC FUSES TO SUIT.
2. EXISTING 1x3 103mm CONCRETE ENCASED DUCTBANK. NEW 13.8kV CABLES TO BE RUN IN SPARE CONDUIT WITHIN DUCTBANK
3. SPARE 103mm PVC CONDUIT IN EXISTING CONCRETE ENCASED DUCT BANK TO BE INTERCEPTED TO SUIT EXTENSION TO EXISTING RELOCATED 750kVA TRANSFORMER LOCATION. HAND DIG AND HYDRO EXCAVATE TO EXPOSE EXISTING DUCTBANK. CAREFULLY CHIP AND BREAK CONCRETE ENCASEMENT AS NECESSARY. RE-FORM EXISTING DUCTBANK AND RE-POUR CONCRETE ENCASEMENT AROUND NEW AND EXISTING 103mm PVC CONDUIT TO MINIMUM COVERAGE NOTED IN DUCT BANK DETAIL. COORDINATE ELECTRICAL ISOLATION OF EXISTING UNDERGROUND POWER FEEDERS IN EXISTING DUCTBANK WITH UTM UTILITIES INFRASTRUCTURE DIVISION. RETAIN THE SERVICES OF ALECTRA TO INSTALL, AS PART OF THIS CONTRACT.
4. RETAIN THE SERVICES OF ALECTRA TO INSTALL, AS PART OF THIS CONTRACT. NEW 3x1 103mmC (REFER TO DETAIL 1 ON THIS DRAWING) CONCRETE ENCASED DUCT BANK EXTENDED FROM EXISTING FOR MEDIUM VOLTAGE FEEDERS TO EXISTING RELOCATED 750kVA TRANSFORMER
5. EXISTING RELOCAED 750kVA PAD-MOUNTED TRANSFORMER. TRANSFORMER SHALL BE THREE-PHASE COMPARTMENTAL TYPE c/w LOADBREAK SWITCH.
6. PROVIDE NEW 2x1 103mmC CONCRETE ENCASED DUCT BANK (REFER TO DETAIL 2 ON THIS DRAWING) FOR SECONDARY 600V FEEDER FROM TRANSFORMER TO MAIN ELECTRICAL ROOM.
7. PROVIDE THREE (3) NEW FIRE ALARM MONITORING MODULES AT CENTRAL UTILITY PLANT (CUP) BUILDING. MODULES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. MODULES TO BE CONFIGURED SUCH THAT AN ALARM, TROUBLE, OR SUPERVISORY FIRE ALARM PANEL CONDITION IN THE NEWLY CONSTRUCTED BUILDING WILL ANNUNCIATE AT THE CUP BUILDING FIRE ALARM PANEL. WIRING SHALL BE RUN THROUGH NETWORK OF SPARE CONDUITS IN NEW AND EXISTING EMERGENCY POWER CONCRETE ENCASED DUCTBANKS AS INDICATED.
8. EXISTING CONCRETE ENCASED EMERGENCY POWER DUCT BANK. RUN NEW FIRE ALARM WIRING IN SPARE 103mm DUCT.
9. EXISTING UNDERGROUND EMERGENCY POWER PULL PIT TO BE UNCOVERED AT INDICATED LOCATION. HAND DIG AND HYDRO EXCAVATE AREA TO EXPOSE EXISTING PULL PIT SIDE WALLS. TERMINATE NEW SINGLE 103mm PVC CONDUIT DUCTBANK TO CONNECT PULL PIT WITH EXISTING MANHOLE MH-4B. BACKFILL EXCAVATED AREAS AND RE-FINISH SURFACES TO MATCH EXISTING.
10. NEW 1x1 103mm (REFER TO DETAIL 3 ON THIS DRAWING) PVC CONDUIT CONCRETE ENCASED DUCTBANK FOR NEW FIRE ALARM WIRING
11. EXISTING MANHOLES MH-4 AND MH-4B TO BE UNCOVERED AT INDICATED LOCATION. HAND DIG AND HYDRO EXCAVATE TO EXPOSE SIDE WALLS TO SUIT TERMINATION OF NEW DUCTBANK. EXISTING MH-4B TO BE REMOVED AND REPLACED WITH NEW DUE TO INFILL WITH ASPHALT. EXISTING DUCTS TO BE RE-TERMINATED TO MH-4B.
12. RUN NEW FIRE ALARM TROUBLE, ALARM, AND SUPERVISORY CONDUCTORS THROUGH EXISTING EMPTY SPARE 103mm UNDERGROUND RIGID PVC CONDUIT.
13. PROVIDE NEW 1x1 103mm CONCRETE ENCASED RIGIC PVC DUCT BANK (REFER TO DETAIL 1 ON THIS DRAWNG) BETWEEN EXISTING MANHOLE MH-6 AND NEW BUILDING FIRE ALARM PANEL FOR NEW WIRING TO BE ROUTED FROM THE CUP BUILDING.
14. OPTICAL CROSSOVER CABINET OCC NO.1 INSTALLED UNDER SEPARATE CONTRACT. DIV. 26 CONTRACTOR TO SUPPLY AND INSTALL 48 OS2 INDOOR/OUTDOOR FIBRE CABLE BETWEEN NEW BUILDING AND OCC NO.1 THROUGH NETWORK OF EXISTING AND NEW DUCT BANKS. TERMINATIONS AT OCC NO.1 BY UTM INFORMATION & INSTRUCTIONAL SERVICES DEPARTMENT. TERMINATIONS IN NEW BUILDING BY DIV.26.
15. NEW UNDERGROUND FIBRE CONCRETE ENCASED CONDUIT DUCTBANK BETWEEN EXISTING MANHOLE MH-4 AND OCC NO.1 INSTALLED UNDER SEPARATE CONTRACT.
16. RUN 48 OS2 INDOOR/OUTDOOR FIBRE CABLE THROUGH EXISTING 103mm UNDERGROUND RIGID PVC CONDUIT. PULLING OF NEW CABLE SHALL BE DONE WITH CARE AS EXISTING CONDUITS ARE FILLED WITH OPERATIONAL EXISTING TO REMAIN FIBRE CABLES SERVING NEARBY BUILDINGS.
17. PROVIDE 1x1 CONCRETE ENCASED DUCTBANK (REFER TO DETAIL 1 ON THIS DRAWING) FOR UNDERGROUND FIBRE BETWEEN EXISTING MANHLE MH-6B AND MAIN COMMUNICATION ROOM IN NEW BUILDING. TERMINATE DUCTBANK IN PULL PIT WITHIN ROOM. TERMINATE FIBRE CABLE TO DATA RACK NO.1 FIBRE PATCH PANEL. EXISTING MANHOLE MH-6B TO BE UNCOVERED. HAND DIG AND HYDRO EXCAVATE AREA TO EXPOSE SIDE WALLS TO SUIT TERMINATION OF NEW 103mm CONDUIT DUCTBANK.
18. EXISTING MEDIUM VOLTAGE UNDERGROUND CONCRETE ENCASED DUCTBANK
19. DIVISION 26 TO PROVIDE TEMPORARY PORTABLE DIESEL GENERATORS TO KEEP THE FOLLOWING BUILDINGS ENERGIZED DURING THE TIME THE EXISTING MEDIUM VOLTAGE SWITCHGEAR IS DE-ENERGIZED TO SUIT THE ASSOCIATED SCOPES OF WORK. FOR EACH GENERATOR INCLUDE IN BID PRICE ALL COSTS ASSOCIATED WITH CONNECTION AND DISCONNECTION OF GENERATORS TO THE RESPECTIVE BUILDING'S MAIN DISTRIBUTION PANEL, DISCONNECT AND RE-CONNECT OF EXISTING CABLES, FUEL COSTS, AND SERVICES OF ONE (1) GENERATOR TECHNICIAN FOR THE ENTIRE TIME THAT THE PORTABLE GENERATOR IS OPERATIONAL:
   - PALEOMAGNETISM BUILDING, FORENSICS ANTHROPOLOGY FIELD SCHOOL & GROUNDS BUILDING – 100kW/125kVA (120/240v, 3w + G)
   - LISLEHURST PRINCIPAL'S RESIDENCE – 50kW/75kVA (120/240v, 3w + G)
   - WEATHER STATION – 100kW/125kVA (120/240v, 3w + G)
20. THE CAMPUS ELECTRICAL DISTRIBUTION IS CUSTOMER OWNED, BUT THE HIGH VOLTAGE (HV) WORK IS DONE BY ALECTRA ON BEHALF OF UofT. ALL WORK RELATED TO THE HV DISTRIBUTION, DUCT, DUCTBANK AND PAD MOUNT TRANSFORMER IS PART OF THIS CONTRACT, BUT SHALL BE UNDERTAKEN BY ALECTRA. RETAIN THE SERVICES OF ALECTRA TO CONDUCT THIS PORTION OF WORK FOR A FULL AND COMPLETE SYSTEM.

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
3	ISSUED FOR SD	2023-12-21
4	ISSUED FOR SPA	2024-01-19
5	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
6	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
7	ISSUED FOR PERMIT	2024-09-06
8	ISSUED FOR ESA	2024-10-21
9	ISSUED FOR 100% CD	2024-11-05
10	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

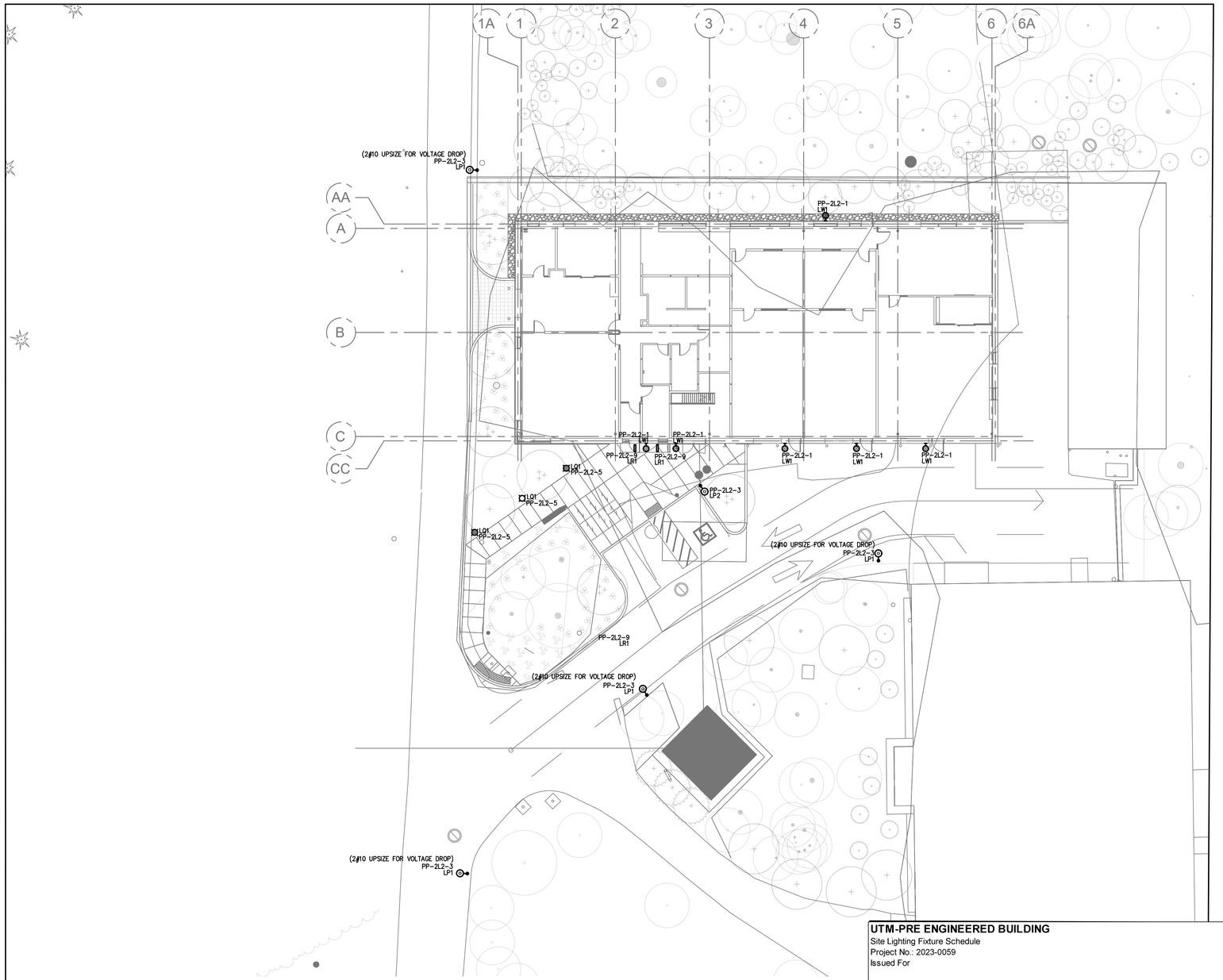
ELECTRICAL SITE PLAN

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENCED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E100
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

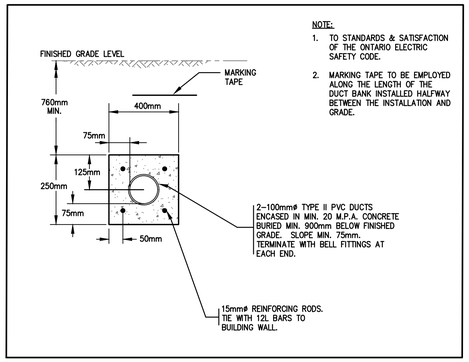


3 E101 ELECTRICAL SITE LIGHTING PLAN

SCALE: 1:200

NOTES:

1. ALL SITE LIGHTS TO BE CONTINUED BY SITE LIGHT CONTROLS. REFER TO 6/E-802 FOR DETAILS.

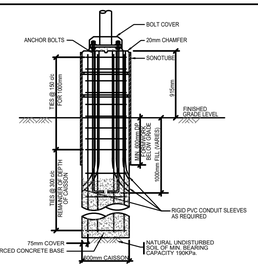


NOTE:

1. TO STANDARDS & SATISFACTION OF THE ONTARIO ELECTRIC SAFETY CODE.
2. MARKING TAPE TO BE EMPLOYED ALONG THE LENGTH OF THE DUCT BANK INSTALLED HALFWAY BETWEEN THE INSTALLATION AND GRADE.

1 E101 DUCTBANK FOR FEEDERS TO SITE LIGHT POLES

SCALE: NTS



NOTES:

1. POLE BASE DETAIL TO REVIEWED BY STRUCTURAL ENGINEER PRIOR TO APPROVAL.
2. POLE BASE DESIGN SHALL MATCH EXISTING IN DIMENSIONS, FINISHES AND STRUCTURE.
3. ALL CAISSON EXCAVATIONS MUST BE INSPECTED AND APPROVED BY QUALIFIED SOIL ENGINEER PRIOR TO POURING.
4. CONCRETE SHALL ATTAIN A STRENGTH OF 35MPa AT 28 DAYS. TO BE REVIEWED BY A STRUCTURAL ENGINEER.
5. USE AIR ENTRAINED CONCRETE MAX. SLUMP 100mm (6% AIR).
6. RE-BARS SHALL BE DEFORMED GRADE fy=400MPa.
7. ALL WORK SHALL CONFORM TO THE RELEVANT SECTIONS OF LATEST EDITION OF THE ONTARIO BUILDING CODE AND CSA STANDARD.
8. CAISSON MUST BE POURED MONOLITHICALLY AND WITHOUT JOINTS.
9. PROVIDE CAISSON LINERS IF REQUIRED DURING EXCAVATING.
10. POLE BASE TO CONFORM TO LUMINAIRE/POLE MANUFACTURER'S RECOMMENDATIONS.

2 E101 TYPICAL LIGHT/SECURITY POLE BASE

SCALE: NTS

UTM-PRE ENGINEERED BUILDING

Site Lighting Fixture Schedule
Project No.: 2023-0059
Issued For

Type	Luminaire Description	Lamp & Wattage	Control Protocol	Input voltage	Finish	Mounting	Location	Manufacturer & Catalogue #	Notes
LP1	POLE MOUNTED LED FIXTURE WITH TYPE 3 DISTRIBUTION, CORROSION RESISTANT, DIE-CAST ALUMINUM HOUSING. TO BE MOUNTED AT 5500mm.	35W, 4748LMNS, 3000K, 80CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	POLE	SITE LIGHTING	**BEACON:** VIPER AREA/SITE VP-1-160L-35-3K8-3-UNV POLE: VALMONT PATAGONIA SINGLE ARM POLE OR APPROVED EQUAL	FIXTURES SHALL BE IP65 RATED AND DARK SKY COMPLIANT.
LP2	ASYMMETRIC WIDE BEAM POLE MOUNTED LED FIXTURE WITH TYPE 2 DISTRIBUTION, CONSTRUCTED IF DIE-CAST MARINE GRADE ALUMINUM. TO BE MOUNTED AT 4500mm.	23W, 2352LMNS, 3000K, 80CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	POLE	SITE LIGHTING	**BEGA:** LIGHT BUILDING ELEMENT 88977-K3 OR APPROVED EQUAL	FIXTURES SHALL BE IP65 RATED AND DARK SKY COMPLIANT.
LQ1	LED BOLLARD MOUNTED ON PLANTER. CONSTRUCTED WITH MARINE GRADE ALLUMINUM.	14.5W, 13.61LMNS, 3000K, 80CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	BOLLARD	SITE LIGHTING	**BEGA:** BOLLARD 99058 OR APPROVED EQUAL	FIXTURES SHALL BE IP65 RATED AND DARK SKY COMPLIANT.
LW1	ARCHITECTURAL, LOWPROFILE WALL MOUNTED OUTDOOR LIGHT WITH BUILT-IN NICKEL CADIUM BATTERY FOR EMERGENCY LIGHTING. PROVIDE PHOTO-SENSOR AND PIR MOTION DETECTOR OPTION. PROVIDE LIGHT SUITABLE FOR -25 TO 50 DEGREES CELSIUS WITH OPTIONAL HEATER OPTION.	3.4W, 1600LMNS (AC), 600LMNS (EMS), 3000K, LED		120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	WALL MOUNTED	SITE LIGHTING	**HUBBELL COMPASS:** CUSO BK-H OR APPROVED EQUAL	FIXTURES SHALL BE IP65 RATED AND DARK SKY COMPLIANT.
LR1	ARCHITECTURAL, EXTRUDED ALUMINUM NOMINALLY 2' L X 2" W RECESSED LINEAR FIXTURE.	7.2W/FT, 750LMN/FT, 3000K, 90CRI LEED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	RECESSED	SITE LIGHTING	**AXIS LIGHTING:** EXTEND 2 EX2R-750-90-30-SO-2-X-120-DPX-X OR APPROVED EQUAL	FIXTURES SHALL BE 1P65 RATED

TRUE NORTH PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
3	ISSUED FOR SD	2023-12-21
4	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
5	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
6	ISSUED FOR PERMIT	2024-09-06
7	ISSUED FOR ESA	2024-10-21
8	ISSUED FOR 100% CD	2024-11-05
9	ISSUED FOR TENDER	2024-11-15

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UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

ELECTRICAL SITE LIGHTING PLAN

THE**HIDI**GROUP
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Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

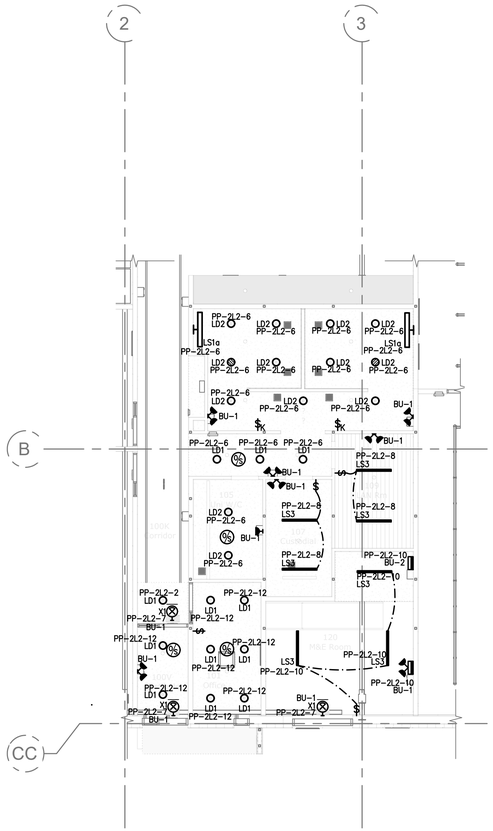
SCALE :	1:200
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	MP
CHECKED BY :	AT

SHEET NO :

E101

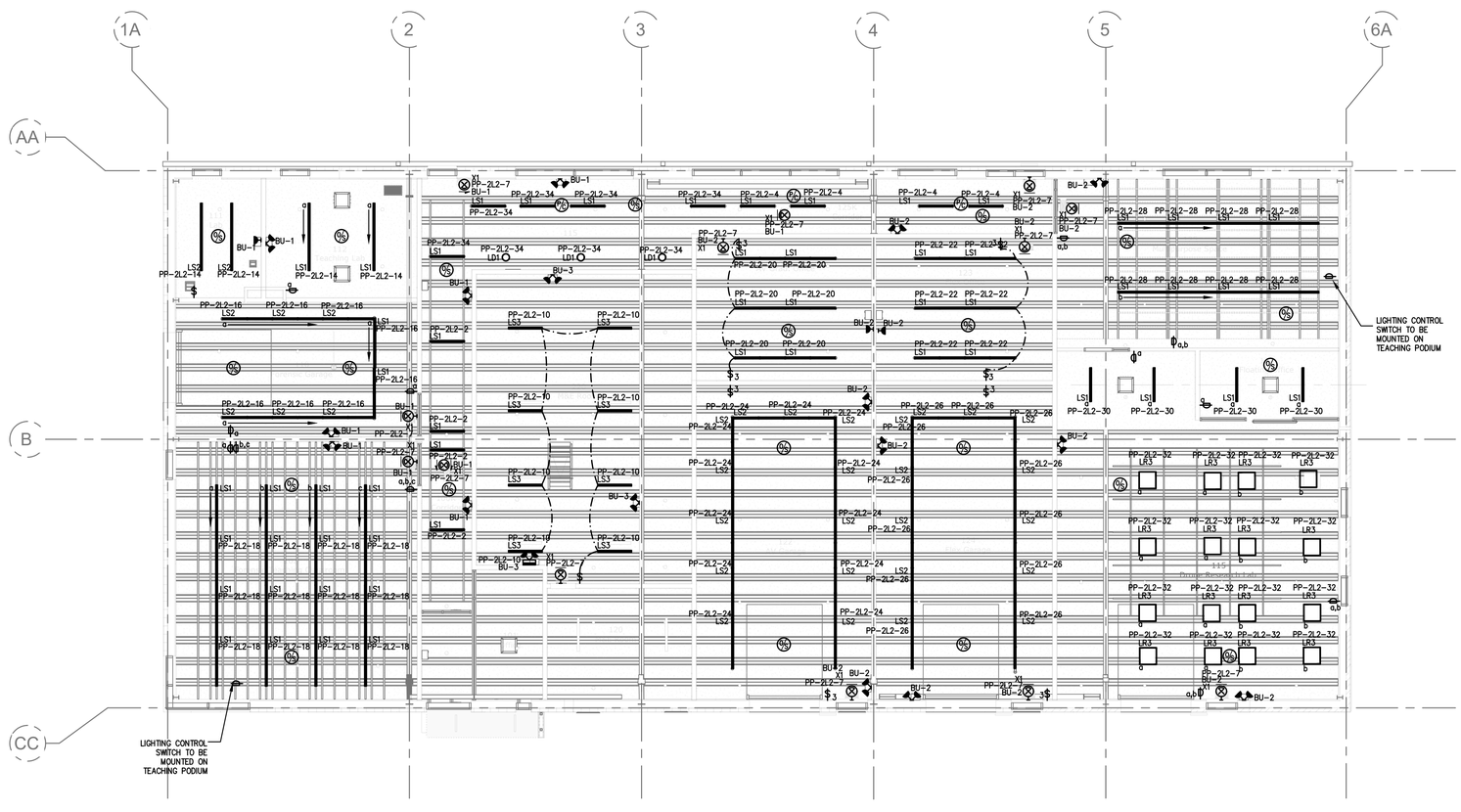
NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND DOCUMENTS.
2. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR FINAL DEVICE LOCATIONS. COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATIONS.
3. REFER TO TYPICAL LIGHTING CONTROL DETAIL FOR ADDITIONAL INFORMATION.



1 E-201 LIGHTING PLAN – ENTRY AND SERVICE CORE

1:100



2 E-201 LIGHTING PLAN

1:100

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
2	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
3	ISSUED FOR PERMIT	2024-09-06
4	ISSUED FOR ESA	2024-10-21
5	ISSUED FOR 100% CD	2024-11-05
6	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

LIGHTING LAYOUT

THEHIDIGROUP

155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

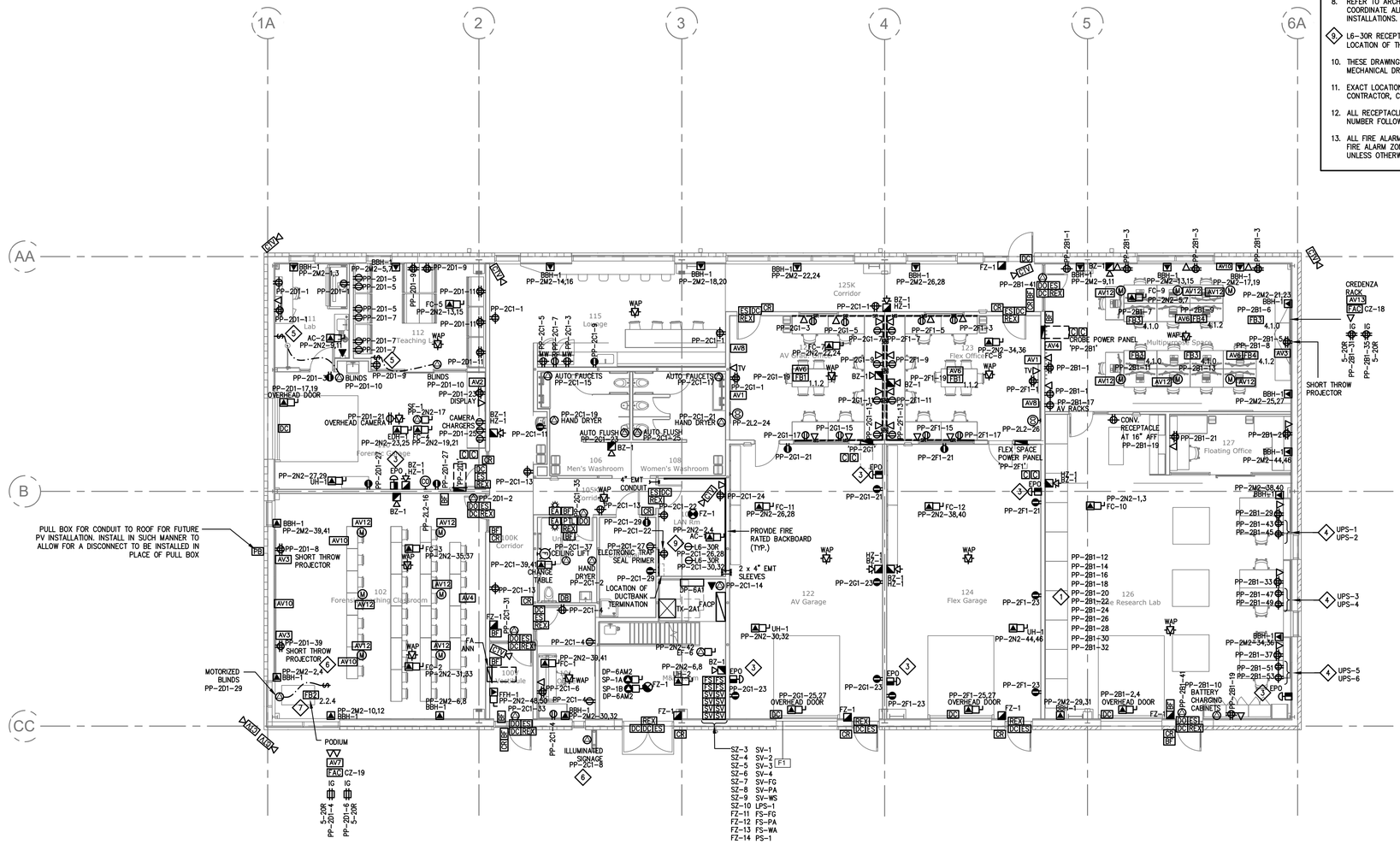
SEAL

LICENCED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : 1:100	SHEET NO : E201
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

KEY NOTES

1. PROVIDE ROUGH-INS AS LISTED FOLLOWING FOR VARIOUS EQUIPMENTS. FINAL LOCATION AND MOUNTING HEIGHTS TO BE COORDINATED WITH ARCHITECT.
   - 1.1. TEN (10) 5-15R DUPLEX RECEPTACLES WITH DATA CONNECTIONS TO LAPTOPS.
   - 1.2. TWO (2) 5-20R DUPLEX RECEPTACLES.
   - 1.3. TEN (10) 5-15R DUPLEX RECEPTACLES.
2. PROVIDE SEPARATE BACKBOXES AND FACEPLATES FOR POWER AND LOW VOLTAGE DEVICES.
3. PROVIDE PROTECTIVE PLASTIC COVER FOR EPO. PROVIDE RED LAMACOID INDICATING "EMERGENCY POWER OFF" EPO BUTTONS TO BE ENCLOSED IN A CLEAR LIFT COVER.
4. PROVIDE 1800W, LINE INTERACTIVE STANDALONE UPS FOR EACH COMPUTER WORKSTATION (QTY 6). 10MINUTES RUNTIME. UPS SHALL BE APC SMART UPS SERIES SMT2200C. PROVIDE RAISED STAND UNDER UPS SO THAT IT IS NOT SITTING DIRECTLY ON FLOOR. UPS ARE TAGGED UPS 1 TO 6.
5. PROVIDE 2 POSITION MOMENTARY UP & DOWN SWITCH FOR MOTORIZED BLINDS WITH 3#12 WIRE FOR BLINDS CONTROL.
6. ILLUMINATED SIGNAGE TO BE CONTROLLED BY SITE LIGHT CONTROLS. REFER TO 6/E-802.
7. COORDINATE THE FINAL LOCATION OF THE FLOOR BOX WITH AV CONSULTANT PRIOR TO INSTALLATION ON SITE.
8. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR FINAL DEVICE LOCATIONS. COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATIONS.
9. L6-30R RECEPTACLES TO BE MOUNTED TO REAR OF 12" MANAGER. COORDINATE THE FINAL LOCATION OF THE RECEPTACLES PRIOR TO INSTALLATION ON SITE.
10. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND DOCUMENTS.
11. EXACT LOCATION OF MECHANICAL EQUIPMENT TO BE COORDINATED WITH MECHANICAL CONTRACTOR, CONFIRM EXACT LOCATION WITH ARCHITECT.
12. ALL RECEPTACLES SHALL BE CLEARLY LABELLED WITH PANEL DESIGNATION AND CIRCUIT NUMBER FOLLOWING FINAL INSTALLATION.
13. ALL FIRE ALARM DEVICES SERVING THIS FLOOR, SHALL BE CONNECTED TO THE RESPECTIVE FIRE ALARM ZONE NUMBER AS INDICATED ON THE DRAWING E703 – FIRE ALARM SCHEDULE, UNLESS OTHERWISE NOTED.



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
3	ISSUED FOR SD	2023-12-21
4	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
5	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
6	ISSUED FOR PERMIT	2024-09-06
7	ISSUED FOR ESA	2024-10-21
8	ISSUED FOR 100% CD	2024-11-05
9	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

POWER & SYSTEMS LAYOUT - GROUND FLOOR

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

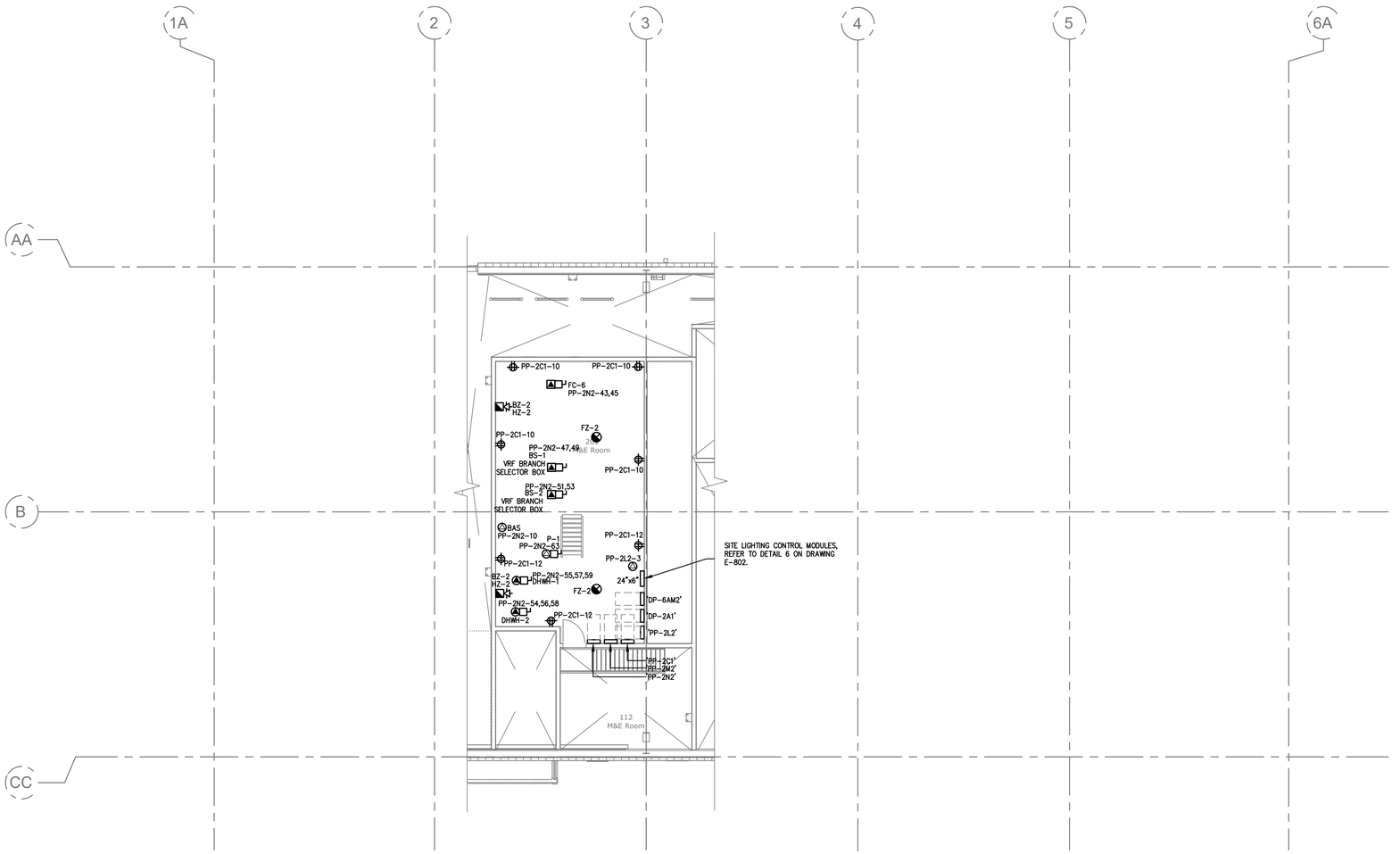
SCALE :	1:100
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	MP
CHECKED BY :	AT

SHEET NO :

E301

NOTES

1. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND DOCUMENTS.
2. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR FINAL DEVICE LOCATIONS. COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATIONS.
3. EXACT LOCATION OF MECHANICAL EQUIPMENT TO BE COORDINATED WITH MECHANICAL CONTRACTOR.
4. ALL RECEPTACLES SHALL BE CLEARLY LABELLED WITH PANEL DESIGNATION AND CIRCUIT NUMBER FOLLOWING FINAL INSTALLATION.
5. ALL FIRE ALARM DEVICES SERVING THIS FLOOR, SHALL BE CONNECTED TO THE RESPECTIVE FIRE ALARM ZONE NUMBER AS INDICATED ON DRAWING E703 – FIRE ALARM SCHEDULE, UNLESS OTHERWISE NOTED.



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD	2023-12-21
3	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
4	ISSUED FOR PERMIT	2024-09-06
5	ISSUED FOR ESA	2024-10-21
6	ISSUED FOR 100% CD	2024-11-05
7	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

POWER & SYSTEMS LAYOUT - MEZZANINE FLOOR

THE**HIDI**GROUP
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SEAL

LICENSED PROFESSIONAL ENGINEER
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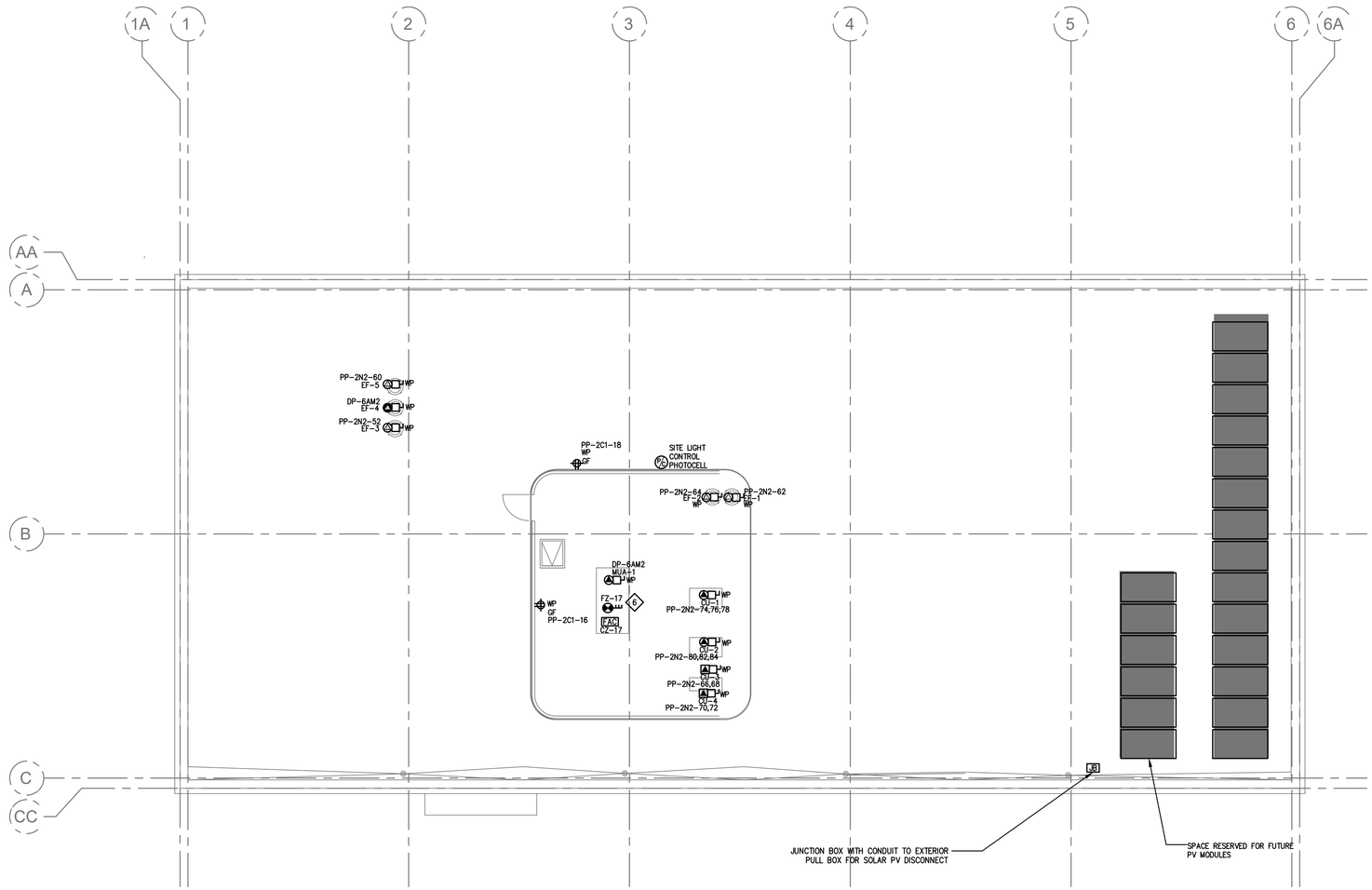
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : 1:100	SHEET NO : E302
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

KEY NOTES

1. INSTALL DUCT SMOKE DETECTOR IN STRAIGHT SECTION OF DUCT WORK WHERE THERE IS LAMINAR FLOW
2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND DOCUMENTS.
3. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR FINAL DEVICE LOCATIONS. COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATIONS.
4. EXACT LOCATION OF MECHANICAL EQUIPMENT TO BE COORDINATED WITH MECHANICAL CONTRACTOR.
5. ALL RECEPTACLES SHALL BE CLEARLY LABELLED WITH PANEL DESIGNATION AND CIRCUIT NUMBER FOLLOWING FINAL INSTALLATION.
6. ALL FIRE ALARM DEVICES SERVING THIS FLOOR, SHALL BE CONNECTED TO THE RESPECTIVE FIRE ALARM ZONE NUMBER AS INDICATED ON DRAWING E703 – FIRE ALARM SCHEDULE, UNLESS OTHERWISE NOTED.



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
3	ISSUED FOR SD	2023-12-21
4	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
5	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
6	ISSUED FOR PERMIT	2024-09-06
7	ISSUED FOR ESA	2024-10-21
8	ISSUED FOR 100% CD	2024-11-05
9	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

POWER & SYSTEMS LAYOUT - ROOF

THEHIDIGROUP
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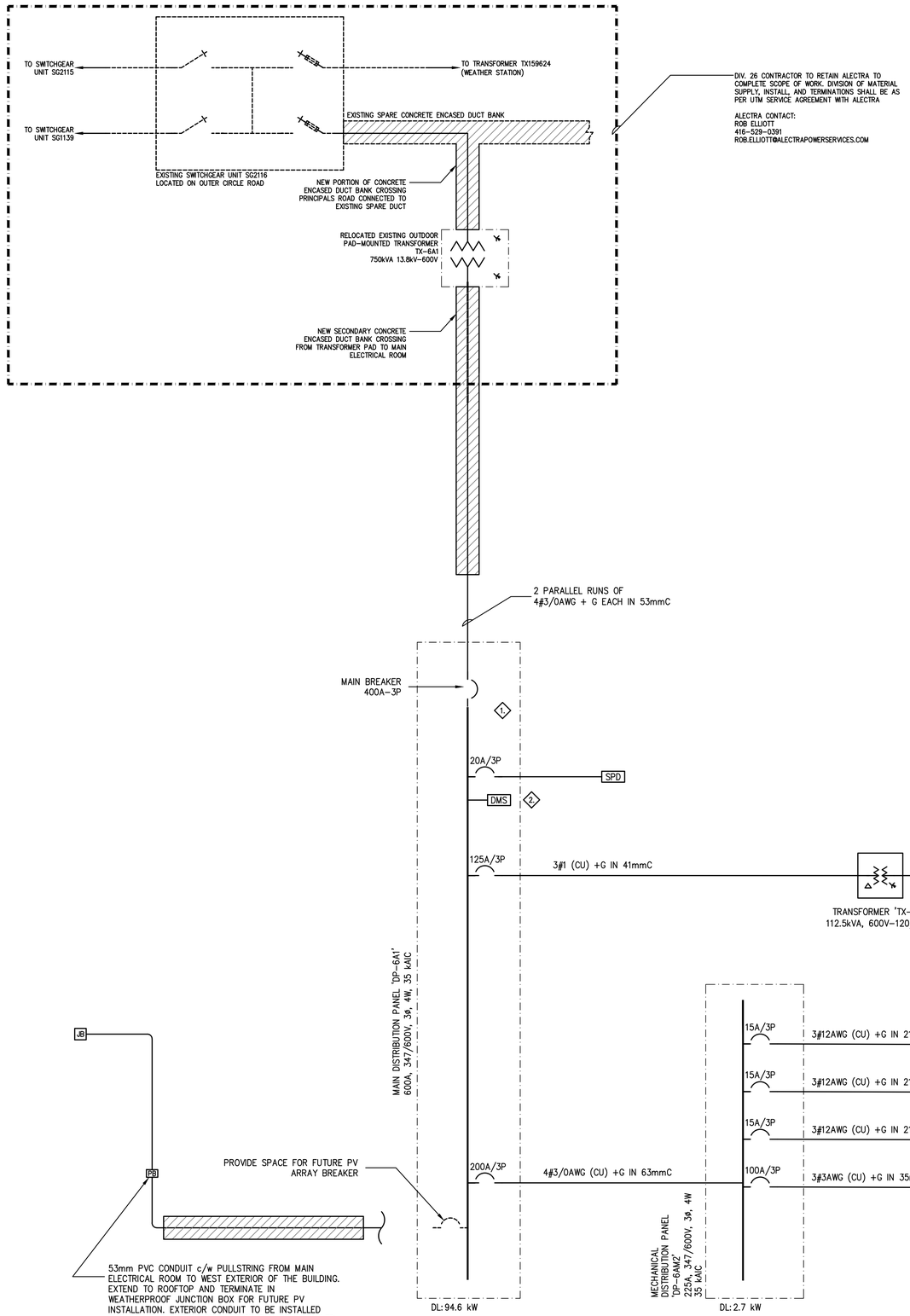
SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE :	1:100
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	MP
CHECKED BY :	AT

SHEET NO :

E303



KEY NOTES

1. THIS BUILDING IS SUB-FED FROM THE CENTRAL UTILITIES PLANT, THEREFORE A HYDRO BULK METER IS NOT EQUIPPED IN THIS BUILDING.
2. PROVIDE A DIGITAL CHECK METER WHICH CAN RECORD THE PEAK LOAD OBSERVED IN KW AND KVA FROM ITS LAST RESET. PROVIDE SCHNEIDER ELECTRIC PM5563 METER. THIS METER SHALL BE INTEGRATED INTO THE CAMPUS PME SYSTEM.

RESPONSIBILITY MATRIX

SCOPE	SUPPLY	INSTALL
PRIMARY CABLES	ALECTRA	ALECTRA
SECONDARY CABLES	DIV.26	DIV.26
TERMINATIONS	–	ALECTRA
TRANSFORMER	ALECTRA	ALECTRA
TRANSFORMER PAD	ALECTRA	ALECTRA

NOTES:

1. RETAIN THE SERVICES OF ALECTRA TO PERFORM THE SCOPE OF WORK IDENTIFIED ABOVE AS PART OF THIS CONTRACT

NOTES

1. ALL FLOOR MOUNTED ELECTRICAL ROOM EQUIPMENT SHALL BE MOUNTED ON A 100MM CONCRETE PAD. THIS CONTRACTOR SHALL PROVIDE THE PADS TO MEET THE REQUIREMENTS OF THE STRUCTURAL DIVISION.
2. ALL MAIN ELECTRICAL ROOM EQUIPMENT IS TO BE SPRINKLERPROOF DESIGNED WITH DRIP SHIELDS.
3. ELECTRICAL SERVICE GROUND MUST CONFORM TO OESC SECTION 36 AND TABLE 51.
4. ALL LIFE SAFETY ELECTRICAL DISTRIBUTION CABLES ARE TO BE 2 HOUR FIRE RATED CABLES (MI) OR ENCLOSED IN A 2 HOUR FIRE RATED ENCLOSURE. CONCRETE ENCASEMENT TO BE 76MM MINIMUM ON ALL SIDES.
5. ALL TRANSFORMERS LOCATED IN MAIN ELECTRICAL ROOM OR MECHANICAL PENTHOUSE ARE TO BE MOUNTED ON NEOPRENE 'NSN' PADS WITH 13MM STATIC DEFLECTION. NEOPRENE MOUNTING PADS ARE TO SUPPORT CORE AND COIL FROM DIRECT CONTACT WITH CONCRETE BASE.

No.	ISSUANCE	DATE
1	ISSUED FOR SD	2023-08-04
2	ISSUED FOR SD COSTING	2023-12-01
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4	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
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6	ISSUED FOR PERMIT	2024-09-06
7	ISSUED FOR ESA	2024-10-21
8	ISSUED FOR 100% CD	2024-11-05
9	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

ELECTRICAL SINGLE LINE DIAGRAM

THEHIDIGROUP
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SEAL

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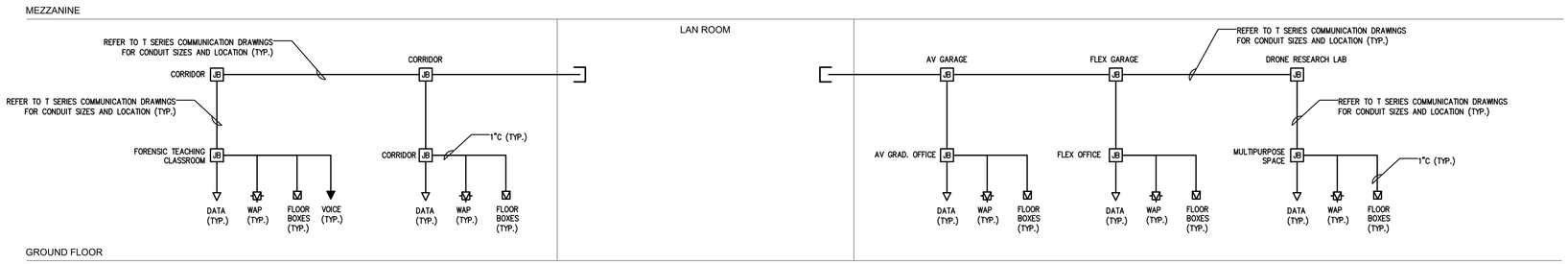
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E500
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

NOTES

1. PROVIDE A COMPLETE BACK BOX, CONDUIT AND JUNCTION BOX INFRASTRUCTURE SYSTEM C/W PULL STRING FOR THE COMMUNICATIONS CABLES. REFER TO COMMUNICATIONS DRAWING PREPARED BY HIDI WHICH FORMS PART OF THIS CONTRACT. ANY DISCREPANCIES BETWEEN DRAWINGS, THE COMMUNICATIONS DRAWINGS SHALL GOVERN. THIS RISER IS DIAGRAMMATIC ONLY.



1 / E501 IT + SECURITY RISER

SCALE: NTS

No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2024-11-05
2	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

IT & SECURITY RISER DIAGRAMS

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SEAL

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15-Nov-2024
PROVINCE OF ONTARIO

SCALE :	N.T.S.
DATE :	FEB 2024
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DRAWN BY :	MP
CHECKED BY :	AT

SHEET NO :

E501

SCOPE ITEM	AUDIOVISUAL CONTRACTOR (A.V.C.)	ELECTRICAL CONTRACTOR (E.C.)	GENERAL CONTRACTOR (G.C.)	COMMUNICATIONS CONTRACTOR (C.C.)
AV SYSTEMS CONDUIT, BACKBOXES AND CABLE TRAYS	–	PROVIDE PULL-READY SYSTEM INCLUDING ALL CONDUIT, BACKBOXES AND CABLE TRAYS. ALL CONDUITS TO BE COMPLETE WITH PULLSTRING.	–	–
AV WALLBOX CONNECTOR PLATES, CUSTOM OR STANDARD	PROVIDE. FINISH PER ARCHITECT'S INSTRUCTIONS	–	–	–
AV FLOORBOXES	MODIFY PLATES TO SUIT FLOORBOX AND INSTALL	PROVIDE FLOORBOX; COORDINATE BOX TYPE WITH AV CONSULTANT; SUPPLY SAMPLE IF REQUESTED, SUPPLY BLANK PLATES TO AV CONTRACTOR	–	–
AV SYSTEMS CABLE (LOW VOLTAGE, INCLUDING NETWORK CABLING WITH PATCH CABLES FOR AV SYSTEMS)	PROVIDE	–	–	–
AC OUTLETS FOR DISPLAYS, PROJECTORS, AV EQUIPMENT, FLOORBOXES, ETC	–	PROVIDE	–	–
DIRECT POWER CONNECTIONS FOR AV SYSTEMS RACKS	PROVIDE DISTRIBUTION WITHIN RACK	PROVIDE POWER CIRCUITS AS REQUIRED AT LOCATIONS NOTED ON DRAWINGS. COORDINATE LOCATIONS WITH AV CONTRACTOR. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH CIRCUIT.	–	–
LAN DROPS FOR OWNER NETWORK	SPECIFY LOCATIONS AND COORDINATE WITH C.C.	–	–	PROVIDE. REFER TO COORDINATION MATRIX FOR LOCATIONS AND QUANTITIES
PATCH CABLING TO CLIENT NETWORK FOR AV DEVICES	INSTALL	–	–	SUPPLY
MILLWORK FURNITURE (TABLES, RACK ENCLOSURES, LECTERNS AND CREDENZAS)	FIT-UP MILLWORK WITH AV DEVICES. COORDINATE WITH DESIGNERS, G.C., E.C. AND FURNITURE/MILLWORK MANUFACTURER	PROVIDE POWER AND LAN CONNECTIVITY SHOWN ON DRAWINGS AND INSTALL ROUGH-INS AS REQUIRED	PROVIDE AND COORDINATE CUTOUTS, WIRING AND DEVICE PLACEMENTS	–
DISPLAY AND PROJECTOR MOUNTING	SUPPLY AND INSTALL STANDARD OR CUSTOM BRACKETS AS REQUIRED	–	PROVIDE BLOCKING AND MISCELLANEOUS METALS AS REQUIRED	–
CEILING MOUNTED LOUDSPEAKER BACKBOXES INTO DRYWALL CEILINGS	PROVIDE	PROVIDE CONDUIT TO SPEAKER BACKBOXES. COORDINATE WITH AV CONTACTOR ON SITE	PROVIDE CEILING SPEAKER CUTOUTS	–
CEILING MOUNTED LOUDSPEAKERS INTO TILE CEILINGS	PROVIDE	–	PROVIDE CEILING SPEAKER CUTOUTS	–
AV SYSTEMS ELECTRONICS, HARDWARE, RACKS (PERMANENT AND PORTABLE)	PROVIDE; REUSE OWNER SUPPLIED EQUIPMENT AS NOTED IN TENDER DOCUMENTS	–	–	–
AV CONTROL SYSTEM PAGE DESIGN AND TESTING	PROVIDE; WRITE ALL PROGRAMMING CODE; DESIGN AND IMPLEMENT	–	–	–
LOW VOLTAGE RELAY CONTROLLERS (LVC) FOR MOTORIZED PROJECTION SCREENS AND LIFTS	SUPPLY LVC TO E.C.; PROVIDE LOW VOLTAGE CONTROL CABLE	PROVIDE HIGH VOLTAGE CABLE, TERMINATIONS AND LABOR AS REQUIRED	PROVIDE ACCESS HATCH AS REQUIRED FOR BACKBOX ACCESS	–
INTELLIGENT LIGHTING AND BLIND/SHADE SYSTEMS	CONNECT AV CONTROL SYSTEM TO RS-232 PROTOCOL CONVERTER. COORDINATE INSTALLATION LOCATION WITH E.C.	PROVIDE LIGHTING/BLIND SYSTEM TO RS-232 PROTOCOL CONVERTER. COORDINATE INSTALLATION LOCATION WITH A.V.C.	PROVIDE BLINDS SYSTEM AND SHADE MOTOR GROUP CONTROLLERS.	–
CEILING RECESSED PROJECTION SCREENS	PROVIDE	PROVIDE HIGH VOLTAGE CABLE TO LVC	PROVIDE CUTOUT. FINISH CEILING AFTER INSTALLATION.	–
FIRE ALARM CONNECTION	PROVIDE MUTE FUNCTIONALITY ON ALL SOUND SYSTEMS. TO BE TRIGGERED ON ACTIVATION OF FIRE ALARM.	PROVIDE FACP DRY CONTACT RELAY CONNECTION TO AV CONTRACTOR	–	–
REMOVAL OF EXISTING INSTALLED AUDIOVISUAL EQUIPMENT NOT PLANNED FOR REUSE	COORDINATE. IF AV CONTRACTOR IS NOT ONBOARD, COORDINATE WITH AV CONSULTANT.	–	PROVIDE REMOVAL AND DISPOSAL	–

NOTES:

1) THE SCOPE OF WORK OF THE TRADES AS IT RELATES TO AUDIO VISUAL SYSTEMS IS DESCRIBED IN THE TABLE ABOVE. THE TERM "PROVIDE" MEANS "SUPPLY, INSTALL, TERMINATE, TEST AND COMMISSION"

2) PROVIDE ALL SCOPE INDICATED UNDER ELECTRICAL CONTRACTOR (EC) COLUMN. REFER TO AV DRAWINGS PREPARED BY SMITH AND ANDERSEN WHICH FORMS PART OF THIS CONTRACT

01 / E502

DIVISION OF RESPONSIBILITY

SCALE: NTS

AV COORDINATION MATRIX

AUDIOVISUAL				ELECTRICAL										COMMUNICATION	MECHANICAL	GENERAL
DEVICE DETAILS				REQUIREMENTS								RECEPTACLES				
SYMBOL NAME	SYMBOL	ID	MOUNTING HEIGHT (TO CENTRE LINE)	FLOOR BOX MODEL	MUDRING BOX	AV BACKBOX/MUDRING SIZE	BACKBOX/MUDRING MOUNTING HEIGHT	VOLTAGE [V]	CURRENT [A]	UNIT POWER [W]	GROUND TYPE	TYPE	QUANTITY	LAN DROPS FOR OWNER NETWORK	HEAT LOAD UNIT HEAT [BTU]	NOTES
65" WALL MOUNT FLAT PANEL DISPLAY		FPD1	1625mm (64") AFF		AV1	(1)2 GANG AV MUDRING + CONDUIT	1830mm (72") AFF	120	2	240	NORMAL	5-15R	(1)QUAD	(2)NETWORK DROPS	818.88	
32" WALL MOUNT FLAT PANEL DISPLAY		FPD2	1625mm (64") AFF		AV2	(1)2 GANG AV MUDRING + CONDUIT	1830mm (72") AFF	120	1	120	NORMAL	5-15R	(1)QUAD	(2)NETWORK DROPS	409.44	
SHORT THROW PROJECTOR	AV	PROJ	2685mm (106") AFF		AV3	(1)2 GANG AV MUDRING + CONDUIT	2685mm (106") AFF	120	4	480	NORMAL	5-15R	(1)QUAD	–	1637.76	
WALL MOUNT PTZ CAMERA	AV	CAM1	2135mm (84") AFF		AV4	(1)2 GANG AV MUDRING + CONDUIT	2135mm (84") AFF	–	–	–	–	–	–	–	–	
CEILING MOUNT PTZ CAMERA	AV	CAM2	AT FINISHED CEILING		AV5	–	–	–	–	–	–	–	–	–	–	
FLOORBOX TABLE MONUMENT		FB1	AT FINISHED FLOOR		AV6	(1)2 GANG OPENING AT FLOORBOX + CONDUIT	AT FINISHED FLOOR	120	1	120	NORMAL	5-15R	(1)DUPLEX	(2)NETWORK DROPS	409.44	
PODIUM		FB2	AT FINISHED FLOOR		AV7	(1)4 GANG OPENING AT FLOORBOX + CONDUIT	AT FINISHED FLOOR	120	20.00	2400	ISOLATED	5-20R	(2)DUPLEX	(6)NETWORK DROPS	5118	DEDICATED CIRCUITS REQUIRED, WITH ISOLATED GROUND. FIRE ALARM, LIGHTING INTERCONNECTION REQUIRED.
WALL MOUNT BUTTON CONTROL PANEL		BP	AT SWITCH HEIGHT		AV8	(1)1 GANG AV MUDRING + CONDUIT	AT SWITCH HEIGHT	–	–	–	–	–	–	–	–	
WIRELESS MIC ANTENNA		ANT1	AT FINISHED CEILING		AV9	(1)1 GANG AV BACKBOX + CONDUIT	AT FINISHED CEILING	–	–	–	–	–	–	–	–	
WIRELESS ASSISTIVE LISTENING SYSTEM ANTENNA		ALS	2135mm (84") AFF		AV10	(1)1 GANG AV BACKBOX + CONDUIT	2135mm (84") AFF	–	–	–	–	–	–	–	–	
CEILING MICROPHONE	M	MIC1	AT FINISHED CEILING		AV11	–	–	–	–	–	–	–	–	–	–	
PENDANT SPEAKERS	S	S1	AT FINISHED CEILING		AV12	(1)1 GANG AV BACKBOX + CONDUIT	AT FINISHED CEILING	–	–	–	–	–	–	–	–	
CREDENZA RACK	DR	RACK1	AT RECEPTACLE HEIGHT		AV13	(1)PULL BOX SIZED TO CONDUIT REQUIREMENTS + CONDUIT	AT RECEPTACLE HEIGHT	120	20.00	2400	ISOLATED	5-20R	(2)QUAD	(4)NETWORK DROPS	5118	DEDICATED CIRCUITS REQUIRED, WITH ISOLATED GROUND. FIRE ALARM & LIGHTING INTERCONNECTION REQUIRED.

NOTES:

1) THIS CONTRACTOR TO PROVIDE RECESSED (FLUSH MOUNTED) FLOOR BOX LEGRAND. RFB SERIES SUITABLE FOR SLAB ON GRADE APPLICATION. BOX SIZE TO ACCOMODATE # OF OPENINGS, OUTLETS AND NETWORK DROPS INDICATED ABOVE.

02 / E502

AV COORDINATION MATRIX

SCALE: NTS

RESPONSIBILITY MATRIX

SYSTEM / WORK	ACCESS CONTROL	BIOMETRIC SYSTEM	GUESTROOM ACCESS	VIDEO MANAGEMENT	INTERCOM	DOOR HARDWARE
ROUGH-IN & CONDUIT	ELEC	ELEC	ELEC	ELEC	ELEC	ELEC/DOOR
CABLING & TERMINATION	SEC	SEC/CBL	CBL	CBL	SEC/CBL	DOOR/SEC
FIELD DEVICE INSTALLATION & TERMINATION	SEC	SEC	SEC	SEC	SEC	DOOR/SEC
PROGRAMMING	SEC	SEC	SEC	SEC	SEC	N/A
COMMISSIONING & TESTING	SEC	SEC	SEC	SEC	SEC	DOOR/SEC

ELEC = ELECTRICAL CONTRACTOR (DIV. 26)
CBL = STRUCTURED CABLING CONTRACTOR (DIV. 27)
SEC = SECURITY CONTRACTOR (DIV. 28)
DOOR = DOOR HARDWARE CONTRACTOR (DIV. 8)

NOTES:

1. PROVIDE ALL CONDUIT BACKBOX AND PULLSTRING AS SHOWN ON THE SECURITY DRAWINGS PREPARED BY THE HIDI GROUP, WHICH FORMS PART OF THIS CONTRACT.

03 / E502

SECURITY RESPONSIBILTY MATRIX

SCALE: NTS

No.	ISSUANCE	DATE
1	ISSUED FOR 100% CD	2024-11-05
2	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

AV REQUIREMENTS

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
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SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E502
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

MECHANICAL EQUIPMENT & MOTOR STARTER SCHEDULE

EQUIPMENT			MOTOR								STARTER								POWER				
TAG	DESCRIPTION	LOCATION	KW	HP	VOLTS	PH	FLA (A)	MCA (A)	MOP (A)	FED FROM	TYPE	HAND-OFF-AUTO SELECTOR SWITCH	RUNNING PILOT LIGHT GREEN	OFF PILOT LIGHT RED	N.O.	N.C.	F.A. START UP	F.A. SHUT DOWN	BREAKER SIZE	WIRE SIZE	LIFE SAFETY	NON-LIFE SAFETY	REMARKS
FC-1	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	OFFICE 109			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-2	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	FORENSIC TEACHING CLASSROOM 104			208	1	–	1.4	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-3	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	FORENSIC TEACHING CLASSROOM 104			208	1	–	1.4	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-4	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	FORENSIC GARAGE 105			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-5	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	TEACHING LAB 108			208	1	–	1.4	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-6	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	LOUNGE 103			208	1	–	1.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-7	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	AV. GRAD OFFICE 110			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-8	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	FLEX OFFICE 112			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-9	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	MULTIPURPOSE SPACE 114			208	1	–	1.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-10	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	DRONE RESEARCH LAB 115			208	1	–	1.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-11	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	AV GARAGE 111			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FC-12	VARIABLE REFRIGERANT FLOW (INDOOR UNITS)	FLEX GARAGE 113			208	1	–	0.8	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
CU-1	VARIABLE REFRIGERANT FLOW (OUTDOOR UNITS)				208	3		34.1	35	PP-2N2									35A-3P	3# 10 AWG (CU) IN 21mmC			
CU-2	VARIABLE REFRIGERANT FLOW (OUTDOOR UNITS)				208	3		34.1	35	PP-2N2									35A-3P	3# 10 AWG (CU) IN 21mmC			
BS-1	BRANCH SELECTOR BOX				208	1		0.6	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
BS-2	BRANCH SELECTOR BOX				208	1		0.6	15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
FFH-1	WALL FORCE FLOW HEATER		2	–	208	1			15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
BBH-1	BASEBOARD HEATER		1.125	–	208	1			15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
EDH-1	DUCT HEATER		12		208	1			80	PP-2N2									80A-2P	2# 8 AWG (CU) IN 21mmC			
UH-1	ELECTRIC UNIT HEATER		–	1/30	208	1			15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
UH-2	ELECTRIC UNIT HEATER		–	1/30	208	1			15	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
SF-1	SUPPLY FAN		–	0.5	120	1			15	PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
MUA-1	MAKE-UP (VENTILATION) AIR UNIT				575	3	76.8	95.7		DP-6AM2									100A-3P	3#3 AWG (CU) IN 35mmC			
EF-1	ROOF MOUNTED EXHAUST FAN			1/4	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
EF-2	ROOF MOUNTED EXHAUST FAN			1/4	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
EF-3	ROOF MOUNTED EXHAUST FAN			1/5	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
EF-4	LABORATORY EXHAUST FAN			3/4	575	3				DP-6AM2									15A-3P	3# 12 AWG (CU) IN 21mmC			
EF-5	ROOF MOUNTED EXHAUST FAN			1/5	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
EF-6	IN-LINE CENTRIFUGAL		0.39	–	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
P-1	DOMESTIC HOT WATER RECIRCULATION PUMP	M&E ROOM 201		1/4	120	1				PP-2N2									15A-1P	2# 12 AWG (CU) IN 21mmC			
SP-1 A&B	WEEPING TILE SUMP PIT	M&E ROOM 121		2	575	3				DP-6AM2									15A-3P	3# 12 AWG (CU) IN 21mmC			
AC-1		120 LAN ROOM			208	1			20	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
AC-2		107 LAB			208	1		12.3		PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
CU-3					208	1		14.23	20	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
CU-4					208	1		12.3	20	PP-2N2									15A-2P	2# 12 AWG (CU) IN 21mmC			
DHWH-1	DOMESTIC HOT WATER HEATER	M&E ROOM 201			208	3	34	42.5	85	PP-2N2									45A-3P	3# 8 AWG (CU) IN 21mmC			
DHWH-2	DOMESTIC HOT WATER HEATER	M&E ROOM 201			208	3	34	42.5	85	PP-2N2									45A-3P	3# 8 AWG (CU) IN 21mmC			

No.	ISSUANCE	DATE
1	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
2	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
3	ISSUED FOR PERMIT	2024-09-06
4	ISSUED FOR ESA	2024-10-21
5	ISSUED FOR 100% CD	2024-11-05
6	ISSUED FOR TENDER	2024-11-15

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UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

MECHANICAL SCHEDULE

THEHIDIGROUP
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SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE :	N.T.S.
DATE :	FEB 2024
PROJECT NO. :	2023-0059
DRAWN BY :	MP
CHECKED BY :	AT

SHEET NO. :

E701

UTM-PRE ENGINEERED BUILDING

Lighting Fixture Schedule
Project No.: 2023-0059
Issued For

Type	Luminaire Description	Lamp & Wattage	Control Protocol	Input voltage	Finish	Mounting	Location	Manufacturer & Catalogue #	Notes
LD1	NOMINAL 3" DIA. RECESSED ADJUSTABLE DOWNLIGHT.	8W, 800LMNS, 3500K, 90CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	RECESSED	VESTIBULE & CORRIDOR	**ACULUX:** INITIA INIT3 INIT3 A-08LM-35K-90CIR-X-EZ1-120-X OR APPROVED EQUAL	
LD2	NOMINAL 3" DIA. RECESSED DOWNLIGHT.	8W, 800LMNS, 3500K, 90CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	RECESSED	WASHROOMS	**ACULUX:** INITIA INIT3 INIT3 D-08LM-35K-90CIR-X-EZ1-120-X OR APPROVED EQUAL	
LR3	2'X2' LED FLAT PANEL	45W, 4800LMNS, 4000K, 80CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	SUSPENDED	DRONE REASERCH LAB	**LITHONIA LIGHTING:** EPANL LED EPANL-2X2-4800LM-80CRI-40K-MIN10-ZT OR APPROVED EQUAL	
LS1	4FT LENGTH DIRECT LED LINEAR FIXTURE	9.7W/FT, 1075LMNS/FT, 4000K, 90CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	SUSPENDED	CLASSROOMS, CORRIDOR, LOUNGE & MULTIPURPOSE SPACE	**A LIGHT:** ACL2ST - ACCOLED ACL2ST-4-DLH-40-90CRI-U-X-HE-X OR APPROVED EQUAL	
LS1a	4FT LENGTH DIRECT LED LINEAR TYPE	4.8W/FT, 443LMNS/FT, 3500K, 90CRI LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	SURFACE WALL	WASHROOM	**A LIGHT:** ACL2ST - EACL2ST-4-DLS-35-90CRI-U-DL-R-x-D OR APPROVED EQUAL	
LS2	4FT/8FT LENGTH VAPOR-TIGHT FEM LED LUMINARE	50W, 8000LMNS, 4000K, 90CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	SUSPENDED /SURFACE	GARAGES, LAB & TEACHING LAB	**LITHONIA LIGHTING:** FEM LED FEM-L48-8000LM-X-MD-120-GZ10-40K-90CRI FEM-L96-8000LM-X-MD-120-GZ10-40K-90CRI OR APPROVED EQUAL	
LS3	4FT LENGTH SURFACE MOUNT LED STRIP LUMINARE	35.3W, 4000LMNS, 4000K, 80CRI, LED	0-10V	120V	ARCHITECT TO SELECT FROM STANDARD FINISHES	SUSPENDED /SURFACE	SERVICE ROOMS	**LITHONIA LIGHTING:** CSS CSS-L48-4000LM-MVOLT-40K-80CRI OR APPROVED EQUAL	
	DOUBLE REMOTE HEAD	5W LED	NON-DIM	24V	N/A	WALL/CEILING	VARIOUS	BELLUCE CANADA: NOVA SERIES CAT# SR-2-24V-5WLED OR APPROVED EQUAL	
BU W/ REMOTE HEADS	BATTERY UNIT WITH REMOTE DOUBLE HEADS	96W LED	NON-DIM	120V	N/A	WALL/CEILING	VARIOUS	BELLUCE CANADA: NOVA SERIES CAT# NV-24-X-2SR-X-120V OR APPROVED EQUAL	30 MIN RUNTIME UNDER FULL LOAD WITH 20% SPARE CAPACITY
X1	DIE-CAST ALUMINUM PICTOGRAM EDGE-LIT EXIT SIGN	3.5W LED	NON-DIM	120V	N/A	WALL/CEILING	Exit Signs	AIM LIGHT - RPEL SERIES	UTM STANDARD

01 / E702 LIGHTING SCHEDULE

NTS

FLOOR BOX SCHEDULE					
Floor Box Type	No Gangs	Gang Use	Size	Location	Manufacturer & Accessories Product #
FB1	4	1-Power, 1-Data, 2-AV	17-3/4" length x 11-15/16" width x 2-1/2" height	AV Grad. Office, Flex Office	Legrand Wiremold CAT #RFBA4R25OG (1) RFBADEC20TR - 20A Receptacle (3) RFBADEC - For Comms & AV Device
FB2	10	2-Power, 2-Data, 4-AV	15-7/8" length x 10-5/8" width x 5-1/2" height	Forensic Teaching Classroom	Legrand Wiremold RFBA10R55OG (1) RFBA10-2G - 2 Gang Adapter Plate (2) RFBADEC20TR - 20A Receptacle (6) RFBADEC - For Comms & AV Device
FB3	6	4-Power, 1-Data	16-1/4" length x 10-3/8" width x 3" height	Multipurpose Space	Legrand Wiremold RFBA6R30OG (4) RFBADEC20TR - 20A Receptacle (1) RFBADEC - For Comms Device
FB4	10	4-Power, 1-Data, 2-AV	15-7/8" length x 10-5/8" width x 5-1/2" height	Multipurpose Space	Legrand Wiremold RFBA10R55OG (2) RFBA10-2G - 2 Gang Adapter Plate (4) RFBADEC20TR - 20A Receptacle (3) RFBADEC - For Comms & AV Device
NOTES: 1. THIS CONTRACTOR TO PROVIDE RECESSED (FLUSH MOUNTED) FLOOR BOX LEGRAND. RFB SERIES SUITABLE FOR SLAB ON GRADE APPLICATION AS INDICATED ABOVE. BOX SIZE TO ACCOMODATE # OF OPENINGS, OUTLETS AND NETWORK DROPS INDICATED ABOVE. 2. COVER FINISHES TO BE SELECTED AT THE TIME OF SHOP DRAWINGS REVIEW BY ARCHITECT.					

02 / E702 FLOOR BOX SCHEDULE

NTS

No.	ISSUANCE	DATE
1	ISSUED FOR DESIGN DEVELOPMENT	2024-03-01
2	ISSUED FOR DESIGN DEVELOPMENT	2024-03-21
3	ISSUED FOR PERMIT	2024-09-06
4	ISSUED FOR ESA	2024-10-21
5	ISSUED FOR TENDER	2024-11-05
6	ISSUED FOR 100% CD	2024-11-05
7	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

LIGHTING & FLOOR BOX SCHEDULE

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SEAL

LICENSED PROFESSIONAL ENGINEER
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15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E702
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

FIRE ALARM SCHEDULE

ZONE #	ZONE DESCRIPTION	PULL STATION (FZ)	HEAT OR SMOKE DETECTOR (FZ)	SUPERVISED VALVE (SZ)	SPRINKLER FLOW SWITCH (FZ)	LOSS OF PRESSURE (SZ)	DUCT DETECTOR (FZ)	STARTUP SIGNAL (CZ)	SHUTDOWN SIGNAL (CZ)	STROBE CCT. A (HZ)	STROBE CCT. B (HZ)	HORN CCT. 1 (BZ)	HORN CCT. 2 (BZ)	HANDSET (PZ)	FIRE ALARM CONNECTION (CZ)	AUX. SYSTEM TROUBLE (SZ)	AUX. SYSTEM ALARM (FZ)	REMARKS
1	GROUND	•	•							•	•	•	•					
2	MEZZANINE		•							•	•	•	•					
3	SV-1 DOUBLE CHECK VALVE ASSEMBLY IN			•														
4	SV-2 DOUBLE CHECK VALVE ASSEMBLY OUT			•														
5	SV-3 SHUT – OFF VALVE DCVA TEST			•														
6	SV-4 MAIN SHUT – OFF SPRINKLER HEADER			•														
7	SV-FG WET SPR. SYSTEM ISOLATION (GROUND & MEZZ FLOOR)			•														
8	SV-PA PREACTION SPR. SYSTEM ISOLATION (GROUND FLOOR)			•														
9	SV-WS WINDOW SPR. SYSTEM ISOLATION (GROUND FLOOR)			•														
10	LPS-1 LOW AIR PRESSURE GROUND LEVEL (PREACTION)			•														
11	FS-FG WET SPR. SYSTEM FLOW SWITCH (GROUND &MEZZ FLOOR)				•													
12	FS-PA PREACTION SPR. SYSTEM FLOW SWITCH				•													
13	FS-WS WINDOW SPR. SYSTEM FLOW SWITCH				•													
14	PS-1 WATER FLOW PS GROUND LEVEL (PREACTION)				•													
15	BAS COMMUNICATION (ALARM)														•			
16	BAS COMMUNICATION (TROUBLE)														•			
17	MUA-1						•		•						•			UNIT TO SHUTDOWN ONLY WHEN DUCT SMOKE DETECTOR ACTIVATES
18	AV RACK CREDENZA MULTIPURPOSE SPACE														•			
19	AV RACK PODIUM FORENSIC CLASSROOM														•			
	PROVIDE 20% SPARE CAPACITY																	

1 E703 FIRE ALARM SCHEDULE

N.T.S

FIRE ALARM SEQUENCE OF OPERATION

1.0. GENERAL

1.1. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF DEVICES. PROVIDE ISOLATION MODULES NOT SHOWN TO MEET ULC524 REQUIREMENTS.

1.2. ALL FIRE ALARM RISERS SHALL BE ULC LISTED 2 HOUR FIRE RATED CABLE.

2.0. FIRE ALARM SYSTEM

2.1. SYSTEM SHALL BE BY MIRCOM, CONVENTIONAL, SINGLE STAGE, CLASS A WIRING. PROVIDE ALL REQUIRED ACCESSORIES, INCLUDING RELAY MODULES, DACT/DIALER, ETC AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM. SYSTEM, SHALL BE INTEGRATED TO THE EXISTING NOTIFIER SYSTEM AT CENTRAL UTILITY PLANT (CUP) BUILDING.

2.2. ALL ADJACENT FIRE ALARM NOTIFICATION DEVICES TO BE ON ALTERNATING CIRCUITS.

2.3. PROVIDE THREE (3) NEW FIRE ALARM MONITORING MODULES AT CENTRAL UTILITY PLANT (CUP) BUILDING. MODULES SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM. MODULES TO BE CONFIGURED SUCH THAT AN ALARM, TROUBLE, OR SUPERVISORY FIRE ALARM PANEL CONDITION IN THE NEWLY CONSTRUCTED BUILDING WILL ANNUNCIATE AT THE CUP BUILDING FIRE ALARM PANEL.

2.4. PROVIDE ALLOWANCE FOR ADDITION OF 10% ADDITIONAL DEVICES TO THE FIRE ALARM SYSTEM WITH ALL ASSOCIATED PROGRAMMING, TO BE AS DIRECTED BY AUTHORITIES HAVING JURISDICTION OR ENGINEER AT LATER DATE.

2.5. PROVIDE AND ARRANGE FOR TELEPHONE CONNECTION OF FIRE ALARM SYSTEM TO LOCAL FIRE DEPARTMENT OR ULC LISTED MONITORING COMPANY.

2.6. FIRE ALARM RISER WIRING BETWEEN THE FIRE ALARM PANEL AND THE FIRE ALARM ISOLATING MODULES ON EACH FLOOR SHALL BE ULC LISTED 2 HOUR FIRE RATED CABLE.

3.0. SEQUENCE OF OPERATION

3.1. ACTUATION OF ANY ALARM INITIATING DEVICE IN THIS BUILDING SHALL CAUSE THE FOLLOWING:

3.1.1. TURN ON THE RESPECTIVE RED ALARM FOR THE ZONE LED AT THE CONTROL PANEL LOCATED IN THE ELECTRICAL ROOM AND ANNUNCIATOR PANEL LOCATED IN THE VESTIBULE AS INDICATED ON THE PLANS.

3.1.2. TURN ON RED LED INDICATOR AND ALARM BUZZER TONE AT MAIN MONITORING PANEL AT CENTRAL UTILITY PLANT AND CAMPUS SAFETY FIRE ALARM PANELS.

3.1.3. DISPLAY THE ACTIVATED DEVICE ON THE LCD DISPLAY AT THE MAIN FIRE ALARM CONTROL PANEL AND ALL FIRE ALARM REMOTE ANNUNCIATOR PANELS.

3.1.4. A TEMPORAL PATTERN ALARM SIGNAL TONE SHALL OCCUR WITHIN THE CONTROL PANEL AND ANNUNCIATORS.

3.1.5. CAUSE ALL AUDIBLE NOTIFICATION DEVICES TO SOUND CONTINUOUSLY WITH TEMPORAL PATTERN THROUGHOUT THE BUILDING UNTIL SILENCED.

3.1.5.1. AFTER A PERIOD OF NOT MORE THAN 10 MINUTES, THE SILENCED AUDIBLE SIGNAL DEVICES WILL BE RESTORED TO CONTINUOUS AUDIBLE SIGNAL IF THE ALARM HAS NOT BEEN ACKNOWLEDGED.

3.1.6. THE AUDIBLE NOTIFICATION DEVICES SHALL CONTINUE TO SOUND DURING ALARM CONDITIONS UNTIL MANUALLY OR AUTOMATICALLY SILENCED. THE MANUAL SILENCING VIA A SIGNAL SILENCE SWITCH ON THE FIRE ALARM SYSTEM CONTROL PANEL, SHALL BE INHIBITED DURING THE FIRST MINUTE OF ALARM.

3.1.7. ACTIVATION OF A SUBSEQUENT ALARM INITIATING DEVICE SHALL REACTIVATE THE ALARM SIGNALS AFTER THEY HAVE EITHER TIMED OUT OR HAVE BEEN MANUALLY SILENCED.

3.1.8. CAUSE ANY VISUAL NOTIFICATION DEVICE TO ACTIVATE. VISUAL SIGNALS MUST BE SYNCHRONIZED WITH THE AUDIBLE SIGNALS AND WITH ALL OTHER VISUAL SIGNAL DEVICES IN EACH FLOOR AREA.

4.0. INTERLOCK TO MECHANICAL EQUIPMENT

4.1. FRESH AIR UNITS

4.1.1. UNLESS THE CORRESPONDING DUCT SMOKE DETECTOR IS ACTIVATED, THE FRESH AIR UNIT IS TO CONTINUE TO RUN DURING FIRE ALARM CONDITION. IMMEDIATELY SHUT DOWN FRESH AIR UNIT UPON ACTIVATION OF DUCT SMOKE DETECTOR.

5.0 SIGNALS TO MONITORING STATION.

5.1 PROVIDE PHONE LINE FOR REMOTE MONITORING SERVICE. REGISTER AND CONNECT TO REMOTE MONITORING SERVICE ON BEHALF OF OWNER.

5.2 PROVIDE CONNECTIONS TO FIRE ALARM PANEL AT CENTRAL UTILITY PLANT (C.U.P.). FIRE ALARM PANEL AT C.U.P. SHALL DISPLAY TROUBLE INDICATIONS FOR ALARM TROUBLE OR SUPERVISORY AT THIS NEW FIRE ALARM PANEL.

5.3 PROVIDE INDICATIONS AS PER 3.1,2, ABOVE.

6.0 INTERLOCK TO AV EQUIPMENT.

6.1 UPON ACTIVATION OF FIRE ALARM SYSTEM, SEND SIGNAL TO AV RACK IN CREDENZA (MULTIPURPOSE ROOM) AND PODIUM (TEACHING CLASSROOM) TO MUTE SOUND SYSTEM.

2 E703 FIRE ALARM SEQUENCE OF OPERATION

N.T.S

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
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TITLE

FIRE ALARM SCHEDULE

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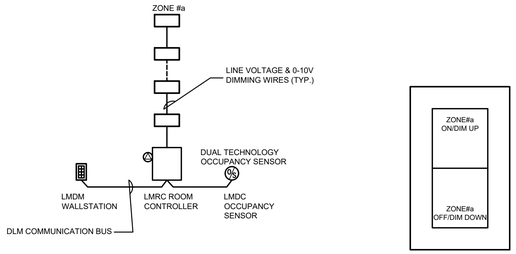
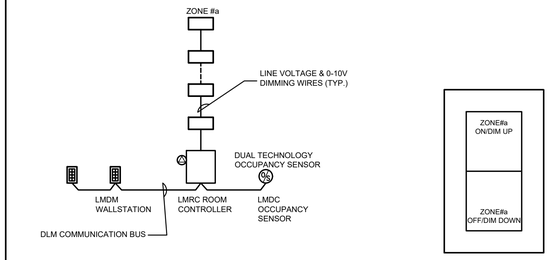


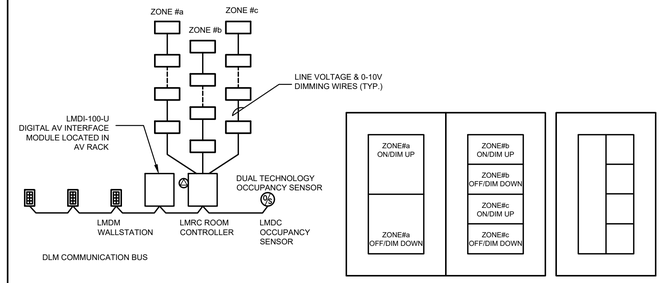
SEQUENCE OF OPERATION
1. DETAIL IS DIAGRAMMATIC ONLY TO SHOW DESIGN INTENT. PROVIDE ALL COMPONENTS AND ACCESSORIES FOR A COMPLETE AND WORKING SYSTEM.
2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
3. ALL OCCUPANCY SENSORS TO BE OF THE DUAL TECHNOLOGY (PIR & ULTRASONIC) TYPE UNLESS OTHERWISE NOTED. PROVIDE TYPE TO SUIT CEILING HEIGHTS.
4. ALLOW FOR 120V CONNECTION TO MODULES AND ACCESSORIES AS REQUIRED. CIRCUITS TO BE COMMON WITH LIGHTS BEING CONTROLLED.
5. USER TO MANUALLY TURN FIXTURES ON ACCORDING TO ASHRAE 90.1 2013.
6. PROVIDE MANUAL CONTROL FOR THE USER TO BRIGHTEN OR DIM FIXTURES USING THE DIMMER. REFER TO FLOORPLANS FOR QUANTITY OF DIMMERS
7. ROOM CONTROLLER TO TURN FIXTURES OFF AFTER 20 MINUTES UPON VACANCY
8. REFER TO MANUFACTURERS INSTRUCTIONS FOR IDEAL PLACEMENT AND QUANTITY OF OCCUPANCY SENSORS AND DAYLIGHT SENSORS
9. INSTALL CONTROLLERS AND MODULES IN ACCESSIBLE CEILING SPACES
10. PROVIDE ENGRAVING KITS FOR ALL WALLSTATIONS. EXACT ENGRAVINGS TO BE CONFIRMED DURING SHOP DRAWING REVIEW.

3 E-801 **TEACHING LAB & FLOATING OFFICE**
NTS



SEQUENCE OF OPERATION
1. DETAIL IS DIAGRAMMATIC ONLY TO SHOW DESIGN INTENT. PROVIDE ALL COMPONENTS AND ACCESSORIES FOR A COMPLETE AND WORKING SYSTEM.
2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
3. ALL OCCUPANCY SENSORS TO BE OF THE DUAL TECHNOLOGY (PIR & ULTRASONIC) TYPE UNLESS OTHERWISE NOTED. PROVIDE TYPE TO SUIT CEILING HEIGHTS.
4. ALLOW FOR 120V CONNECTION TO MODULES AND ACCESSORIES AS REQUIRED. CIRCUITS TO BE COMMON WITH LIGHTS BEING CONTROLLED.
5. USER TO MANUALLY TURN FIXTURES ON ACCORDING TO ASHRAE 90.1 2013.
6. PROVIDE MANUAL CONTROL FOR THE USER TO BRIGHTEN OR DIM FIXTURES USING THE DIMMER. REFER TO FLOORPLANS FOR QUANTITY OF DIMMERS
7. ROOM CONTROLLER TO TURN FIXTURES OFF AFTER 20 MINUTES UPON VACANCY
8. REFER TO MANUFACTURERS INSTRUCTIONS FOR IDEAL PLACEMENT AND QUANTITY OF OCCUPANCY SENSORS AND DAYLIGHT SENSORS
9. INSTALL CONTROLLERS AND MODULES IN ACCESSIBLE CEILING SPACES
10. PROVIDE ENGRAVING KITS FOR ALL WALLSTATIONS. EXACT ENGRAVINGS TO BE CONFIRMED DURING SHOP DRAWING REVIEW.

2 E-801 **FORENSIC GARAGE**
NTS



SEQUENCE OF OPERATION
1. DETAIL IS DIAGRAMMATIC ONLY TO SHOW DESIGN INTENT. PROVIDE ALL COMPONENTS AND ACCESSORIES FOR A COMPLETE AND WORKING SYSTEM.
2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
3. ALL OCCUPANCY SENSORS TO BE OF THE DUAL TECHNOLOGY (PIR & ULTRASONIC) TYPE UNLESS OTHERWISE NOTED. PROVIDE TYPE TO SUIT CEILING HEIGHTS.
4. ALLOW FOR 120V CONNECTION TO MODULES AND ACCESSORIES AS REQUIRED. CIRCUITS TO BE COMMON WITH LIGHTS BEING CONTROLLED.
5. USER TO MANUALLY TURN FIXTURES ON ACCORDING TO ASHRAE 90.1 2013.
6. PROVIDE MANUAL CONTROL FOR THE USER TO BRIGHTEN OR DIM FIXTURES USING THE DIMMER. REFER TO FLOORPLANS FOR QUANTITY OF DIMMERS
7. ROOM CONTROLLER TO TURN FIXTURES OFF AFTER 20 MINUTES UPON VACANCY
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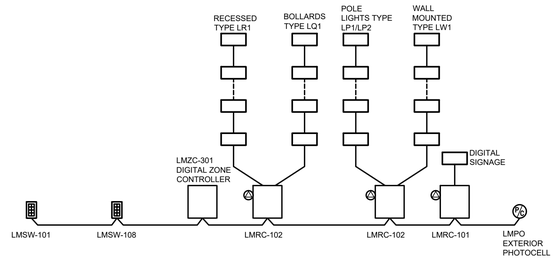
10. PROVIDE ENGRAVING KITS FOR ALL WALLSTATIONS. EXACT ENGRAVINGS TO BE CONFIRMED DURING SHOP DRAWING REVIEW.

1 E-801 **FORENSIC TEACHING CLASSROOM**
NTS



SEQUENCE OF OPERATION
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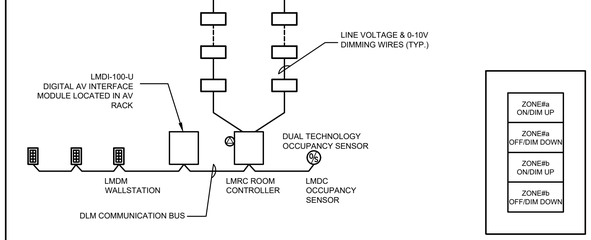
2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
3. ALLOW FOR 120V CONNECTION TO MODULES AND ACCESSORIES AS REQUIRED. CIRCUITS TO BE COMMON WITH LIGHTS BEING CONTROLLED.
4. USER TO MANUALLY TURN FIXTURES ON ACCORDING TO ASHRAE 90.1 2013.
5. MOUNT MODULES NEATLY ON PLYWOOD BACKBOARD.
6. PROGRAM THE LOW VOLTAGE SWITCH TO OVERRIDE AND TOGGLE LIGHTS AS FOLLOWS:
6.1. BUTTON 1 ON LMSW TO TURN ON/OFF POLE LIGHTS.
6.2. BUTTON 2 ON LMSW TO TURN ON/OFF BOLLARDS.
7. THE LIGHTS SHALL BE PROGRAMMED TO TURN ON 30 MINUTES BEFORE SUNSET AND TURN OFF 30 MINUTES AFTER SUNRISE, BASED ON THE LMZC-301 ASTRONOMICAL TIMECLOCK.
8. INSTALL AS PER MANUFACTURERS RECOMMENDATION.

6 E-801 **SITE LIGHT CONTROLLER**
NTS



SEQUENCE OF OPERATION
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2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
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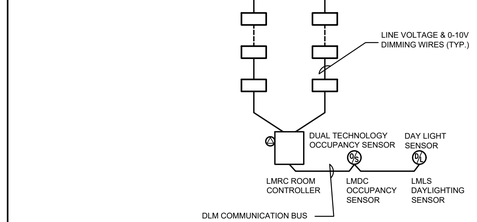
9. INSTALL CONTROLLERS AND MODULES IN ACCESSIBLE CEILING SPACES
10. PROVIDE ENGRAVING KITS FOR ALL WALLSTATIONS. EXACT ENGRAVINGS TO BE CONFIRMED DURING SHOP DRAWING REVIEW.

5 E-801 **MULTIPURPOSE SPACE & DRONE CROBE LAB**
NTS



SEQUENCE OF OPERATION
1. DETAIL IS DIAGRAMMATIC ONLY TO SHOW DESIGN INTENT. PROVIDE ALL COMPONENTS AND ACCESSORIES FOR A COMPLETE AND WORKING SYSTEM.
2. ROOM LIGHTING CONTROLS TO BE WATTSTOPPER DLM SYSTEM OR APPROVED EQUAL.
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4 E-801 **CORRIDOR, LOUNGE & VESTIBULE**
NTS

No.	ISSUANCE	DATE
1	ISSUED FOR ESA	2024-10-21
2	ISSUED FOR 100% CD	2024-11-05
3	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

LIGHTING CONTROL DETAILS

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO : E801
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

EQUIPMENT SCHEDULE (1)

1. MULTI-FUNCTION RELAY
2. 4 1/2" ILLUMINATED PUSH PLATE WITH ENCLOSURE AND SIGN
3. 4 1/2" ILLUMINATED PUSH PLATE WITH ENCLOSURE AND SIGN
4. MAGNETIC DOOR CONTACT
5. 'PRESS FOR EMERGENCY ASSISTANCE' SWITCH
6. 'ASSISTANCE REQUESTED' LED ANNUNCIATOR WITH SOUNDER
7. SINGLE GANG DOME LIGHT WITH SOUNDER
8. EMERGENCY ASSISTANCE SIGN
9. DOOR OPERATOR – SUPPLIED BY OTHERS
10. GRADE 2 UNIVERSAL ELECTRIC STRIKE
11. 4 1/2" SQUARE ACTIVATION SWITCH
12. FLUSH MOUNT BOX FOR CM-45/4
13. 12/24 VDC LINEAR POWER SUPPLY
14. 40VA, 24 VAC TRANSFORMER

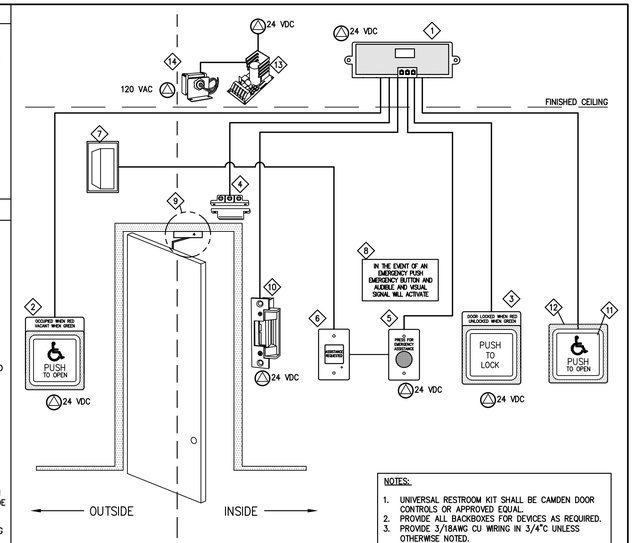
SYSTEM OPERATION

NORMAL OPERATION:

1. THE DOOR IS NORMALLY CLOSED AND UNLOCKED.
2. PRESSING THE EXTERIOR 'PUSH TO OPEN' AURA PUSH PLATE OPENS THE DOOR.
3. ONCE INSIDE AND THE DOOR IS CLOSED, PRESSING THE ILLUMINATED 'PUSH TO LOCK' AURA PUSH PLATE, CHANGES THE COLOR TO RED AND LOCKS THE DOOR.
4. TO EXIT, PRESS THE INTERIOR PUSH PLATE TO UNLOCK THE DOOR AND RESET THE SYSTEM.
5. THE 'PUSH TO LOCK' AURA™ PUSH PLATE SWITCH ILLUMINATED RING TURNS GREEN AND THE EXTERIOR 'PUSH TO OPEN' AURA™ PUSH PLATE OUTER RING TURNS GREEN.
6. IF THE DOOR IS OPENED MANUALLY TO EXIT THE RESTROOM, THE OVERHEAD MAGNETIC CONTACT SWITCH RESETS THE SYSTEM.

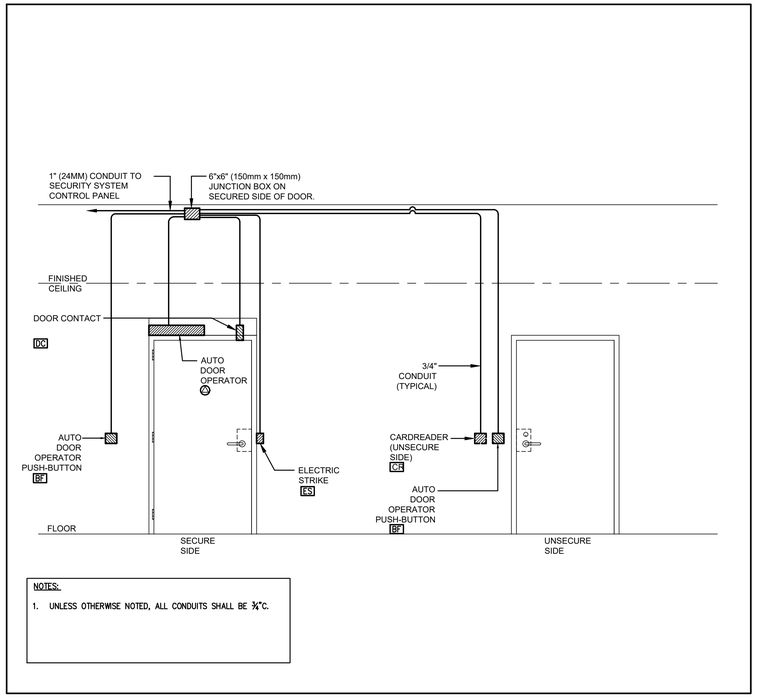
EMERGENCY OPERATION:

1. THE 'PRESS FOR EMERGENCY ASSISTANCE' MUSHROOM PUSH BUTTON IS ACTIVATED BY THE OCCUPANT.
2. THIS ENERGIZES THE LED ANNUNCIATOR AND SOUNDER WITHIN THE WASHROOM, AND THE DOME LIGHT WITH SOUNDER OUTSIDE THE WASHROOM.
3. BOTH ANNUNCIATORS WILL BE ENERGIZED UNTIL THE LATCHING MUSHROOM PUSH BUTTON SWITCH IS PULLED OUT.



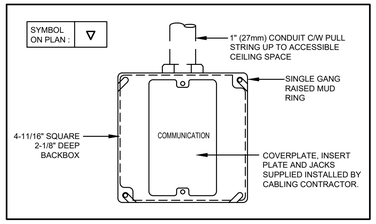
1 / E-802 UNIVERSAL RESTROOM KIT

SCALE: NTS



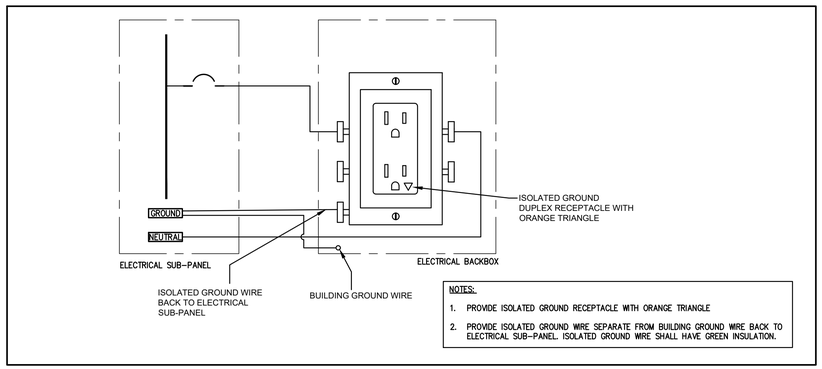
02 / E-802 TYPICAL SINGLE DOOR WITH ELECTRIC STRIKE

N.T.S.



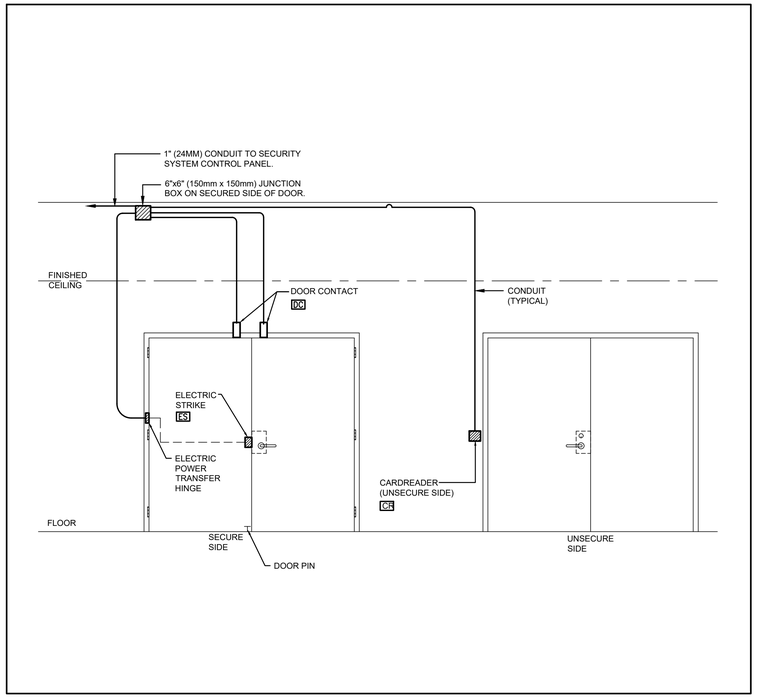
04 / E-802 SINGLE COMMUNICATION WALL OUTLET

SCALE: NTS



05 / E-802 ISOLATED GROUND RECEPTACLE

SCALE: NTS



03 / E-802 TYPICAL DOUBLE DOOR WITH ELECTRIC STRIKE

N.T.S.

No.	ISSUANCE	DATE
1	ISSUED FOR PERMIT	2024-09-06
2	ISSUED FOR ESA	2024-10-21
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

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CLIENT LOGO

UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

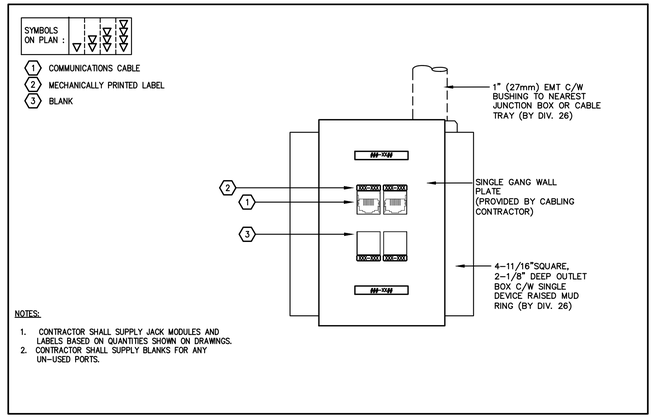
ELECTRICAL DETAILS I

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

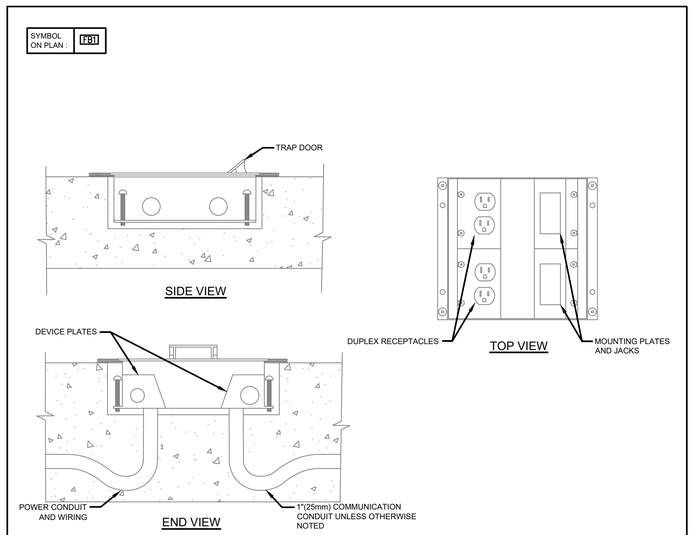
LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E801
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	



01 / E-803 COMMUNICATIONS WALL OUTLET DETAIL

SCALE: N.T.S.



02 / E-803 FLOOR BOX RECESSED COMBINATION

SCALE: N.T.S.

No.	ISSUANCE	DATE
1	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

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UNIVERSITY OF TORONTO MISSISSAUGA

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

ELECTRICAL DETAILS II

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
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SEAL

LICENSED PROFESSIONAL ENGINEER
A. TAN
100087772
15-Nov-2024
PROVINCE OF ONTARIO

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	E803
PROJECT NO : 2023-0059	
DRAWN BY : MP	
CHECKED BY : AT	

PROJECT NOTES

1. DEVICE LOCATIONS INDICATED ON DRAWINGS ARE APPROXIMATE. COORDINATE FINAL INSTALLATION LOCATIONS AND DETAILS WITH THE ARCHITECT/INTERIOR DESIGNER. REFER TO ARCHITECTURAL DRAWINGS AND REVIEW SITE CONDITIONS FOR INSTALLATION REQUIREMENTS. COORDINATE FINAL DEVICE LOCATIONS TO SUIT SITE CONDITIONS.
2. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ARCHITECTURAL, ELECTRICAL, SECURITY, AND AUDIOVISUAL DRAWINGS.
3. ARCHITECTURAL PLAN DRAWING BACKGROUNDS ARE FOR REFERENCE ONLY. REFER TO PROJECT ARCHITECTURAL DRAWINGS AND SITE CONDITIONS. SITE MEASURE FOR EXACT DIMENSIONS AND INSTALLATION REQUIREMENTS.
4. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE TELECOMMUNICATIONS SPECIFICATIONS.
5. PROVIDE ALL MOUNTS, BACK BOXES, ADAPTERS, FACEPLATES, BEZELS, TRIM, ETC. UNLESS OTHERWISE NOTED.
6. ALL SLAB AND WALL PENETRATIONS TO BE FIRE-STOPPED AS REQUIRED TO MAINTAIN FIRE RATING OF SLAB OR WALL. FIRE STOPPING MATERIAL SHALL BE A TYPE THAT WILL FACILITATE FUTURE MOVES, ADDS, AND CHANGES. OBTAIN APPROVAL FROM THE GC OR OWNER.
7. PROVIDE COMPLETE SHOP DRAWINGS WITH PRODUCT NUMBERS/FINISHES HIGHLIGHTED, AND DETAILS FOR ALL PROPOSED INSTALLATIONS. OBTAIN ARCHITECT/INTERIOR DESIGNER APPROVAL FOR ALL INSTALLATIONS.
8. COORDINATE ALL INSTALLATIONS AND WORK. OBTAIN ALL NECESSARY APPROVALS AND PERMITS.
9. PROVIDE ALL INSTALLATIONS IN COMPLIANCE WITH APPLICABLE CODES AND SITE INSTALLATION STANDARDS AND GUIDELINES.
10. OBTAIN ARCHITECT'S/INTERIOR DESIGNER'S APPROVAL FOR INSTALLATION OF ALL DEVICES AND COMPONENTS (THIS INCLUDES COLOUR AND FINISHES).
11. NOTIFY THE ARCHITECT/INTERIOR DESIGNER AND ICT CONSULTANT OF ANY DRAWING DISCREPANCIES.
12. DO NOT COPY OR DISTRIBUTE THESE TELECOMMUNICATIONS DRAWINGS. UNAUTHORIZED DISTRIBUTION OF ANY PORTION OF THESE DRAWINGS, ELECTRONIC OR PAPER IS PROHIBITED.

ACRONYMS & ABBREVIATIONS

MANY OF THE ACRONYMS AND ABBREVIATIONS BELOW ARE USED IN COMBINATION WITH THE SYMBOLS IN THE TELECOMMUNICATIONS LEGEND TO REFERENCE A SPECIFIC SCOPE OF WORK DESCRIBED IN THE DETAIL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THOROUGHLY ALL DETAILS FOR FURTHER GUIDANCE AND EXPECTATIONS ON SCOPE OF WORK.

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PROVIDER
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
CCTV	CLOSED-CIRCUIT TELEVISION (CABLE FOR SECURITY CAMERA
CLG	CEILING
CP	CONSOLIDATION POINT
CRO	CORROSION-RESISTANT OUTLET
DS	DIGITAL SIGNAGE
EF	ENTRANCE FACILITY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
ESS	ELECTRONIC SAFETY AND SECURITY
F/UTP	FOILED, UNSHIELDED TWISTED PAIR
Ex	EXISTING TO REMAIN
GND	GROUND
IC	INTERCOM
ICT	INFORMATION AND COMMUNICATIONS TECHNOLOGY
IDF	INTERMEDIATE DISTRIBUTION FRAME
ISP	INTERNET SERVICE PROVIDER
JB	JUNCTION BOX
LAN	LOCAL-AREA NETWORK
LOC	LOCATION
MC	MAIN CROSS-CONNECT
MCR	MAIN COMPUTER ROOM
MDF	MAIN DISTRIBUTION FRAME
MH	MAINTENANCE HOLE
MPTL	MODULAR PLUG TERMINATED LINK
MMF	MULTI-MODE FIBRE
OFE	OWNER-FURNISHED EQUIPMENT
PB	PULLBOX
PBB	PRIMARY BONDING BUSBAR
PBX	PRIVATE BRANCH EXCHANGE
POP	POINT OF PRESENCE
PR	PAIR
R	TO BE REMOVED / RELOCATED
RBP	ROOM BOOKING PANEL
RE/RE	REMOVE & RE-INSTALL
RF	RADIO FREQUENCY
RL	DEVICE OR OUTLET/CABLE IN RELOCATED POSITION
RMC	RIGID METALLIC CONDUIT
RU / U	RACK UNIT (RACK MOUNTING UNIT)
SBB	SECONDARY BONDING BUSBAR
SEC	SECURITY
SMF	SINGLE-MODE FIBRE
SR	SURFACE RACEWAY
STP	SHIELDED TWISTED PAIR
TEMP	TEMPORARY
TR	TELECOMMUNICATIONS ROOM
TSER	TELECOMMUNICATIONS SERVICE ENTRANCE ROOM
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
U/S	UNDERSIDE
UTP	UNSHIELDED TWISTED PAIR
WAN	WIRE-AREA NETWORK
WAP	WIRELESS ACCESS POINT
WP	WALL PHONE
WPO	WEATHERPROOF OUTLET
WW	WIREWAY

TELECOMMUNICATIONS DRAWING LIST

T-001	LEGEND, DRAWING LIST AND PROJECT NOTES
T-002	SPECIFICATIONS
T-101	SITE PLAN
T-201	GROUND FLOOR AND PARTIAL MEZZANINE TELECOM LAYOUTS
T-301	HUB ROOM LAYOUT AND ELEVATION
T-401	DETAILS

TELECOMMUNICATIONS LEGEND

ALL SYMBOLS IN THIS LEGEND REPRESENT THE COMPLETE, END-TO-END INSTALLATION OF COMMUNICATIONS CABLES; TERMINATED, LABELLED, AND TESTED.

THIS INSTALLATION INCLUDES TERMINATION AT A PATCH PANEL OR BACKBOARD WITHIN THE NEAREST TELECOMMUNICATIONS ROOM/ENCLOSURE, TO THE TERMINATION AT THE SERVICE AREA OUTLET LOCATION IDENTIFIED ON THE FLOORPLANS.

CONTRACTOR SHALL REVIEW THOROUGHLY ALL TELECOMMUNICATIONS SPECIFICATIONS AND DRAWINGS FOR FURTHER INSTRUCTION ON TERMINATION REQUIREMENTS AND SCOPE OF WORK ASSOCIATED WITH THE SYMBOLS FOUND IN THIS LEGEND.

COPPER LEGEND

OUTLET TYPE	MOUNT TYPE	
DATA / NETWORK 'A'		
▽	WALL	COMMUNICATIONS CABLE(S) DESIGNATED FOR DATA OR NETWORK 'A.' QUANTITIES OF CABLES EXCEEDING ONE (1) PER POSITION ARE INDICATED BY MULTIPLES OF STACKED SYMBOLS AS OUTLINED BELOW. SEE SPECIFICATIONS FOR CABLE/CONNECTOR TYPES, FINISHES, AND LABELLING REQUIREMENTS. ▽ = ONE (1) COMMUNICATIONS CABLE IN A SINGLE ADAPTER/FACEPLATE ▽▽ = TWO (2) COMMUNICATIONS CABLES IN A SINGLE ADAPTER/FACEPLATE ▽▽▽ = THREE (3) COMMUNICATIONS CABLES IN A SINGLE ADAPTER/FACEPLATE
▽	FLOOR	
▽	CEILING	
▽	FURNITURE	
VOICE / NETWORK 'B'		
▼	WALL	COMMUNICATIONS CABLE(S) DESIGNATED FOR VOICE OR NETWORK 'B.' QUANTITIES OF CABLES EXCEEDING ONE (1) PER POSITION ARE INDICATED BY MULTIPLES OF STACKED SYMBOLS AS DEMONSTRATED ABOVE. SEE SPECIFICATIONS FOR CABLE/CONNECTOR TYPES, FINISHES, AND LABELLING REQUIREMENTS.
▼	FLOOR	
▼	CEILING	
▼	FURNITURE	
DATA & VOICE / NETWORK 'A' & NETWORK 'B'		
▼	WALL	
▼	FLOOR	
▼	CEILING	
▼	FURNITURE	
TV		
⊙	WALL	COAXIAL CABLE(S) FOR AV APPLICATIONS. QUANTITIES OF CABLES EXCEEDING ONE (1) PER POSITION ARE INDICATED BY MULTIPLES OF STACKED SYMBOLS AS DEMONSTRATED ABOVE. SEE SPECIFICATIONS FOR CABLE/CONNECTOR TYPES, FINISHES, AND LABELLING REQUIREMENTS.
⊡	FLOOR	
⊙	CEILING	
⊙	FURNITURE	

FIBRE LEGEND

FIBRE		
▽	WALL	SMF/MMF COMMUNICATIONS CABLE(S). EACH SYMBOL REPRESENTS TWO (2) STRANDS FOR DUPLEX CONNECTIONS. SEE SPECIFICATIONS FOR CABLE, CONNECTOR/POLISH/TERMINATION TYPES, AND LABELLING REQUIREMENTS.
⊡	FLOOR	
▽	CEILING	
▽	FURNITURE	

MISC. LEGEND

FEED	FEED TYPE
	POWER & COMMUNICATIONS SERVICE POLE (BY DIV. 26)
	POWER & COMMUNICATIONS SERVICE POLE WITH SYSTEMS FURNITURE FEED (BY DIV. 26)
	WALL OR COLUMN FEED TO SYSTEMS FURNITURE (BY DIV. 26)
	FLOOR FEED TO SYSTEMS FURNITURE (BY DIV. 26)
01 / T-X	DRAWING NUMBER / DETAIL CALLOUT
	SURFACE RACEWAY (BY DIV. 26)

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

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CLIENT LOGO

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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

LEGEND, DRAWING LIST AND NOTES

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SEAL

SCALE : N.T.S.	SHEET NO : T-001
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : BC	

UNIT PRICES

UNIT PRICING – CONTRACTOR SHALL SUBMIT ADD AND DELETE PRICES FOR THE FOLLOWING ITEMS AT TIME OF BID

COPPER HORIZONTAL CABLING:

1. CATEGORY 6A FT6 HORIZONTAL CABLE: SUPPLY AND INSTALL ONE (1) CABLE END TO END, LABELED, TERMINATED, AND TESTED (BASED ON AN AVERAGE LENGTH OF 200 FEET)
2. CATEGORY 6A FT6 HORIZONTAL CABLES: SUPPLY AND INSTALL TWO (2) CABLES END TO END, LABELED, TERMINATED, AND TESTED (BASED ON AN AVERAGE LENGTH OF 200 FEET)
3. CATEGORY 6A FT6 HORIZONTAL CABLES: SUPPLY AND INSTALL THREE (3) CABLES END TO END, LABELED, TERMINATED, AND TESTED (BASED ON AN AVERAGE LENGTH OF 200 FEET)
4. CATEGORY 6A FT6 HORIZONTAL CABLES: SUPPLY AND INSTALL FOUR (4) CABLES END TO END, LABELED, TERMINATED, AND TESTED (BASED ON AN AVERAGE LENGTH OF 200 FEET)

COPPER CABLE TERMINATION:

1. SUPPLY AND INSTALL ONE (1) 1U 24–PORT MODULAR PATCH PANEL
2. SUPPLY AND INSTALL ONE (1) 2U 48–PORT MODULAR PATCH PANEL

PATCH CABLES:

1. SUPPLY ONE (1) 1.2m CATEGORY 6A PATCH CABLE (28 AWG)
2. SUPPLY ONE (1) 2.1m CATEGORY 6A PATCH CABLE (28 AWG)
3. SUPPLY ONE (1) 3m CATEGORY 6A PATCH CABLE (28 AWG)
4. SUPPLY ONE (1) 7–FOOT OS2 UPC LC–TO–LC PATCH CABLE

WAPs:

1. INSTALL ONE (1) CLIENT–SUPPLIED WAP AND MOUNTING BRACKET

END OF RFQ

SPECIFICATIONS

27 00 00 GENERAL SPECIFICATIONS AND REQUIREMENTS FOR COMMUNICATIONS

1. GENERAL

a. THIS DOCUMENT SPECIFIES THE USE OF AN CAT6A/FT6 COPPER END TO END STRUCTURED CABLING PLATFORM AS MANUFACTURED AND WARRANTED BY PANDUIT OR BELDEN. NO SUBSTITUTIONS ARE PERMITTED.
b. THIS DOCUMENT SPECIFIES THE USE OF AN OS2 FT4/FT6 FIBRE OPTICAL END TO END STRUCTURED CABLING PLATFORM AS MANUFACTURED AND WARRANTED BY CORNING. NO SUBSTITUTIONS ARE PERMITTED.
c. ALL COMMUNICATIONS PRODUCT FOR THIS INSTALLATION SHALL BE NEW UNUSED UNLESS OTHERWISE DESCRIBED IN THESE DOCUMENTS.
d. CONTRACTOR MUST BE A CERTIFIED INSTALLER OF THE PROPOSED SOLUTION AND CAPABLE OF PROVIDING THE WARRANTY ON MATERIALS AND LABOUR DIRECTLY FROM THE PROPOSED CABLING SYSTEM SOLUTION MANUFACTURER.
e. CERTIFICATION BY THIRD PARTY OR ANY OTHER MEANS IS NOT ACCEPTABLE.
f. THE CONTRACTOR SHALL SUPPLY A MINIMUM 20 YEAR MANUFACTURER WARRANTY.
g. CONTRACTOR SHALL SUBMIT THEIR CERTIFICATION DOCUMENTS FOR THEIR PROPOSED SOLUTION AT TIME OF BID.
h. CONTRACTOR MUST IDENTIFY ALL PRODUCTS WITH THEIR BIDS INCLUDING MANUFACTURER AND PART NUMBERS.
i. CONTRACTOR IS RESPONSIBLE FOR READING ALL TELECOMMUNICATIONS DRAWINGS AS WELL AS ELECTRICAL AND ARCHITECTURAL DRAWINGS.
j. CONTRACTOR IS OBLIGED TO CONTACT THE TELECOMMUNICATIONS DESIGNER FOR ANY CLARIFICATION ON SCOPE, MATERIALS, AND ANY DISCREPANCIES ENCOUNTERED ON THE PROJECT.
k. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND CLEARANCES PRIOR TO ORDERING AND INSTALLING EQUIPMENT.
l. REFER TO THE ARCHITECTURAL/INTERIOR DESIGNER'S DRAWINGS FOR EXACT LOCATIONS, DIMENSIONS, MOUNTING HEIGHTS, AND FINISHES OF DEVICES PRIOR TO COMMENCEMENT OF WORK. WHERE DISCREPANCIES OCCUR, CONTRACTOR TO CONFIRM WITH ARCHITECT, INTERIOR DESIGNER, AND/OR CONSULTANT PRIOR TO COMMENCEMENT OF WORK.
m. ANY NETWORK EQUIPMENT IS TO BE PROVIDED AND INSTALLED BY THE CLIENT UNLESS SPECIFICALLY NOTED OTHERWISE.
n. ANY COST INCURRED BY FAILING THE POINTS STATED ABOVE WILL HAVE TO BE COVERED BY THE CONTRACTOR.
o. CONTRACTOR SHALL REVIEW IN–TANDEM WITH THESE DRAWINGS AND SPECIFICATIONS THE UTM COMMUNICATION CABLING STANDARDS R3.1. IF ANY DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS, THE UTM STANDARD SHALL BE CONSIDERED AUTHORITATIVE AND BE ADHERED TO. UTM I&ITS SHALL BE CONTACTED FOR ANY CLARIFICATIONS. ANY ASSUMPTIONS MADE BY THE CONTRACTOR WILL BE CORRECTED SO AS TO BE IN–LINE WITH THE UTM STANDARDS, AND ANY COSTS INCURRED TO BE PAID FOR BY THAT GIVEN TRADE.

2. SITE CONDITIONS

a. THE COMMUNICATION CONTRACTOR IS REQUIRED TO BE ON SITE DURING EACH PHASE/MOVE AND PROVIDE FOR EIGHT (8) HOURS SUPPORT ON THE PHASE/MOVE ON WEEKENDS. INCLUDE ALL NECESSARY ALLOWANCES FOR OVERTIME WORK ON WEEKENDS AND/OR AFTER REGULAR HOURS TO SUIT PROJECT SCHEDULE AND FURNITURE DELIVERY PLAN.
b. CONTRACTOR IS RESPONSIBLE FOR COMPLETE HANDLING, DELIVERY, STORAGE, AND INSTALLATION OF ALL MATERIALS USED IN THE PERFORMANCE OF THE WORK.
c. CONTRACTOR IS RESPONSIBLE FOR KEEPING THE WORKPLACE CLEAN, SAFE, AND FREE FROM DEBRIS AT ALL TIMES. ALL DEBRIS MUST BE REMOVED FROM THE SITE ON A DAILY BASIS.
d. COSTS FOR CLEANING ARE THE RESPONSIBILITY OF THE CONTRACTOR.
e. CONTRACTOR WILL BEAR ANY COSTS FOR DAMAGE CAUSED BY THEM OR CLEAN–UPS AND DEBRIS REMOVAL THAT REMAIN ON SITE ONE DAY AFTER THE COMPLETION OF THE COMMUNICATIONS CABLING INSTALLATION.
f. CONTRACTOR SHALL COORDINATE WITH FURNITURE AND CARPET INSTALLERS FOR DISCONNECT/RECONNECT OF FURNITURE.
g. CONTRACTOR TO NEATLY BUNDLE AND SECURE LOOSE CABLES WITH SPLIT LOOM. SPIRAL WRAP IS NOT ACCEPTABLE.
h. ROUTE HORIZONTAL CABLING THROUGH IN–CEILING CABLE TRAY OR CONDUIT. SEE DRAWINGS FOR DETAILS.
i. CONTRACTOR IS NOT PERMITTED TO INSTALL OR DE–INSTALL EQUIPMENT ON CUSTOMER PREMISES WITHOUT PRIOR APPROVAL FROM OWNER OR GENERAL CONTRACTOR.
j. CONTRACTOR IS NOT ALLOWED TO REMOVE ANY EQUIPMENT INSTALLED BY ANOTHER TRADE. WHERE THE MOVEMENT OF EQUIPMENT NOT CONTROLLED BY THE CONTRACTOR IS REQUIRED, THE CONTRACTOR MUST INFORM THE OWNER OR THE GENERAL CONTRACTOR AND THEY WILL DIRECT ACCORDINGLY.
k. CONTRACTOR IS REQUIRED TO CONSIDER WHERE CABLES WILL BE INSTALLED AND IF ANY LIFTS OR ADDITIONAL EQUIPMENT IS REQUIRED TO INSTALL THE CABLING.
l. ALL COMMUNICATIONS CONTRACTOR EMPLOYEES SHALL HAVE WORKING AT HEIGHTS AND WHIMIS CERTIFICATION.
m. CONTRACTOR IS NOT PERMITTED TO CORE/DRILL OR PENETRATE ANY WALLS, CEILINGS, FLOORS OR ANY OTHER AREAS WITHOUT PERMISSION FROM THE OWNER OR GENERAL CONTRACTOR.
n. ANY CABLES PASSING THROUGH A FIRE RATED PARTITION MUST BE FIRE STOPPED WITH A UL/CSA LISTED ASSEMBLY. REFER TO ARCHITECTURAL DETAILS.

3. DOCUMENTATION / PROJECT CLOSE OUT

a. CONTRACTOR SHALL SUBMIT WARRANTIES, CERTIFICATIONS, AS–BUILT DRAWINGS, AND ALL CABLE TEST RESULTS AS PART OF THE PROJECT CLOSEOUT DOCUMENTATION.
b. CONTRACTOR SHALL PREPARE AS–BUILT DRAWINGS IDENTIFYING ALL VOICE/DATA OUTLETS, PATCH PANELS, AND IDC CONNECTIONS AS PER THE REQUIREMENTS OF ANSI/TIA 606–C.
c. AS–BUILT DRAWINGS SHALL BE PROVIDED IN AUTOCAD (VERSION 2010 OR LATER), SOFT COPY FORMAT, PDF, AND HARD COPY FULL SIZE DRAWINGS.
d. DRAWINGS SHALL DESCRIBE CABLE ID'S ON DRAWINGS.
e. AS–BUILT DRAWINGS SHALL INCLUDE FLOOR LAYOUTS AND BACKBONE DIAGRAMS.
f. THIS PROJECT REQUIRES THE CONTRACTOR TO PROVIDE THE MANUFACTURER WARRANTY, WHICH COMBINES AN EXTENDED PRODUCT WARRANTY WITH AN APPLICATIONS ASSURANCE WARRANTY, ALONG WITH CONTRACTOR'S WARRANTY.
g. CONTRACTOR SHALL PROVIDE THE WARRANTY CERTIFICATE AS THE FINAL DELIVERABLE TO SIGNIFY COMPLETION OF WORK.
h. DOCUMENTATION FOR TEST RESULTS SHALL INCLUDE SOFT COPIES AND ONE (1) BINDER WITH COLOUR DOCUMENTS.
i. THE DOCUMENTATION BINDER AND SOFT COPY CASE SHALL BE MARKED WITH THE PROJECT NAME, PROJECT DESCRIPTION, AND DATE OF PROJECT COMPLETION (DAY, MONTH, AND YEAR).
j. TEST RESULTS SHALL INCLUDE FULL TEST RESULTS AND SUMMARY, IN THE NATIVE FORMAT OF THE CERTIFICATION TESTER, WITH INCLUDED READER SOFTWARE, ON CD OR FLASH DRIVE.
k. CABLE ID ON THE TEST RESULTS SHALL MATCH THE ID ON THE AS–BUILT DRAWINGS.
l. A DRAFT NETWORK DRAWING, DETAILING PHYSICAL PORT LOCATIONS, QUANTITIES AND IDENTIFICATIONS MUST BE PROVIDED AHEAD OF TIME FOR I&ITS NETWORK ENGINEERING TO CONFIGURE NETWORK EQUIPMENT. THIS LENGTH OF TIME IS VARIABLE AND IS REPRESENTED AS A FUNCTION OF THE NUMBER OF DATA DROPS. EACH DROP REQUIRES APPROXIMATELY 7 MINUTES OF CONFIGURATION TIME, HENCE A NETWORK MAP FOR A BUILDING WITH 500 DATA DROPS MUST BE PROVIDED AT LEAST 8 BUSINESS DAYS PRIOR TO COMMISSIONING NETWORK EQUIPMENT: 500 DROPS X 7 MINUTES PER DROP = 3,500 MINUTES = 58.33 HOURS; 58.33 / 7.25 WORKING HOURS PER DAY =~8.04 DAYS.
m. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1. ALL DATA POINTS WILL BE DOCUMENTED BY THE CONTRACTOR IN UTM–PROVIDED 'DATA COUNT' EXCEL SHEET. CONTRACTOR SHALL COORDINATE WITH UTM I&ITS.

4. WARRANTY

a. PRODUCT SHALL BE WARRANTED FREE OF DEFECTS IN MATERIAL OR WORKMANSHIP.
b. PRODUCT SHALL BE WARRANTED TO PERFORM THE INTENDED FUNCTION WITHIN DESIGN LIMITS.
c. FIELD–APPLIED PAINT COATINGS ON RACEWAY, BOXES, PLATES OR FITTINGS SHALL BE EXCLUDED FROM RACEWAY MANUFACTURER'S WARRANTY.
d. INSTALLED CABLING COMPONENTS SHALL BE GRANTED A PERMANENT LINK OR CHANNEL WARRANTY BY THE MANUFACTURER UNDER THE CONDITIONS STATED BELOW.
e. CONSTRUCTION IS PERFORMED BY AN INSTALLER THAT IS CERTIFIED BY THE MANUFACTURER'S TRAINING PROGRAM.
f. CONTRACTORS PERFORMING THE CERTIFIED INSTALLATION ARE PROPERLY REGISTERED IN THE MANUFACTURER'S WARRANTY PROGRAM.
g. PERMANENT LINK OR CHANNEL COMPONENTS ARE SUPPLIED ENTIRELY BY THE MANUFACTURER (INCLUDING PATCH CORDS FOR CHANNEL).
h. A WARRANTY FROM THE CONTRACTOR IS NOT ACCEPTED IN LIEU OF MANUFACTURER WARRANTY/CERTIFICATION.
i. CONTRACTOR TO PROVIDE HARD COPY EVIDENCE OF MANUFACTURER'S CERTIFICATION WITH TENDER SUBMISSION AND UPON COMPLETION OF THE PROJECT.
j. CONTRACTOR TO PROVIDE THE MANUFACTURER'S WARRANTY UNDER THE CLIENT'S NAME AND SHALL BE TRANSFERABLE.

27 00 01 SCOPE OF WORK FOR STRUCTURED CABLING COMMUNICATIONS

1. THE SPECIFIC STRUCTURED CABLING SCOPE OF WORK FOR THIS PROJECT INCLUDES BUT IS NOT LIMITED TO THE SUPPLY AND INSTALL OF:
   a. INTER–BUILDING FIBRE BACKBONE CABLING
   b. HORIZONTAL CABLING
   c. RACKS AND ACCESSORIES
   d. CABLE TRAY/SLINGS
   e. CONTRACTOR TO PROVIDE LABOUR TO INSTALL CLIENT–PROVIDED ACCESS POINTS AND BRACKETS (WAP)
   f. ALL FIRE STOP MATERIALS/MECHANISMS FOR ALL COMMUNICATION CABLING PENETRATIONS
   g. ALL CLOSE OUT DOCUMENTATION REQUIREMENTS NEEDED AS PER SECTION 27 00 00.

27 05 44 FIRE STOPPING FOR COMMUNICATIONS PATHWAY AND CABLING

1. ANY CABLES PASSING THROUGH A FIRE RATED PARTITION MUST BE FIRE STOPPED WITH A UL/CSA LISTED ASSEMBLY. REFER TO ARCHITECTURAL DETAILS.

27 05 26 GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS

1. GROUNDING TO TIE INTO A SINGLE GROUND POINT ONLY
2. ALL METALLIC ENCLOSURES, RACKS, CABLE TRAY, PATCH PANELS, VOICE CABLES SHALL BONDED TO THE MESH–BN, SBB OR PBB USING A MINIMUM SIZED CONDUCTOR OF 6 AWG.
3. CABINETS, RACKS, AND OTHER ENCLOSURES SHALL NOT BE BONDED SERIALLY; EACH SHALL HAVE THEIR OWN DEDICATED BONDING CONDUCTOR TO THE MESH–BN, SBB, PBB OR TEBC.
4. RAISED FLOOR PEDESTALS SHALL BE BONDED USING A MINIMUM SIZED CONDUCTOR OF 6 AWG.
5. GROUND CABLE SHALL BE INSULATED GREEN JACKET, COPPER WIRE INSTALLED IN EACH COMMUNICATION ROOM THAT CONNECTS TO THE BUILDING GROUND SYSTEM.
6. COMMUNICATIONS CABLING CONTRACTOR TO FOLLOW ANSI–TIA 607–C STANDARD TO GROUND AND BOND SYSTEMS.
7. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTIONS 27 05 26. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 05 28 PATHWAYS FOR COMMUNICATIONS SYSTEMS

1. CABLE TRAY

a. COMMUNICATIONS CABLING CONTRACTOR TO SUPPLY AND INSTALL CABLE TRAY (REFER TO DRAWINGS FOR SIZE AND LOCATION).
b. THE COMMUNICATIONS CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING AND CONFIRMING CABLE PATHWAYS PRIOR TO INSTALLATION TO ENSURE NO CABLING WILL EXCEED THE SPECIFIED DISTANCE LIMITATIONS. WHERE THE DISTANCE LIMITATIONS ARE EXCEEDED, THE COMMUNICATIONS CONTRACTOR SHALL INFORM THE COMMUNICATIONS CONSULTANT PRIOR TO INSTALLATION.
c. ALL CABLING EXTENDING BEYOND CABLE TRAY SHALL BE SUPPORTED USING CONDUIT OR CABLE SLINGS.
d. TELECOMMUNICATIONS WIRE BASKET TRAY SHALL BE SECURED INDEPENDENTLY TO THE STRUCTURAL CEILING, BUILDING TRUSS SYSTEM, WALL OR FLOOR USING MANUFACTURER'S RECOMMENDED SUPPORTS AND APPROPRIATE HARDWARE AS DEFINED BY LOCAL CODE.
e. WHEN THE PATHWAY IS OVERHEAD, WIRE MESH CABLE TRAY SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 12 INCHES ABOVE THE TRAY. 12 INCHES MUST BE LEFT IN–BETWEEN THE TRAY AND THE CEILING/BUILDING TRUSS STRUCTURE. MULTIPLE TIERS OF WIRE MESH CABLE TRAY SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 12 INCHES IN–BETWEEN THE TRAYS.
f. WHEN INSTALLED UNDER A RAISED FLOOR, WIRE MESH CABLE TRAY SHALL BE INSTALLED WITH A MINIMUM $\frac{3}{4}$ INCH CLEARANCE BETWEEN THE TOP OF THE TRAY AND THE BOTTOM OF THE FLOOR TILES OR FLOOR SYSTEM STRINGERS (WHICHEVER ARE LOWER IN ELEVATION). WIRE MESH CABLE TRAY SHALL BE SUPPORTED BY MANUFACTURER'S SPECIFICATIONS.
g. SEE UTM COMMUNICATION CABLING STANDARD R3.1 SECTION 27 05 29 PART 3.1.9 FOR REQUIRED SEPARATIONS FROM EMI SOURCES:
h. TELECOMMUNICATIONS WIRE BASKET TRAY SHALL BE SUPPORTED AT LEAST EVERY 1.5 M (5 FT) CENTERS UNLESS THEY ARE DESIGNED FOR GREATER SPANS. A SUPPORT SHALL ALSO BE PLACED WITHIN 0.6 M (2 FT) ON EACH SIDE OF ANY CONNECTION TO A FITTING.
i. SEE 20201112 – UTM COMMUNICATION CABLING STANDARDS – R3.1 SECTION 27 15 01 19 PART 3.1.10 CABLE RACEWAYS SHALL NOT BE FILLED GREATER THAN THE TIA/EIA–569–B RECOMMENDED MAXIMUM FILL FOR THE PARTICULAR RACEWAY TYPE, OR 40% WHICHEVER IS LESS.
j. TELECOMMUNICATIONS WIRE BASKET TRAY SHALL BE BONDED TO THE SECONDARY BONDING BUSBAR (SBB) OVERHEAD OR UNDER FLOOR BONDING CONDUCTOR GRID SYSTEM USING AN APPROVED GROUND LUG ON THE WIRE BASKET TRAY AND A MINIMUM #6 AWG GROUNDING WIRE OR AS RECOMMENDED BY THE AHJ. VERIFY BONDS AT SPLICES AND INTERSECTIONS BETWEEN INDIVIDUAL CABLE TRAY SECTIONS AND SUPPORTS. CABLE PATHWAY SHOULD BE ELECTRICALLY CONTINUOUS THROUGH BONDING AND ATTACHED TO THE SBB.
k. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 05 36. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

2. VELCRO WRAPS

k. COMMUNICATIONS CABLING CONTRACTOR TO USE VELCRO TIES TO TIE BUNDLES OF CABLE, NYLON CABLE TIES WILL NOT BE ACCEPTED.
l. VELCRO WRAPS SHALL BE SUPPLIED AND INSTALLED TO SUPPORT AND NEATLY BUNDLE ALL HORIZONTAL AND VERTICAL CABLING.

4. INNERDUCT

a. INNERDUCT SHALL BE SUPPLIED AND INSTALLED NON–PLENUM (FT4) OR PLENUM (FT6) RATED TO SUIT THE FIRE RATING AT THE LOCATION OF INSTALLATION..
b. INNERDUCT SHALL BE COLOURED FOR USE WITH DIFFERENT CABLING AS FOLLOWS:
c. MULTIMODE FIBRE : ORANGE
d. SINGLEMODE FIBRE : YELLOW

5. SPLIT LOOM

a. COMMUNICATIONS CABLING CONTRACTOR SHALL SUPPLY SPLIT LOOM TO DRESS THE CABLING FROM THE WALL/FLOOR FEED TO FURNITURE FEED LOCATIONS.
b. THE SPLIT LOOM SHALL BE SIZED AND COLOUR MATCHED TO SUIT EACH LOCATION.

27 05 53 IDENTIFICATION FOR COMMUNICATIONS SYSTEMS

1. CONTRACTOR SHALL LABEL EACH CABLE BY USING SELF–ADHESIVE, SELF–LAMINATING LABELS IN ACCORDANCE WITH THIS SPECIFICATION AND ANSI/TIA–606–C.
2. ALL LABELS SHALL BE MACHINE–GENERATED; HAND WRITTEN LABELS ARE NOT ACCEPTABLE.
   a. **CABLE LABELING**: ALL CABLING SHALL BE LABELED IN FOUR (4) LOCATIONS, EACH END OF THE CABLE FOUR (4) INCHES FROM THE END, ON THE CORRESPONDING FACEPLATE, AND PATCH PANEL/IDC MOUNT.
   b. **PIGTAIL LABELING**: ALL CABLING SHALL BE LABELED IN THREE (3) LOCATIONS, EACH END OF THE CABLE FOUR (4) INCHES FROM THE END, AND ON THE CORRESPONDING FACEPLATE.
   c. **PATCH CORD LABELING**: ALL PATCH CABLES SHALL BE LABELED IN TWO (2) LOCATIONS, EACH END OF THE CABLE.
3. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 05 53. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 08 00 COMMISSIONING OF STRUCTURED CABLING SYSTEMS

1. THE INSTALLATION SHALL BE TESTED AND WARRANTED TO THE CATEGORY OF CABLE BEING INSTALLED AND TESTED TO THE STANDARDS AS DETAILED IN ANSI/TIA DOCUMENTS 568.0–D, 568.1–D, 568.2–D, AND 568.3–D INCLUDING ALL ADDENDA.
2. COPPER CATEGORY CABLES MUST BE TESTED AS PER TIA–1152 AND THE MANUFACTURER'S REQUIREMENTS TO MEET THE CATEGORY CABLE LEVEL SPECIFIED IN THIS DOCUMENT AND AS NECESSARY TO BE ELIGIBLE FOR THE MANUFACTURER'S 20+ YEAR WARRANTY.
3. PRE–APPROVED LEVEL IV CABLE CERTIFICATION TESTERS ARE THE FLUKE VERSIV DSX RANGE AND THE IDEAL NETWORKS LANTEK IV.
4. TESTER SHALL BE CALIBRATED AND HAVE LATEST VERSIONS OF FIRMWARE AND SOFTWARE.
5. TESTING OF TELECOMMUNICATIONS CABLING SHALL BE DONE AT THE TIME OF INSTALLATION.
6. ALL CABLING IS TO BE TESTED AND CERTIFIED.
7. TESTING OF BACKBONE CABLING SHALL BE DONE PRIOR TO THE DELIVERY OF THE SYSTEM.
8. THE ACCEPTABLE OPTICAL LOSS MUST BE LESS THAN THE ALLOWABLE LOSS THAT WILL SUPPORT THE CLIENT NETWORK PROTOCOL.
9. ALL OPTICAL FIBRE STRANDS SHALL BE TESTED WITH A MANUFACTURER–APPROVED OPTICAL LOSS TEST SET (OLTS), ACCORDING TO TIA–526–7–A–2015 FOR SINGLE MODE CABLES, AND TIA–526–14–C–2015 FOR MULTI–MODE CABLES.
10. PRE–APPROVED OLTSS ARE THE FLUKE VERSIV DSX RANGE (WITH OPTICAL FIBRE ADAPTERS), AND EXFO FOT SERIES.
11. CONTRACTOR SHALL ENSURE THAT THE OLTS UNITS ARE EQUIPPED TO SUPPORT THE REQUIRED SINGLE–MODE AND MULTI–MODE BANDWIDTHS.
12. THE PASS/FAIL REPORTING MUST BE REFERENCED TO THE OPTICAL POWER BUDGET ESTABLISHED FOR THE FIBRE TYPE AND OPTICAL TRANSCEIVER EQUIPMENT TO BE USED. CONTRACTOR SHALL CONFIRM WITH CLIENT.
13. TEST SHALL BE PERFORMED BIDIRECTIONAL AT 850 AND 1300 NM FOR MULTIMODE, AND 1310 AND 1550 NM, FOR SINGLE MODE UNLESS OTHER–WISE REQUIRED.
14. FOR OSP SINGLE MODE FIBRE, BIDIRECTIONAL OTDR TESTING IS REQUIRED.
15. ALL TEST RESULTS SHALL BE DELIVERED TO THE MANUFACTURER AND BOTH A SOFT COPY AND HARD COPY SHALL BE DELIVERED TO THE HIDI GROUP FOR REVISION OF THE RESULTS.
16. CABLE USED IN THE INSTALLATION SHALL BE QUALIFIED AND RECOGNIZED BY THE MANUFACTURER OF THE CABLING SOLUTION.
17. LINKS OR CHANNELS IN THE INSTALLATION ARE PROPERLY DOCUMENTED AND TESTED WITH A 'PASS' RESULT, CONDITIONAL/MARGINAL PASSES (PASS*) MUST BE FIXED AND RETESTED UNTIL THEY ACHIEVE A CLEAN PASS.
18. REQUIRED TEST RESULTS AND PROJECT DOCUMENTATION SHALL BE SUBMITTED TO MANUFACTURER BY THE REGISTERED CONTRACTOR, IN ORDER TO OBTAIN PROPER SYSTEM CERTIFICATION.
19. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 05 55. ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 11 16 COMMUNICATIONS CABINETS, RACKS, FRAMES, AND ENCLOSURES

1. THE COMMUNICATIONS CONTRACTOR SHALL SUPPLY AND INSTALL CABINET/RACKS AS PER DRAWING
2. THE CABINETS/RACKS SHALL BE BONDED TO BUILDING GROUND AND BOLTED TO FLOOR USING APPROPRIATELY–SIZED LAG BOLTS.
3. THE CABINETS/RACKS SHALL BE NEW AND FREE OF DEFECTS.
4. HORIZONTAL CABLE MANAGERS SHALL BE COMPATIBLE WITH 19" STANDARD CABINETS/RACKS.
5. VERTICAL CABLE MANAGERS SHALL BE INSTALLED TO RUN THE FULL HEIGHT OF THE RACK.
6. SHELVES SHALL BE RATED FOR NO LESS THAN 200LBS.
7. CABLE DROP CONTROLS / WATERFALLS SHALL BE INSTALLED IN LOCATIONS WHERE THE CABLE DROPS INTO CABINETS AND OR RACKS.
8. PLYWOOD BACKBOARDS SHALL BE SUPPLIED AND INSTALLED BY USING ¾" THICK, FIRE RATED, 4' X 8' GOOD ONE SIDE, AS PER LOCATION NOTED ON DRAWING.
9. ALL PLYWOOD BACKBOARDS SHALL BE PAINTED WITH TWO (2) COATS OF FIRE RETARDANT NON–CONDUCTINE WHITE PAINT. 'FIRE RATING" STAMP SHALL BE LEFT UNPAINTED TO ALLOW FOR VERIFICATION OF RATING.
10. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 11 16 FOR ADDITIONAL REQUIREMENTS ON RACKS/CABINETS AND CABLE MANAGEMENT.

27 11 19 COMMUNICATIONS TERMINATION BLOCKS AND PATCH PANELS

1. ALL HORIZONTAL UTP CABLING SHALL BE TERMINATED ON MODULAR, BLACK PATCH PANELS.
2. ALL MODULAR PATCH PANELS SHALL BE POPULATED WITH UTP MODULES WITH THE CATEGORY MEETING THE REQUIREMENTS SET OUT IN SECTION 27 15 43.
3. ALL UTP MODULES SHALL MEET THE COLOUR REQUIREMENTS SET OUT IN SECTION 27 15 43.
4. ALL FIBRE OPTIC CABLING SHALL BE TERMINATED IN RACK MOUNTED PATCH PANELS.
5. BLANK FILLER STRIPS SHALL BE PROVIDED FOR ALL UNUSED OPENINGS.
6. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTIONS 27 11 19 AND 27 11 23. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 11 26 COMMUNICATIONS RACK MOUNTED POWER PROTECTION AND POWER STRIPS

1. THE CONTRACTOR SHALL PROVIDE UPS AND PDUs.
2. THE POWER CORDS SHALL BE A MINIMUM OF NINE (9) FEET TO REACH UP TO THE CABLE TRAY OR DOWN TO THE FLOOR WHERE IT WILL PLUG INTO A RECEPTACLE SUPPLIED BY DIVISION 26.
3. SUPPLY AND INSTALL UPS/PDUs AS PER LOCATIONS ON DRAWINGS.
4. UPS, SPECIFIED PRODUCT: EATON 9PX6–L 6kVA (SUPPLY AND INSTALL ONE)
5. PDU, SPECIFIED PRODUCT: EATON EVMAL630B W/ L6–30P (SUPPLY AND INSTALL TWO)

27 13 13 COMMUNICATIONS COPPER BACKBONE CABLING

1. ALL BACKBONE CABLING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDED BUNDLING PRACTICES FOR INSTALLATION; CABLES SHALL NOT BE SCRATCHED, DENTED OR OTHERWISE DAMAGED BEFORE, DURING, OR AFTER THE INSTALLATION.
2. THE COMMUNICATIONS CABLING CONTRACTOR SHALL ENSURE THAT ALL INSTALLED CABLING DOES NOT EXCEED THE MINIMUM BEND RADIUS AT ANY POINT IN THE LINK.
3. LUBRICATION: IN ORDER TO REDUCE CABLE FRICTION WHEN INSTALLING COMMUNICATION CABLES IN CONDUITS, IT IS PERMISSIBLE FOR THE CONTRACTOR TO USE AN APPROVED PULLING LUBRICANT PROVIDING IT MEETS OR EXCEEDS THE MANUFACTURER'S SPECIFICATIONS AND GUIDELINES.
4. ALL BACKBONE LINKS SHALL BE POINT–TO–POINT WITH NO SPLICES.
5. VERTICAL RUNS OF MORE THAN 30 FEET OR 3 FLOORS SHALL BE RESTRAINED EVERY 30 FEET WITH SPLIT MESH GRIPS OR CADDY VERTICAL GRIPS.
6. ALL PENETRATIONS OF THE FIRE RATED SLABS OR PARTITIONS MUST BE FIRE STOPPED WITH CSA /ULC LISTED ASSEMBLY TO MAINTAIN THE ORIGINAL FIRE RATING.
7. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 13 13. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 13 23 COMMUNICATIONS OPTICAL FIBRE BACKBONE CABLING

1. ALL BACKBONE CABLING SHALL COMPLY WITH MANUFACTURER'S RECOMMENDED BUNDLING PRACTICES FOR INSTALLATION, CABLES SHALL NOT BE SCRATCHED, DENTED, OR OTHERWISE DAMAGED BEFORE, DURING, OR AFTER THE INSTALLATION.
2. THE COMMUNICATIONS CABLING CONTRACTOR SHALL ENSURE THAT ALL INSTALLED CABLING DOES NOT EXCEED THE MINIMUM BEND RADIUS AT ANY POINT IN THE LINK
3. LUBRICATION: IN ORDER TO REDUCE CABLE FRICTION WHEN INSTALLING COMMUNICATION CABLES IN CONDUITS IT IS PERMISSIBLE FOR THE CONTRACTOR TO USE AN APPROVED PULLING LUBRICANT PROVIDING IT MEETS OR EXCEEDS THE MANUFACTURER'S SPECIFICATIONS AND GUIDELINES.
4. ALL BACKBONE LINKS SHALL BE POINT–TO–POINT.
5. ALL STRANDS OF THE OPTICAL FIBRE SHALL BE FUSION SPLICED.
6. VERTICAL RUNS OF MORE THAN 30 FEET OR 3 FLOORS SHALL BE RESTRAINED EVERY 30 FEET WITH SPLIT MESH GRIPS OR CADDY VERTICAL GRIPS.
7. ALL PENETRATIONS OF THE FIRE RATED SLABS OR PARTITIONS MUST BE FIRE STOPPED WITH CSA ULC ASSEMBLY TO MAINTAIN THE ORIGINAL FIRE RATING.
8. REFER TO DRAWINGS FOR FIBRE TYPES.
9. FOR TERMINATIONS IN EXISTING OPTICAL CROSS–CONNECT CABINET (OCC), CONTRACTOR SHALL SUPPLY AND INSTALL ALL NECESSARY HARDWARE FOR FUSION TERMINATION WITHIN CORNING FIBRE DISTRIBUTION INTERFACE. COORDINATE WITH UTM I&ITS FOR ACCESS TO OCC. PART NUMBERS ARE: CCH–CS24–A9–P00RE AND RMB–CASS–12C. SUPPLY AND INSTALL FDI–CASSETTE AND FDI–TRAY AS REQUIRED.
10. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 13 23 AND 27 13 23 13. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 15 13 COMMUNICATIONS COPPER HORIZONTAL CABLING

1. ALL CABLING MUST BE TERMINATED USING ANSI–TIA 568A CONFIGURATION, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL CABLE SLACK SHALL BE NEATLY COILED AND SECURED TO THE PATHWAY WITH VELCRO.
3. CONTRACTOR SHALL ENSURE THAT ALL INSTALLED SPECIFIED CATEGORY CABLING DOES NOT EXCEED THE MINIMUM BEND RADIUS AT ANY POINT IN THE LINK.
4. ALL CABLE BUNDLES SHALL NOT EXCEED 12 CABLE PER BUNDLE.
5. ALL UTP CABLES SHALL BE BLUE.
6. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 15 01 19. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 15 43 COMMUNICATIONS FACEPLATES AND CONNECTORS

1. UTP TERMINATION MODULES SHALL BE OF THE SAME CATEGORY AS THE UTP CABLING SOLUTION TO ENSURE THAT THE MANUFACTURER'S END–TO–END WARRANTY.
2. ALL WPO (WEATHERPROOF OUTLET) SHALL BE INSTALLED WITH CORROSIVE RESISTANT UTP JACK MODULE.
3. ALL UTP CONNECTORS SHALL MEET REQUIREMENTS IDENTIFIED BELOW:
   3.1. DATA:BLUE
   3.2. SECURITY: YELLOW
   3.3. WAPs: ORANGE
   3.4. BAS/BMS: RED
4. OPTICAL FIBRE CONNECTORS SHALL BE FUSION SPLICED AND BE OF THE SAME MANUFACTURER AS THE CABLE INSTALLED.
5. OPTICAL FIBRE SHALL BE TERMINATED WITH LC CONNECTORS.
6. OPTICAL FIBRE ADAPTER STRIPS SHALL BE OF THE SAME MANUFACTURER AND STYLE TO SUIT THE CABLING INSTALLED.
7. WORKSTATION FACEPLATES AND ADAPTERS:
8. WORKSTATION OUTLETS SHALL BE BE OF THE SAME MANUFACTURER AND STYLE TO SUIT THE CONNECTORS INSTALLED.
9. MODULAR FURNITURE FACEPLATES SHALL HAVE A MINIMUM OF THREE (3) PORTS AND BLANKS SHALL BE INSTALLED FOR ALL UN–USED PORTS.
10. WALL FACEPLATES SHALL HAVE A MINIMUM OF FOUR (4) PORTS AND BLANKS SHALL BE INSTALLED FOR ALL UN–USED PORTS.
11. WALL FACEPLATE FOR MOUNTED PHONES SHALL MADE OF STEEL AND HAVE ONE (1) PORT AND SHALL HAVE TWO (2) MOUNTING POSTS TO SUPPORT CLIENT PROVIDED PHONE.
12. SURFACE MOUNTED BOXES SHALL HAVE A MINIMUM OF TWO (2) PORTS AND BLANKS SHALL BE INSTALLED FOR ALL UN–USED PORTS.
13. SYSTEMS FURNITURE:
    13.1. COMMUNICATIONS CONTRACTOR SHALL ROUTE CABLES THROUGH THE CHANNEL/COMPARTMENT OF THE SYSTEMS FURNITURE.
    13.2. COMMUNICATIONS CONTRACTOR SHALL COORDINATE WITH FURNITURE VENDOR FOR SPECIFIC FACEPLATE AND MOUNTING REQUIREMENTS.
14. FLOOR BOXES:
    14.1. COMMUNICATIONS CONTRACTOR SHALL COORDINATE WITH ELECTRICAL/GENERAL CONTRACTOR TO ENSURE TERMINATION HARDWARE COMPATIBILITY IN SPECIFIED FLOORBOXES AND/OR POKE–THROUGHS.
15. CONTRACTOR SHALL REFERENCE UTM COMMUNICATION CABLING STANDARDS R3.1 SECTION 27 15 43. CONTRACTOR SHALL ENGAGE UTM I&ITS FOR DIRECTION AS REQUIRED.

27 16 19 COMMUNICATIONS PATCH CORDS, STATION CORDS, AND CROSS–CONNECT WIRE

1. THE COMMUNICATIONS CONTRACTOR SHALL SUPPLY AND INSTALL ALL PATCH CORDS AT BOTH ENDS.
2. PATCH CORDS SHALL BE OF THE SAME MANUFACTURER AND CATEGORY TO PROVIDE A COMPLETE END TO END SOLUTION.
3. THE COMMUNICATION CONTRACTOR SHALL ASSUME ALL PORTS SHALL BE PATCHED AND USED CABLE MANAGEMENT/VELCRO WHILE MAINTAINING CABLE BEND RADIUS.
4. SUPPLY AND INSTALL TWO (2) FT4 RATED PATCH CORDS FOR EVERY HORIZONTAL CABLE

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

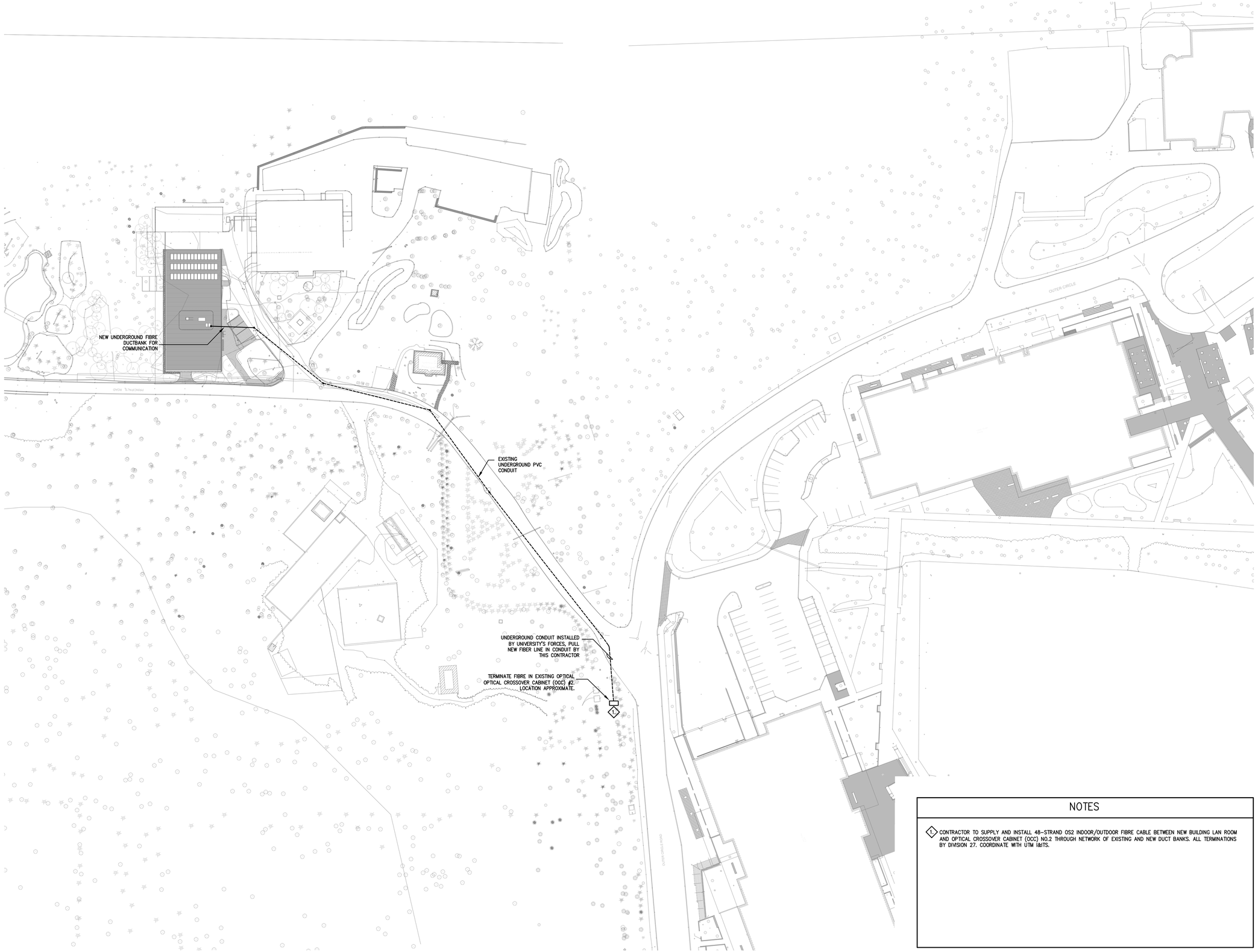
SPECIFICATIONS

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE : N.T.S.
DATE : FEB 2024
PROJECT NO : 2023-0059
DRAWN BY : SS
CHECKED BY : BC
SHEET NO :

T-002



NOTES

1. CONTRACTOR TO SUPPLY AND INSTALL 48-STRAND OS2 INDOOR/OUTDOOR FIBRE CABLE BETWEEN NEW BUILDING LAN ROOM AND OPTICAL CROSSOVER CABINET (OCC) NO.2 THROUGH NETWORK OF EXISTING AND NEW DUCT BANKS. ALL TERMINATIONS BY DIVISION 27. COORDINATE WITH UTM I&ITS.

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

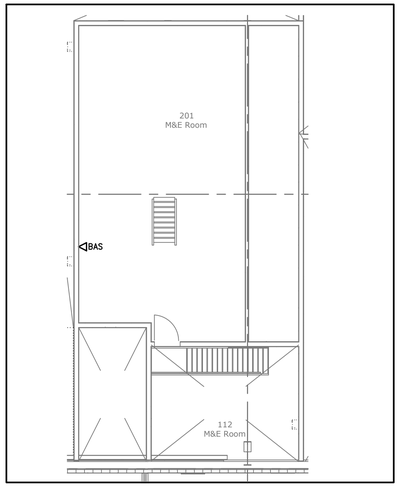
TITLE

SITE PLAN

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

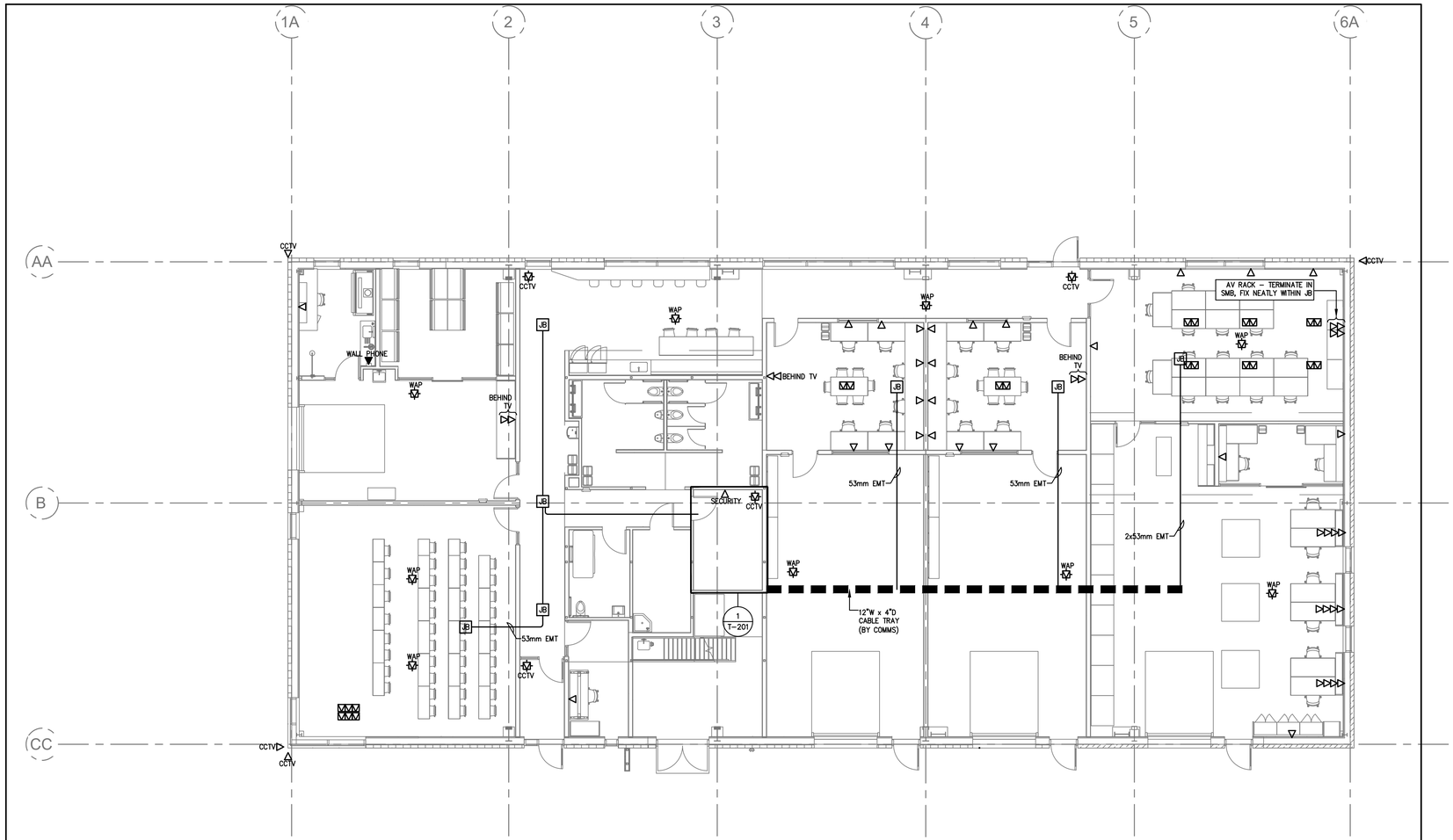
SEAL

SCALE : 1:600	SHEET NO : T-101
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : BC	



02 T-201 MEZZANINE PART PLAN

1:100



01 T-201 GROUND FLOOR STRUCTURED CABLING LAYOUT

1:100

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

GROUND FLOOR AND PARTIAL MEZZANINE TELECOM LAYOUTS

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

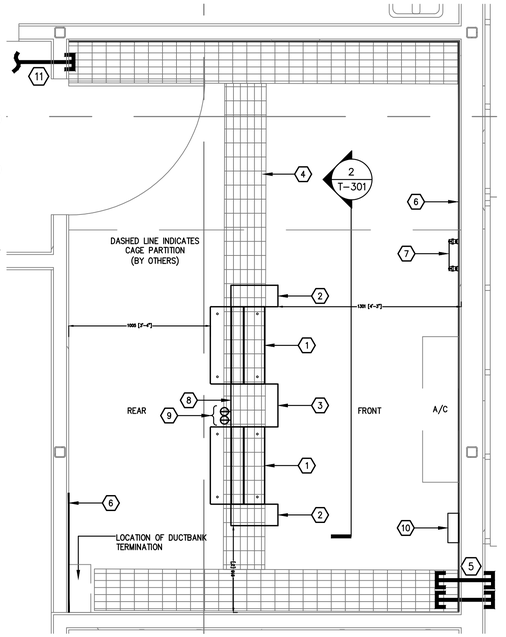
SCALE : 1:100	SHEET NO :
DATE : FEB 2024	T-201
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : BC	

EQUIPMENT:

1. 45U 2-POST RACK (BY COMMS)
2. 6"W VERTICAL CABLE MANAGER (BY COMMS)
3. 12"W VERTICAL CABLE MANAGER (BY COMMS)
4. 12"W x 4"D CABLE-TRAY (BY COMMS)
5. 2 x 4" EMT SLEEVES TO CABLE TRAY (BY DIV. 26)
6. 3/4" FIRE-RATED PLYWOOD BACKBOARD (BY DIV. 26)
7. SECONDARY BONDING BUSBAR (BY DIV. 26)
8. TWO (2) PDUs MOUNTED TO REAR OF VERTICAL MANAGER, ONE ON UTILITY, ONE ON UPS (BY COMMS)
9. TWO (2) DEDICATED L6-30 RECEPTACLES MOUNTED CLOSE TO FLOOR ON REAR OF VERTICAL CABLE MANAGER. COORDINATE PLACEMENT WITH PDUs. (BY DIV. 26)
10. BIX MOUNT AND WAFER – CONTRACTOR SHALL SUPPLY/INSTALL 25-PAIR CATEGORY 3 TO AMPHENOL VOICE PATCH PANEL IN RACK.
11. 4" EMT ZONE CONDUIT TO JB (BY DIV. 26)

NOTES:

1. CONTRACTOR TO SUPPLY AND INSTALL VERTICAL CABLE TRAY TO TRANSITION CABLING TO SLEEVE/CONDUIT LOCATIONS.
2. SEE UTM SPECIFICATIONS FOR ALL METHODS AND MATERIALS.



01 T-301 HUB ROOM LAYOUT

1:20

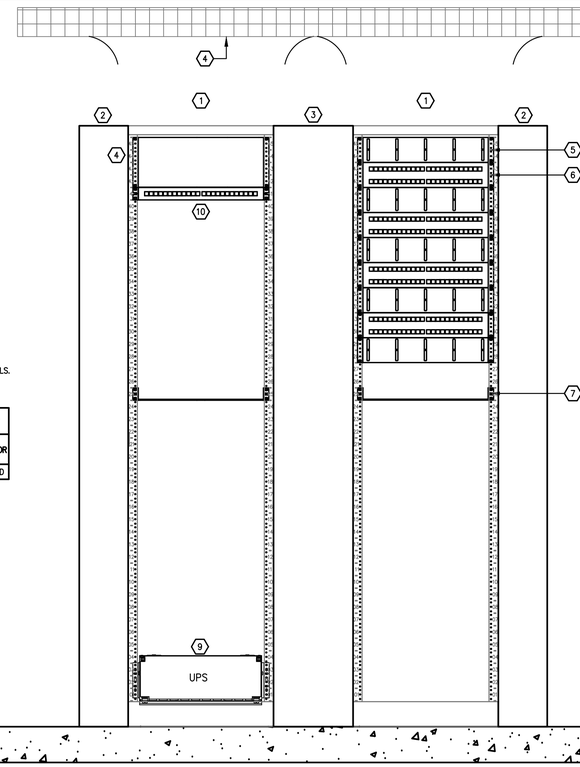
EQUIPMENT LIST:

1. 45U 2-POST RACK (BY COMMS)
2. 6" VERTICAL CABLE MANAGER (BY COMMS)
3. 12" VERTICAL CABLE MANAGER (BY COMMS)
4. 4U FIBRE ENCLOSURE (BY COMMS)
5. 2U HORIZONTAL CABLE MANAGER, TYP (BY COMMS)
6. 2U 48-PORT PATCH PANEL, TYP (BY COMMS)
7. 1U EQUIPMENT SHELF (BY COMMS)
8. 12"W CABLE-TRAY C/W WATERFALLS, TYP (BY COMMS)
9. UPS (BY COMMS)
10. VOICE PATCH PANEL (BY COMMS)

NOTES:

1. RACK ELEVATION IS NOT FINAL. COORDINATE FINAL REQUIREMENTS WITH UTM I&ITS RACK DIAGRAM.
2. SEE UTM SPECIFICATIONS FOR ALL METHODS AND MATERIALS.

INTER-BUILDING FIBRE BACKBONE MATRIX. CONTRACTOR SHALL SUPPLY AND INSTALL THE FOLLOWING.		
FROM	TO	QTY. OS2 INDOOR/OUTDOOR OFNR FIBRE
LAN RM [120]	OCC#2	1 x 48-STRAND



2 T-301 HUB ROOM ELEVATION

1:10

TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

HUB ROOM LAYOUT AND ELEVATION

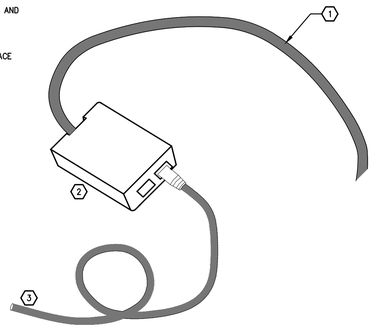
THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE : AS NOTED	SHEET NO : T-301
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : BC	

SYMBOL ON PLAN : WAP

1. COMMUNICATIONS CABLE (CONTRACTOR TO LEAVE AND CONCEAL 20-FOOT SERVICE LOOP)
2. 2-PORT SURFACE-MOUNT BOX, FT6/CMP-RATED
3. PATCH CORD, CMP-RATED IF WITHIN PLENUM SPACE



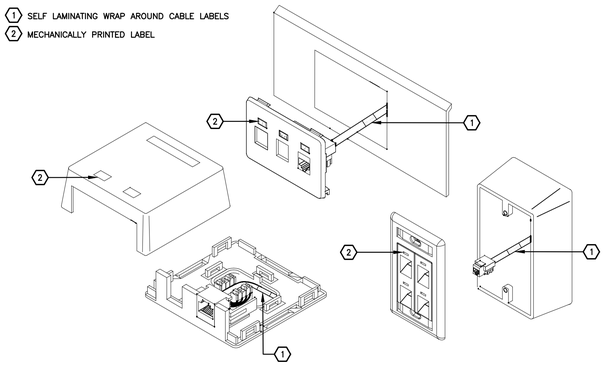
09 T-401

2-PORT SURFACE MOUNT BOX

SCALE: N.T.S.

EQUIPMENT:

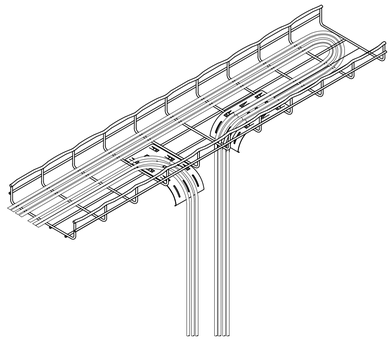
1. SELF LAMINATING WRAP AROUND CABLE LABELS
2. MECHANICALLY PRINTED LABEL



05 T-401

FACEPLATE / CABLE LABELLING (TYPICAL)

SCALE: N.T.S.



NOTE:

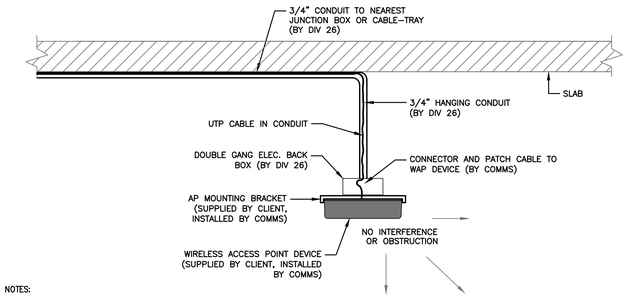
1 - FOR INFORMATION ONLY

06 T-401

CABLE TRAY/WATERFALLS - CABLES SLACK DETAIL

SCALE: N.T.S.

SYMBOL ON PLAN : WAP



NOTES:

1. ROUGH-IN SHALL BE LOW ENOUGH AS TO AVOID ANY ELECTRICAL OR MECHANICAL OBSTRUCTIONS.
2. FOR INFORMATION ONLY.

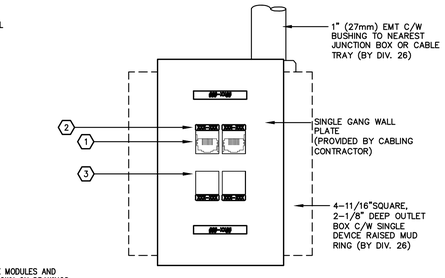
08 T-401

WAP MOUNTING DETAIL - OPEN, HARD, OR DESIGN CEILING, TYPICAL

SCALE: N.T.S.

SYMBOLS ON PLAN :

1. COMMUNICATIONS CABLE
2. MECHANICALLY PRINTED LABEL
3. BLANK



NOTES:

1. CONTRACTOR SHALL SUPPLY JACK MODULES AND LABELS BASED ON QUANTITIES SHOWN ON DRAWINGS.
2. CONTRACTOR SHALL SUPPLY BLANKS FOR ANY UN-USED PORTS.

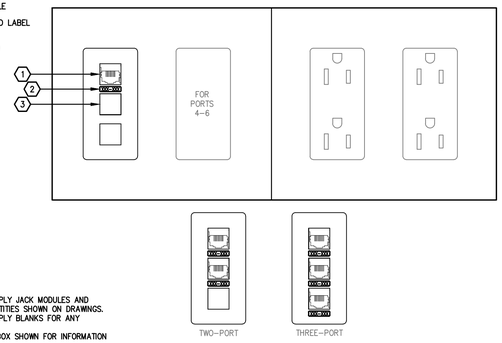
01 T-401

COMMUNICATIONS WALL OUTLET DETAIL

SCALE: N.T.S.

SYMBOLS ON PLAN :

1. COMMUNICATIONS CABLE
2. MECHANICALLY PRINTED LABEL (AS REQUIRED)
3. BLANK (AS REQUIRED)



NOTES:

1. CONTRACTOR SHALL SUPPLY JACK MODULES AND LABELS BASED ON QUANTITIES SHOWN ON DRAWINGS.
2. CONTRACTOR SHALL SUPPLY BLANKS FOR ANY UN-USED PORTS.
3. SURFACE-MOUNT FLOORBOX SHOWN FOR INFORMATION ONLY.

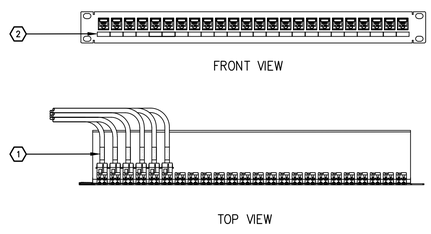
02 T-401

COMMUNICATIONS FLOOR OUTLET DETAIL

SCALE: N.T.S.

EQUIPMENT:

1. SELF LAMINATING WRAP AROUND CABLE LABELS
2. MECHANICALLY PRINTED LABEL



03 T-401

PATCH PANEL / CABLE LABELLING (TYPICAL)

SCALE: N.T.S.

No.	ISSUANCE	DATE
1	ISSUED FOR 50% CD	2024-09-06
2	ISSUED FOR PROGRESS	2024-10-15
3	ISSUED FOR 100% CD	2024-11-05
4	ISSUED FOR TENDER	2024-11-15

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

DETAILS

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE : N.T.S.	SHEET NO : T-401
DATE : FEB 2024	
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : BC	

PRE-ENGINEERED BUILDING UTM

3359 MISSISSAUGA RD
MISSISSAUGA, ON L5L 1C6

DRAWING INDEX

SD-001	DRAWING LIST, NOTES AND LEGEND
SD-002	SPECIFICATIONS
SD-201	GROUND FLOOR SECURITY LAYOUT
SD-401	DETAILS

GENERAL NOTES

1. SECURITY DEVICE LOCATIONS INDICATED ON DRAWINGS ARE APPROXIMATE. COORDINATE FINAL INSTALLATION LOCATIONS AND DETAILS WITH THE ARCHITECT. REFER TO ARCHITECTURAL DRAWINGS AND REVIEW SITE CONDITIONS FOR INSTALLATION REQUIREMENTS. ALL DETAILS SHOWN SHALL BE ADAPTED AS REQUIRED TO SUIT THE SITE CONDITIONS AND THE SPECIFIC APPLICATION.
2. ARCHITECTURAL PLAN DRAWING BACKGROUNDS ARE FOR REFERENCE ONLY. REFER TO PROJECT ARCHITECTURAL DRAWINGS AND SITE CONDITIONS. SITE MEASURE FOR EXACT DIMENSIONS AND INSTALLATION REQUIREMENTS.
3. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE BSS SPECIFICATIONS.
4. PROVIDE ALL REQUIRED CUTTING, BORING, PATCHING AND FINISHING NECESSARY TO PROVIDE A COMPLETE INSTALLATION. PROVIDE ALL MOUNTS, BACK BOXES, ADAPTERS, FACEPLATES, BEZELS, TRIM, ETC. UNLESS OTHERWISE NOTED.
5. PROVIDE COMPLETE SHOP DRAWINGS AND DETAILS FOR ALL PROPOSED INSTALLATIONS. OBTAIN ARCHITECT'S APPROVAL FOR ALL INSTALLATIONS.
6. COORDINATE ALL INSTALLATIONS AND WORK. OBTAIN ALL NECESSARY APPROVALS AND PERMITS.
7. PROVIDE ALL INSTALLATIONS IN COMPLIANCE WITH APPLICABLE CODES AND SITE INSTALLATION STANDARDS AND GUIDELINES.
8. PROVIDE ALL DEVICES AND INSTALLATIONS WITH A COLOR AND FINISH TO MATCH THE INSTALLATION LOCATION. OBTAIN ARCHITECT'S APPROVAL FOR ALL INSTALLATION OF DEVICES AND COMPONENTS.
9. NOTIFY THE ARCHITECT AND CONSULTANT OF ANY DRAWING DISCREPANCIES.
10. ALL SECURITY SYSTEM CABLING SHALL BE INSTALLED WITHIN DEDICATED CONDUIT. PROVIDE ALL CONDUIT SLEEVES FOR SECURITY SYSTEM CABLING.
11. CONDUIT SIZES INDICATED ON THE DRAWINGS AND HOME RUN SIZES SHOWN ON DETAIL SHEETS ARE TO BE CONSIDERED THE MINIMUM SIZE TO BE INSTALLED. PROVIDE LARGER OR ADDITIONAL CONDUIT IF REQUIRED. CONDUIT SIZES INDICATE DEDICATED HOME RUNS, BUT MAY BE COMBINED WITH OTHER LOCATIONS BY SYSTEM TYPE (CCTV, PACS, SIS) AS LONG AS CEC MAXIMUM FILL REQUIREMENTS ARE MAINTAINED. PROVIDE LARGER CONDUIT SIZES FOR COMBINED DEVICE HOME RUNS.
12. UNLESS NOTED OTHERWISE, ALL CONDUIT AND BACKBOXES SHALL BE INSTALLED CONCEALED WITHIN WALLS AND ABOVE FINISHED CEILINGS. OBTAIN APPROVAL FOR ANY PROPOSED INSTALLATION OF EXPOSED OR SURFACE CONDUIT, DEVICES, ETC.
13. SECURITY WIRING, CONDUIT AND JUNCTION BOXES SHALL BE INSTALLED ON THE SECURE SIDE OF DOOR (INSIDE SECURE SPACE).
14. REFER TO THE BUILDING ELECTRICAL DRAWINGS FOR THE ELECTRICAL DISTRIBUTION PANEL AND POWER SUPPLY DETAILS.
15. DO NOT COPY OR DISTRIBUTE THESE SECURITY DRAWINGS. UNAUTHORIZED DISTRIBUTION OF ANY PORTION OF THESE DRAWINGS, ELECTRONIC OR PAPER, IS PROHIBITED.

ABBREVIATIONS

AFF = ABOVE FINISHED FLOOR
AFG = ABOVE FINISHED GRADE
CLG = CEILING
Ex = EXISTING TO REMAIN
NIC = NOT IN CONTRACT
PB = PULL BOX
R = EXISTING TO DEMO (REMOVE)
RL = EXISTING TO RELOCATE
RP = RELOCATED POSITION
TEMP = TEMPORARY
TYP = TYPICAL
UPS = UNINTERRUPTIBLE POWER SUPPLY
UON = UNLESS OTHERWISE NOTED
WP = WEATHERPROOF

⬡1 = REFER TO DRAWING NOTE 1

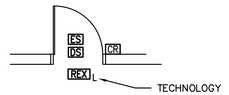
RESPONSIBILITY MATRIX

SYSTEM / WORK	ACCESS CONTROL	BIOMETRIC SYSTEM	GUESTROOM ACCESS	VIDEO MANAGEMENT	INTERCOM	DOOR HARDWARE
ROUGH-IN & CONDUIT	ELEC	ELEC	ELEC	ELEC	ELEC	ELEC/DOOR
CABLING & TERMINATION	SEC	SEC/CBL	CBL	CBL	SEC/CBL	DOOR/SEC
FIELD DEVICE INSTALLATION & TERMINATION	SEC	SEC	SEC	SEC	SEC	DOOR/SEC
PROGRAMMING	SEC	SEC	SEC	SEC	SEC	N/A
COMMISSIONING & TESTING	SEC	SEC	SEC	SEC	SEC	DOOR/SEC

ELEC = ELECTRICAL CONTRACTOR (DIV. 26)
CBL = STRUCTURED CABLING CONTRACTOR (DIV. 27)
SEC = SECURITY CONTRACTOR (DIV. 28)
DOOR = DOOR HARDWARE CONTRACTOR (DIV. 8)

BUILDING SECURITY SYSTEM (BSS) LEGEND

DEVICE TAG LEGEND



PHYSICAL ACCESS CONTROL SYSTEM (PACS)

CR T	PROXIMITY CARD READER (STANDARD) NO TAG = STANDARD WALL MOUNT E = ELEVATOR L = INTEGRAL TO LOCK SET K = WITH INTEGRAL KEYPAD T = TIME AND ATTENDANCE READER V = LONG RANGE / VEHICLE M = MULLION MOUNT
GL T	WIRELESS ELECTRONIC LOCK: G = WIRELESS GUESTROOM LOCK W/ INTEGRAL CARD READER AND DOOR STATUS (CONNECTED TO GUESTROOM MANAGEMENT SYSTEM) B = WIRELESS BACK OF HOUSE LOCK W/ INTEGRAL CARD READER AND DOOR STATUS (CONNECTED TO HOTEL ELECTRONIC ACCESS CONTROL SYSTEM) X = WIRELESS LOCK WITH EXIT TRIM AND DOOR STATUS E = WIRED GUEST ELEVATOR CARD READER R = WIRED GUEST REMOTE CARD READER C/W EXTERNAL HARDWARE
KP T	KEYPAD O = OVERRIDE OR DISARM I = INTRUSION SYSTEM KEYPAD
BIO T	BIOMETRIC ENTRY DEVICE F = FINGERPRINT C = FINGERPRINT W/ INTEGRAL CARD READER I = IRIS SCAN H = HAND GEOMETRY

VIDEO MANAGEMENT SYSTEM (VMS)

MON	VIDEO SURVEILLANCE MONITOR
T	FIXED CAMERA NO TAG = INTERIOR DOME CAMERA (RECESSED) S = DOME CAMERA (SURFACE MOUNT) E = ELEVATOR MOUNT P = POLE MOUNT F = SOFFIT MOUNTED W = WALL MOUNT 180/360 = 180°/360° PANORAMIC VIEW CAMERA PD = PENDANT MOUNT H = THERMAL CAMERA IR = INFRARED CAMERA
T	PTZ CAMERA NO TAG = INTERIOR PTZ P = POLE MOUNT PTZ H = THERMAL CAMERA
KEY	VIDEO CONTROL KEYBOARD
REC T	RECORDING EQUIPMENT N = NETWORK VIDEO RECORDER D = DIGITAL VIDEO RECORDER (ANALOG) A = AUDIO RECORDER
ENC T	ANALOG TO DIGITAL VIDEO ENCODER

LOCKING DEVICES & ACCESSORIES

EL T	ELECTRONIC LOCK X = WITH INTEGRAL REQUEST TO EXIT SWITCH E = ELECTRIC LATCH RETRACTION P = PANIC HARDWARE L = INTEGRAL TO LOCK SET D = PANIC HARDWARE W/ DELAYED EGRESS M = WITH INTEGRAL LATCH BOLT MONITORING
ES T	ELECTRIC STRIKE M = WITH INTEGRAL LATCH BOLT MONITORING H = HEADER MOUNT STRIKE R = RIM MOUNT
ML T	MAGNETIC LOCK B = MAGNETIC LOCK WITH INTEGRAL BOND SENSOR
PT	POWER TRANSFER HINGE (BY OTHERS)
CO T	CONTROL OUTPUT RELAY A = AUTO DOOR OPERATOR O = OVERHEAD DOOR T = TURNSTILES V = VEHICLE BARRIER / BOLLARD / GATE E = ELEVATOR CONTROL

COMMUNICATIONS

IC T	INTERCOM STATION NO TAG = AUDIO SUB STATION M = INTERCOM MASTER STATION V = AUDIO/VIDEO SUB STATION E = DIRECTORY ENTRY PHONE P = PARKING/DURESS ASSISTANCE STATION VM = AUDIO/VIDEO MASTER STATION
TEL T	TELEPHONE DIALER D = DIGITAL (VOIP) V = VOICE (PBX) M = 24/7 MONITORING
RX T	TRANSCEIVER/COMMUNICATION DEVICE C = WIRELESS CARD READER V = WIRELESS VEHICLE FOB READER L = WIRELESS LOCK SET D = WIRELESS DURESS BUTTON G = WIRELESS GUESTROOM CARD READER W = WIRED DOOR GATEWAY
NET T	NETWORK SWITCH NO TAG = EDGE SWITCH C = CORE SWITCH
FO T	FIBER OPTIC TRANSCEIVER V = VIDEO D = DATA TX = TRANSMITTER RX = RECEIVER
RF T	RF VIDEO/DATA TRANSCEIVER

SENSORS & INPUT DEVICES

DS T	DOOR POSITION SWITCH NO TAG = STANDARD MAGNETIC L = INTEGRAL TO LOCK SET O = OVERHEAD DOOR T = CABINET TAMPER SWITCH
PB T	PUSH BUTTON D = DURESS R = REMOTE RELEASE C = CALL A = ALARM ACKNOWLEDGEMENT
REX T	REQUEST TO EXIT DEVICE M = MOTION SENSOR P = PUSH BUTTON T = TOUCHLESS SENSOR L = INTEGRAL TO LOCK SET K = KEY SWITCH
MD T	MOTION DETECTOR NO TAG = MICROWAVE IR = INFRARED D = DUAL TECHNOLOGY U = ULTRASONIC B = BURRIED INTRUSION
GB	GLASS BREAK SENSOR
ID T	INTRUSION/DETECTION DEVICE V = VIBRATION F = FENCE MOUNTED FIBER OPTIC B = BURIED COAXIAL CABLE P = PHOTO BEAM SENSOR
SEN T	MONITORING SENSOR B = TEMPERATURE W = WATER L = LATCH H = HUMIDITY S = SAFE P = PARKING BARRIER POSITION
KS T	MANUALLY OPERATED KEY SWITCH
FA	ADDRESSABLE FIRE ALARM RELEASE RELAY
◪	MANUAL PULL STATION C/W AUXILIARY CONTACT (BY OTHERS)

COMPUTER & PERIPHERAL COMPONENTS

SRV T	SERVER COMPUTER/CPU A = PHYSICAL ACCESS CONTROL V = VIDEO MANAGEMENT I = INTERCOM EXCHANGE F = FRONT OF HOUSE DOOR LOCKING
WKS T	MONITORING WORKSTATION A = PHYSICAL ACCESS CONTROL V = VIDEO MANAGEMENT R = VISITOR REGISTRATION / KIOSK G = GUARD TOUR B = BADGING
KVM	RACK MOUNTED KVM SWITCH WITH INTEGRAL KEYBOARD, MOUSE AND LCD SCREEN
PRN T	PRINTER A = ALARM REPORT C = CARD/ID V = VISITOR BADGE
NCO T	ENCODER DEVICE NO TAG = KEY CARD ENCODER B = BIOMETRIC ENROLMENT

BARRIERS & VEHICLE CONTROLS

TS T	TURNSTILE F = FULL HEIGHT O = OPTICAL
VB T	VEHICLE CONTROL BARRIER NO TAG = PARKING ARM B = RISING BOLLARD S = SLIDING GATE W/ WEDGE O = OVERHEAD GRILLE/SHUTTER
PC T	PARKING CONTROL DEVICE A = AUTOMATIC VEHICLE ID READER W = WIRELESS RECEIVER T = TICKET DISPENSER F = PAY ON FOOT STATION P = PAY IN LANE STATION L = LOT FULL SIGNAGE
VS T	VEHICLE SENSOR NO TAG = INDUCTION LOOP B = BEAM DETECTOR

MISCELLANEOUS SECURITY COMPONENTS

SCR T	SCREENING DEVICE M = METAL DETECTOR T = TAG SENSOR (EAS) H = HANDBAG X-RAY C = CARGO/MAIL X-RAY L = LUGGAGE X-RAY
ICP T	INTELLIGENT CONTROL PANEL NO TAG = PACS V = VOICE INTERCOM I = INTRUSION P = PARKING
RFP T	REMOTE FIELD PANEL NO TAG = PACS F = FENCE DETECTION
PS T	POWER SUPPLY L = ELECTRIC LOCK M = MAGNETIC LOCK / FAIL SAFE P = PANEL C = CAMERA I = INTERCOM A = AUXILIARY DEVICES
AA T	AUDIBLE/VISIBLE ALARM DEVICE NO TAG = LOCAL AUDIBLE ALARM B = BUZZER S = SPEAKER C = CHIME V = AUDIBLE W/ STROBE
VA T	VISUAL ALARM DEVICE NO TAG = STROBE LIGHT L = LED INDICATOR (IN CUSTOM ENCLOSURE OR FACE PLATE)
▬	20mm FIRE RATED PLYWOOD
BF ADO BF	AUTOMATIC DOOR OPERATOR WITH BARRIER-FREE PUSH BUTTONS (BY OTHERS)

No.	ISSUANCE	DATE
1.	ISSUED FOR 50% CD	09-06-2024
2.	ISSUED FOR PERMIT	10-11-2024
3.	ISSUED FOR 100% CD	11-06-2024
4.	ISSUED FOR TENDER	11-15-2024

DISCLAIMER:

NOT FOR CONSTRUCTION

CLIENT LOGO

CLIENT
UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT
PRE-ENGINEERED BUILDING
3359 MISSISSAUGA ROAD

TITLE
LEGEND, DRAWING LIST AND NOTES

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	SD-001
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : DR	

SPECIFICATIONS

GENERAL SCOPE OF WORK

1. SUPPLY AND INSTALL ALL MATERIALS, EQUIPMENT, PROGRAMMING, TESTING, AND COMMISSIONING NECESSARY TO PROVIDE A TURN-KEY BUILDING SECURITY SYSTEM (BSS) SOLUTION, INCLUDING ALL SYSTEMS, EQUIPMENT, AND FUNCTIONALITY DESCRIBED ON THESE DOCUMENTS.
2. CONNECT BSS COMPONENTS TO BUILDING FIRE ALARM SYSTEM (FAS) AND COORDINATE WITH BUILDING FAS TO ENSURE ALL INSTALLATIONS ARE COMPLIANT WITH BUILDING CODES. INCLUDE ALL NECESSARY FEES AND LABOUR FOR PERMITS AND INSPECTIONS REQUIRED WITH AUTHORITIES HAVING JURISDICTION (AHJ).
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND INDUSTRY BEST PRACTICES.
4. INSTALL ALL BSS EQUIPMENT IN COMPLIANCE WITH TYPICAL DETAILS AND SCHEMATICS ISSUED WITHIN THESE DOCUMENTS.
5. ENSURE ALL EQUIPMENT IS GROUNDED AND BONDED TO THE PROVIDED GROUNDING SYSTEM.
6. PROVIDE THE END-USER WITH TRAINING FOR ALL SYSTEMS PROVIDED. PROVIDE TWO (2) TRAINING SESSIONS OF FOUR (4) HOURS EACH. INCLUDE SYSTEM ADMINISTRATION, CONFIGURATION, OPERATOR, AND SYSTEM MAINTENANCE TRAINING. SUBMIT TRAINING AGENDA TO OWNER AND CONSULTANT TWO (2) WEEKS PRIOR TO TRAINING DATE FOR APPROVAL AND SCHEDULING AS FOLLOWS:
7. PROVIDE WARRANTY FOR ALL BSS COMPONENTS PROVIDED. WARRANTY SHALL BE EFFECTIVE FOR ONE (1) YEAR PAST THE AGREED TO SUBSTANTIAL COMPLETION DATE. MAINTENANCE DURING THE WARRANTY PERIOD SHALL BE INCLUDED IN THE BSS CONTRACT.
8. COORDINATE ALL INSTALLATIONS WITH OWNER, ARCHITECT, AND CONSULTANT TO ENSURE AND MAINTAIN INTEGRITY AND CONSTRUCTION OF SECURE DOORS, WALLS, AND ENCLOSURES.
9. PROVIDE LABELLING FOR ALL ICP's, RFI's , OTHER PANELS, ENCLOSURES AND CABLING. INDICATED ON THE RECORD DOCUMENTATION.
10. COMPLETE A COMPREHENSIVE COMMISSIONING PROCESS WITH THE OWNER AND CONSULTANT TO ENSURE EACH SYSTEM PERFORMS TO THE FUNCTIONALITY AS SPECIFIED IN THESE DOCUMENTS.
11. PROVIDE AS-BUILT DOCUMENTATION, INCLUDING DRAWINGS, OPERATOR, AND MAINTENANCE MANUALS FOR ALL BSS COMPONENTS.

PHYSICAL ACCESS CONTROL SYSTEM (PACS)

1. PACS ARE EXISTING GENETEC, LOCATED ON THE MAIN CAMPUS.
2. PACS MAY BE PROVIDED IN A SINGLE BOX SOLUTION IN CONJUNCTION WITH THE VMS FOR THIS PROJECT.
3. ACCESS CONTROL PANEL EQUIPMENT SHALL BE MERCURY AUTHENTIC HARDWARE, NO ACCEPTED ALTERNATES.
4. PACS SHALL BE CAPABLE OF:
   - 4.1. SUPPORTING MULTIPLE CREDENTIAL FORMATS (MINIMUM OF 26-BIT PROX, ICLASS, AND MIFARE FORMATS).
   - 4.2. INTEGRATION TO ELEVATOR CONTROL SYSTEM FOR FLOOR SELECTIVE CONTROL.
   - 4.3. LOGGING ALL SYSTEM EVENTS AND ACTIONS TO A DATABASE, WITH A MINIMUM OF ONE HUNDRED THOUSAND (100,000) RECORDS TO BE RETAINED.
5. SECURITY CONTRACTOR SHALL:
   - 5.1. SUPPLY ALL NECESSARY GENETEC LICENCE.
   - 5.1. SUPPLY ALL ASSOCIATED LABOR, EQUIPMENT, AND PERIPHERALS NECESSARY FOR THE INTENDED FUNCTIONALITY.
   - 5.2. SUPPLY ALL PACS EQUIPMENT WITH SUFFICIENT BATTERY BACKUP FOR EIGHT (8) CONTINUOUS HOURS OF OPERATION UPON FAILURE OF MAINS POWER.
   - 5.3. SUPPLY ALL PACS POWER SUPPLIES, CONTROL PANELS, AND BATTERY ENCLOSURES WITH TAMPER SWITCHES FOR DETECTION. ENCLOSURES COMMON TO A SINGLE LOCATION MAY SHARE ONE (1) COMMON ALARM, CONNECTED IN SERIES.
   - 5.4. INSTALL ALL INPUT DEVICES WITH END OF LINE (EOL) RESISTORS FOR CIRCUIT SUPERVISION. EOL RESISTORS SHALL BE INSTALLED AT THE FIELD DEVICE. EOL RESISTORS INSTALLED AT THE CONTROLLER OR PANEL LOCATION SHALL NOT BE PERMITTED.
   - 5.5. COMPLETE THE COMMISSIONING PROCESS WITH THE OWNER AND CONSULTANT BY DEMONSTRATING THE FULL FUNCTION OF EACH PACS DOOR AND DEVICE, INCLUDING VALID/INVALID CARD READ, VALID/INVALID BIOMETRIC READ, DOOR FORCED AND OPEN ALARMS, ETC.

VIDEO MANAGEMENT SYSTEM (VMS)

- 1.6. VMS IS A EXISTING GENETEC SOLUTION, LOCATED ON CAMPUS.
- 1.7. COORDINATE, FOCUS AND ADJUST FIELD OF VIEW (FOV) FOR EACH CAMERA WITH OWNER AND CONSULTANT.

SURVEILLANCE CAMERAS

1. CAMERAS FOR THE VMS SHALL BE AXIS COMMUNICATIONS.
2. EXTERIOR CAMERAS
   - 2.1. SHALL BE AXIS P3265-LVE
3. INTERIOR CAMERAS
   - 2.1. SHALL BE AXIS P3265-LVE

FIELD DEVICES

1. CARD READERS
   - 1.1. CARD READERS SUPPLIED SHALL BE CAPABLE OF READING MULTIPLE CREDENTIAL FORMATS AND TECHNOLOGIES.
   - 1.2. HID MULTICLASS SE OR EQUIVALENT.
2. REQUEST TO EXIT MOTION DETECTOR
   - 2.1. REQUEST TO EXIT MOTION DETECTOR SHALL BE PROGRAMMED ONLY TO SHUNT DOOR CONTACT ALARM, AND SHALL NOT RELEASE DOOR LOCK.
   - 2.2. KANTECH T-REX-XL, BOSCH DS160I, HONEYWELL IS320 OR EQUIVALENT.
3. MONITORING CONTACTS
   - 3.1. DOORS
     - 3.1.1. SHALL BE RECESS MOUNTED, EITHER ¾" OR 1" IN DIAMETER.
     - 3.1.2. GE/INTERLOGIX 1076/1078 SERIES OR EQUIVALENT.
   - 3.2. OVERHEAD DOORS
     - 3.2.1. SHALL BE FIXED TO THEIR MOUNTING LOCATIONS USING APPROPRIATE HARDWARE.
     - 3.2.2. GE/INTERLOGIX 2200 SERIES OR EQUIVALENT.
4. TAMPER SWITCHES
   - 4.1. SHALL BE FIXED TO THE ENCLOSURE USING APPROPRIATE HARDWARE.
   - 4.2. ADEMCO 955, POTTER SIGNAL PSW-22, OR EQUIVALENT.
5. AUTOMATIC OPERATOR SEQUENCER
   - 5.1. SHALL BE INSTALLED AT ACCESS CONTROL DOORS REQUIRING AUTOMATIC OPERATORS TO MEET THE SEQUENCE OF OPERATIONS NOTED IN THE INTEGRATION SECTION.
   - 5.2. CAMDEN CONTROLS CX-22 OR EQUIVALENT.

DOOR HARDWARE

1. SUPPLY ALL DOOR HARDWARE AT PACS DOORS, INCLUDING BUT NOT LIMITED TO TRANSFER HINGES, DOOR CONTACTS.
2. PROVIDE ALL LOCKSMITH SERVICES NECESSARY FOR CLEAN AND COMPLETE INSTALLATION OF ALL DOOR HARDWARE.
3. SECURITY CONTRACTOR SHALL:
   - 3.1. SUPPLY AND INSTALL ALL LOCKS AND LOCK POWER SUPPLIES TO PROVIDE POWER.
   - 3.2. SUPPLY ALL LOCK POWER SUPPLIES WITH SUFFICIENT BATTERY BACKUP FOR EIGHT (8) CONTINUOUS HOURS OF OPERATION UPON FAILURE OF MAINS POWER.

NETWORK CABLING INFRASTRUCTURE

1. CAT6 NETWORK INFRASTRUCTURE SUPPORTING ALL BSS EQUIPMENT SHALL BE INSTALLED BY DIVISION 27.

No.	ISSUANCE	DATE
1.	ISSUED FOR 50% CD	09-06-2024
2.	ISSUED FOR PERMIT	10-11-2024
3.	ISSUED FOR 100% CD	11-06-2024
4.	ISSUED FOR TENDER	11-15-2024

DISCLAIMER:

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CLIENT LOGO

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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

SPECIFICATIONS

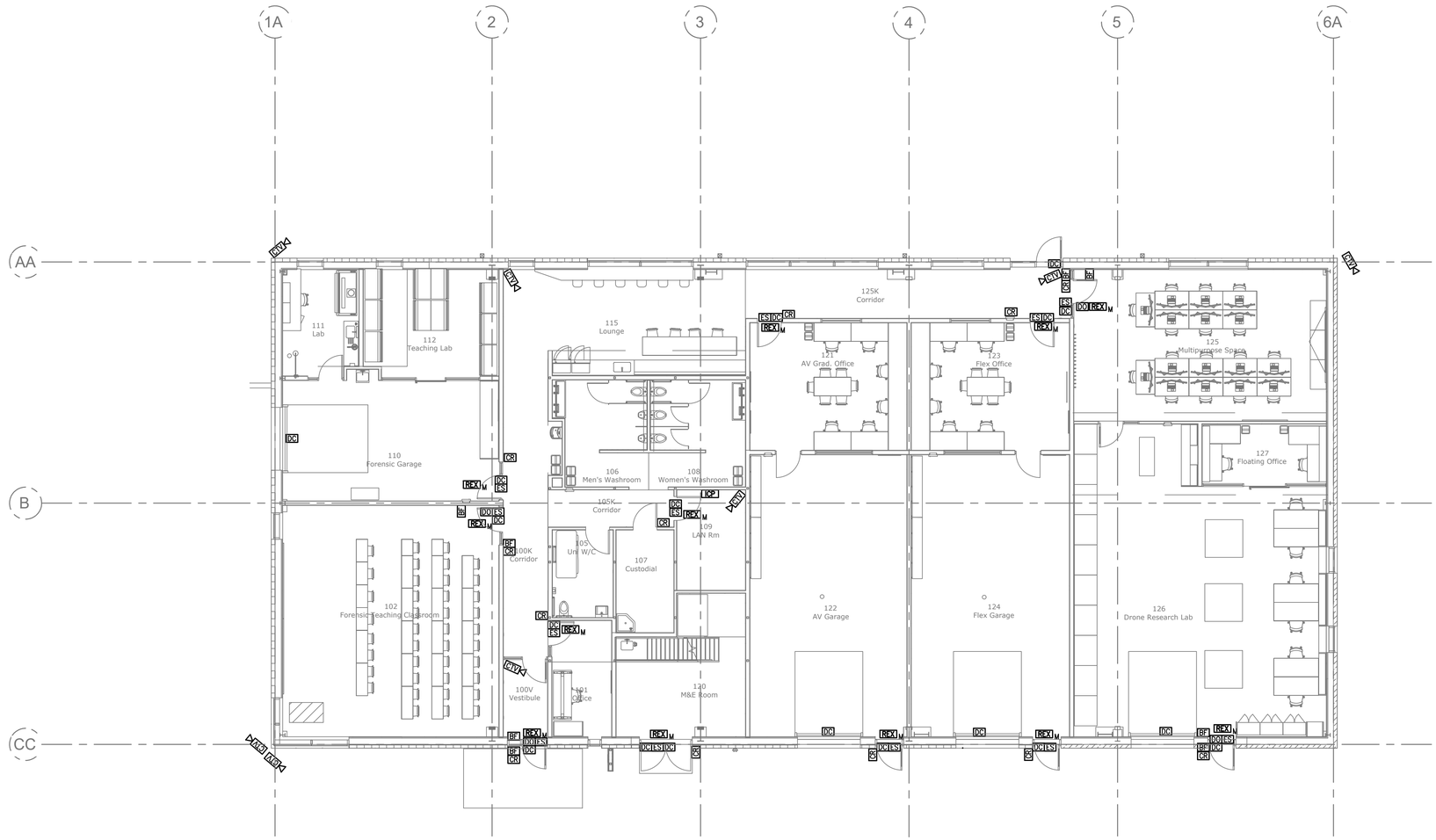
THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE :	N.T.S.
DATE :	FEB 2024
PROJECT NO :	2023-0059
DRAWN BY :	SS
CHECKED BY :	DR

SHEET NO :

SD-002



TRUE NORTH

PROJECT NORTH

No.	ISSUANCE	DATE
1.	ISSUED FOR 50% CD	09-06-2024
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UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

GROUND FLOOR SECURITY LAYOUT

THE**HIDI**GROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

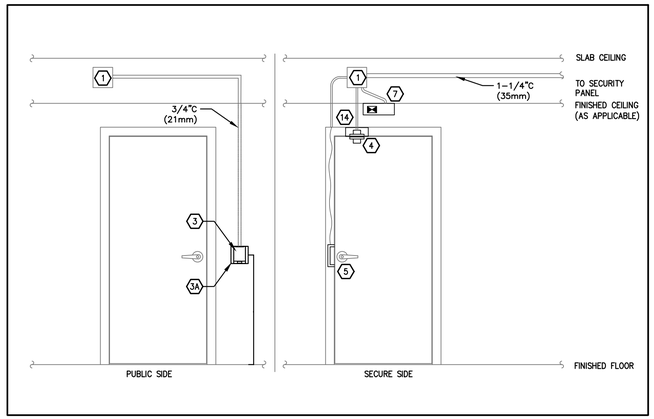
SCALE : 1:100	SHEET NO :
DATE : FEB 2024	SD-201
PROJECT NO : 2023-0059	
DRAWN BY : SS	
CHECKED BY : DR	

DOOR LEGEND & MATERIALS

1. SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR (BY ELECTRICAL)
2. MAGNETIC LOCK
3. PROXIMITY CARD READER
3A. DOUBLE GANG BACK BOX W/ SINGLE GANG TRIM PLATE (BY ELECTRICAL)
4. RECESSED DOOR POSITION SWITCH
5. ELECTRIC STRIKE
6. POWER TRANSFER HINGE
7. REQUEST TO EXIT MOTION DETECTOR
8. REQUEST TO EXIT PUSH BUTTON
9. AUTO DOOR OPERATOR EQUIPMENT (BY DOOR HARDWARE)
10. CONCEALED LATCHING DURESS BUTTON
11. SINGLE GANG LATCHING DURESS
12. MANUAL FIRE ALARM PULL STATION C/W AUXILIARY CONTACTS (BY FIRE ALARM CONTRACTOR)
13. MECHANICAL FLUSH BOLT
14. DUST BOX / MORTAR SHIELD IN FRAME AS REQUIRED (BY DOOR HARDWARE)
15. OVER HEAD DOOR POSITION SENSOR WITH FLEXIBLE ARMOR CONDUIT
16. AUTOMATIC DOOR OPERATOR PUSHBUTTON (BY DOOR HARDWARE)
17. GUESTROOM WIRELESS LOCKSET W/ INTEGRATED CARD READER AND DOOR POSITION SWITCH
18. WIRELESS LOCK GATEWAY
19. PANIC BAR
20. RETRACTABLE LATCH
21. FOH REMOTE CARD READER BEHIND DECORATIVE PLATE
22. ELECTRIC MORTISE LOCK W/ INTEGRATED REQUEST TO EXIT
23. WIRELESS LOCK SET WITH INTEGRATED CARD READER, DOOR SWITCH, AND REQUEST TO EXIT
24. INTERCOM
25. ELECTRIFIED PANIC W/ INTEGRATED REQUEST TO EXIT
26. WIRED LOCK GATEWAY
27. GUESTROOM MANAGEMENT SYSTEM CONTROLLER BY GUESTROOM MANAGEMENT

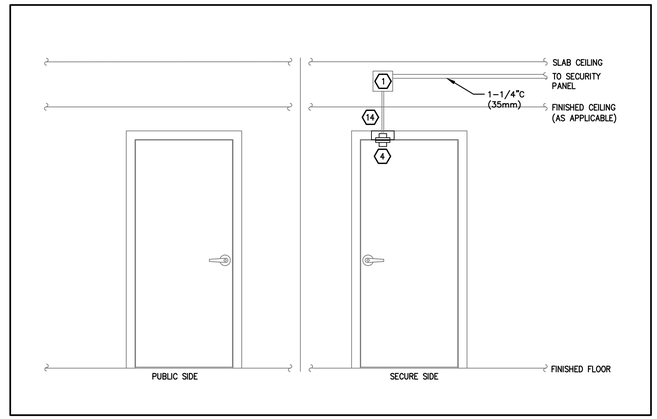
LINE TYPES LEGEND

- CABLE INSIDE DOOR FRAMES/DOORS
- CONDUIT INSTALLED IN WALL SPACE
- CONDUIT INSTALLED IN CEILING SPACE



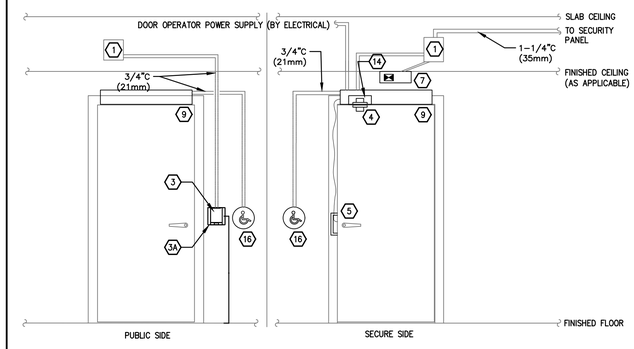
01 SD-401 SINGLE DOOR W/ READER IN, ELECTRIC STRIKE

SCALE: N.T.S.



02 SD-401 MONITORED SINGLE DOOR

SCALE: N.T.S.



03 SD-401 SINGLE DOOR W/ READER IN, BARRIER FREE, ELECTRIC STRIKE

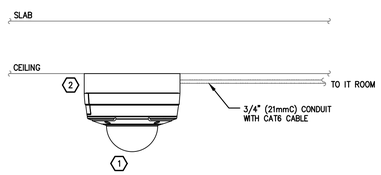
SCALE: N.T.S.

CAMERA LEGEND & MATERIALS

1. SECURITY CAMERA
2. SECURITY JUNCTION BOX
3. UTP MEDIA CONVERTOR
4. POE INJECTOR
5. CAMERA POWER SUPPLY
6. RECEPTACLE (BY ELECTRICAL CONTRACTOR)
7. PENDANT ADAPTOR
8. SECURITY JUNCTION BOX
9. STEEL STRAPS
10. PENDANT KIT
11. AUXILIARY DEVICE (GLASS BREAK, AUDIBLE ALARM, MOTION DETECTOR, ETC.)
12. BLUE STROBE LIGHT
13. PUSH RED BUTTON FOR ASSISTANCE
14. SPEAKER
15. MICROPHONE
16. VIDEO CAMERA FOR ASSISTANCE STATION
17. PARAPET MOUNT

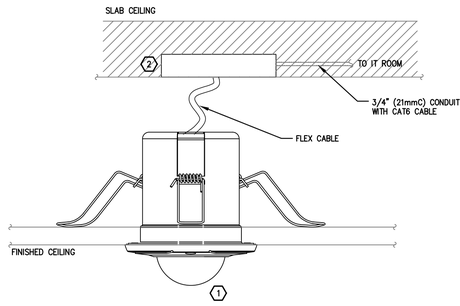
LINE TYPES LEGEND

- CABLE RAN INSIDE DOOR FRAMES/DOORS
- CONDUIT INSTALLED IN WALL SPACE



04 SD-401 TYPICAL SURFACE MOUNT CAMERA

SCALE: N.T.S.



05 SD-401 TYPICAL RECESSED MOUNTED CAMERA

PRE-CAST CONDUIT

SCALE: N.T.S.

No.	ISSUANCE	DATE
1.	ISSUED FOR 50% CD	09-06-2024
2.	ISSUED FOR PERMIT	10-11-2024
3.	ISSUED FOR 100% CD	11-06-2024
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DISCLAIMER:

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CLIENT LOGO

CLIENT

UNIVERSITY OF TORONTO MISSISSAUGA

PROJECT

PRE-ENGINEERED BUILDING

3359 MISSISSAUGA ROAD

TITLE

DETAILS

THEHIDIGROUP
155 Gordon Baker Road, Suite 200
Toronto, ON M2H 3N5 Canada
t. 416 364 2100 | HIDI.com

SEAL

SCALE : N.T.S.	SHEET NO :
DATE : FEB 2024	SD-401
PROJECT NO. : 2023-0059	
DRAWN BY : SS	
CHECKED BY : DR	

UNIVERSITY OF TORONTO MISSISSAUGA - ROBOTICS LABORATORY ENVIRONMENT BUILDING

3359 MISSISSAUGA ROAD

AUDIO-VISUAL SYSTEMS DRAWINGS

ISSUED FOR AV TENDER - 2024.11.15

SCOPE ITEM	AUDIOVISUAL CONTRACTOR (A.V.C.)	ELECTRICAL CONTRACTOR (E.C.)	GENERAL CONTRACTOR (G.C.)	COMMUNICATIONS CONTRACTOR (C.C.)
AV SYSTEMS CONDUIT, BACKBOXES AND CABLE TRAYS	–	PROVIDE PULL-READY SYSTEM INCLUDING ALL CONDUIT, BACKBOXES AND CABLE TRAYS. ALL CONDUITS TO BE COMPLETE WITH PULLSTRING.	–	–
AV WALLBOX CONNECTOR PLATES, CUSTOM OR STANDARD	PROVIDE, FINISH PER ARCHITECT'S INSTRUCTIONS	–	–	–
AV FLOORBOXES	MODIFY PLATES TO SUIT FLOORBOX AND INSTALL	PROVIDE FLOORBOX; COORDINATE BOX TYPE WITH AV CONSULTANT; SUPPLY SAMPLE IF REQUESTED, SUPPLY BLANK PLATES TO AV CONTRACTOR	–	–
AV SYSTEMS CABLE (LOW VOLTAGE, INCLUDING NETWORK CABLING WITH PATCH CABLES FOR AV SYSTEMS)	PROVIDE	–	–	–
AC OUTLETS FOR DISPLAYS, PROJECTORS, AV EQUIPMENT, FLOORBOXES, ETC	–	PROVIDE	–	–
DIRECT POWER CONNECTIONS FOR AV SYSTEMS RACKS	PROVIDE DISTRIBUTION WITHIN RACK	PROVIDE POWER CIRCUITS AS REQUIRED AT LOCATIONS NOTED ON DRAWINGS. COORDINATE LOCATIONS WITH AV CONTRACTOR. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH CIRCUIT.	–	–
LAN DROPS FOR OWNER NETWORK	SPECIFY LOCATIONS AND COORDINATE WITH C.C.	–	–	PROVIDE. REFER TO COORDINATION MATRIX FOR LOCATIONS AND QUANTITIES
PATCH CABLING TO CLIENT NETWORK FOR AV DEVICES	INSTALL	–	–	SUPPLY
MILLWORK FURNITURE (TABLES, RACK ENCLOSURES, LECTERNS AND CREDENZAS)	FIT-UP MILLWORK WITH AV DEVICES, COORDINATE WITH DESIGNERS, G.C., E.C. AND FURNITURE/MILLWORK MANUFACTURER	PROVIDE POWER AND LAN CONNECTIVITY SHOWN ON DRAWINGS AND INSTALL ROUGH-INS AS REQUIRED	PROVIDE AND COORDINATE CUTOUTS, WIRING AND DEVICE PLACEMENTS	–
DISPLAY AND PROJECTOR MOUNTING	SUPPLY AND INSTALL STANDARD OR CUSTOM BRACKETS AS REQUIRED	–	PROVIDE BLOCKING AND MISCELLANEOUS METALS AS REQUIRED	–
CEILING MOUNTED LOUDSPEAKER BACKBOXES INTO DRYWALL CEILINGS	PROVIDE	PROVIDE CONDUIT TO SPEAKER BACKBOXES. COORDINATE WITH AV CONTACTOR ON SITE	PROVIDE CEILING SPEAKER CUTOUTS	–
CEILING MOUNTED LOUDSPEAKERS INTO TILE CEILINGS	PROVIDE	–	PROVIDE CEILING SPEAKER CUTOUTS	–
AV SYSTEMS ELECTRONICS, HARDWARE, RACKS (PERMANENT AND PORTABLE)	PROVIDE; REUSE OWNER SUPPLIED EQUIPMENT AS NOTED IN TENDER DOCUMENTS	–	–	–
AV CONTROL SYSTEM PAGE DESIGN AND TESTING	PROVIDE; WRITE ALL PROGRAMMING CODE; DESIGN AND IMPLEMENT	–	–	–
LOW VOLTAGE RELAY CONTROLLERS (LVC) FOR MOTORIZED PROJECTION SCREENS AND LIFTS	SUPPLY LVC TO E.C.; PROVIDE LOW VOLTAGE CONTROL CABLE	PROVIDE HIGH VOLTAGE CABLE, TERMINATIONS AND LABOR AS REQUIRED	PROVIDE ACCESS HATCH AS REQUIRED FOR BACKBOX ACCESS	–
INTELLIGENT LIGHTING AND BLIND/SHADE SYSTEMS	CONNECT AV CONTROL SYSTEM TO RS-232 PROTOCOL CONVERTER. COORDINATE INSTALLATION LOCATION WITH E.C.	PROVIDE LIGHTING/BLIND SYSTEM TO RS-232 PROTOCOL CONVERTER. COORDINATE INSTALLATION LOCATION WITH A.V.C.	PROVIDE BLINDS SYSTEM AND SHADE MOTOR GROUP CONTROLLERS.	–
CEILING RECESSED PROJECTION SCREENS	PROVIDE	PROVIDE HIGH VOLTAGE CABLE TO LVC	PROVIDE CUTOUT. FINISH CEILING AFTER INSTALLATION.	–
FIRE ALARM CONNECTION	PROVIDE MUTE FUNCTIONALITY ON ALL SOUND SYSTEMS. TO BE TRIGGERED ON ACTIVATION OF FIRE ALARM.	PROVIDE FACP DRY CONTACT RELAY CONNECTION TO AV CONTRACTOR	–	–
REMOVAL OF EXISTING INSTALLED AUDIOVISUAL EQUIPMENT NOT PLANNED FOR REUSE	COORDINATE. IF AV CONTRACTOR IS NOT ONBOARD, COORDINATE WITH AV CONSULTANT.	–	PROVIDE REMOVAL AND DISPOSAL	–
THE SCOPE OF WORK OF THE TRADES AS IT RELATES TO AUDIO VISUAL SYSTEMS IS DESCRIBED IN THE TABLE ABOVE. THE TERM "PROVIDE" MEANS "SUPPLY, INSTALL, TERMINATE, TEST AND COMMISSION"				

2 / AV000 DIVISION OF RESPONSIBILITY

AV DRAWING LIST	
DWG NO.	DRAWING TITLE
AV000	AV DRAWING LIST
AV001	AV LEGENDS, NOTES & COORDINATION MATRIX
AV101A	GROUND LEVEL – AV DEVICE FLOOR PLAN
AV101B	GROUND LEVEL – AV DEVICE FLOOR RCP
AV200	AV ELEVATIONS
AV300	AV CONDUIT NOTES
AV301	AV RISER DIAGRAMS
AV400	AV DETAILS
AV401	AV DETAILS
AV500	AV FUNCTIONALS
AV501	AV FUNCTIONALS
AV502	AV FUNCTIONALS

1 / AV000 DRAWING LIST

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UNIVERSITY OF TORONTO MISSISSAUGA

KEYPLAN

No.	ISSUANCE	DATE
1	ISSUED FOR AV TENDER	2024/11/15

DISCLAIMER:

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PROJECT

TITLE

AV DRAWING LIST

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Baird Sampson Neuert

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SCALE :	1 : 100
DATE :	
PROJECT NO :	
DRAWN BY :	S.R.
CHECKED BY :	P.G.

SHEET NO. :

AV000

AV COORDINATION MATRIX

AUDIOVISUAL				ELECTRICAL								COMMUNICATION	MECHANICAL	GENERAL
DEVICE DETAILS				REQUIREMENTS						RECEPTACLES			HEAT LOAD	
SYMBOL NAME	SYMBOL	ID	MOUNTING HEIGHT (TO CENTRE LINE)	AV BACKBOX/MUDRING SIZE	BACKBOX/MUDRING MOUNTING HEIGHT	VOLTAGE [V]	CURRENT [A]	UNIT POWER [W]	GROUND TYPE	TYPE	QUANTITY	LAN DROPS FOR OWNER NETWORK	UNIT HEAT [BTU]	NOTES
65" WALL MOUNT FLAT PANEL DISPLAY		FPD1	1625mm (64") AFF	(1)2 GANG AV MUDRING	1830mm (72") AFF	120	2	240	NORMAL	5-15R	(1)QUAD	(2)NETWORK DROPS	818.88	
32" WALL MOUNT FLAT PANEL DISPLAY		FPD2	1625mm (64") AFF	(1)2 GANG AV MUDRING	1830mm (72") AFF	120	1	120	NORMAL	5-15R	(1)QUAD	(2)NETWORK DROPS	409.44	
SHORT THROW PROJECTOR	AV	PROJ	2685mm (106") AFF	(1)2 GANG AV MUDRING	2685mm (106") AFF	120	4	480	NORMAL	5-15R	(1)QUAD	–	1637.76	
WALL MOUNT PTZ CAMERA	AV	CAM1	2135mm (84") AFF	(1)2 GANG AV MUDRING	2135mm (84") AFF	–	–	–	–	–	–	–	–	
CEILING MOUNT PTZ CAMERA	AV	CAM2	AT FINISHED CEILING	–	–	–	–	–	–	–	–	–	–	
FLOORBOX TABLE MONUMENT		FB1	AT FINISHED FLOOR	(1)2 GANG OPENING AT FLOORBOX	AT FINISHED FLOOR	120	1	120	NORMAL	5-15R	(1)DUPLEX	(2)NETWORK DROPS	409.44	
PODIUM		FB2	AT FINISHED FLOOR	(1)4 GANG OPENING AT FLOORBOX	AT FINISHED FLOOR	120	20.00	2400	ISOLATED	5-20R	(2)DUPLEX	(6)NETWORK DROPS	5118	DEDICATED CIRCUITS REQUIRED, WITH ISOLATED GROUND. FIRE ALARM, LIGHTING INTERCONNECTION REQUIRED.
WALL MOUNT BUTTON CONTROL PANEL		BP	AT SWITCH HEIGHT	(1)1 GANG AV MUDRING	AT SWITCH HEIGHT	–	–	–	–	–	–	–	–	
WIRELESS MIC ANTENNA		ANT1	AT FINISHED CEILING	(1)1 GANG AV BACKBOX	AT FINISHED CEILING	–	–	–	–	–	–	–	–	
WIRELESS ASSISTIVE LISTENING SYSTEM ANTENNA		ALS	2135mm (84") AFF	(1)1 GANG AV BACKBOX	2135mm (84") AFF	–	–	–	–	–	–	–	–	
CEILING MICROPHONE	M	MIC1	AT FINISHED CEILING	–	–	–	–	–	–	–	–	–	–	
PENDANT SPEAKERS	S	S1	AT FINISHED CEILING	(1)1 GANG AV BACKBOX	AT FINISHED CEILING	–	–	–	–	–	–	–	–	
CREDENZA RACK	CR	RACK1	AT RECEPTACLE HEIGHT	(1)PULL BOX SIZED TO CONDUIT REQUIREMENTS	AT RECEPTACLE HEIGHT	120	20.00	2400	ISOLATED	5-20R	(2)QUAD	(4)NETWORK DROPS	5118	DEDICATED CIRCUITS REQUIRED, WITH ISOLATED GROUND. FIRE ALARM & LIGHTING INTERCONNECTION REQUIRED.

3 AV001 AV COORDINATION MATRIX

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER CONSULTANT'S DRAWINGS AND SPECIFICATION. ANY DISCREPANCIES OR CONFLICT BETWEEN CONSULTANT'S DRAWINGS FOR A/V SCOPE, SHALL BE REPORTED TO S+A IMMEDIATELY FOR CLARIFICATION.
2. ALL EQUIPMENT AND CABLING HAVE BEEN SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS FOR ALL HARDWARE, FIXTURES AND EQUIPMENT, FOR CONSULTANT'S APPROVAL PRIOR TO PURCHASE.
3. ALL DEVICE LOCATIONS ARE SCHEMATIC ONLY. EXACT LOCATIONS SHOULD BE LOCATED USING ARCHITECTURAL OR INTERIOR DESIGN DRAWINGS. IF LOCATION IS UN-CLEAR A REQUEST FOR INFORMATION SHOULD BE ISSUED.
4. CONTRACTOR TO ENSURE ALL WORK INSTALLATIONS ARE IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.
5. CONTRACTOR MUST REVIEW SITE AND ENSURE ALL AV WORK WITHIN EXTENT IS INCLUDED IN THE AV CONTRACT.
6. CARE AND ATTENTION SHALL BE MADE TO ALL DRAWING NOTES AND ITEMS INCLUDED WITHIN SPECIFICATION FOR INCLUSION IN SCOPE OF WORK. QUESTIONS OR CONCERNS SHALL BE REPORTED TO CONSULTANT BY THE BIDDER PRIOR TO AWARD FOR TENDER. OTHERWISE, SUCCESSFUL BIDDER ASSUMES ALL RESPONSIBILITY FOR INCLUDING ALL EQUIPMENT AND PROVISIONS AS STATED WITHIN THE DRAWING AND SPECIFICATION PACKAGE IN SCOPE OF WORK.
7. ALL EQUIPMENT INSTALLATIONS SHALL ADHERE TO EXACT MANUFACTURERS SPECIFICATIONS AND REQUIREMENTS. ANY INSTALLATIONS NOT MEETING CORRECT INSTALLATION METHODS AS OUTLINED BY THE MANUFACTURER SHALL BE RECTIFIED TO OPERATE AS INTENDED AT THE EXPENSE OF THE CONTRACTOR.
8. CONTRACTOR TO COORDINATE ON SITE WITH OTHER TRADES FOR EXACT LOCATION AND MOUNTING HEIGHTS OF REQUIRED BACKBOXES AND RECEPTACLES FOR DISPLAYS, PROJECTORS, SPEAKERS AND OTHER AV EQUIPMENT. ALL RECEPTACLES SHALL BE CONCEALED BEHIND EQUIPMENT.
9. ALL EQUIPMENT MUST BE SECURELY FASTENED AND INSTALLED TO SUPPORT WEIGHT, USER FUNCTION AND OPERATION. SCREENS SHALL BE ANCHORED TO STUDS AND SUPPORTED BY THREADED RODS AND CHAIN LINKS. PROJECTOR POLE MOUNTS AND DISPLAYS SHALL ALSO BE ANCHORED TO STUDS, AS REQUIRED TO SUPPORT EQUIPMENT FUNCTION. CONTRACTOR TO WARRANTY INSTALLATION FROM ANY IMPROPER INSTALLATION WITH NO EXPENSE TO THE USER.
10. AV CONTRACTOR SHALL INCLUDE FOR ALL MISCELLANEOUS CONNECTORS, SIGNAL CONVERTERS, SIGNAL REPEATERS, EXPANSION MODULES, POLE EXTENSIONS, SHELVING, MOUNTING HARDWARE ETC. THAT IS NOT STATED BUT IS REQUIRED TO COMPLETE THE SCOPE OF WORK AND PROVIDE THE SYSTEM FUNCTIONALITY AS WAS INTENDED WITH NO DEGRADATION IN QUALITY AND PERFORMANCE. ANY CONCERNS WITH RESPECT TO EQUIPMENT NOT INCLUDED WITHIN THE SCOPE OF WORK SHALL BE REPORTED TO THE CONSULTANT PRIOR TO TENDER CLOSE FOR INCLUSION. FAILURE TO DO SO WILL BE AT THE EXPENSE OF THE BIDDER/SUCCESSFUL CONTRACTOR DURING CONSTRUCTION AND EXTRAS WILL NOT BE TOLERATED.
11. REVIEW ALL PROJECT RELATED ARCHITECTURAL, MECHANICAL, ELECTRICAL, COMMUNICATIONS AND SECURITY DRAWINGS AND SPECIFICATIONS, DISCERN AND COORDINATE ALL OVERLAPPING WORK WITH AUDIOVISUAL SYSTEMS TO AVOID COLLISIONS AND CONFLICTS OF DEVICES.
12. DEVICES SHALL NOT BE INSTALLED IN WALL AREAS THAT ARE DESIGNATED TO HAVE MARKER BOARD, FABRIC PANELS, OR ACCENT FINISHES/DETAIL UNLESS INDICATED SPECIFICALLY ON AN ELEVATION DRAWING.
13. DEVICES SHALL NOT BE INSTALLED ABOVE ANY FURNITURE – AND SHALL BE LOCATED WHERE THERE IS ADEQUATE ACCESS FOR USE UNLESS INDICATED SPECIFICALLY ON AN ELEVATED DRAWING.
14. INFORM THE ENGINEER'S REPRESENTATIVE AND GC OF ALL DEVICE AND FURNITURE CONFLICTS PRIOR TO INSTALLATION. OBTAIN RESOLUTION TO DEVICE AND FURNITURE CONFLICTS FROM THE ENGINEER'S REPRESENTATIVE PRIOR TO INSTALLATION.

1 AV001 GENERAL NOTES – AUDIOVISUAL BIDDER INFORMATION

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	AUDIO VISUAL SYSTEM TAG-## DEVICE IDENTIFICATION NUMBER	PROJ-## AV	PROJECTOR.
		LIFT-## AV	PROJECTOR ON LIFT.
RACK-## ID	AV EQUIPMENT RACK RACK 'ID' DESIGNATION: 'AV' = FREE STANDING EQUIPMENT RACK. 'CR' = CREDENZA RACK. 'RC' = RACK ON CASTERS.	SCR-## XX	PROJECTION SCREEN. NOTE: 'XX' DENOTES SCREEN SIZE (IN INCHES)
TAG-## XX	WALL MOUNT FLAT PANEL DISPLAY. DISPLAY 'TAG' DESIGNATION: 'FPD' = FLAT PANEL DISPLAY. 'IAD' = INTERACTIVE DISPLAY. 'DS' = DIGITAL SIGNAGE DISPLAY. 'MW' = MEDIA WALL DISPLAY(S). SEE DRAWING FOR QUANTITIES. 'VW' = VIDEO WALL NOTE: 'XX' DENOTES SCREEN SIZE (IN INCHES)	TAG-## S	CEILING RECESSED SPEAKER. 'TAG' DESIGNATION: 'S' = AV SPEAKER. 'PGS' = PAGING SPEAKER.
		TAG-##	SURFACE MOUNT SPEAKER. 'TAG' DESIGNATION: 'S' = AV SPEAKER. 'PGS' = PAGING SPEAKER. 'SC' = SPEAKER CLUSTER
TAG-## XX	CEILING MOUNT FLAT PANEL DISPLAY. DISPLAY 'TAG' DESIGNATION: 'PMD' = POLE MOUNT FLAT PANEL DISPLAY. 'PDD' = POLE MOUNT DUAL FLAT PANEL DISPLAYS. NOTE: 'XX' DENOTES SCREEN SIZE (IN INCHES)	TAG-##	WALL MOUNT ANTENNA. 'TAG' DESIGNATION: 'ANT' = MICROPHONE ANTENNA. 'ALS' = ASSISTIVE LISTENING ANTENNA.
TAG-## XX	WALL MOUNT AV INTERFACE. 'TAG' DESIGNATION: 'RSD' = ROOM SCHEDULING DISPLAY. 'MRD' = MEETING ROOM DISPLAY. 'CTL' = TOUCH CONTROL PANEL. NOTE: 'XX' DENOTES SCREEN SIZE (IN INCHES)	TAG-##	CEILING MOUNT ANTENNA. 'TAG' DESIGNATION: 'ANT' = MICROPHONE ANTENNA. 'ALS' = ASSISTIVE LISTENING ANTENNA.
TAG-##	BUTTON CONTROL PANEL BY AUDIOVISUAL CONTRACTOR. 'TAG' DESIGNATION: 'BP' = BUTTON PANEL. 'VC' = VOLUME CONTROL. 'SC' = SCREEN CONTROL (FOR PROJECTION SCREENS).	MIC-## M	CEILING MOUNT MICROPHONE.
FB-##	FLOORBOX CONNECTION FOR TABLETOP CONNECTIVITY.	AV-##	AV MUDRING AV INPUT PLATE. (1 GANG) (2 GANG)
CAM-## AV	WALL MOUNT AV CAMERA.	AV-##	AV BACKBOX. (1 GANG) (2 GANG) (3 GANG)
CAM-## AV	CEILING MOUNT AV CAMERA.	AV 'SIZE'	AV CABLE PULL BOX. SIZE DESIGNATION: '6X6' = 6X6X6 AV CABLE PULL BOX. '12X12' = 12X12X6 AV CABLE PULL BOX.
OC-## O	OCCUPANCY SENSORS.		
PT-## P	PARTITION SENSORS.		

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS. REFER TO AV COORDINATION MATRIX OR AV CONSULTANT DRAWINGS FOR BACKBOX SIZE, MOUNTING HEIGHT, AND ALL INFRASTRUCTURE REQUIREMENTS.

2 AV001 AUDIO-VISUAL LEGEND

CLIENT LOGO

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KEYPLAN

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CLIENT

PROJECT

TITLE

AV LEGENDS, NOTES & COORDINATION MATRIX

architects
Baird Sampson Neuert
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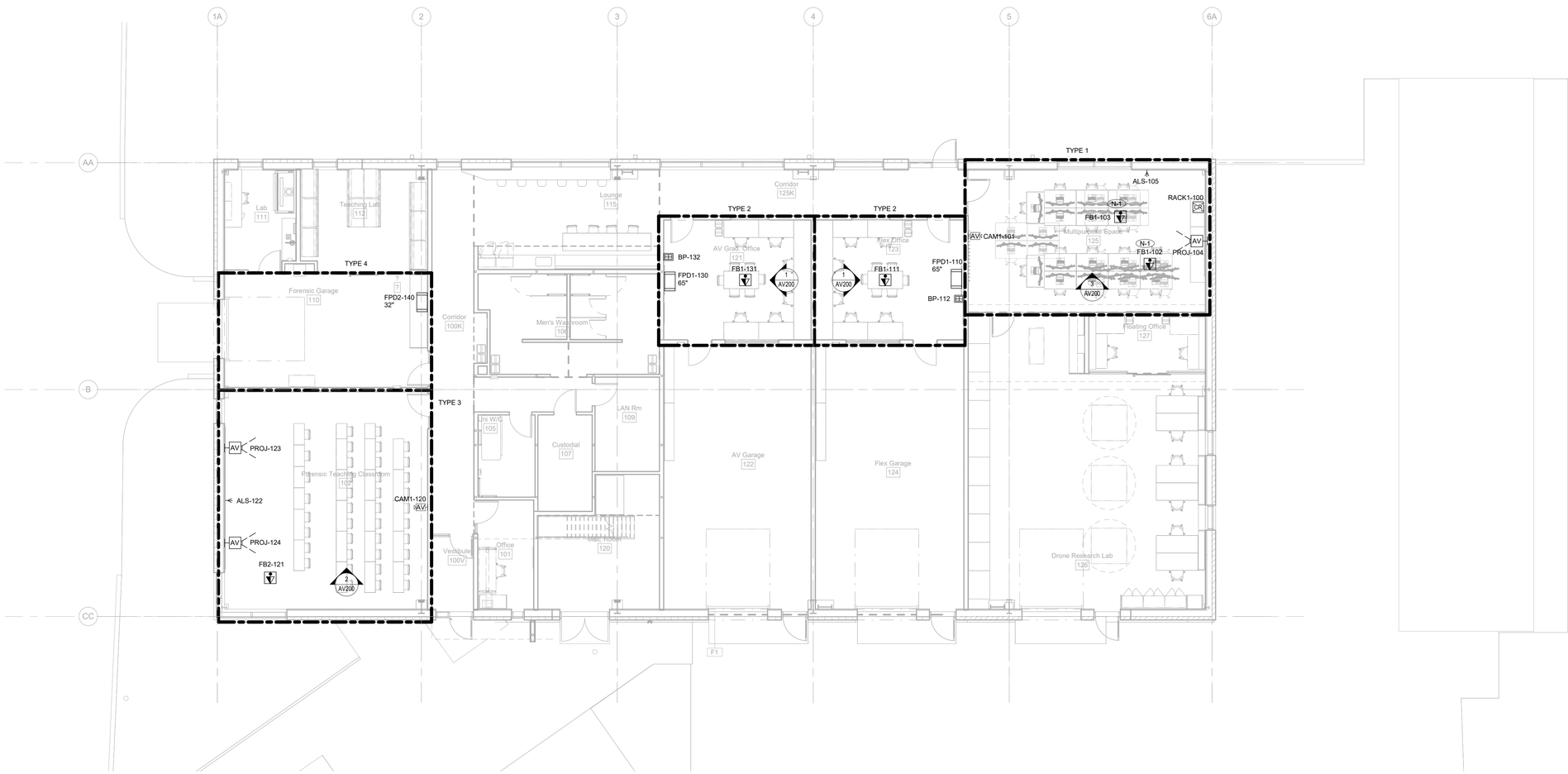
SCALE :	1 : 100
DATE :	
PROJECT NO :	
DRAWN BY :	S.R.
CHECKED BY :	P.G.

SHEET NO : **AV001**

DRAWING NOTE:

N-1 INFRASTRUCTURE ONLY. FOR FUTURE USE. REFER TO AV001 (AV COORDINATION MATRIX) FOR REQUIERMENTS.



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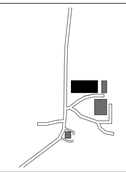
KEYPLAN



No.	ISSUANCE	DATE
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CLIENT

University of Toronto Mississauga

PROJECT

Robotics Laboratory Environment Building
3359 Mississauga Road

TITLE

GROUND FLOOR - AV DEVICE FLOOR PLAN

architects
Baird Sampson Neuert
416.363.8877 bsnarchitects.com

SEAL

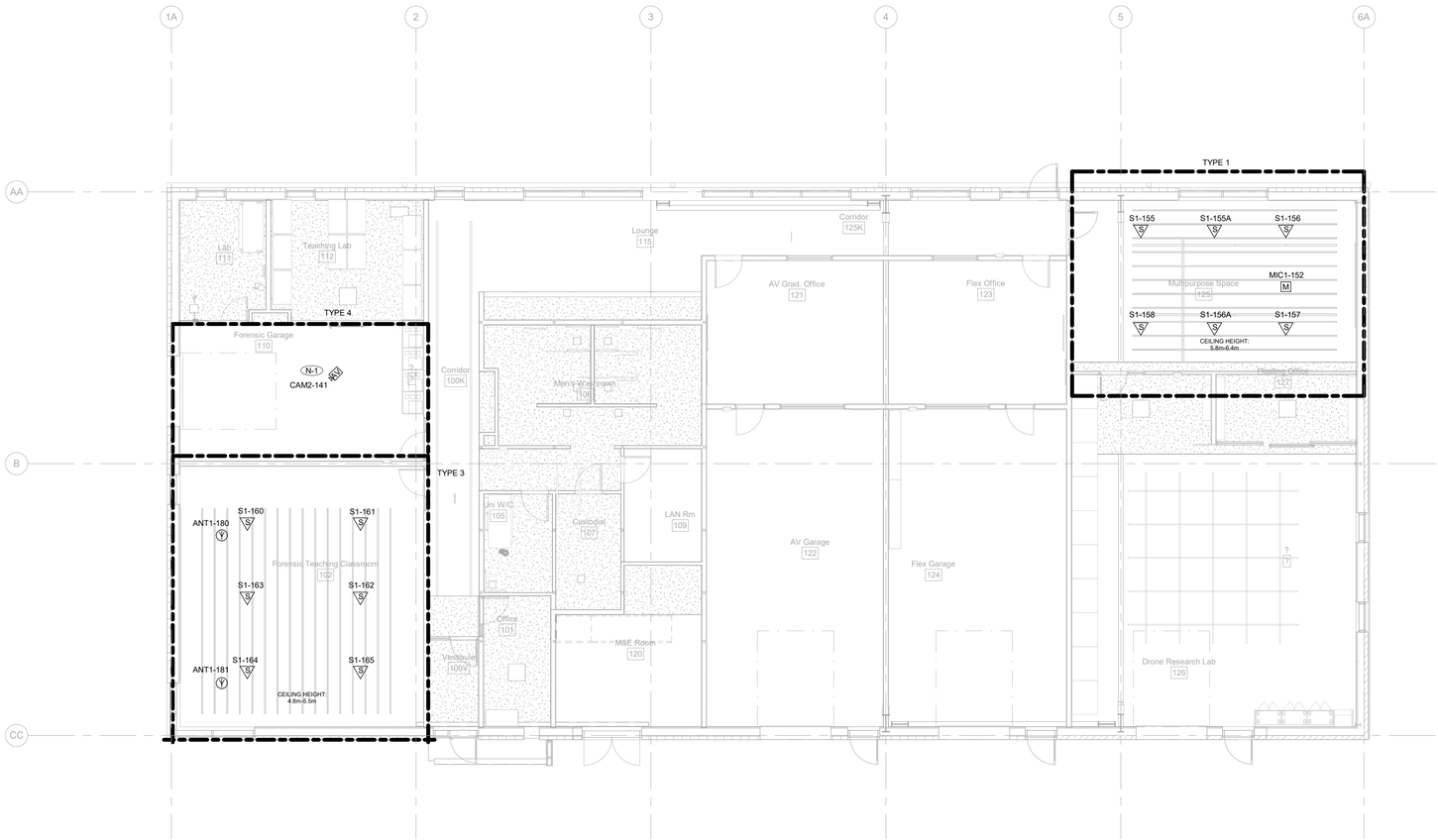
SCALE :	1 : 100
DATE :	03/16/20
PROJECT NO :	21352.002
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

AV101A

DRAWING NOTE:

(N-1) THE CAMERA BE CEILING-MOUNTED, 360 DEGREE RANGE, ABOVE THE VEHICLE LOCATION, SLIGHTLY TOWARDS THE REAR SIDE. THE CAMERA SHOULD BE POSITIONED BELOW THE LIGHT FIXTURES, WHICH ARE AT 3650MM AFF.



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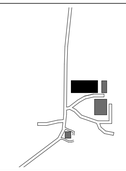
KEYPLAN



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CLIENT

University of Toronto Mississauga

PROJECT

Robotics Laboratory Environment Building
3359 Mississauga Road

TITLE

GROUND FLOOR - AV DEVICE RCP

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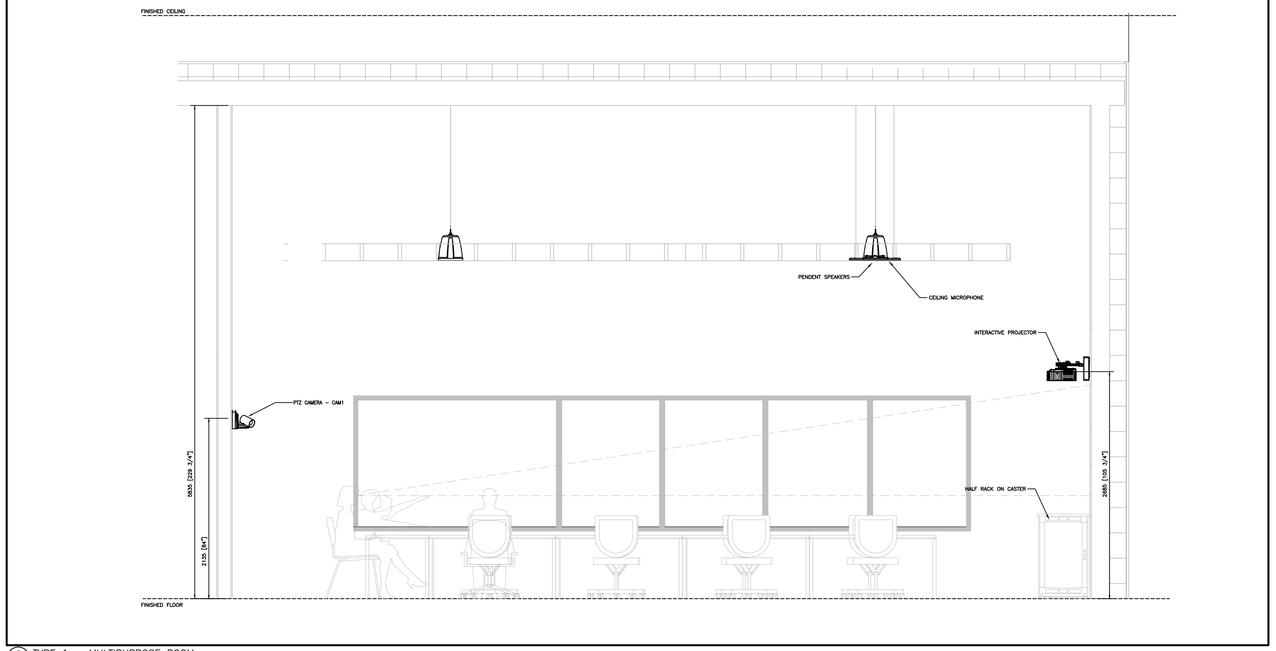
SEAL

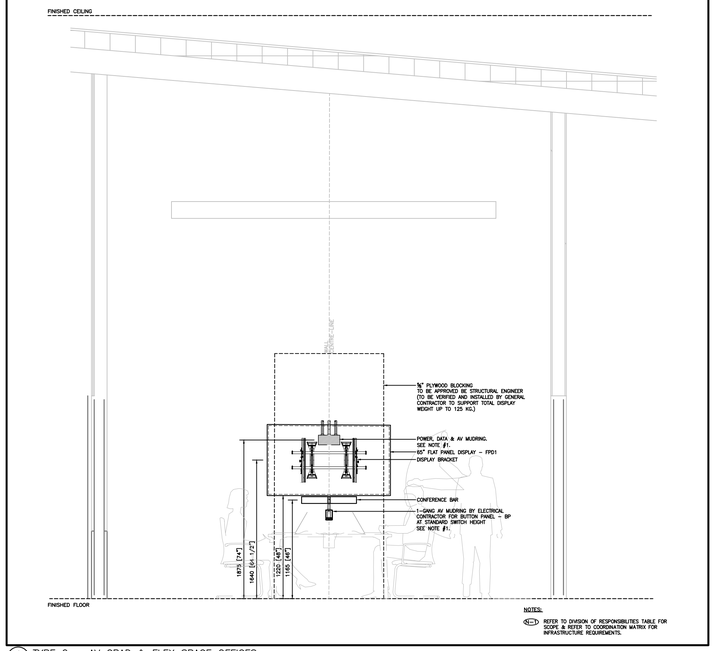
SCALE :	1 : 100
DATE :	03/16/20
PROJECT NO :	21352.002
DRAWN BY :	Author
CHECKED BY :	Checker

SHEET NO :

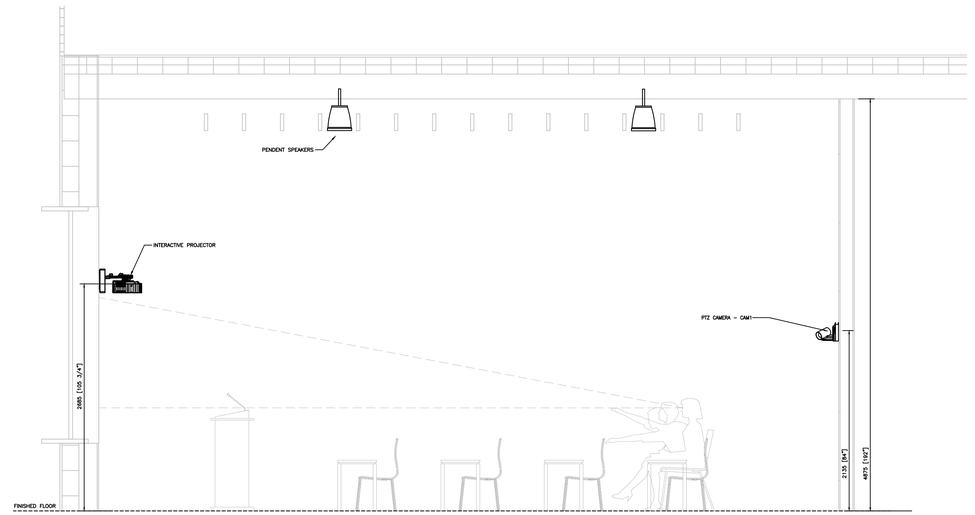
AV101B



3 / AV200 TYPE 1 – MULTIPURPOSE ROOM
AV DEVICE SIDE ELEVATION



1 / AV200 TYPE 2 – AV GRAD & FLEX SPACE OFFICES
AV DEVICE ELEVATION



2 / AV200 TYPE 3 – FORENSIC TEACHING LAB
AV DEVICE SIDE ELEVATION

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CLIENT

PROJECT

TITLE

AV ELEVATIONS

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Baird Sampson Neuert

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SCALE :	AS NOTED
DATE :	
PROJECT NO :	
DRAWN BY :	S.R.
CHECKED BY :	P.G.

SHEET NO. :

AV200

CONDUIT SIZES	
IMPERIAL	METRIC
1/2"	16MM
3/4"	21MM
1"	1"
1-1/4"	35MM
1-1/2"	1.5"
2"	53MM
2-1/2"	65MM
3"	78MM
4"	103MM

4 AV300 CONDUIT SIZE CONVERSIONS

UNLESS NOTED ON RISER, PROVIDE THE FOLLOWING CONDUIT SIZES AND QUANTITY:

ALL BUTTON PANEL CONDUITS ARE (1) 1" [1"]

ALL WALL PLATE CONDUITS ARE MINIMUM (1) 1.5" [41mm]

ALL SPEAKER CONDUITS ARE MINIMUM (1) 1" [1"]

ALL ANTENNA CONDUITS ARE MINIMUM (1) 1.5" [41mm]

ALL FLOORBOX CONDUITS ARE MINIMUM (2) 1.5" [41mm]

ALL DISPLAY CONDUITS ARE MINIMUM (1) 1" [1"]

ALL CONTROL PANELS ARE MINIMUM (1) 1" [1"]

ALL PROJECTORS ARE MINIMUM (1) 1" [1"]

ALL PROJECTION LIFTS ARE MINIUM (1) 1.25" [35mm]

ALL PROJECTION SCREENS ARE MINIMUM (1) 0.75" [21mm]

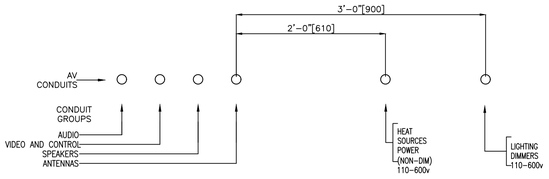
5 AV300 CONDUIT SIZES

AUDIO-VISUAL CONDUIT SEPARATION CRITERIA

1. DO NOT RUN AV CONDUITS PARALLEL TO AC AND LIGHTING CONDUITS. WHERE RUNS ARE PARALLEL, ADHERE TO THE SEPARATION SHOWN BELOW:

LENGTH OF RUN PARALLEL TO HIGH VOLTAGE CONDUITS meters (feet)	MIN. SEPARATION OF AV CONDUITS FROM AC CONDUITS mm (inch)	MIN. SEPARATION OF AV CONDUITS FROM DIMMER CONDUITS mm (inch)
<= 1.8 (6)	150 (6)	228 (9)
1.8 (6) to 9.1 (30)	300 (12)	406 (16)
>= 9.1 (30)	600 (24)	812 (32)

2. WHERE SYSTEM CONDUITS ARE RUN TOGETHER AND PARALLEL THEY SHALL BE IN THE FOLLOWING ORDERED SEQUENCE, STARTING AT THE SIDE FURTHEST FROM AC CONDUITS:



3. WHERE AUDIO-VISUAL CONDUITS CROSS HIGH VOLTAGE CONDUITS, CROSSINGS SHOULD BE AS CLOSE TO 90° AS POSSIBLE.

4. AV CONDUITS CONTAINING MICROPHONE CABLE SHOULD BE RUN AS FAR AS POSSIBLE FROM HIGH VOLTAGE CONDUITS. WHEN MULTIPLE AV CONDUITS ARE PROVIDED, ENSURE CONDUIT DESIGNATED FOR MICROPHONE CABLE IS FURTHEST AWAY FROM HIGH VOLTAGE CONDUIT.

5. NOTIFY AV CONSULTANT IF AV CONDUITS ARE TO BE RUN AT A DISTANCE CLOSER THAN RECOMMENDED SEPARATIONS.

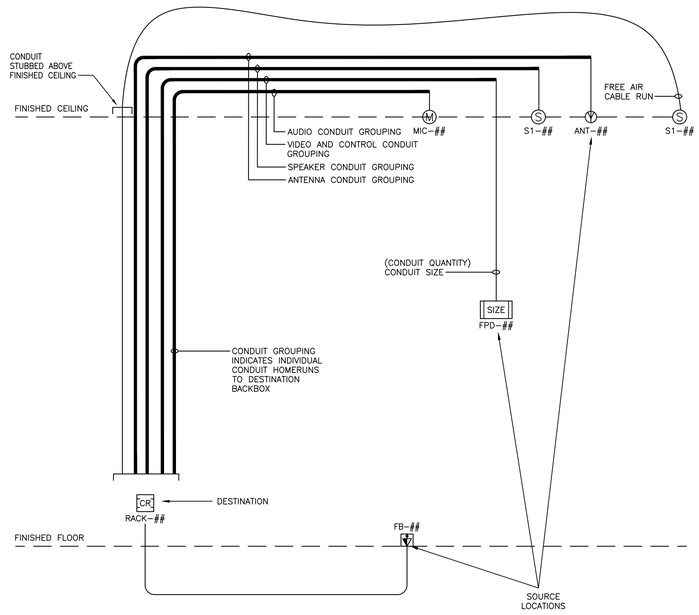
6. ALL DIMENSIONS ARE MINIMUM VALUES.

7. FOR RUNS OF LENGTH GREATER THAN 75', DOUBLE ALL VALUES.

8. IF NOT PHYSICALLY POSSIBLE TO PROVIDE THE SEPARATION SPECIFIED FOR PARALLEL RUNS FOR DISTANCES OVER 75' WRAP THE EXTERIOR OF THE SIGNAL CONDUIT IN 1/32" THICK LEAD SHEET.

2 AV300 AUDIO-VISUAL CONDUIT SEPARATION CRITERIA
SCALE: NTS

Cable pathway shall not exceed 300 ft. Pathways that exceed 300 ft must be coordinated with the Systems Designer and AV Contractor.



3 AV300 RISER DIAGRAM DEFINITION

GENERAL

1. SUPPLY AND INSTALL NETWORKS OF CONDUITS (INCLUDING PULLBOXES AND JUNCTION BOXES) AND BACKBOXES, READY FOR PULLING OF WIRE TO CAPTURE THE REQUIREMENTS SHOWN ON AV DRAWINGS.
2. THE DESCRIPTION OF CONDUIT SYSTEMS AS SHOWN IN AV SCHEDULES AND RISERS IS SCHEMATIC ONLY AND IS INTENDED TO CONVEY THE REQUIREMENTS OF THE AV CONDUIT SYSTEM SUCH THAT THE AV SYSTEMS WILL FUNCTION CORRECTLY.

BACKBOXES

1. THE TERM "BACKBOX" INCLUDES TERMINATION BOXES MOUNTED TO WALLS, CEILINGS AND IN FLOORS. ALL BACKBOXES TO BE SUPPLIED WITH UTILITY COVERS, FASTENED IN PLACE.
2. THE DRAWINGS SHOW, APPROXIMATELY, WHERE BACKBOXES ARE TO BE LOCATED. FOR EXACT LOCATIONS, SEE ARCHITECTURAL DRAWINGS OR OBTAIN DIRECTION FROM THE ARCHITECT. THE LOCATIONS OF SOME PULL-BOXES AND JUNCTION BOXES ARE INDICATED FOR REFERENCE. THEIR EXACT LOCATIONS TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD, SUBJECT TO THE REQUIREMENTS SHOWN HEREIN AND IN THE DRAWINGS.
3. PROVIDED THAT THE STATED REQUIREMENTS ARE MET, THE ELECTRICAL CONTRACTOR MAY USE ITS DISCRETION TO ADJUST THE DESIGN OF THE CONDUIT NETWORK TO CONFORM TO SITE CONDITIONS AND REALIZE ECONOMIES IN MATERIALS AND/OR PHYSICAL SPACE. EXAMPLE OF SUCH CONDITIONS ARE AS FOLLOWS:
   - ROUTING OF CONDUIT FROM POINT TO POINT MAY BE CHANGED TO RUN VIA AVAILABLE BUILDING LINES AND ACCESSIBLE AREA
   - WITH SHARE GROUPS, MANY SMALLER CONDUITS MAY BE COMBINED INTO FEWER LARGER CONDUITS THAT THE STATED FILL RATIO IS OBSERVED AND NET CAPACITY IS NOT REDUCED.

NOMENCLATURE

1. CONSULT AV DRAWINGS FOR DETAILS OF BACKBOX INSTALLATION REQUIREMENTS (SIZE, MOUNTING HEIGHT, ETC.).
2. EACH BACKBOX IS IDENTIFIED BY SYSTEM CODE ACCORDING TO THE AV SYSTEM(S) CABLES THAT WILL BE TERMINATED THERE.

SIZE

1. UNLESS NOTED OTHERWISE, SIZE CONDUIT ACCORDING TO REQUIREMENTS OF WIRES TO BE CONTAINED THEREIN. THE QUANTITY AND TYPES OF CABLES SHALL BE PROVIDED BY THE AV CONTRACTOR.
2. THE FILL RATIO SHALL NOT EXCEED 40%.

MATERIALS

1. ALL BACKBOXES TO BE MANUFACTURED OF STEEL.
2. ALL BACKBOXES TO BE 75MM (3") DEEP OR GREATER, EXCEPT CEILING LOUDSPEAKER BACKBOXES, WHICH ARE SPECIFIED SEPARATELY.
3. ALL SUSPENDED BACKBOXES SHALL INCLUDE AT LEAST ONE REDUNDANT CHAIN TO BE FASTENED TO THE CEILING SLAB OR OTHER STRUCTURAL MEMBER FOR SEISMIC AND FIRE SAFELY PURPOSES. TENSION RATING OF CHAIN AND FASTENERS TO MEET CODE REQUIREMENTS.
4. WHERE NOTED ON DRAWINGS, USE RIGID CONDUIT UP TO 2400MM (8'-0") ABOVE FINISHED FLOOR WHERE EXPOSED INDOORS AND SUBJECT TO DAMAGE. USE EPOXY COATED RIGID CONDUIT WHERE EXPOSED IN CORROSIVE AREAS INDOORS.
5. UNLESS NOTED OTHERWISE, PVC CONDUIT, BUSHINGS AND CONNECTIONS ARE NOT ACCEPTABLE.
6. ALL EXPOSED SURFACE-MOUNTED GANG BACKBOXES (i.e. MOUNTED TO EXPOSED CONCRETE COLUMNS OR WALLS) SHALL BE SIMILAR TO WIREMOLD V5744-SERIES, ALLOWING FOR ALL COVER PLATES TO NOT OVERHANG BACKBOX. STANDARD METAL ELECTRICAL BACKBOXES ARE NOT ACCEPTABLE.

INSTALLATION

1. COORDINATE BACKBOX LOCATIONS AS REQUIRED WITH ELECTRICAL POWER RECEPTACLES AND LIGHT SWITCHES TO PRESENT A UNIFORM APPEARANCE TO THE SATISFACTION OF THE ARCHITECT.
3. MOUNT SURFACE OR RECESSED ACCORDING TO LOCAL FINISH REQUIREMENTS, AT THE DISCRETION OF THE ARCHITECT.
4. MARK BACKBOXES IN THE FIELD CONSISTENT WITH THE DRAWINGS FOR IDENTIFICATION PURPOSES. USE PERMANENT MARKER TO MARK ID AND SYSTEM CODE ON THE FACING SURFACE OF THE BACKBOX.
5. COORDINATE CEILING BACKBOXES WITH OTHER SERVICES IN CEILING SUCH THAT BACKBOXES ARE CLEAR OF INTERFERENCES AND DIRECTLY ACCESSIBLE FROM BELOW.
6. IN OPEN CEILINGS, WHERE CHAIN OR STRUT IS THE PRIMARY HANGING SUPPORT, ENSURE THAT LOUDSPEAKER ARE SUSPENDED PLUMB AND LEVEL AT CONSISTENT HEIGHT ABOVE FINISHED FLOOR.
7. WHERE LOUDSPEAKER BACKBOXES WILL BE CONCEALED ABOVE PLASTER OR GYPSUM BOARD CEILING PRIOR TO INSTALLATION OF THE LOUDSPEAKERS, PROVIDE PULLSTRING SUSPENDED BELOW THE CEILING LINE TO INDICATE ITS LOCATION.
8. ALL JUNCTION BOXES MUST BE ACCESSIBLE AFTER THE INSTALLATION OF WALL FINISHES AND OTHER PERMANENT BUILDING FEATURES

CONDUIT ORGANIZATION

1. UNLESS NOTED OTHERWISE, PROVIDE A SEPARATE NETWORK CONNECTING ALL BACKBOXES OF EACH SYSTEM, AS IDENTIFIED ON THE DRAWINGS.
2. UNLESS NOTED OTHERWISE, PROVIDE CONDUIT TO JOIN EVERY BACKBOX TO THE NETWORK(S), WHETHER OR NOT THE CONDUIT IS SPECIFICALLY DESCRIBED HEREIN.

BONDING

1. ALL CONDUIT, PULL BOXES AND JUNCTION BOXES TO BE CONTINUOUSLY GROUNDED BY MEANS OF BONDING STRAPS LINKING EACH ELEMENT.
2. LOW VOLTAGE CONDUITS SHALL BE MECHANICALLY AND ELECTRICALLY ISOLATED FROM SOUND SYSTEM EQUIPMENT RACKS. AT RACKS, USE ISOLATED CONNECTION, SUCH AS PVC BUSHING, SUCH THAT CONDUIT REMAINS ISOLATED FROM THE RACK. CONNECT LOW VOLTAGE CONDUITS WITH HEAVY INSULATED GROUND WIRE TO THE NEAREST GROUND OF A UTILITY PANEL.

PROXIMITIES AND ROUTING

1. AV CONDUITS AND AC CONDUITS RUN IN PARALLEL SHOULD BE SEPARATED BY A DISTANCE OF 24" FOR RUNS LESS THAN 75'. FOR PARALLEL RUNS GREATER THAN 75' DOUBLE ALL VALUES.
2. DO NOT RUN WIRING, RACEWAYS AND CONDUIT NEAR POWER TRANSFORMERS, LIGHTING DIMMERS, POWER CONTROL EQUIPMENT, HEAVY CURRENT SWITCHGEAR, FUSEBOARDS, FLUORESCENT BALLASTS, MOTORS, OR ANY OTHER EQUIPMENT WHICH RADIATES EMI.
3. CROSS CONDUITS OF POWER SYSTEMS AT 90 DEGREES.
4. UNUSUALLY HEAVY CURRENT DEMANDS IN ADJACENT CONDUIT OR LONG PARALLEL RUNS MAY DICTATE GREATER SEPARATION TO AVOID INTERFERENCE IN THE SOUND AND VIDEO. IDENTIFY SUCH INSTANCES ON SITE AND CONSULT WITH ELECTRICAL CONSULTANT FOR RESOLUTION PRIOR TO INSTALLATION OF CONDUITS.
6. WHERE CONDUIT CROSSES ACOUSTICAL JOINTS, PROVIDE ISOLATION METHODS AS SHOWN IN ARCHITECTURAL DETAIL.
7. CONDUIT EXPANSION FITTINGS TO BE PROVIDED WHEN CROSSING BUILDING EXPANSION JOINTS. CROSSING TO BE DONE AT 90 DEGREES TO JOINT.
8. ALL WALL-MOUNTED PAGING LOUDSPEAKER AND ATTENUATOR BACKBOXES ARE TO BE SERVED BY CONDUIT ROUTED INTO CEILING SPACE ABOVE.

INSTALLATION

1. BEND RADIUS OF CONDUIT MUST BE NO LESS THAN 10 (TEN) TIMES THE CONDUIT DIAMETER. BEND CONDUIT WITHOUT HEATING, REPLACE CONDUIT IF CHINKED OR FLATTENED MORE THAN 1/10 OF THE ORIGINAL DIAMETER.
2. MINIMUM DISTANCE BETWEEN TWO PULL BOXES TO INCLUDE A MAXIMUM OF 2 (TWO) 90 DEGREES BENDS OR EQUIVALENT UP TO 180 DEGREES, OR 30M (100') OF CONDUIT, WHICHEVER IS LESS.
3. MARK ALL CONDUITS IN THE FIELD FOR IDENTIFICATION PURPOSES. FOR RISERS, SHOW SHARE GROUP LETTER AT EVERY JUNCTION BOX. FOR HORIZONTAL RUNS, SHOW DEVICE LOCATION ID AND SHARE GROUP LETTER AT EVERY JUNCTION BOX.

PULL STRINGS

1. FISH PULL-STRINGS THROUGH ALL NETWORKS. AT EACH END OF EACH PULL-STRING, LABEL STRING WITH ID OF OTHER END. SECURE BOTH ENDS OF STRING TO CONDUIT OUTSIDE BACKBOX TO PREVENT IT FROM RE-ENTERING CONDUIT.
2. WHERE LOUDSPEAKER BACK BOXES WILL BE CONCEALED ABOVE PLASTER OR GYPSUM BOARD CEILING PRIOR TO INSTALLATION OF THE LOUDSPEAKERS, PROVIDE PULL STRING SUSPENDED BELOW THE CEILING LINE TO INDICATE ITS LOCATION.
3. FASTEN UTILITY COVERS TO ALL BACKBOXES.

1 AV300 AV CONDUIT AND BACKBOX NETWORK
SCALE: NTS

CLIENT LOGO

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1	ISSUED FOR AV TENDER	2024/11/15

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TITLE

AV CONDUIT NOTES

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Baird Sampson Neuert
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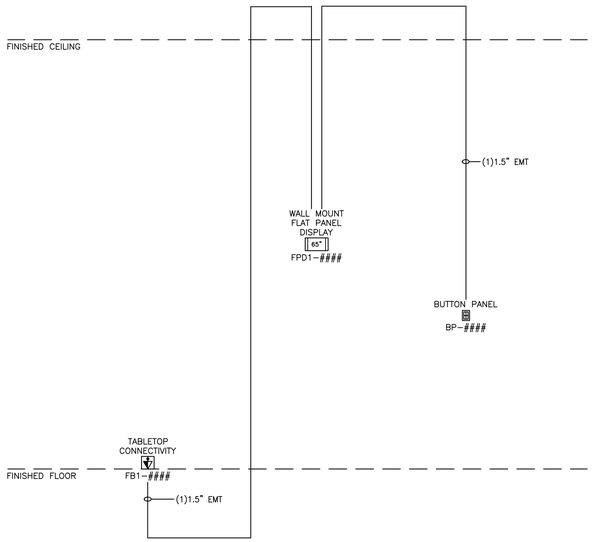
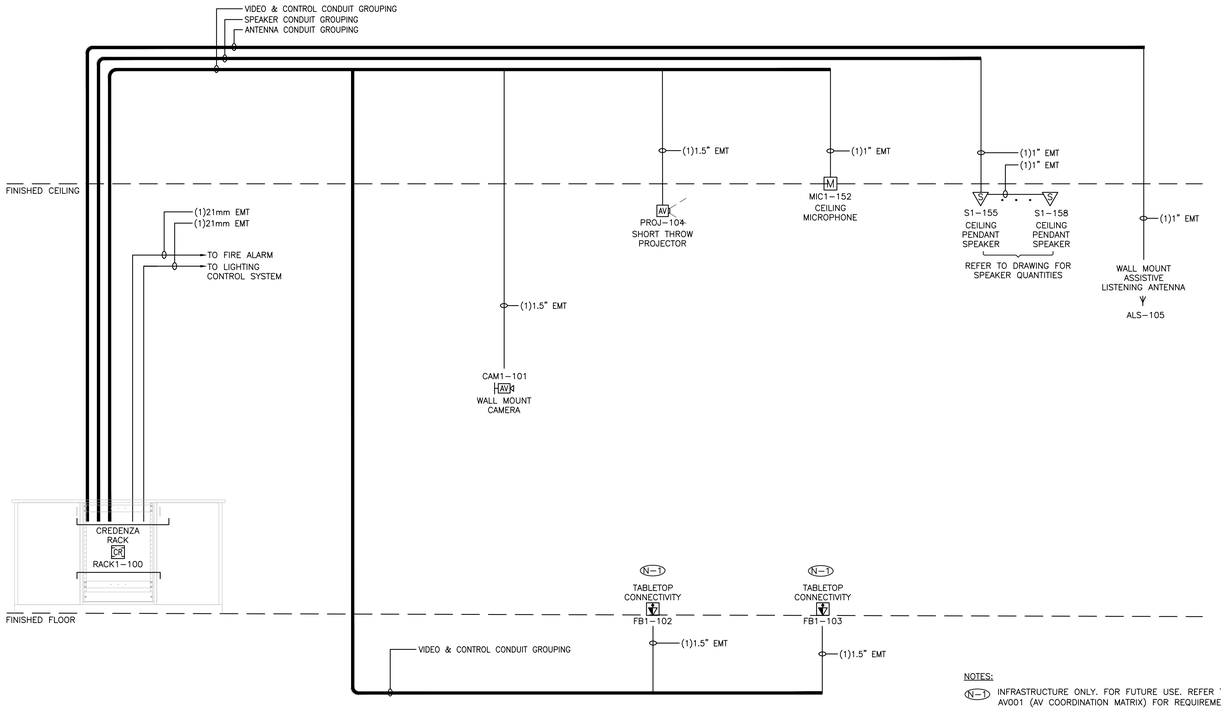
PROJECT NO :	
DRAWN BY :	S.R.
CHECKED BY :	P.G.

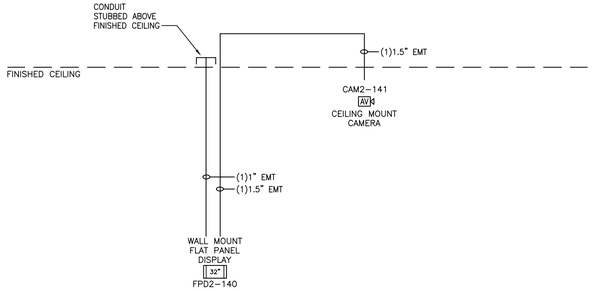
SHEET NO : **AV300**



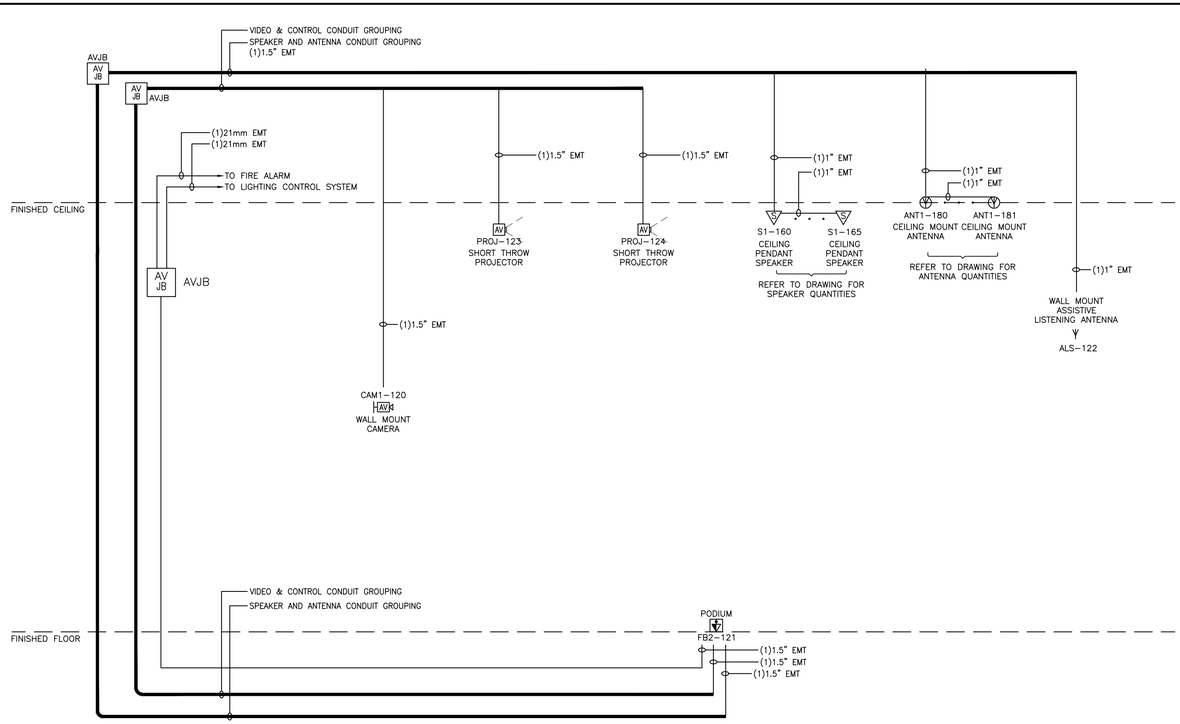
3 AV301 TYPE 2 – AV GRAD & FLEX SPACE OFFICES
AV RISER DIAGRAM



1 AV301 TYPE 1 – MULTI–PURPOSE SPACE
AV RISER DIAGRAM



4 AV301 TYPE 4 – FORENSIC GARAGE
AV RISER DIAGRAM



2 AV301 TYPE 3 – FORENSIC TEACHING LAB
AV RISER DIAGRAM

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AV RISER DIAGRAMS

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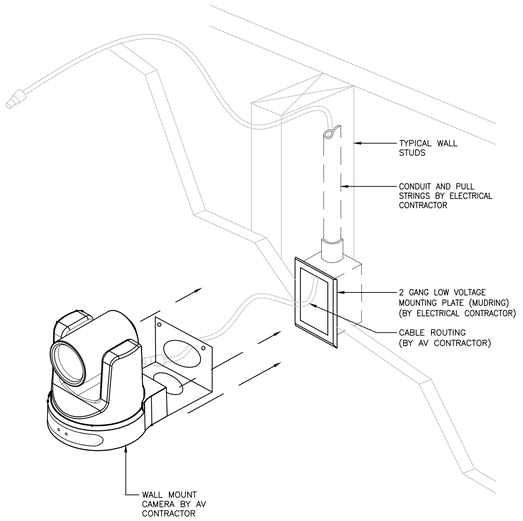
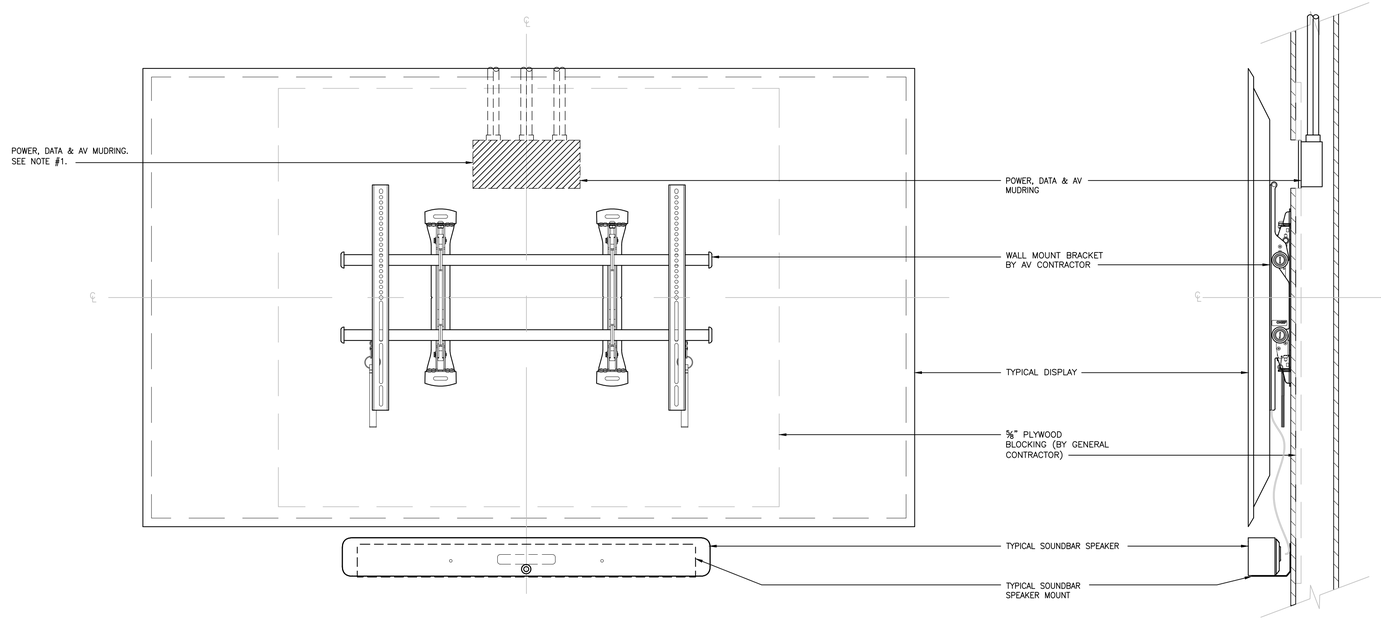
AV301



CAM1
AV

3 AV400 WALL MOUNT CAMERA
SCALE: NTS



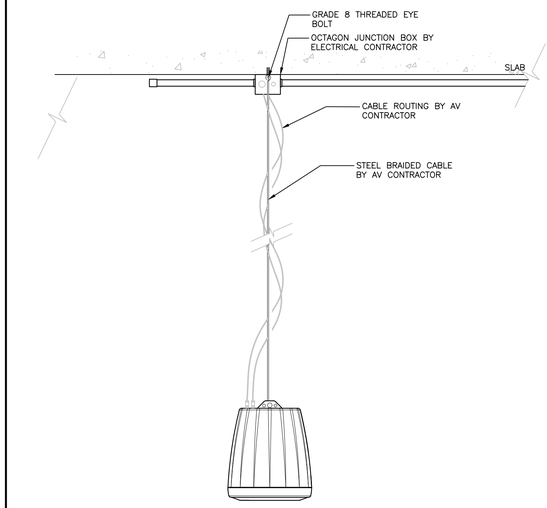
FPD1
XX"

NOTES:

N—1 REFER TO DIVISION OF RESPONSIBILITIES TABLE FOR SCOPE & REFER TO COORDINATION MATRIX FOR INFRASTRUCTURE REQUIREMENTS.

CROSS SECTION

1 AV400 WALL MOUNT DISPLAY W/ SOUND BAR
SCALE: NTS

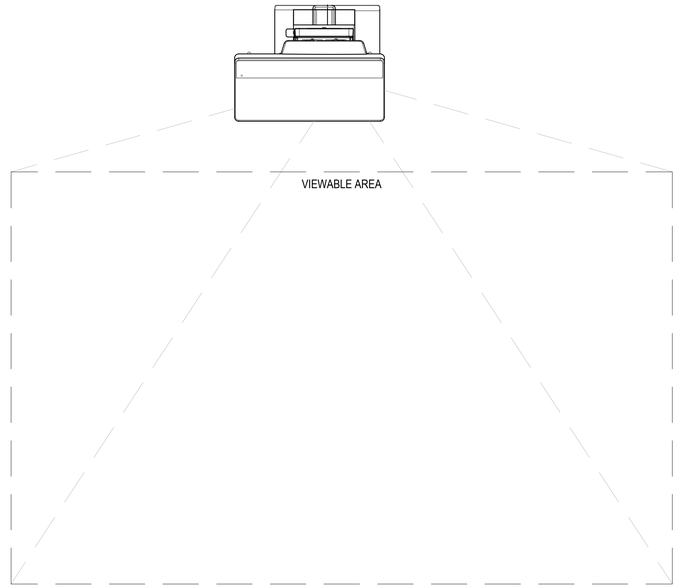


NOTES:

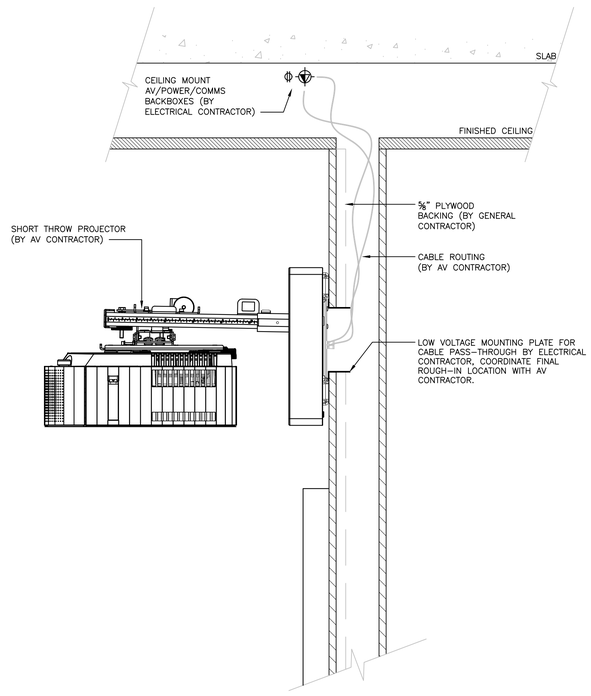
N—1 TYPICAL HEIGHT TO BOTTOM OF SPEAKER SHALL BE COORDINATED WITH LIGHTING DESIGNER AND CONFIRMED WITH ARCHITECT.

S1

4 AV400 PENDANT SPEAKER
SCALE: NTS



PROJ#
AV



2 AV400 SHORT THROW PROJECTOR
SCALE: NTS

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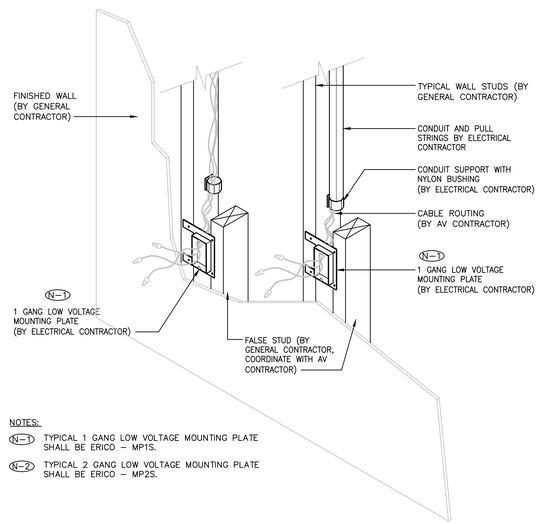
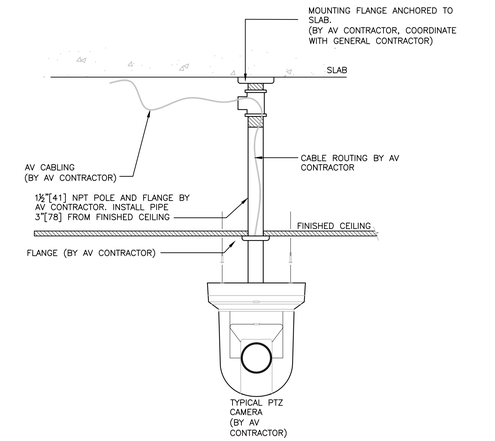
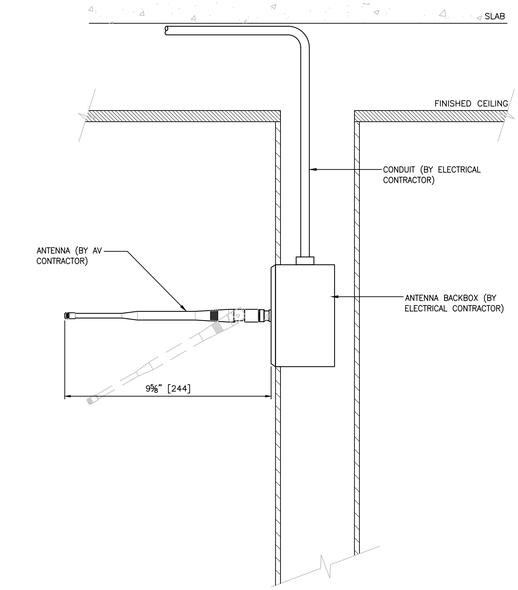


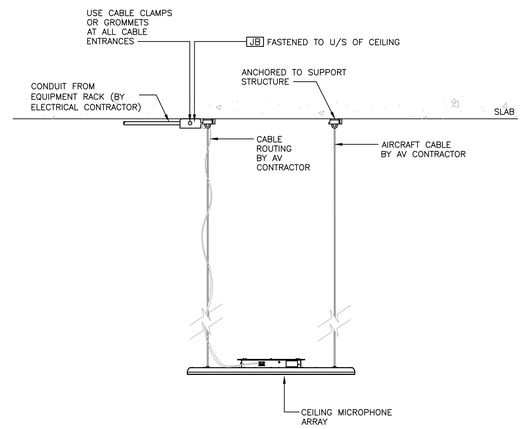
3 AV401 LOW VOLTAGE MOUNTING PLATE
SCALE: NTS



1 AV401 CEILING MOUNT CAMERA
SCALE: NTS



4 AV401 WALL MOUNTED ANTENNA
SCALE: NTS



2 AV401 TYPICAL CEILING MICROPHONE ARRAY WITH AIRCRAFT CABLES
SCALE: NTS

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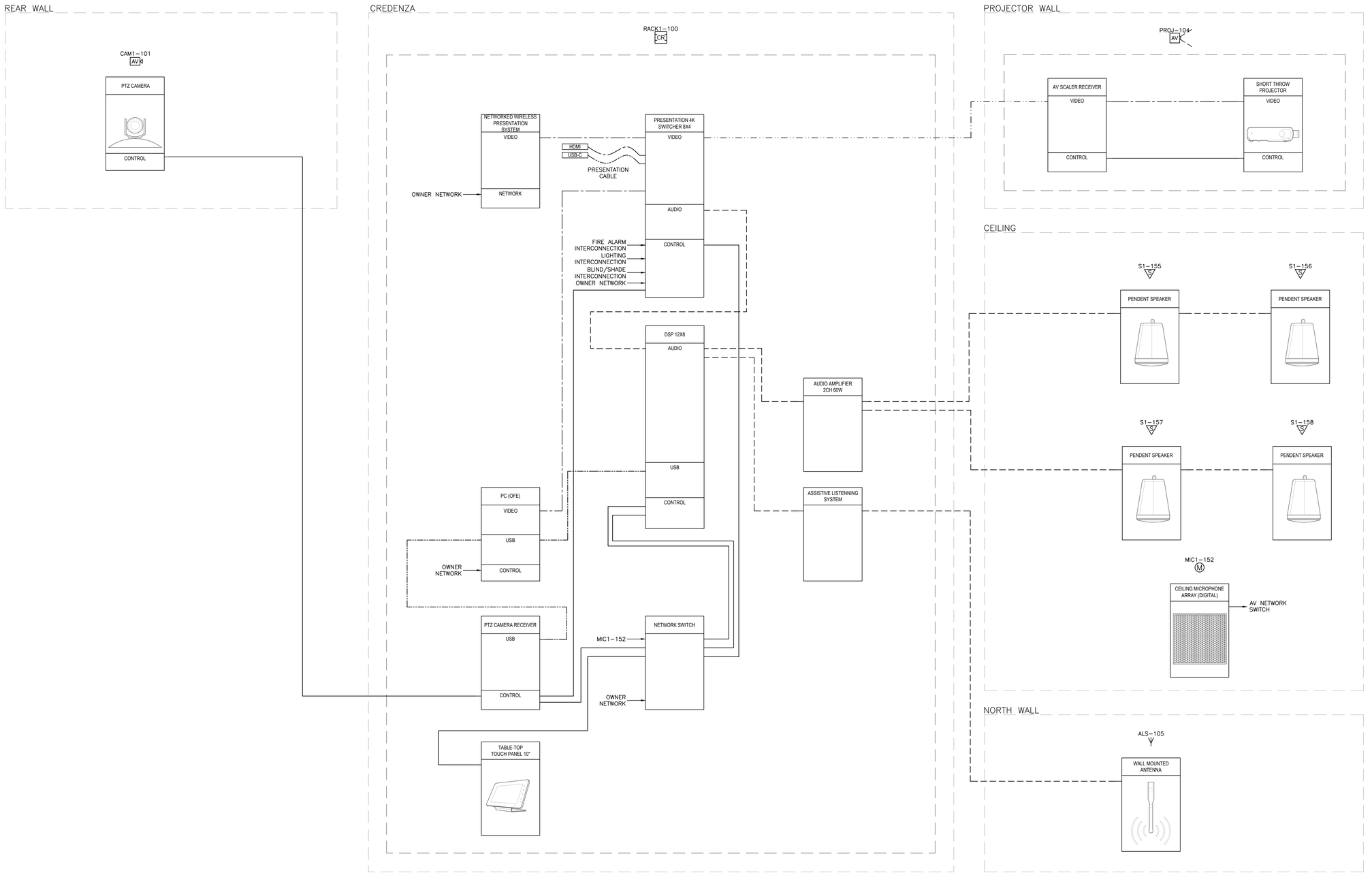

1 AV500 TYPE 1 – MULTI–PURPOSE SPACE
TYPICAL SYSTEM FUNCTIONAL SCHEMATIC

LEGEND

HDBaseT	
VIDEO	
AUDIO	
CONTROL	
USB	

CLIENT LOGO

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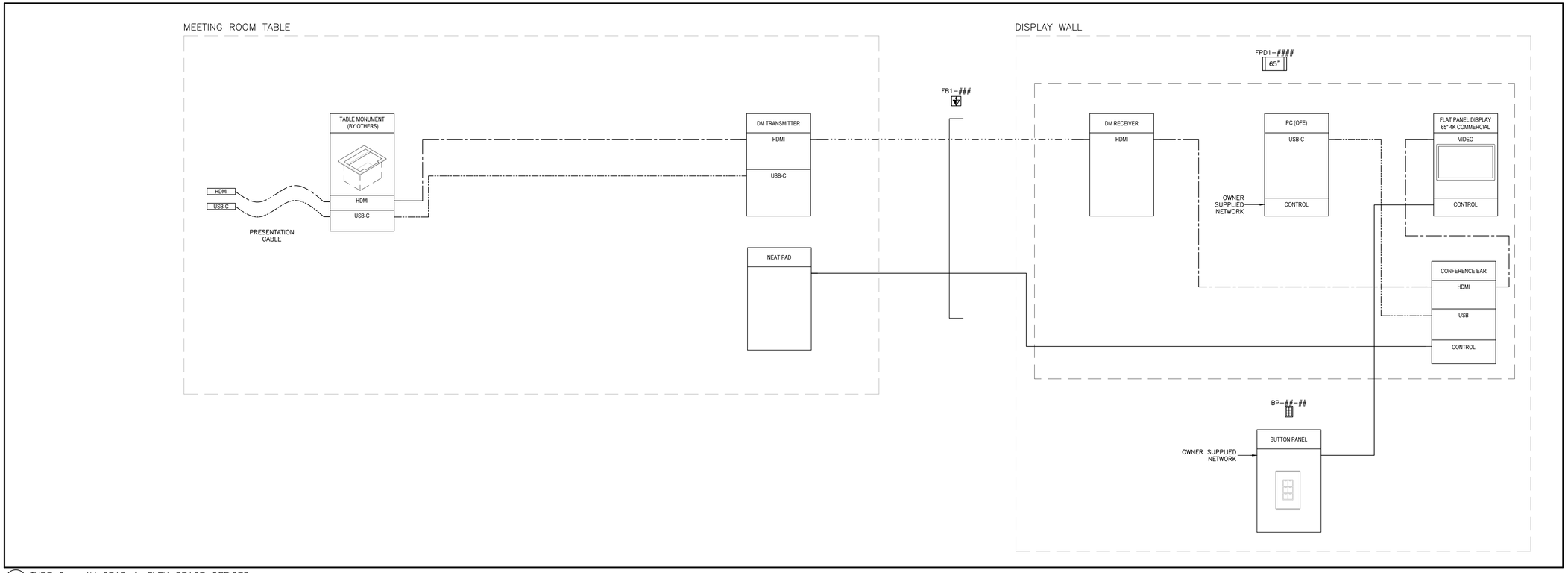
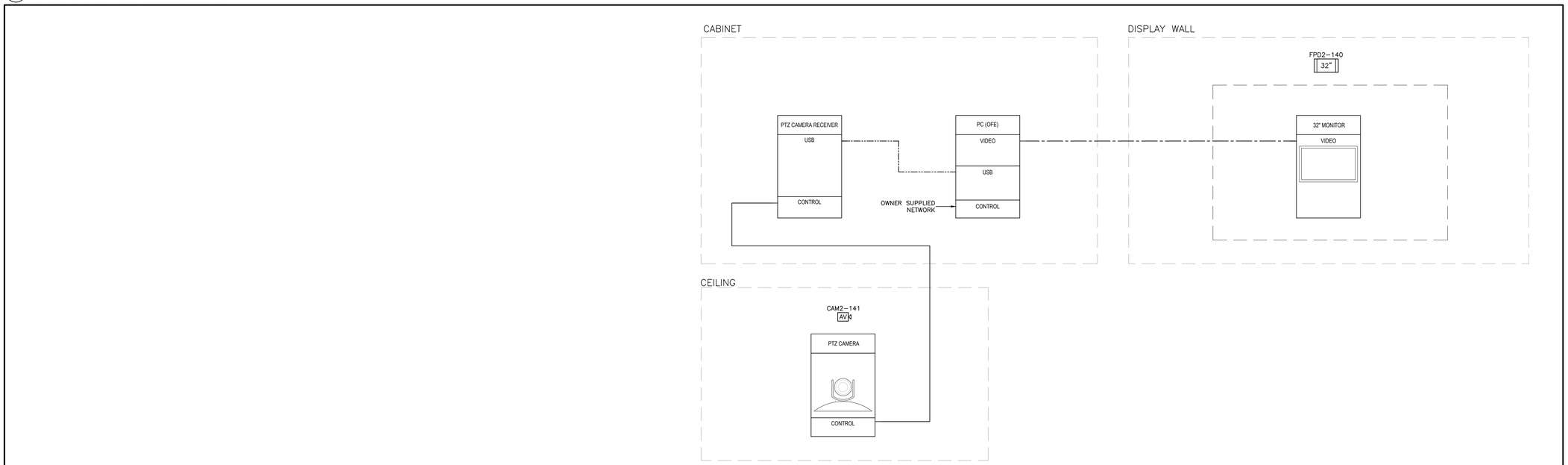
SHEET NO :

AV500



1 AV501 TYPE 2 – AV GRAD & FLEX SPACE OFFICES
TYPICAL SYSTEM FUNCTIONAL SCHEMATIC



2 AV501 TYPE 4 – FORENSIC GARAGE
TYPICAL SYSTEM FUNCTIONAL SCHEMATIC

LEGEND

HDBaseT	
VIDEO	
AUDIO	
CONTROL	
USB	

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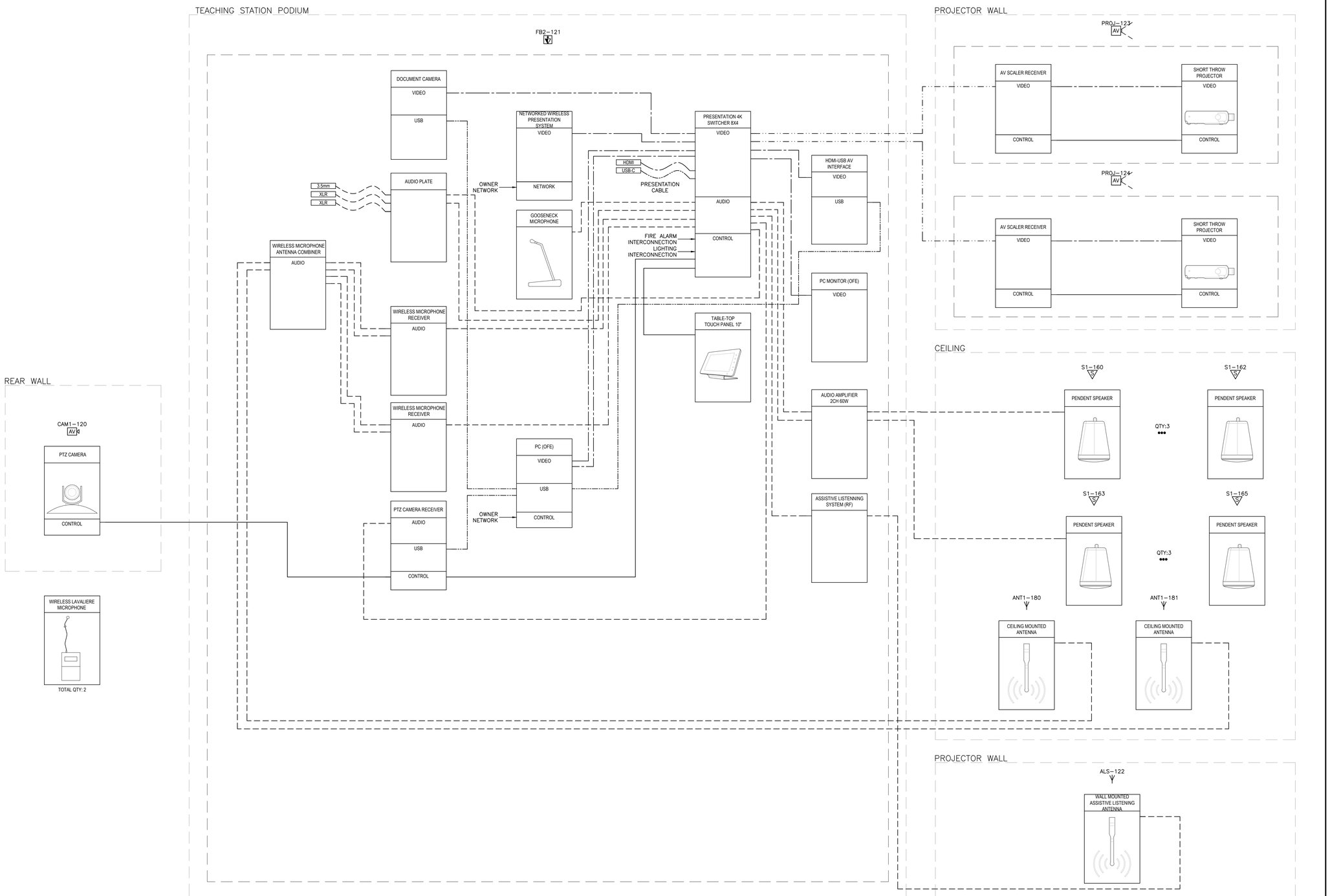

1 AV502 TYPE 3 – FORENSIC TEACHING CLASSROOM
TYPICAL SYSTEM FUNCTIONAL SCHEMATIC

LEGEND

HDBaseT	
VIDEO	
AUDIO	
CONTROL	
USB	

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