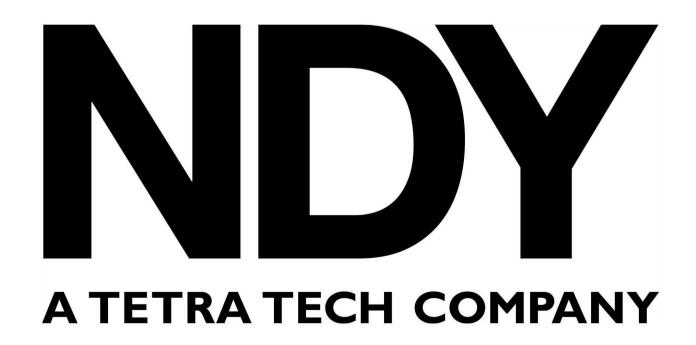
# **SINSW - DUNDAS PUBLIC SCHOOL UPGRADE** MECHANICAL DRAWING SET NDY | SCHEMATIC DESIGN





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ARCHITECT

**RPINFRASTRUCTURE** 

KEY PLAN

	1 2 3 4 5	CH CH CH CH CH
NORTH		

SHEET NUMBER

JPS-NDY-XX-XX-DR-M-000000 UPS-NDY-XX-XX-DR-M-000001

JPS-NDY-00-00-DR-M-001011

DUPS-NDY-B00L-GF-DR-M-120010

JPS-NDY-B00L-RF-DR-M-120111

COVER SHEET

SITE PLAN

LEGEND & GENERAL NOTE

BLOCK L GROUND FLOOR LA

BLOCK L ROOF PLAN

SHEET NAME	REVISION	REVISION DATE
	5	18/12/2024
	5	18/12/2024
	5	18/12/2024
YOUT	5	18/12/2024
	5	18/12/2024

RE	EV BY	DATE	DESCRIPTION
1	CH	11/10/2024	CONCEPT DESIGN
2	CH	01/11/2024	CONCEPT DESIGN
3	CH	26/11/2024	DRAFT SCHEMATIC DESIGN
4	CH	06/12/2024	SCHEMATIC DESIGN
5	CH	18/12/2024	SCHEMATIC DESIGN

PROJECT NAME SINSW - DUNDAS PUBLIC SCHOOL UPGRADE 85 KISSING POINT RD, DUNDAS NSW 2117 **BLOCK L** 

DRAWING TITLE MECHANICAL SERVICES COVER SHEET

PROJECT NO. 758-0120.0041152.0001 STATUS

SCHEMATIC DESIGN

DRW | CHK | APP | DATE CH ML SS 18/12/2024

DRAWING NO. DUPS-NDY-XX-XX-DR-M-000000 SCALE @A1

# MECHANICAL LAYOUT ELEMENTS

	FION FOR INSULATION REQUIREMENTS	
800×300	DENOTES EXTERNALLY INSULATED SUPPLY/RETURN AIR DUCTWORK. OUTSIDE & EXHAUST AIR UNINSULATED UNLESS INDICATED OTHERWISE.	×1"
<sup>∼</sup> 800×300 <sup>∼</sup>	DENOTES 100mm INTERNALLY INSULATED DUCTWORK.	<b>**</b> *
800×300	DENOTES 75mm INTERNALLY INSULATED DUCTWORK.	<b></b> "x>
800x300	DENOTES 50mm INTERNALLY INSULATED DUCTWORK.	900x3
800x300	DENOTES 38mm INTERNALLY INSULATED DUCTWORK.	∣ "xxx"
800×300	DENOTES FIRE RATED DUCTWORK. REFER TO SPECIFICATION FOR DETAILS.	
	DENOTES FLEXIBLE DUCTWORK. REFER TO SCHEDULE FOR SIZE.	M
OUCT SYSTE	M COLOURS	□ □ □
300x300	EXHAUST AIR GENERAL DUCTWORK (EA)	₩ ∏ <sup>"××"</sup>
<b>300x300</b>	MAKEUP AIR DUCTWORK (MA)	₩ ₩    "××"
300×300	OUTSIDE AIR DUCTWORK (OA)	ret
300x300	RETURN AIR DUCTWORK (RA)	
300x300	RELIEF AIR DUCTWORK (RE)	$\bigcirc$ T $(CO_2)$
		$\bigcirc$
300x300	SUPPLY AIR DUCTWORK (SA)	A
300x300 300x300	SUPPLY AIR DUCTWORK (SA) TRANSFER AIR DUCTWORK (TA)	
		Ap *AHS
300x300	TRANSFER AIR DUCTWORK (TA)	AP *AHS T T/H

#### PIPEWORK SYSTEM COLOURS & ABBREVIATIONS

CD	CONE
RD	REFR
RL	REFR

DENSATE DRAIN RIGERANT DISCHARGE

RIGERANT LIQUID LINES

# DOOR GRILLE SCHEDULE

	DOOR GRILLE SIZE	AIR QUANTITY RANGE (I/s)
U	25mm DOOR UNDERCUT	0 - 50
A	600 x 150	51 - 90
В	600 × 300	91 - 150
С	600 x 450	151 - 210
D	600 x 600	211 - 275
_	NOTE: ALL DOOR GRILLES TO BE AND INSTALLED BY BUILDING TRA	SUPPLIED BY MECHANICAL TRADE DE.



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#### EVICES & EQUIPMENT

EVICES & EQUIPMENT		
"xxx"	SUPPLY AIR DIFFUSER 4 WAY BLOW WITH INTERNALLY LINED CUSHION HEAD. AIR QUANTITY AS NOMINATED.	
"xxx"	RADIAL VANE SWIRL DIFFUSER WITH INTERNALLY LINED CUSHION HEAD. AIR QUANTITY AS NOMINATED.	
"xxx"	EGG CRATE TYPE AIR GRILLE WITH INTERNALLY LINED CUSHION HEAD U.N.O. REFER TO DRAWINGS FOR SYSTEM TYPE. AIR QUANTITY AS NOMINATED.	
000x300 ∕/- <b>→</b> xxx"	DOUBLE DEFLECTION SIDEWALL REGISTER. SIZE AND AIR QUANTITY AS NOTED.	
AP	DENOTES DUCT MOUNTED ACCESS PANEL.	
	FIRE DAMPER	
	VOLUME CONTROL DAMPER	
"xx"	DAMPER (NOT VOLUME CONTROL) "xx" DENTOES DAMPER TYPE. REFER TO ABBREVIATION LIST	
"xx"	MOTORISED DAMPER "xx" DENTOES DAMPER TYPE. REFER TO ABBREVIATION LIST	
"xx"	DUCT HEATER "xx" DENOTES TYPE	
	MECHANICAL SERVICES SWITCHBOARD	
т	TUNDISH. PROVIDED BY HYDRAULICS TRADE	
$D_2$	CARBON DIOXIDE SENSOR	
P	CEILING ACCESS PANEL BY BUILDING TRADE	
l	DENOTES WALL MOUNTED CONTROL PANEL. MOUNTED AT 1600mm AFFL U.N.O.	

MOUNTED AT 1600mm AFFL U.N.O. AHS = AFTER HOURS SWITCH (NOTED IF APPLICABLE) TEMPERATURE SENSOR

**TEMPERATURE & HUMIDITY SENSOR** 

HUMIDITY SENSOR

U

UNDERCUT DOOR BY OTHERS (NOMINALLY 25mm)

# FLEXIBLE DUCT SIZES

AIR QUANTITY RANGE (I/s)	DIAMETER
0 - 55	Ø150
56 - 90	Ø200
91 - 190	Ø250
191 - 280	Ø300
281 - 390	Ø350
391 - 500	Ø400

# MECHANICAL ABBREVIATIONS

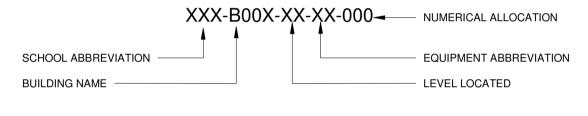
#### GENERAL

Ø	DIAMETER (NOMINAL BORE)	AC
В	BLANK	ATT
СМ	CEILING MOUNTED	BMS
c/w	COMPLETE WITH	EAF
EA	EXHAUST AIR	FCU
FD	FIRE DAMPER	MSSB
IC	IN CEILING	OAF
L/S	LITRES PER SECOND	RAF
m² / SQM	SQUARE METRE	RC
MA	MAKEUP AIR	SAF
MFD	MOTORISED FIRE DAMPER	TEF
MFSD	MOTORISED FIRE/SMOKE DAMPER	UNO
MSD	MOTORISED SMOKE DAMPER	VSD
MVCD	MOTORISED VOLUME CONTROL DAMPER	ERV
NRD	NON RETURN DAMPER	
OA	OUTSIDE AIR	
RA	RETURN AIR	
SA	SUPPLY AIR	
U.N.O.	UNLESS NOTED OTHERWISE	
VCD	VOLUME CONTROL DAMPER	
WM	WALL MOUNTED	

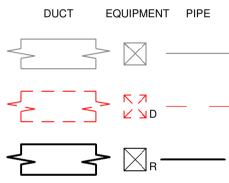
# EQUIPMENT

AC	INDOOR AIR CONDITIO
ATT	ACOUSTIC ATTENUAT
BMS	BUILDING MANAGEME
EAF	EXHAUST AIR FAN
FCU	FAN COIL UNIT
MSSB	MECHANICAL SERVIC
OAF	OUTSIDE AIR FAN
RAF	RETURN / RELIEF AIR
RC	ROOF COWL
SAF	SUPPLY AIR FAN
TEF	TOILET EXHAUST FAN
UNO	UNLESS NOTED OTHE
VSD	VARIABLE SPEED DRI
ERV	ENERGY RECOVERY

#### PROJECT SPECIFIC NAMING CONVENTION



#### PHASING

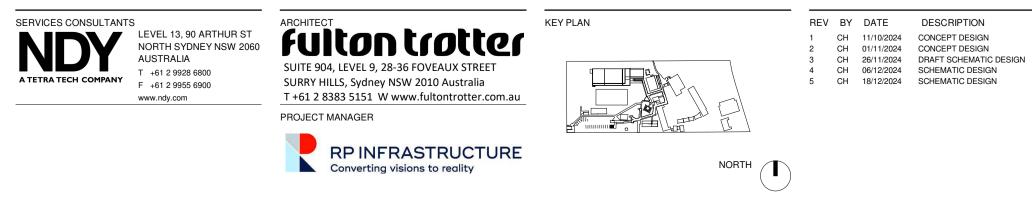


#### DENOTES EXISTING MECHANICAL SERVICES TO REMAIN. ALL SERVICES ARE EXISTING UNLESS OTHERWISE NOTED ON THE DRAWING DENOTES EXISTING MECHANICAL SERVICES TO BE DEMOLISHED OR RELOCATED DENOTES EXISTING MECHANICAL SERVICES RELOCATED POSITION

COLOUR AND LINETYPE FOR RELOCATED OR NEW DUCTWORK OR PIPEWORK DETERMINED BY SYSTEM TYPE. REFER TO PIPE AND DUCT SYSTEMS LEGEND.

### **GENERAL NOTES**

- ALL DUCT SIZES ARE CLEAR INTERNAL AIRWAY DIMENSIONS.
- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL AIR AND FLUID FLOWS INDICATED ARE LITRES / SECOND.
- ALL PIPE SIZES ARE NOMINAL DIAMETER UNLESS NOTED OTHERWISE. CONVERT TO ACTUAL SIZES TO SUIT THE MATERIAL USED.
- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE MECHANICAL SERVICES SPECIFICATION.
- DRAWINGS PROVIDED ARE NOT TO BE USED FOR MANUFACTURE OF DUCTWORK OR ORDERING OF EQUIPMENT. SHOP DRAWINGS SHALL BE PRODUCED AND SUBMITTED FOR REVIEW TO THE MECHANICAL ENGINEER PRIOR TO COMMENCEMENT OF WORKS ON SITE.
- DO NOT SCALE FOR SIZING. REFER TO ARCHITECTURAL, MANUFACTURERS DOCUMENTATION AND SPECIFICATION FOR EXACT MEASUREMENTS.
- ALL WORKS TO BE CARRIED OUT AS PER LATEST REVISION OF ALL RELEVANT BUILDING CODES AND STANDARDS.



IONING UNIT TOR IENT SYSTEM

CES SWITCHBOARD

R FAN

IERWISE

RIVE VENTILATOR

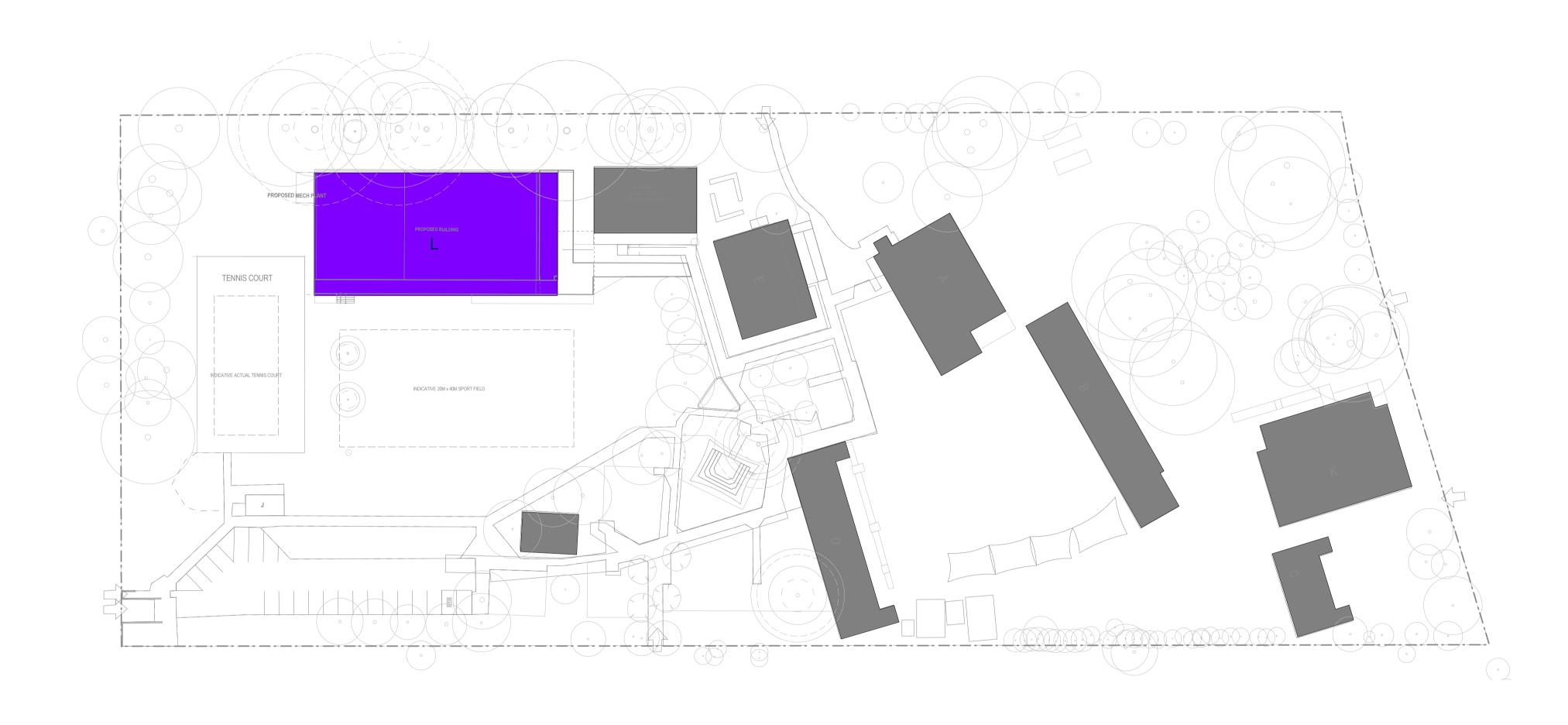
PROJECT NAME SINSW - DUNDAS PUBLIC SCHOOL UPGRADE 85 KISSING POINT RD, DUNDAS NSW 2117 BLOCK L

DRAWING TITLE MECHANICAL SERVICES **LEGEND & GENERAL NOTES** 

PROJECT NO. 758-0120.0041152.0001 STATUS SCHEMATIC DESIGN

DRW | CHK | APP | DATE CH ML SS 18/12/2024 1 : 100 @A1

DRAWING NO. DUPS-NDY-XX-XX-DR-M-000001 SCALE



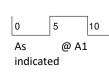


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No.

# DESCRIPTION

#### LEGEND



NO UPGRADES PROPOSED WITHIN THE BLOCK. BUILDING IS GENERALLY ALREADY PROVIDED WITH A/C OR A/C IS NOT REQUIRED FOR THE SPACES AS PER EFSG COOLER CLASSROOM PROGRAMS



NEW BLOCK TO BE PROVIDED WITH A/C AND VENTILATION AS REQUIRED. REFER TO ASSOCIATED DRAWINGS OF THE BLOCK FOR FURTHER DETAILS

PROJECT NAME SINSW - DUNDAS PUBLIC SCHOOL UPGRADE 85 KISSING POINT RD, DUNDAS NSW 2117 **BLOCK L** 

DRAWING TITLE MECHANICAL SERVICES SITE PLAN

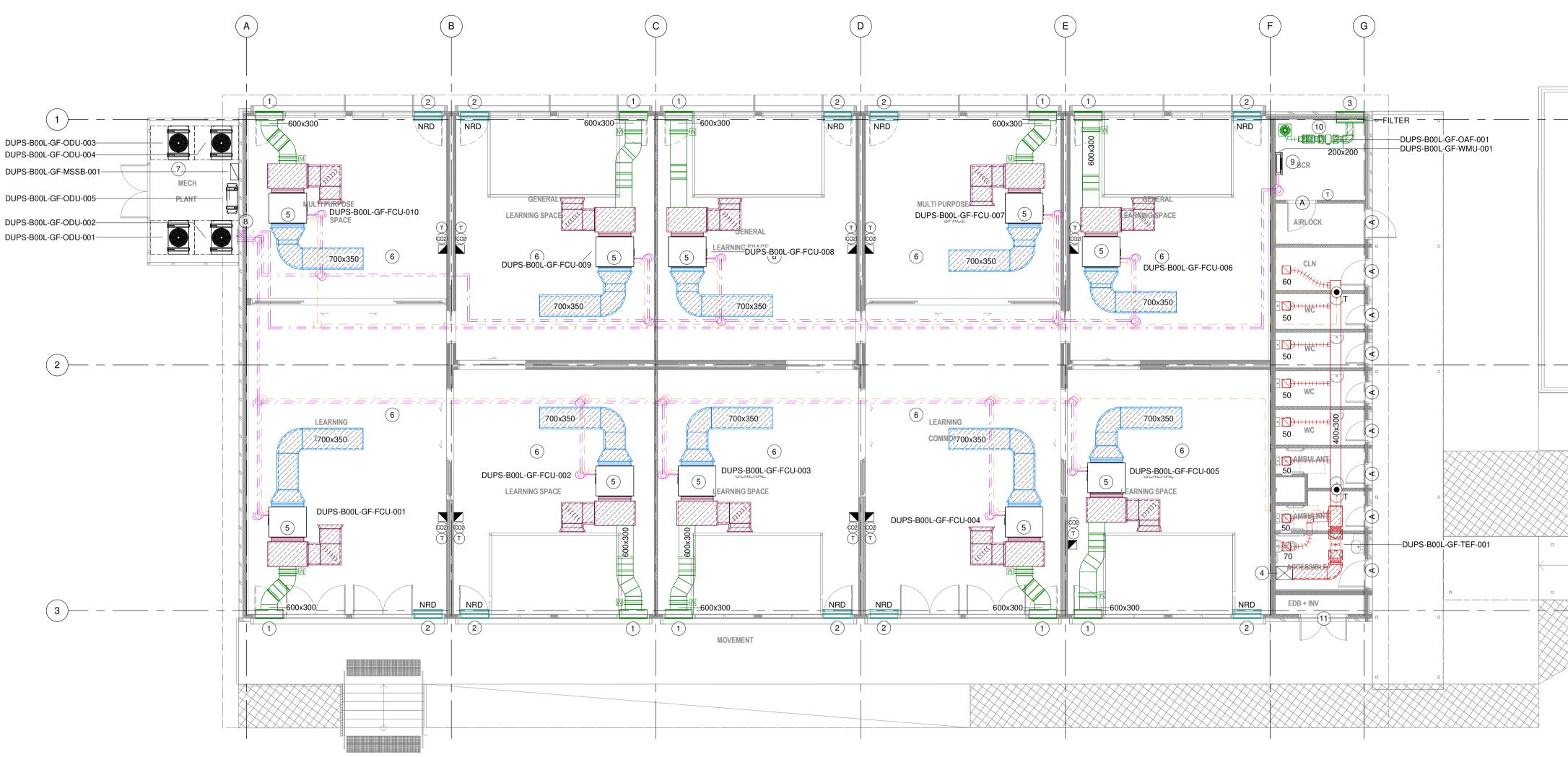
PROJECT NO. 758-0120.0041152.0001

STATUS SCHEMATIC DESIGN

DRW | CHK | APP | DATE | CH ML SS 18/12/2024 As indicated @A1

DRAWING NO. DUPS-NDY-00-00-DR-M-001011 REV 5

SCALE



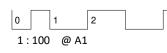


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#### No.

# DESCRIPTION

- 1 OUTSIDE AIR INTAKE LOUVRE. MIN 0.5 SQM OF AREA
- 2 RELIEF AIR LOUVRE. MIN 0.5 SQM OF AREA
- 3 OUTSIDE AIR INTAKE AIR LOUVRE. MIN 0.25 SQM OF AREA
- 4 TOILET EXHAUST DISCHARGE DIRECTLY TO ROOF ABOVE THROUGH ROOF COWL. 500x600 PENETRATION
- 5 IN-CEILING DUCTED FAN COIL UNIT WITH MIN 900 MM LONG INTERNALLY INSULATED MIXING AIR PLENUM. ARCHITECT TO ALLOW FOR MIN 650 MM HIGH CLEAR CEILING SPACE. CONDENSATE SHALL BE CONNECTED TO THE NEAREST TUNDISH, IN COORDINATION WITH THE HYDRAULICS TRADE. ALLOW FOR CONDENSATE PUMP WHERE ADEQUATE FALL FOR DRAINAGE CANNOT BE ACHIEVED.
- 6 DIFFUSER LOCATIONS, QUANTITY, AND SIZES FOR STANDARD HUBS ARE ASSUMED TO BE AS PER SINSW PATTERNBOOK AND ARE NOT SHOWN IN SCHEMATIC DESIGN.



## No.

8

9

# DESCRIPTION

7 CONDENSATE DISCHARGE OF OUTDOOR CONDENSERS TO BE COORDINATED WITH HYDRAULICS REFRIGERANT PIPING FROM OUTDOOR CONDENSERS TO INDOOR UNITS. PENETRATION LOCATION FOR REFERENCE ONLY AND SUBJECT TO FURTHER DETAILED DESIGN

WALL-MOUNTED SPLIT UNIT TO SERVE THE NEW BCR. CONDENSATE TO BE CONNECTED TO THE NEAREST TUNDISH, OUTSIDE OF THE BCR

10 IN-LINE OUTSIDE AIR FAN TO SERVE THE NEW BCR

11 PROVIDE 600x300 INTUMESCENT GRILLE ON HIGH AND LOW LEVELS FOR CUPBOARD VENTILATION

××××××××××	
-	□

#### GENERAL NOTES:

- ALL MECHANICAL LOUVRE AND DOOR GRILLE OPENINGS SHALL **BE VERMIN PROOF**
- FIRE DAMPER SHALL BE PROVIDED THROUGH ALL FIRE RATED WALLS
- NEW MECHANICAL SERVICES SWITCHBOARD SHALL BE PROVIDED WITH A DIGITAL POWER METER FOR THE RECORDING AND ANALYSIS OF ENERGY CONSUMPTION ASSOCIATED WITH MECHANICAL SERVICES AS PER THE NCC AND EFSG REQUIREMENTS. THE POWER METER SHALL BE CONNECTED TO THE CAMPUS ENERGY MONITORING SYSTEM
- ENSURE THAT CEILING PLENUM IS NOT USED FOR RETURN AIR PURPOSES
- LOCATION OF FAN COIL UNITS ARE FOR REFERENCE ONLY AND SUBJECT TO FURTHER COORDINATION WITH ARCHITECTURAL RCP

PROJECT NAME SINSW - DUNDAS PUBLIC SCHOOL UPGRADE 85 KISSING POINT RD, DUNDAS NSW 2117 BLOCK L

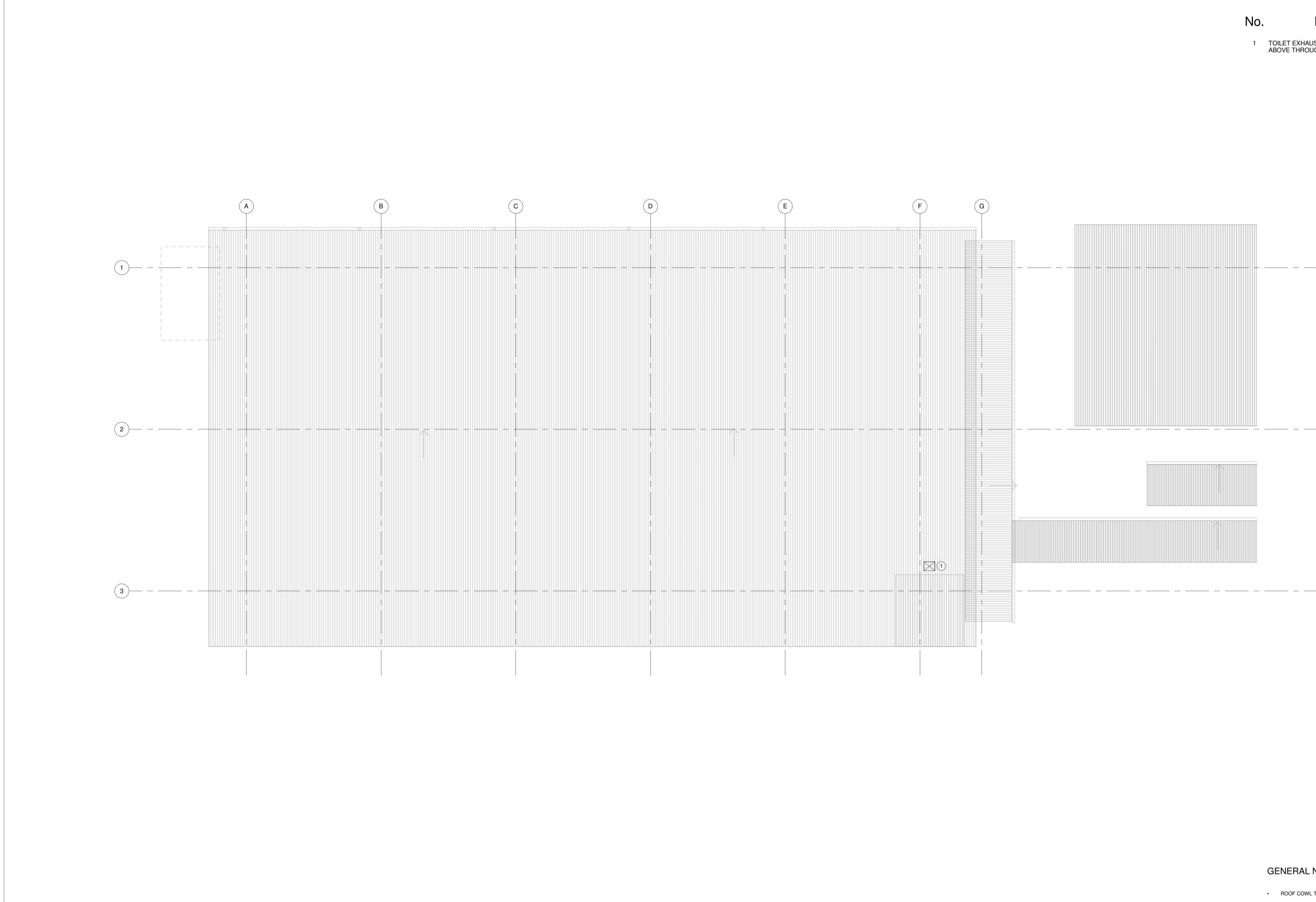
DRAWING TITLE MECHANICAL SERVICES **BLOCK L GROUND FLOOR LAYOUT** 

PROJECT NO. 758-0120.0041152.0001 STATUS

SCHEMATIC DESIGN

DRW | CHK | APP | DATE CH ML SS 18/12/2024 1 : 100 @A1

DRAWING NO. DUPS-NDY-B00L-GF-DR-M-120010 SCALE





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# DESCRIPTION

1 TOILET EXHAUST DISCHARGE DIRECTLY TO ROOF ABOVE THROUGH ROOF COWL. 500x600 PENETRATION

#### GENERAL NOTES:

ROOF COWL TO BE VERMIN PROOF

PROJECT NAME SINSW - DUNDAS PUBLIC SCHOOL UPGRADE 85 KISSING POINT RD, DUNDAS NSW 2117 **BLOCK L** 

DRAWING TITLE MECHANICAL SERVICES BLOCK L ROOF PLAN

PROJECT NO. 758-0120.0041152.0001

STATUS SCHEMATIC DESIGN

 DRW
 CHK
 APP
 DATE
 SCALE

 CH
 ML
 SS
 18/12/2024
 1 : 100 @A1

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