

20

PLUMBING FIXTURE REQUIREMENTS:
Occupant Load Calculation:

Students	350
Staff	40
Total school Occupant Load	390

PLUMBING FIXTURE REQUIREMENTS:
Students $300 + 30 = 330$

3.7.4.3. (14) Students:
 $350 / 2 = 175$ at 1 wc per 30 males = 6
 $350 / 2 = 175$ at 1 wc per 26 females = 7

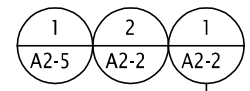

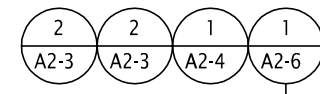
3.7.4.7. (1) Staff - School:
 $40 / 2 = 20$
for 10 to 24 persons of each sex
Required = 2 wc's for each sex

	Existing			Required			Proposed (new)		
	W.C.	Ur.	Lav.	W.C.	Ur.	Lav.	W.C.	Ur.	Lav.
Female Student	(11 ex. - 8 demo) = 3	0	(1 wash fountain demo) + 1 wash fountain remain	7	-	4	8	0	1 Bradley = 4
Male Student	(6 ex. - 4 demo) = 2	(8 ex. - 4 demo) = 4	(3 sinks demo) + 1 wash fountain remain	6		3	2	2	1 Bradley = 3
Staff	7	2	8	-	-	-	-	-	-
B.F Unisex	1	0	1	-	-	-	-	-	-
Univ. WR	-	-	-	-	-	-	1	-	1

SYMBOL LEGEND

LIST OF DRAWINGS

[illegible]



1
A2-0

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO
BE CHECKED AND VERIFIED ON THE JOB. ALL
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1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
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6. ALL DIMENSIONS GIVEN ARE IN METRIC.

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TITLE: RAIL R AND FIRST R PLANS	
T NO: 02.7	SCALE: 1:150
C.C D:	DRAWING NO: A2-0
20	

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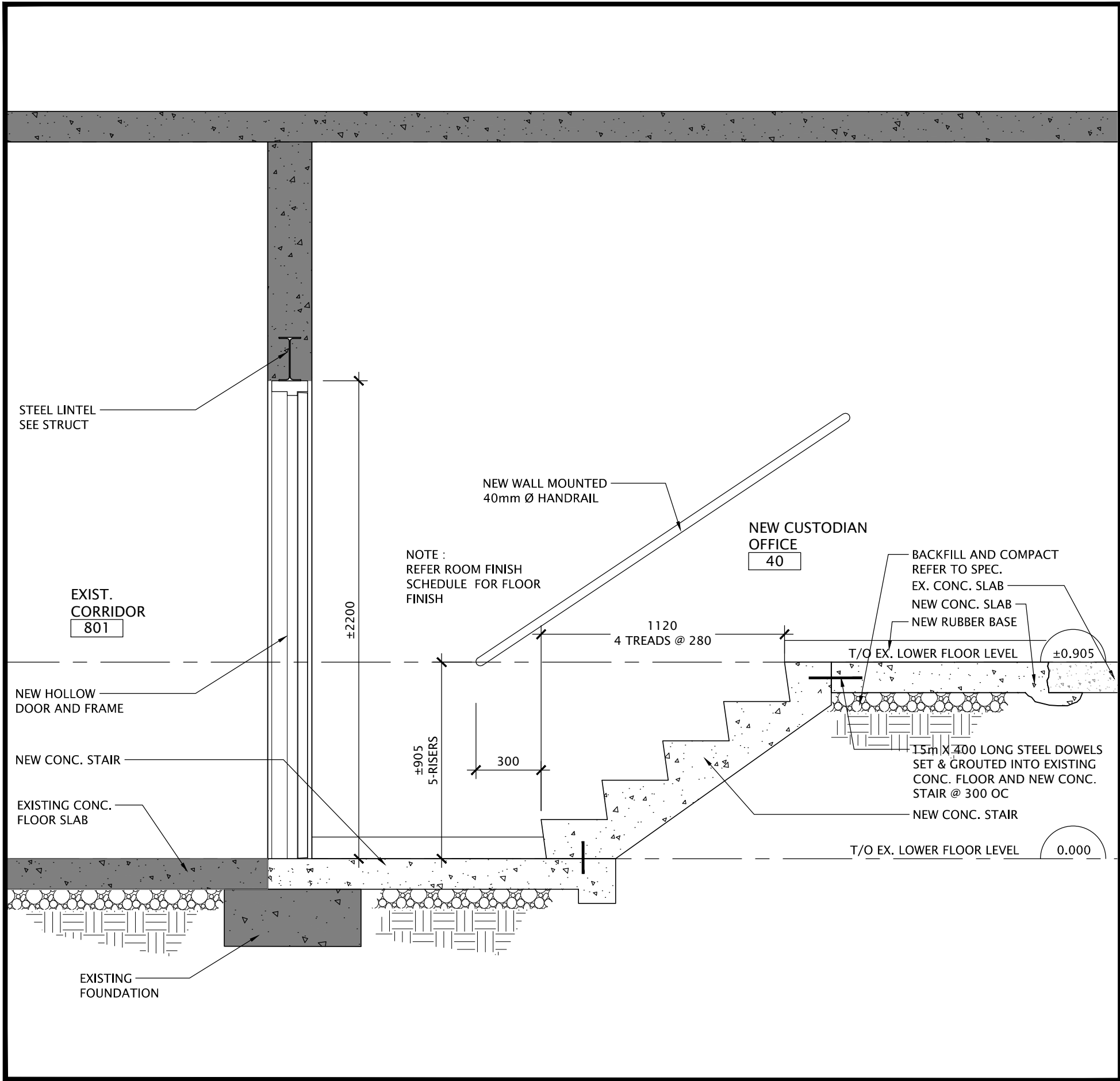


DRAWING TITLE:
PARTIAL MAIN FLOOR PLAN
GYMNASIUM DEMOLITION
AND NEW LAYOUT

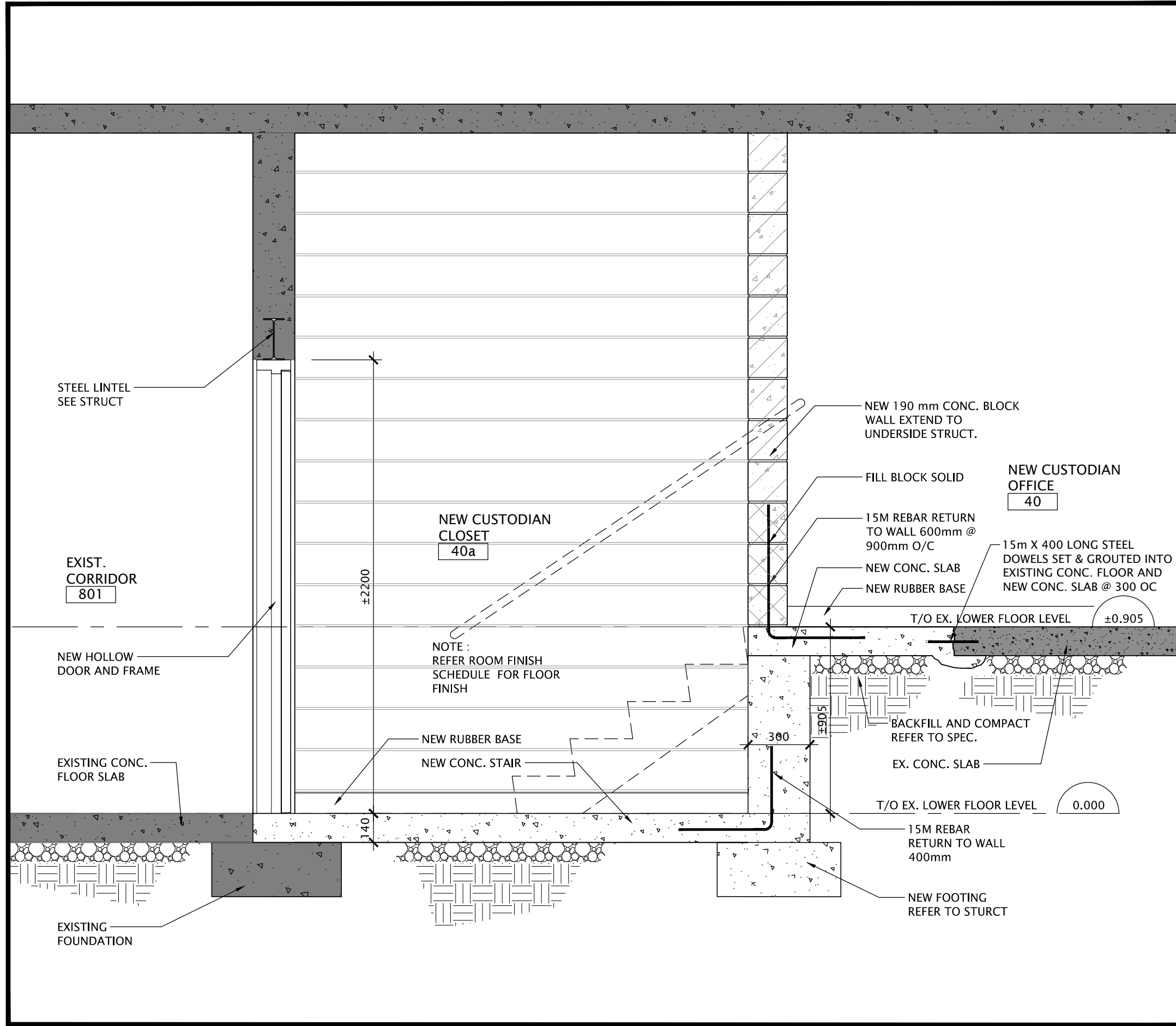
FILES: A20002.7 - A2-2 ENLARGEMENT DEMO

2 PLAN ENLARGEMENT - PROPOSED LAYOUT
2-2 SCALE: 1:75

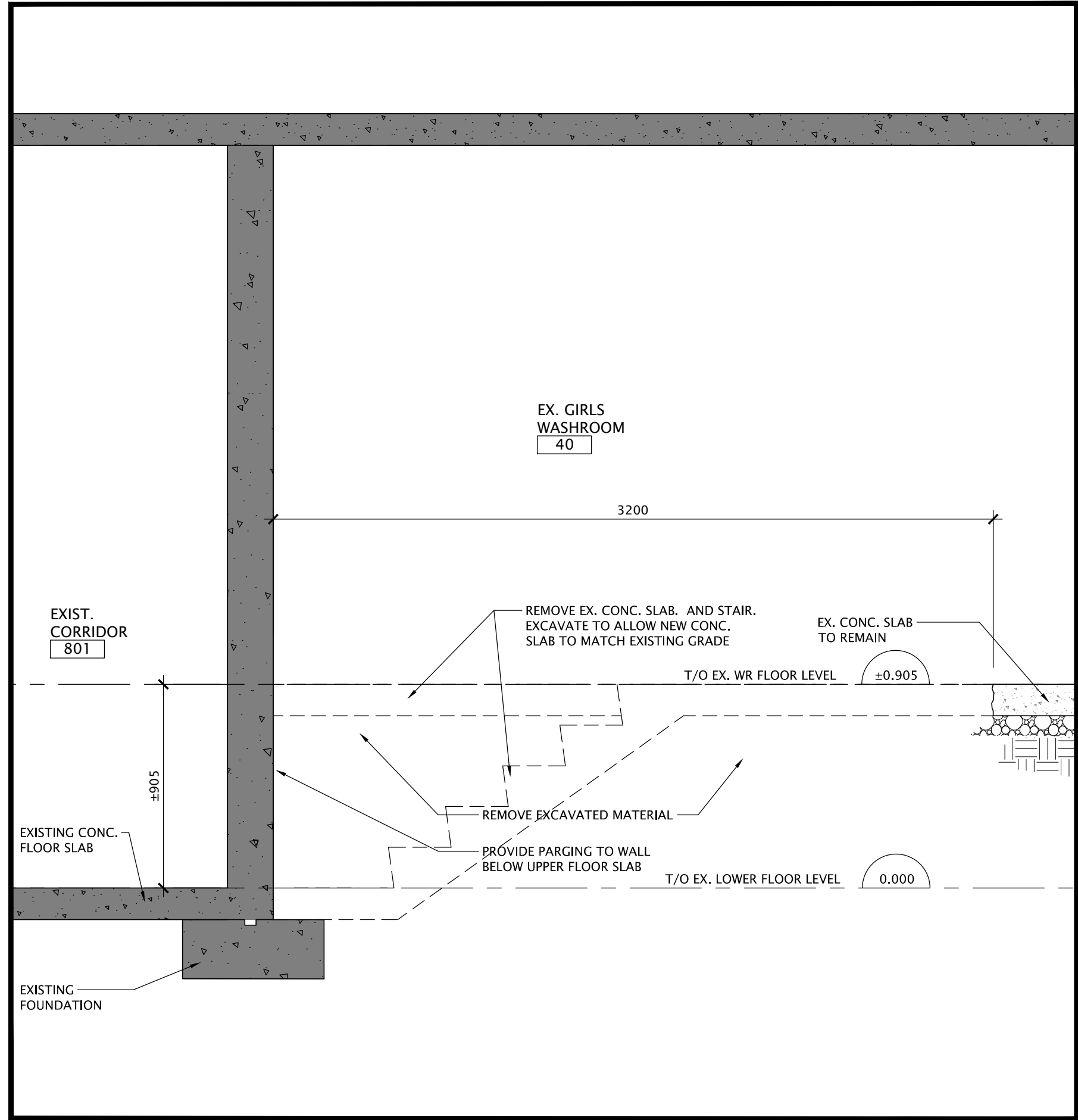
1	PLAN ENLARGEMENT - DEMOLITION
2-2	SCALE: 1:75



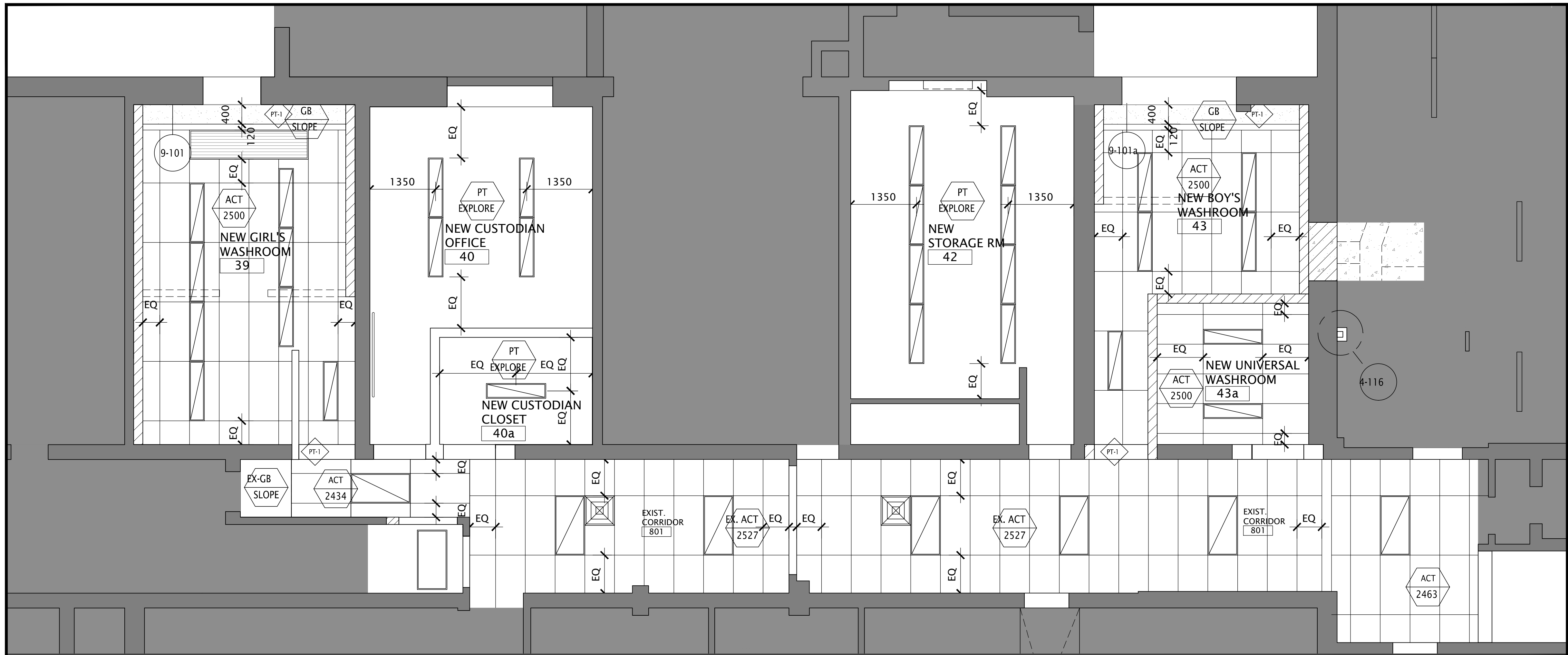
4 SECTION AT NEW CUSTODIAN OFFICE
SCALE: 1:50



3 SECTION AT NEW CUSTODIAN CLOSET
SCALE: 1:50



2 SECTION - DEMOLITION
SCALE: 1:50



1 PARTIAL REFLECTED CEILING PLAN
SCALE: 1:50

NO.	DATE	REVISION
1	21/04/23	ISSUED FOR TENDER AND PERMIT
0	27/04/14	ISSUED FOR CLIENT REVIEW

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- LEGEND:**
- CYP 3000 CEILING TYPE
 - CEILING HEIGHT
 - LED LIGHT 150 X 1220
 - SPRINKLER

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DRAWING TITLE:
**PARTIAL REFLECTED
LOWER FLOOR REFLECTED
CEILING PLAN & SECTIONS**

PROJECT NO: A20002.7	SCALE: 1:50
DRAWN: D.T./C.C.	DRAWING NO.: A2-4
CHECKED: B.F.	REV.: 1
DATE: DEC/20	

FILES: A20002.7 - A2-4 RCP & SECTIONS.DWG

DATE PLOTTED: April 23, 2021

[illegible]

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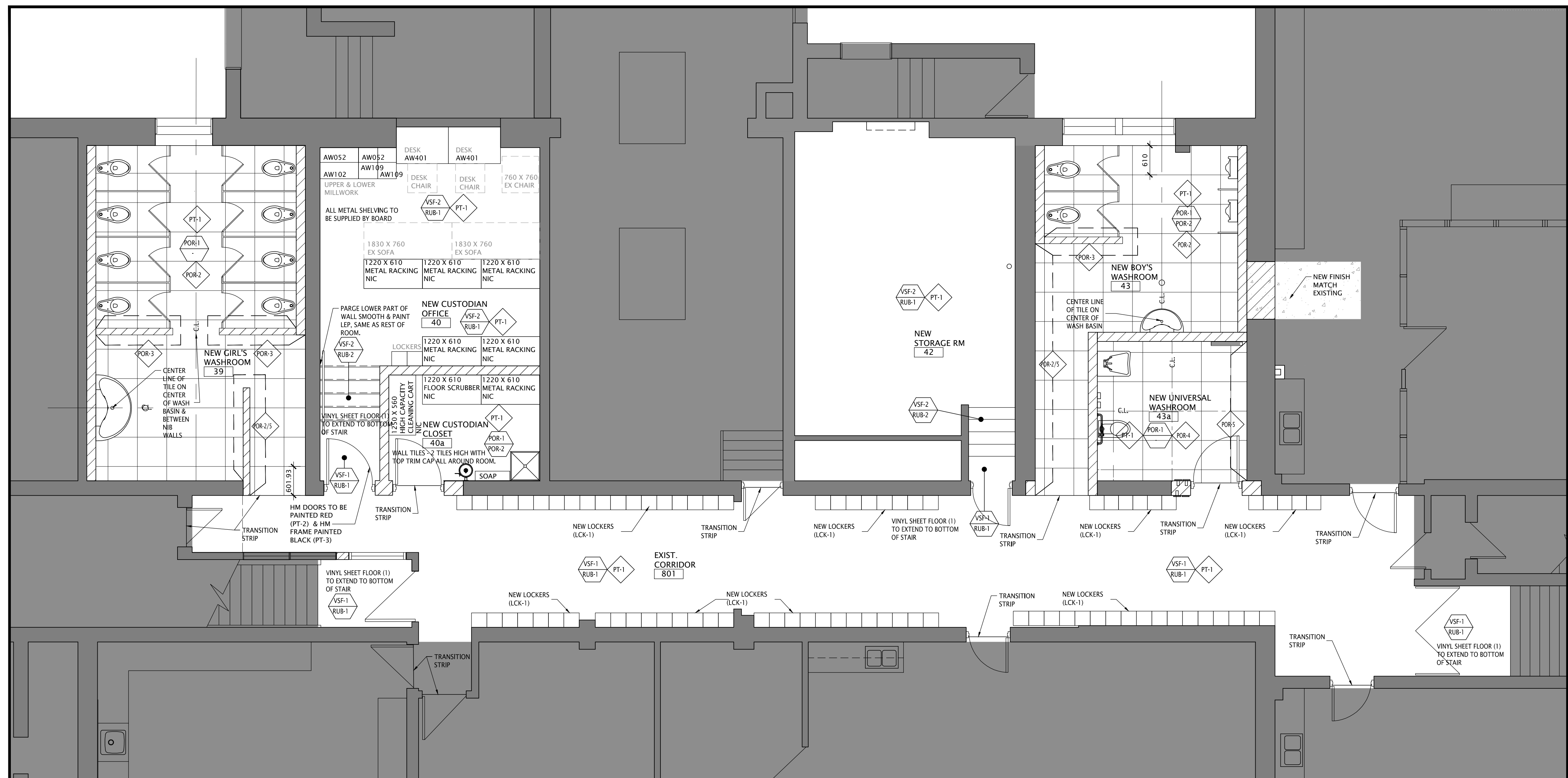
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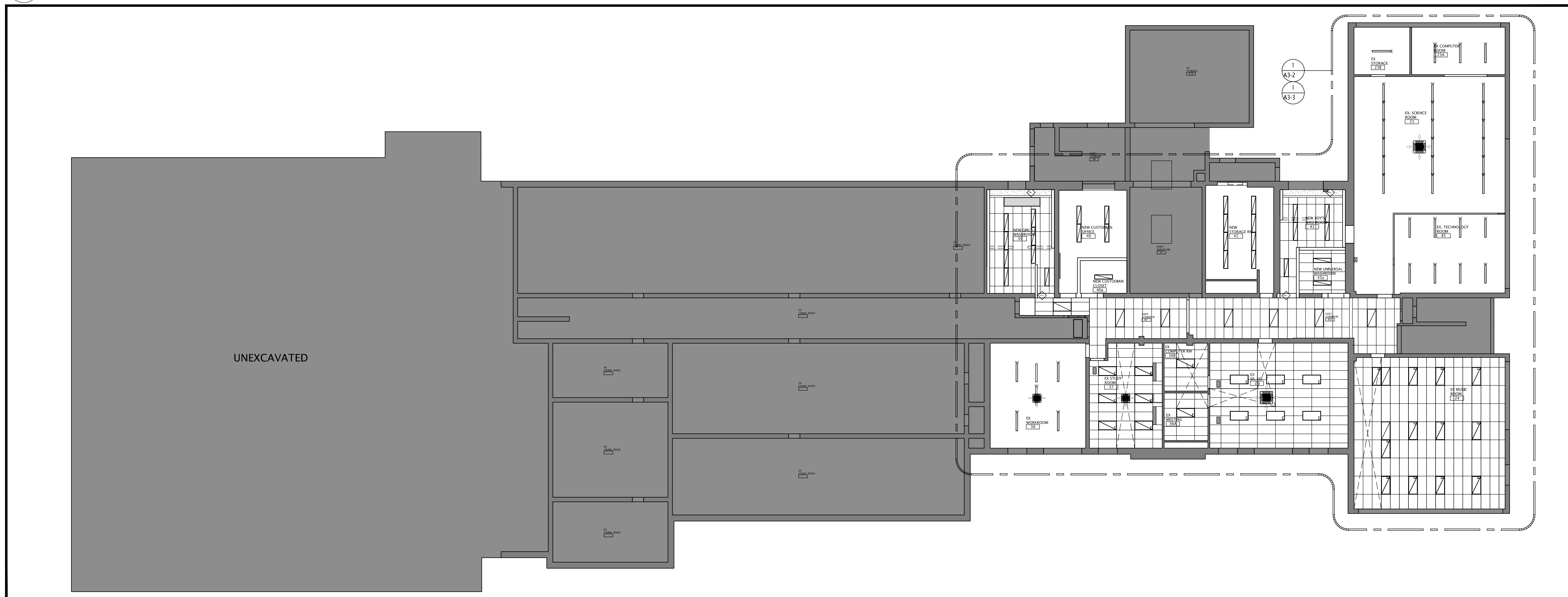
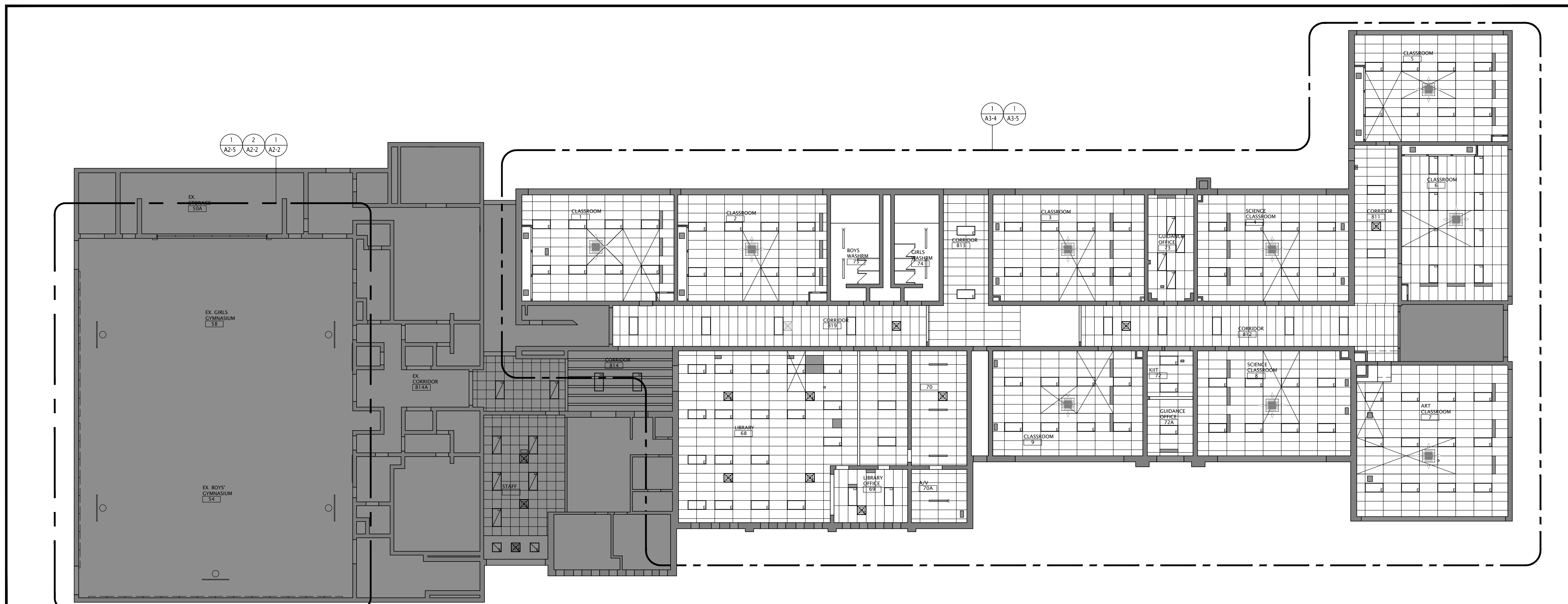
DRAWING TITLE:
PARTIAL LOWER FLOOR PLAN
FINISHES PLAN

PROJECT NO: A20002.7	SCALE: 1:50	
DRAWN: M.L.	DRAWING NO:	REV.
CHECKED: B.F.	A2-6	1
DATE: DEC/20		

FILES: A20002.7 - A2-6 LOWER FINISH.DWG



1 PARTIAL LOWER FLOOR PLAN - NEW FINISHES
A2-6 SCALE: 1:50

[illegible]

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DRAWING TITLE:
A/C OVERALL
LOWER AND
MAIN FLOOR PLANS

PROJECT NO: A20002.7	SCALE: 1:150	
DRAWN: C.C.	DRAWING NO:	REV.
CHECKED: B.F.	A3-0	1
DATE: DEC/20		

FILES: A20002.7 - A3-0 AC OVERALL PLAN.D

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-
2. REFER TO ELECTRICAL DRAWINGS FOR NEW LIGHT FIXTURES REQUIRED, COMPLETELY REMOVAL CEILING T-BAR AND TILES FOR MECHANICAL DUCTWORK AND PIPING INSTALLATION INCLUDING ALL CEILING MOUNTED DEVICES. RE-INSTALL ALL CEILING DEVICES ON NEW CEILING. REFER TO MECHANICAL
3. REPLACE ANY DAMAGED CEILING TILES AS REQUIRED
- Architectural floor plan of a school building showing proposed and existing rooms, corridors, and mechanical work areas. The plan includes labels for various rooms such as classrooms, offices, storage, and washrooms, along with specific instructions for ceiling and drywall removal and replacement.
- Rooms and areas labeled include:
- EX STORAGE 23A
 - EX STORAGE 23B
 - EX COMPUTER ROOM 23A
 - EX. SCIENCE ROOM 23
 - EXISTING DRYWALL CEILING TO REMAIN
 - EXIST. TECHNOLOGY ROOM 85
 - EXISTING DRYWALL CEILING TO REMAIN
 - NEW GIRL'S WASHROOM 39
 - NEW CUSTODIAN OFFICE 40
 - REMOVE EXISTING CEILING FIXTURES REFER TO ELECT.
 - EXIST. ROILER RM. 41
 - NEW STORAGE RM 42
 - REMOVE EXISTING CEILING, FIXTURES REFER TO ELECT.
 - NEW BOY'S WASHROOM 43
 - REMOVE EXISTING CEILING FIXTURES REFER TO ELECT
 - NEW UNIVERSAL WASHROOM 43a
 - NEW CUSTODIAN CLOSET 40a
 - EX CRAWL SPACE
 - REMOVE EXISTING CEILING, FIXTURES REFER TO ELECT
 - EXIST. CORRIDOR 801
 - REMOVE EXISTING CEILING COMPLETELY FOR MECHANICAL WORKS
 - EXIST. CORRIDOR 801
 - REMOVE EXISTING CEILING COMPLETELY FOR MECHANICAL WORKS
 - EX STUDY ROOM 37
 - REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS
 - EX COMPUTER RM 36B
 - REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS
 - EX SP. ED. 25
 - REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS
 - EX MEETING 36A
 - EXISTING DRYWALL CEILING TO REMAIN
 - EX WORKROOM 38
 - EX MUSIC ROOM 24
 - REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS

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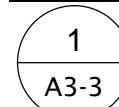
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DRAWING TITLE:
A/C PARTIAL LOWER FLOOR
REFLECTED CEILING PLAN
DEMOLITION

PROJECT NO: A20002.7		SCALE: 1:75	
DRAWN: C.C.		DRAWING NO: A3-2	REV. 1
CHECKED: B.F.			
DATE: DEC/20			

FILES: A20002.7 - A3-2 AC RCP - DEMO.DWG

DATE PLOTTED: April 23, 2021



SCALE: 1:75

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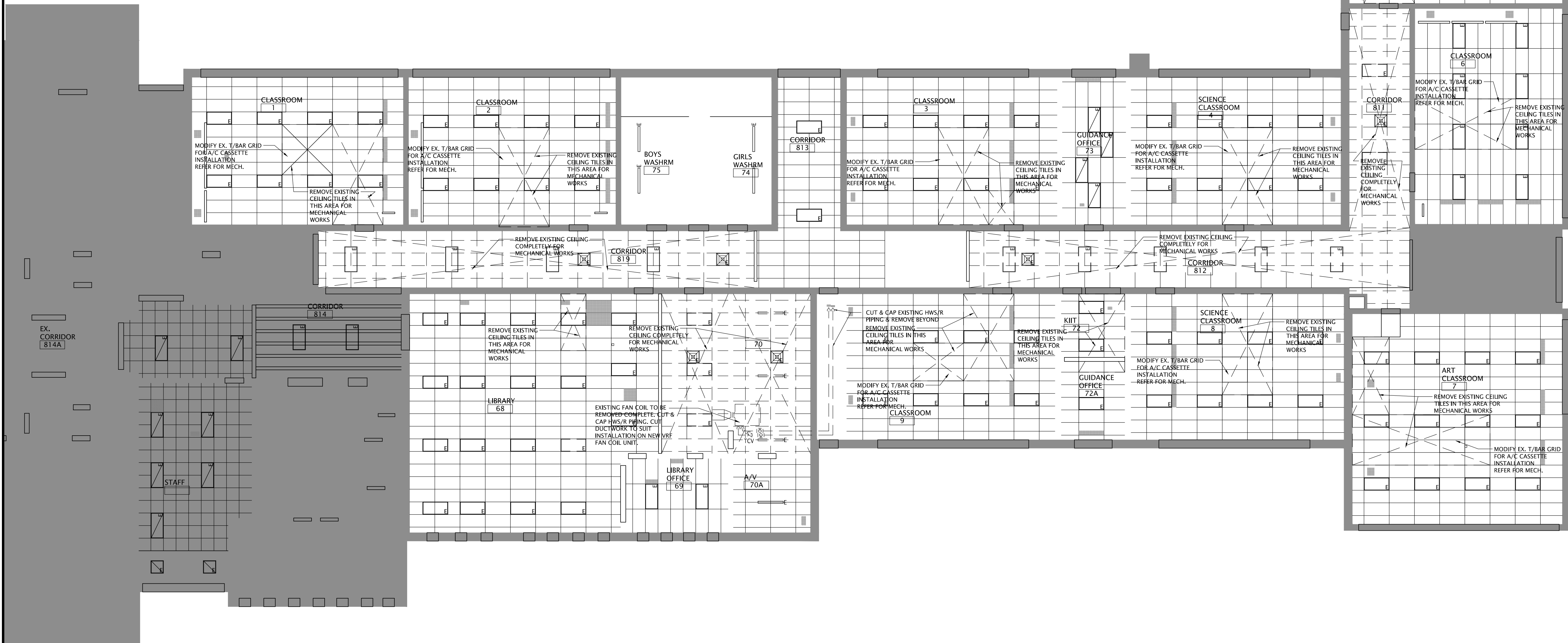
1042 Weber Street E.
Kitchener, ON
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DRAWING TITLE:
A/C PARTIAL LOWER FLOOR
REFLECTED CEILING PLAN
NEW

PROJECT NO: A20002.7	SCALE: 1:75	
DRAWN: C.C.	DRAWING NO:	REV.
CHECKED: B.F.	A3-3	1
DATE: DEC/20		

FILES: A20002.7 - A3-3 AC RCP - NEW.DWG

DATE PLOTTED: April 23, 2021



CEILING DEMOLITION NOTES

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1. REFER TO ELECTRICAL DRAWINGS FOR NEW LIGHT FIXTURES REQUIRED, REMOVE PARTIAL CEILING TILES ONLY FOR MECHANICAL PIPING INSTALLATION, REFER TO MECHANICAL.
2. REFER TO ELECTRICAL DRAWINGS FOR NEW LIGHT FIXTURES REQUIRED, COMPLETELY REMOVAL CEILING T-BAR AND TILES FOR MECHANICAL DUCTWORK AND PIPING INSTALLATION INCLUDING ALL CEILING MOUNTED DEVICES. RE-INSTALL ALL CEILING DEVICES ON NEW CEILING. REFER TO MECHANICAL
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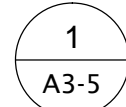


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DRAWING TITLE:
A/C PARTIAL MAIN FLOOR REFLECTED CEILING PLAN DEMOLITION

PROJECT NO:	SCALE:	1:100
DRAWN:	DRAWING NO:	REV.
C.C		
CHECKED:		
B.F.		
DATE:		
DEC/20		

FILES: A20002.7 - A3-4 AC RCP - DEMO.DWG



SCALE: 1:100

FILES: A20002.7 - A3-5 AC RCP - NEW.DWG

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-
- Architectural floor plan of the second floor, showing various rooms and corridors. The plan includes annotations for mechanical work and room identification.
- Classroom 16:** Annotations include "MODIFY EX. T/BAR GRID FOR A/C CASSETTE INSTALLATION REFER FOR MECH." and "REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS".
- Classroom 17:** Annotations include "MODIFY EX. T/BAR GRID FOR A/C CASSETTE INSTALLATION REFER FOR MECH." and "REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS".
- Corridor 821:** Annotations include "MODIFY EX. T/BAR GRID FOR A/C CASSETTE INSTALLATION REFER FOR MECH." and "REMOVE EXISTING CEILING COMPLETELY FOR MECHANICAL WORKS".
- Life Skills 18:** Annotations include "REMOVE EXISTING CEILING TILES IN THIS AREA FOR MECHANICAL WORKS" and "MODIFY EX. T/BAR GRID FOR A/C CASSETTE INSTALLATION REFER FOR MECH.".

GENERAL NOTES

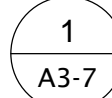
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DRAWING TITLE:
A/C PARTIAL SECOND FLOOR
REFLECTED CEILING PLAN
DEMOLITION

FILES: A20002.7 - A3-6 AC RCP - DEMO.DWG



SCALE: 1:100

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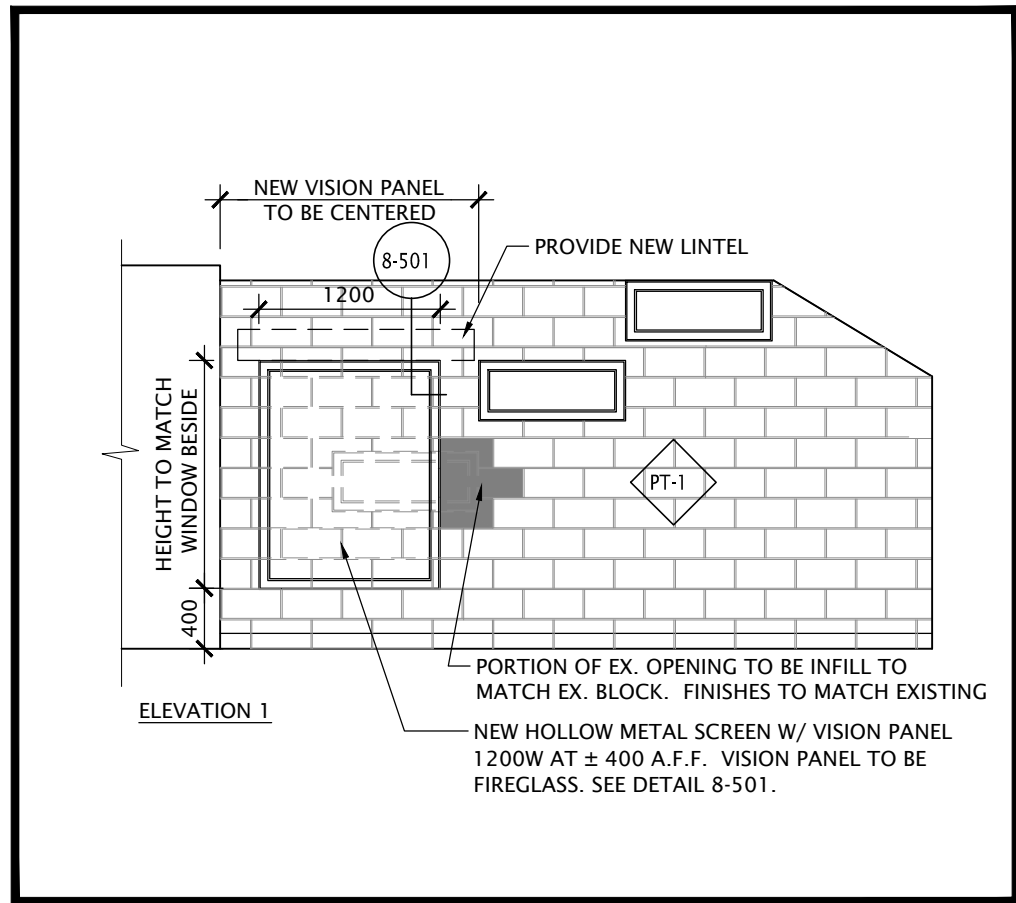
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DRAWING TITLE:
A/C PARTIAL SECOND FLOOR
REFLECTED CEILING PLAN
NEW

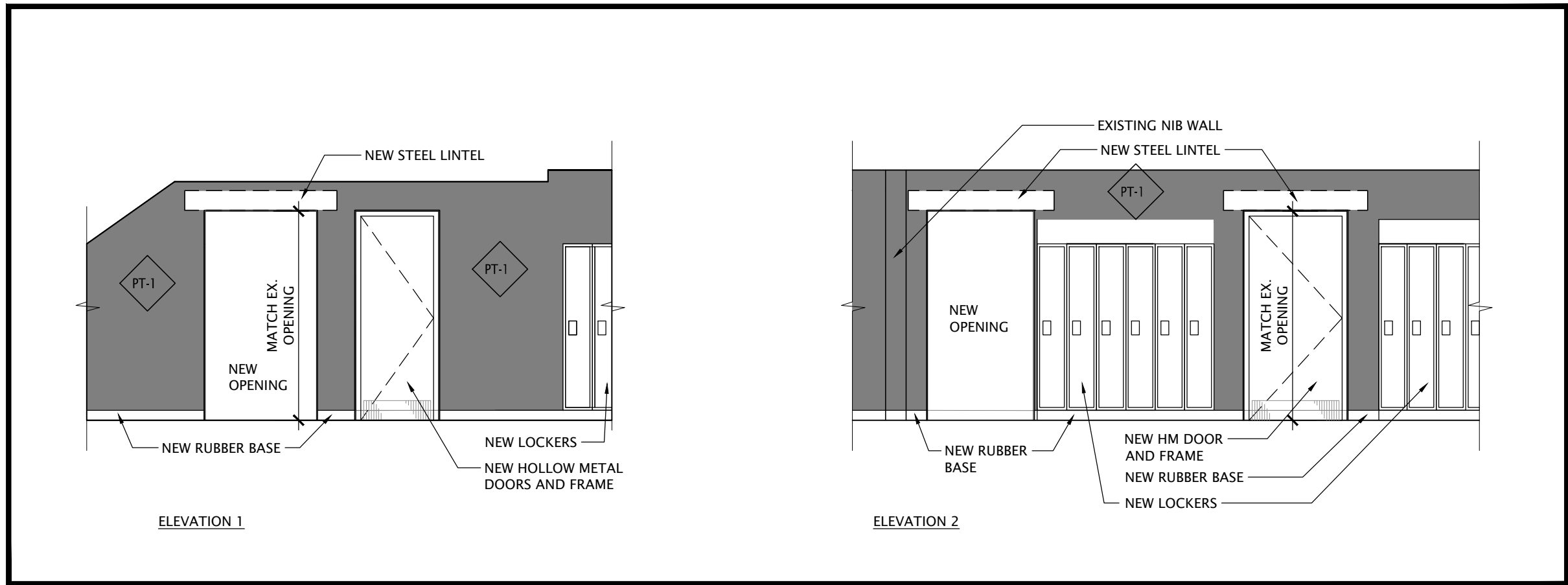
PROJECT NO: A20002.7	SCALE: 1:100	
DRAWN: C.C.	DRAWING NO:	REV.
CHECKED: B.F.	A3-7	1
DATE: DEC/20		

FILES: A20002.7 - A3-7 AC RCP - NEW.DWG

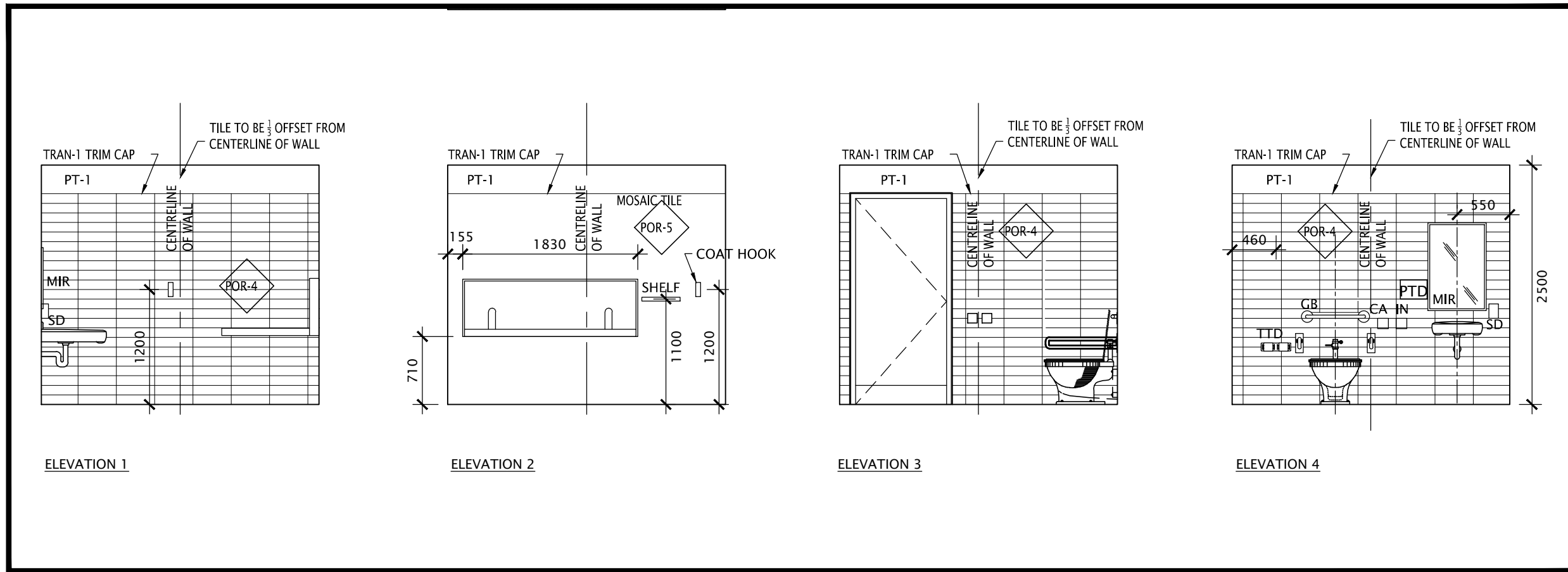
DATE PLOTTED: April 23, 2021



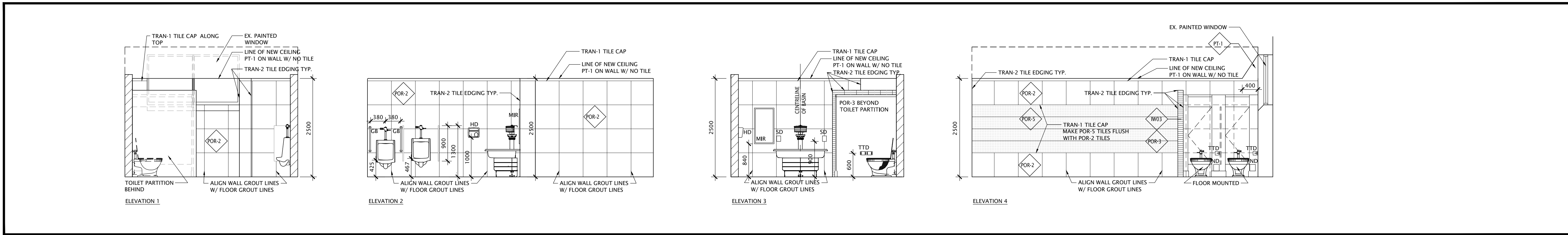
5 INTERIOR ELEVATION - EXISTING CORRIDOR 801
SCALE: 1:50



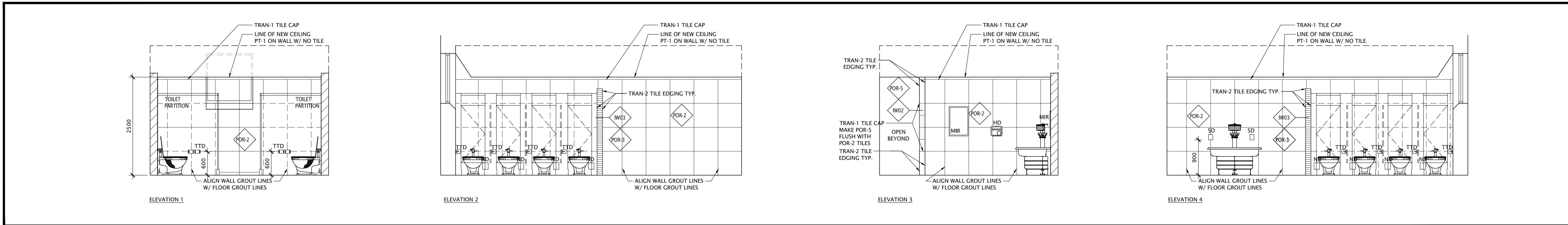
4 INTERIOR ELEVATION - EXISTING CORRIDOR 801
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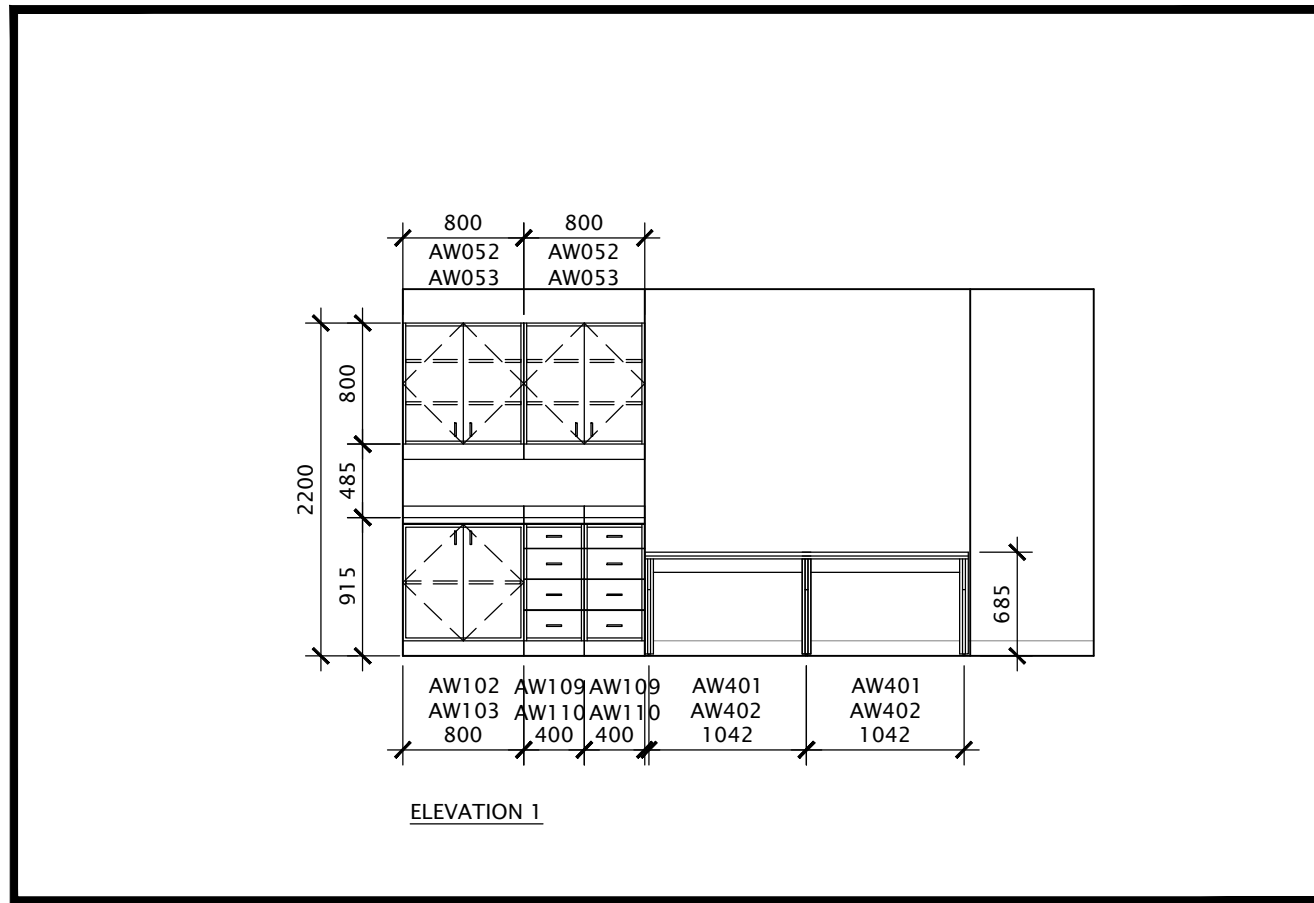
3 INTERIOR ELEVATION - NEW UNIVERSAL WASHROOM 43a
SCALE: 1:50



2 INTERIOR ELEVATION - NEW GIRL'S WASHROOM 39
SCALE: 1:50



1 INTERIOR ELEVATION - NEW BOY'S WASHROOM 43
SCALE: 1:50



6 INTERIOR ELEVATION - NEW CUSTODIAN OFFICE 40
SCALE: 1:50

- GENERAL NOTES
1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
 2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
 3. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
 4. ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 5. THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
 6. ALL DIMENSIONS GIVEN ARE IN METRIC.

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DRAWING TITLE:
INTERIOR ELEVATIONS

PROJECT NO: A20002.7	SCALE: 1:50
DRAWN: D.T./C.C.	DRAWING NO: REV.
CHECKED: B.F.	A4-0
DATE: DEC/20	1

FILES: A20002.7 - A4-0 INT. ELEVATION.DWG

DATE PLOTTED: April 23, 2021

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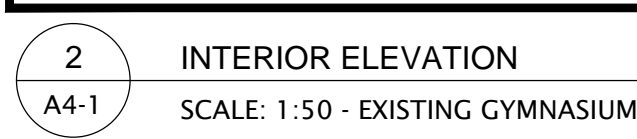
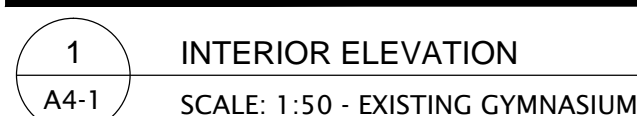
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DRAWING TITLE:
EXISTING GYMNASIUM
INTERIOR ELEVATIONS










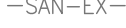









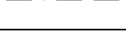









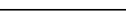

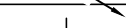














FILES: A20002.7 - A4-1 INT. ELEVATION - GYM



PLUMBING FIXTURE SCHEDULE

Item	Type	Connection Sizes					Fixture		Acceptable Manufacturer	Trim		Acceptable Manufacturer	Accessories	
		HW	CW	TW	Drain	Vent	Acceptable Manufacturer	Fixture Description		Trim Description	Acceptable Manufacturer		Accessory Description	
WC-1	WATER CLOSET FLUSH VALVE HANDS FREE (BATTERY)		1		3	1 1/2	AMERICAN STANDARD MADERA 2234-001 KOHLER WELLCOMME K-4350 MANSFIELD BALTIC 1311NS ZURN Z5655-BWL	VITREOUS CHINA, SIPHON JET, ELONGATED RIM, TOP SPUD FOR FLUSH VALVE, BOLT CAP, BOTTOM OUTLET, FLOOR-MOUNTED, 10" OR 12" ROUGH-IN, MIN 2" TRAP WAY, MAXIMUM 6 litres (1.6 gal) PER FLUSH.	DELTA 81T201BT ZURN SLOAN	EXPPOSED, POLISHED CHROME PLATED, SENSOR OPERATED DIAPHRAGM TYPE FLUSH VALVE WITH SEAT BUMPER, 25mm (1") SCREWDRIVER ANGLE STOP, MOTORIZED ACTUATOR, AUTOMATIC SENSOR WITH MANUAL PUSH BUTTON OVERRIDE, VACUUM BREAKER ADJUSTABLE TAIL PIECE, OPTIONAL 24 HR COURTESY FLUSH, FLUSH CONNECTION & COUPLING FOR 40mm (1 1/2") TOP SPUD WITH 11 1/2" TALL OUTLET TUBE, WALL AND SPUD ESCUTCHEONS, BATTERY OPERATED C/W 4 'AA' CELL BATTERIES, SENSOR BOX C/W COVER, VANDAL RESISTANT SCREWS, FLUSH CYCLE SET FOR 6.0 LITRE (1.6 GAL) PER FLUSH.	SEAT: BEMIS 1955C CENTOCO	SEAT: BLACK, ELONGATED, OPEN FRONT, LESS COVER, MOLDED SOLID PLASTIC, STAINLESS STEEL CHECK HINGES, STAINLESS STEEL OR SOLID BRASS INSERT POST.		
WC-2	BARRIER FREE WATER CLOSET FLUSH VALVE, 16" HIGH, HANDS FREE (BATTERY)		1		3	1 1/2	AMERICAN STANDARD MADERA 3043.001 KOHLER HIGHCREST K-4302 MANSFIELD ADRIATIC 1319 ZURN ECO VANTAGE Z5665-BWL	BARRIER FREE, 16" TALL TO RIM, VITREOUS CHINA, SIPHON JET, ELONGATED RIM, TOP SPUD FOR FLUSH VALVE, BOLT CAP, BOTTOM OUTLET, FLOOR-MOUNTED, 12" ROUGH-IN, MIN 2" TRAP WAY, MAXIMUM 6 litres (1.5 gal) PER FLUSH.	DELTA 81T221BT ZURN SLOAN	EXPPOSED, POLISHED CHROME PLATED, SENSOR OPERATED DIAPHRAGM TYPE FLUSH VALVE WITH SEAT BUMPER, 25mm (1") SCREWDRIVER ANGLE STOP, MOTORIZED ACTUATOR, AUTOMATIC SENSOR WITH MANUAL PUSH BUTTON OVERRIDE, VACUUM BREAKER ADJUSTABLE TAIL PIECE, OPTIONAL 24 hr COURTESY FLUSH, FLUSH CONNECTION & COUPLING FOR 40mm (1 1/2") TOP SPUD WITH 24" TALL OUTLET TUBE, WALL AND SPUD ESCUTCHEONS, BATTERY OPERATED C/W 4 'AA' CELL BATTERIES, SENSOR BOX C/W COVER, VANDAL RESISTANT SCREWS, FLUSH CYCLE SET FOR 6.0 litre (1.6 gal) PER FLUSH.	SEAT: BEMIS 1950 CENTOCO	SEAT: BLACK, ELONGATED, OPEN FRONT WITH COVER, MOLDED SOLID PLASTIC, STAINLESS STEEL CHECK HINGES, STAINLESS STEEL OR SOLID BRASS INSERT POST.		
U-1	URINAL WITH FLUSHING SYSTEM	3/4			2	1 1/2	AMERICAN STANDARD WASHBROOK 6515.005 KOHLER BARDON K-4904-ER ZURN Z5760	VITREOUS CHINA, WASHOUT TYPE, INTEGRAL FLUSHING RIM, EXTENDED SHIELDS, INTEGRAL TRAP, BACK OUTLET, WALL-MOUNTED, BACK SUPPLY SPUD, MIN 2" TRAP WAY, MAXIMUM 1.9 litres (0.5 gal) PER FLUSH. C/W FLOOR MOUNTED CARRIER PROVIDE 400 mm (16") LONG x 20ø (3/4"), STAINLESS STEEL FLEXIBLE SUPPLY CONNECTOR		REFER TO SPEC FOR AUTOMATIC URINAL FLUSHING SYSTEM. PROVIDE FLOOR MOUNTED WALL CARRIER.				
WF-1	B.F. WASH FOUNTAIN (4 USERS)	1/2	1/2		1 1/2	1 1/4	BRADLEY SENTRY SN2024-A-IR-STD-TMA-NSD-BS	BARRIER FREE SEMI-CIRCULAR STAINLESS STEEL BOWL. ALL EXPOSED COMPONENTS TO BE STAINLESS STEEL. SUITABLE FOR FOUR (4) USERS. STANDARD PEDESTAL HEIGHT. C/W BACKSPASH. TRIM: INFRARED CONTROLLED, AT EACH INDIVIDUAL USER, MOLDED SPRAYHEAD, STOP VALVES, HORIZONTAL SWING CHECK VALVES. THERMOSTATIC MIXING VALVE PRESET AT 40°C. NO SOAP DISPENSER. SUITABLE FOR 120 V/1/60 COMPLETE WITH CLASS II 120/24V PLUG IN TRANSFORMER. COLOUR BY ARCHITECT.						
WF-2	B.F. WASH FOUNTAIN (3 USERS)	1/2	1/2		1 1/2	1 1/4	BRADLEY SENTRY SN2023-A-IR-STD-TMA-NSD-BS	BARRIER FREE SEMI-CIRCULAR STAINLESS STEEL BOWL. ALL EXPOSED COMPONENTS TO BE STAINLESS STEEL. SUITABLE FOR THREE (3) USERS. STANDARD PEDESTAL HEIGHT. C/W BACKSPASH. TRIM: INFRARED CONTROLLED, AT EACH INDIVIDUAL USER, MOLDED SPRAYHEAD, STOP VALVES, HORIZONTAL SWING CHECK VALVES. THERMOSTATIC MIXING VALVE PRESET AT 40°C. NO SOAP DISPENSER. SUITABLE FOR 120 V/1/60 COMPLETE WITH CLASS II 120/24V PLUG IN TRANSFORMER. COLOUR BY ARCHITECT.						
L-1	BARRIER FREE WALL HUNG LAV FAUCET HANDS FREE (BATTERY)	1/2	1/2		1 1/4	1 1/4	AMERICAN STANDARD MURRO 0955-001EC KOHLER BRENHAM K-1997 ZURN Z5344	WALL-HUNG SINK, VITREOUS CHINA, WITH SPLASH LIP, SINGLE CENTER SUPPLY OPENING, OVERFLOW. SIZE: 559 mm x 540 mm (22 x 21 1/4"). C/W SHROUD/KNEE CONTACT GUARD	DELTA 591T1256 MOEN COMMERCIAL ZURN	BATTERY ELECTRONIC PROXIMITY SENSING FAUCET. CAST BRASS ONE PIECE BODY. ADJUSTABLE SENSING RANGE AND TIME OUT, CHROME FINISH. VANDAL RESISTANT AERATOR HAVING INTEGRAL FLOW CONTROL FOR 0.5gpm (1.9 l/min) @ 413 kPa (60 psf) MAX. UNDER COUNTER PLASTIC SURFACE MOUNTED HOUSING WITH FLUSH STAINLESS STEEL COVER FOR SOLENOID AND CONTROLLER. SENSOR ACTIVATES IN PRESENCE OF PERSON'S HANDS IN LAVATORY. USES FOUR 'AA' CELL BATTERIES.		WASTE FITTING: NPS 32 MM (1¼") OFFSET WASTE WITH OPEN GRID STRAINER. PROVIDE FLOOR MOUNTED WALL CARRIER PROVIDE SHROUD/KNEE CONTACT GUARD		
SH-1	BARRIER FREE SHOWER ROUGHIN	1/2	1/2				PIPING ROUGHIN ONLY							
FD-1	FLOOR DRAIN				NOTED	1 1/2	ZURN ZN415B MIFAB F1100-C CONTOUR C2000-R6 WATTS FD-100-C-A	GENERAL DUTY CAST IRON BODY, ADJUSTABLE HEAD, NICKEL BRONZE STRAINER, INTEGRAL SEEPAGE PAN, AND CLAMPING COLLAR. USE SQUARE STRAINER IN TILED AREAS AND ROUND STRAINER ELSEWHERE. C/W TRAP PRIMER						

MECHANICAL LEGEND

Item	Description	Item	Description
-----	ITEM TO BE REMOVED		STRAINER
	CUT EXISTING & CONNECT NEW PIPING		SCREWED OR WELDED PIPE CAP
	POTABLE COLD WATER		BALL VALVE
	POTABLE HOT WATER		PENDENT HEAD
	POTABLE HOT WATER RECIRC.		UPRIGHT PENDENT HEAD
	EXISTING SAN ABOVE FLOOR		SIDEWALL HEAD
	EXISTING SAN BELOW FLOOR		FIRE HOSE CABINET
	SANITARY ABOVE FLOOR		RECESSED CABINET MOUNTED FIRE EXTINGUISHER
	SANITARY BELOW FLOOR		WALL MOUNTED FIRE EXTINGUISHER
	EXISTING STM ABOVE FLOOR		FLOOR CLEANOUT
	EXISTING STM BELOW FLOOR		LINE CLEANOUT
	VENT		THERMOSTAT (WITH GUARD WHERE INDICATED)
	SPRINKLER		SUPPLY AIR DUCT
	HEATING WATER SUPPLY		RETURN/EXHAUST AIR DUCT
	HEATING WATER RETURN		ACOUSTIC DUCT LINING
	FLOOR DRAIN		BALANCING DAMPER
	TRAP PRIMER		FIRE/SMOKE DAMPER
	TEE CONNECTION		BACK DRAFT DAMPER
	PIPE DOWN		RECTANGULAR DUCTWORK
	PIPE UP		RIGID ROUND DUCT
	FLEXIBLE CONNECTION		DIFFUSER/GRILLE SIZE (imp), TYPE & CAPACITY (cfm)
	REDUCER/INCREASER		HYDRONIC HEATING SIZE, TYPE & CAPACITY
	CHECK VALVE		EXISTING DUCT (SIZE AS INDICATED)
	UNION		

GENERAL NOTES

- A. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PREPARED SPECIFICATION.
- B. SANITARY VENT PIPING IS NOT SHOWN. PROVIDE ALL NECESSARY VENT PIPING FROM ALL FIXTURES FOR A COMPLETE SYSTEM TO ALL LOCAL PLUMBING CODE & LOCAL AUTHORITY REQUIREMENTS, CONNECTED TO EXISTING VENTS OR NEW VENTS AS REQUIRED. CO-ORDINATE VENT LOCATION(S) WITH GENERAL CONTRACTOR. MAINTAIN MIN 14"-0" FROM ANY AIR INLET. INSTALL VENT PIPING HIGH IN JOIST SPACE.
- C. UPON COMPLETION OF THE PROJECT THE CONTRACTORS SHALL PROVIDE THE FOLLOWING CERTIFICATES BEFORE 15% FINALANCE LETTERS ARE ISSUED BY THE CONSULTANT:
- POTABLE WATER TEST (SEE SPEC 15-042/22 11 16 PART 3)
 - BACKFLOW TEST CERTIFICATE(S) FOR ALL TESTABLE DEVICES
 - COPY OF MANDATORY TSSA/CSA-B149 GAS PRESSURE TEST TAG
 - GAS LEAKAGE CERTIFICATE OF AUTHORIZATION FOR SPLIT AIR CONDITIONING SYSTEMS (EXCEEDING 5 TONS)
- ALL CERTIFICATES ARE TO BE SUBMITTED TOGETHER IN A SINGLE PACKAGE.

GRILLE SCHEDULE

Item	Type	Equalizing Grid	Volume Damper	Acceptable Manufacturer	Description
D1	SQUARE CEILING DIFFUSER	YES	NONE	EH PRICE SCDA	MULTICONE, FULLY ADJUSTABLE, 24x24, STEEL CEILING DIFFUSER W/ROUND NECK. SUITABLE FOR LAY-IN T-BAR CEILING, OR DRYWALL CEILING WHEN C/W FRAME. PROVIDE FIRE STOP FLAP & FIRE BLANKET.
R1	CEILING RETURN GRILLE (NON-DUCTED)	NO	NONE	EH PRICE 80-CH	1/2x1/2x1/2 ALUMINUM EGGRATE CORE, C/W CHANNEL BORDER FOR LAY-IN T-BAR CEILING.
E1	EXHAUST GRILLE (DUCTED)	NO	NONE	EH PRICE 80-FA	1/2x1/2x1/2 ALUMINUM EGGRATE CORE, C/W 1 1/4" FLAT BORDER & SCREWED FASTENING FOR SURFACE MOUNTING.

GENERAL DIFFUSER/GRILLE NOTES:

1. ACCEPTABLE MANUFACTURERS: EH PRICE, NAILOR, TITUS, KRUEGER, CARNES, METALAIRE, TUTTLE & BAILEY
2. GRILLE COLOURS ARE SELECTED BY ARCHITECT FROM STANDARD COLOUR CHART, UNLESS OTHERWISE NOTED
3. PAINT INTERIOR OF DUCTWORK BEHIND GRILLE MATT BLACK (WHERE VISIBLE THRU GRILLE).

HYDRONIC HEATING COMPONENT SCHEDULE

Item	Type	Acceptable Manufacturer	Description
H1	CONVECTOR	ENG-A C-3W	16ga STEEL CABINET WITH ALL MOUNTING HARDWARE. ELEMENT TO BE 4x4 ALUMINUM FINNS ON 1/2" COPPER TUBE WITH 50 FINNS/FT. PROVIDE STAMPED GRILLES ON FRONT INLET & OUTLET. SURFACE MOUNTED ON WALL WITH TOP OF UNIT AT 42" AFF. MANUAL CONTROL W/ DAMPER & OPERATOR
H2	RADIANT CEILING PANEL	ENG-A AIRTEX HEF-2	EXTRUDED ALUMINUM PANEL WITH EXPOSED TEXTURED FACE AND CONTINUOUS ALUMINUM SADDLES ON BACK TO HOLD 1/2" COPPER TUBING BONDED TO SADDLE. PANEL FINISH COMPLETED IN FACTORY (NO FIELD APPLIED PAINT). PANEL SUITABLE FOR T-BAR INSTALLATION.

GENERAL HEATING COMPONENT NOTES:
 1. ACCEPTABLE MANUFACTURERS: ENGINEERED AIR, SIGMA, RITTLING, SLANT-FIN, ROSEMEX, DUNHAM-BUSH
 2. CABINET FINISHES ARE TO BE FACTORY FINISH PAINTED SELECTED FROM STANDARD MANUFACTURER'S COLOURS UNLESS OTHERWISE NOTED.

SUMP PUMP SCHEDULE

Item	Type	Capacity USgpm	Head ft	Size hp	Speed rpm	Electrical Voltage	Manufacturer & Model	Remarks
SP-2	SANITARY SUMP PUMP - DUPLEX	20	35	2Ø2	3450	208/3/60	MYERS WGL20	DUPLEX PUMPS TO BE COMPLETE WITH CONTROL PANEL, FLOATS, HIGH LEVEL ALARM WITH AUDIBLE SIGNAL AND TEST BUTTON. PROVIDE 36" DIAMETER FIBERGLASS SUMP WITH SEALED HEAVY DUTY LID.

[illegible]

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow the client's construction plan. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the revised conditions.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale this drawing.

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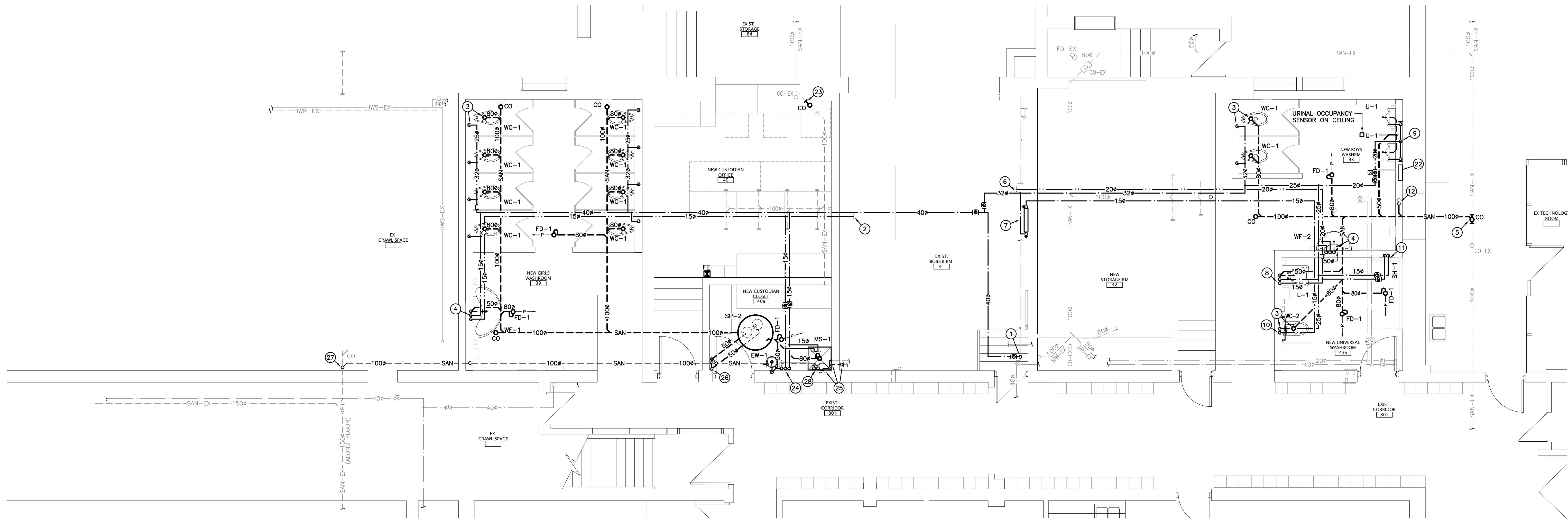
**SUNNYSIDE
PUBLIC SCHOOL
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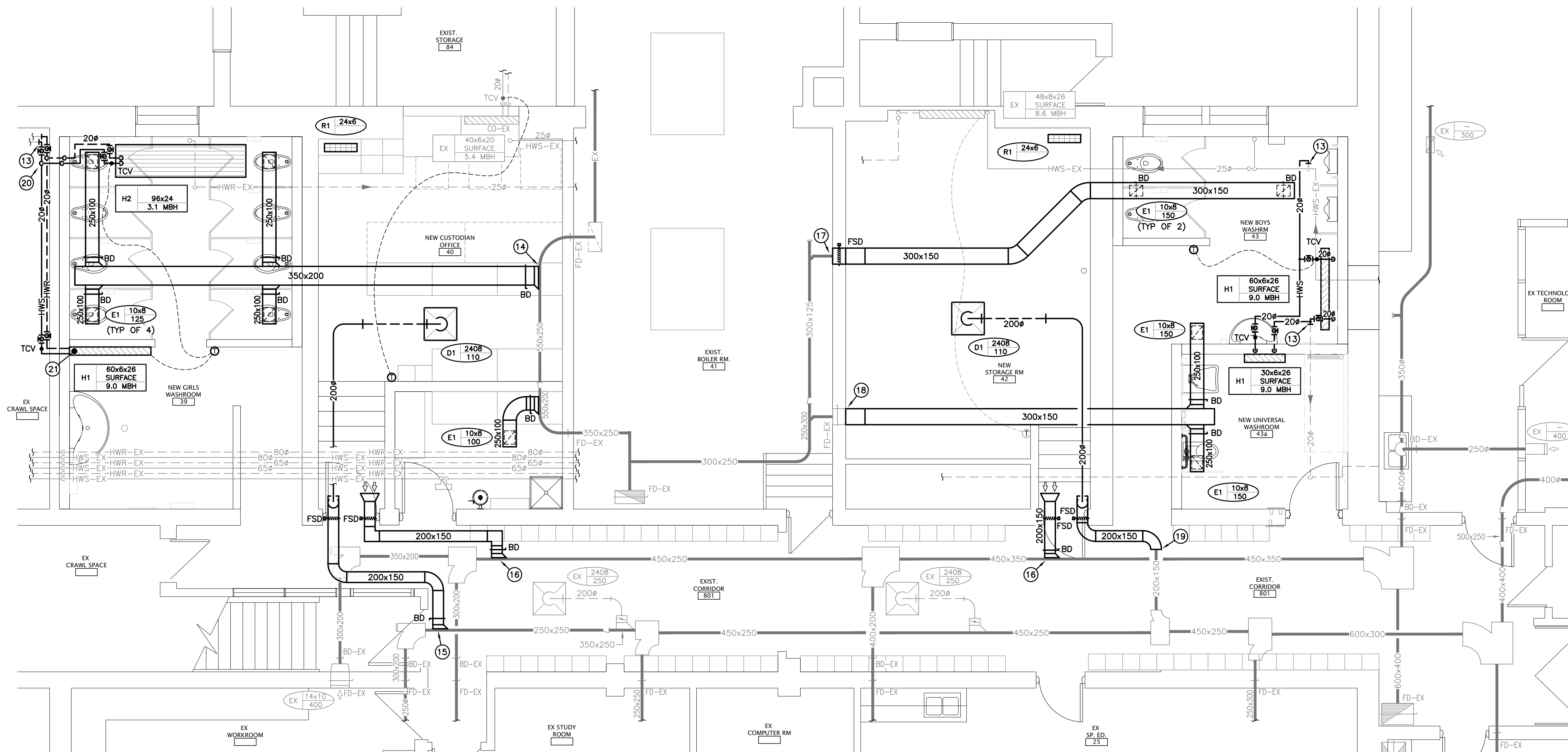
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MECHANICAL LEGEND & SCHEDULES

PROJECT NO: A20002.7	SCALE: AS NOTED	
DRAWN: AH	DRAWING NO: M101	REV.
CHECKED: AH		
DATE: FEB 2021		



LOWER LEVEL PART PLAN - PLUMBING & DRAINAGE
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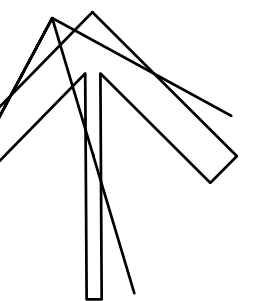


LOWER LEVEL PART PLAN - HEATING & VENTILATION
SCALE: 1:50

GENERAL RENOVATION NOTES

- CONNECT NEW 40# CW TO EXISTING 40# CW MAIN AND EXTEND TO SERVE NEW FIXTURES.
- CONNECT NEW 15# HW TO EXISTING SUITABLE HW SOURCE IN BOILER ROOM C/W ISOLATION VALVE AND EXTEND TO SERVE NEW FIXTURE.
- 80# SAN IN FLOOR AND 15# CW DN IN WALL SERVING WATER CLOSET (TYP).
- 15# H&CW & 50# SAN SERVING WASH FOUNTAIN.
- CONNECT NEW 100# SAN TO EXISTING SAN MAIN BELOW FLOOR C/W NEW CLEANOUT.
- CONNECT NEW 15# HW AND 25# CW TO EXISTING SUITABLE H&CW SOURCES IN BOILER ROOM C/W ISOLATION VALVES AND EXTEND TO SERVE NEW FIXTURES.
- NEW 15# CW ROUTE TO RP BACKFLOW DEVICE. ROUTE CW BACK TO W/R'S FOR FUTURE BIDET. MOUNT RP BFD ON WALL WITHIN 1200MM AFF. PIPE DRAIN TO MS. LOCATE RP ON SUITABLE WALL SURFACE IN ROOM.
- 15# H&CW & 50# SAN SERVING LAV.
- 32# CW HEADER IN CHASE SERVING URINALS. 20# CW FROM HEADER TO EACH URINAL C/W URINAL FLUSHING MATRIX.
- 15# CW DN TO CW ROUGHIN FOR FUTURE BIDET SEAT. PROVIDE STOP.
- 15# H&CW DN SERVING SHOWER.
- CONNECT NEW SAN TO EXISTING SAN DN FROM FLOOR ABOVE AND EXTEND DN BELOW FLOOR IN CHASE TO NEW SAN BELOW FLOOR. SIZE OF NEW SAN TO MATCH EXISTING.
- CONNECT NEW 20# HWS OR HWR TO EXISTING CUT CONNECTION AND EXTEND TO NEW HEATER.
- CONNECT NEW 350x200 EXH DUCT TO EXISTING EXH DUCT AND EXTEND AS INDICATED.
- CONNECT NEW 200x150 SA DUCT C/W BALANCING DAMPER TO EXISTING SA MAIN AND EXTEND AS INDICATED.
- CONNECT NEW 200x150 RA DUCT C/W BALANCING DAMPER TO EXISTING RA MAIN AND EXTEND AS INDICATED.
- CONNECT NEW 300x150 EXH DUCT TO EXISTING EXH DUCT CONNECTION C/W FIRE DAMPER THRU BOILER ROOM WALL AND TRANSITION AS REQUIRED AND EXTEND AS INDICATED.
- CONNECT NEW 300x150 EXH DUCT TO EXISTING EXH DUCT CONNECTION C/W TRANSITION AS REQUIRED AND EXTEND AS INDICATED.
- CONNECT NEW 200x150 SA DUCT TO EXISTING CUT CONNECTION AND EXTEND AS INDICATED.
- PROVIDE ISOLATION VALVES AND BALANCING VALVE ON HWS/R RISERS SERVING RADIANT PANEL.
- PROVIDE ISOLATION VALVES AND BALANCING VALVE SERVING CONNECTOR WITHIN CABINET.
- URINAL CONTROL PANEL MOUNTED ON WALL ABOVE CEILING.
- PROVIDE CLEANOUT ON END OF EXISTING SAN BELOW FLOOR.
- 15# H&CW DN TO MIXING VALVE ON WALL. 15# TW UP TO EYEWASH.
- CONNECT NEW SAN TO EXISTING CUT CONNECTIONS AND ROUTE AS INDICATED. SAN TO BE ROUTED AS HIGH AS POSSIBLE THRU ROOMS. SIZE TO MATCH EXISTING.
- 285# PD FROM SANITARY SUMP UP IN CORNER OF ROOM AND DISCHARGED INTO TOP OF ABOVE GRADE SAN MAIN.
- CONNECT NEW 100# SAN TO EXISTING SAN ABOVE GRADE.
- 15# H&CW DN ALONG WALL TO SERVE MOP SINK.

PROJECT NORTH



DEI
Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC
55 Northland Road, Waterloo, ON N2V 1Y8
Phone: 519-745-5555 Fax: 519-745-1515
Website: deiasociates.ca
Project Number: 20053



SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:
**LOWER LEVEL PART
PLANS RENOVATION**

PROJECT NO: A20002.7	SCALE: AS NOTED
DRAWN: AH	DRAWING NO.: REV. M301
CHECKED: AH	
DATE: FEB 2021	

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as shown on actual building construction will prevail. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets, fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not reuse this drawing. © 2021 DEI & Associates Inc.

NO.	DATE	REVISION
2	21.04.21	ISSUED FOR PERMIT AND TENDER
1	21.04.08	ISSUED FOR CLIENT REVIEW



SCALE: 1:100

A. DWGS ARE DIAGRAMATIC. EXACT LOCATION & ROUTE OF PIPING TO BE COORDINATED ON SITE BY CONTRACTOR WITH EXISTING SERVICES IN CEILING SPACE (TYPICAL ALL FLOORS).

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

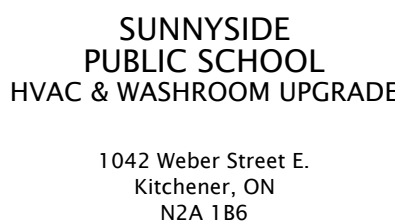
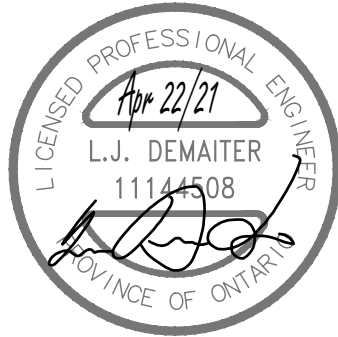
The drawings show general arrangement of services. Follow the drawings and the construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

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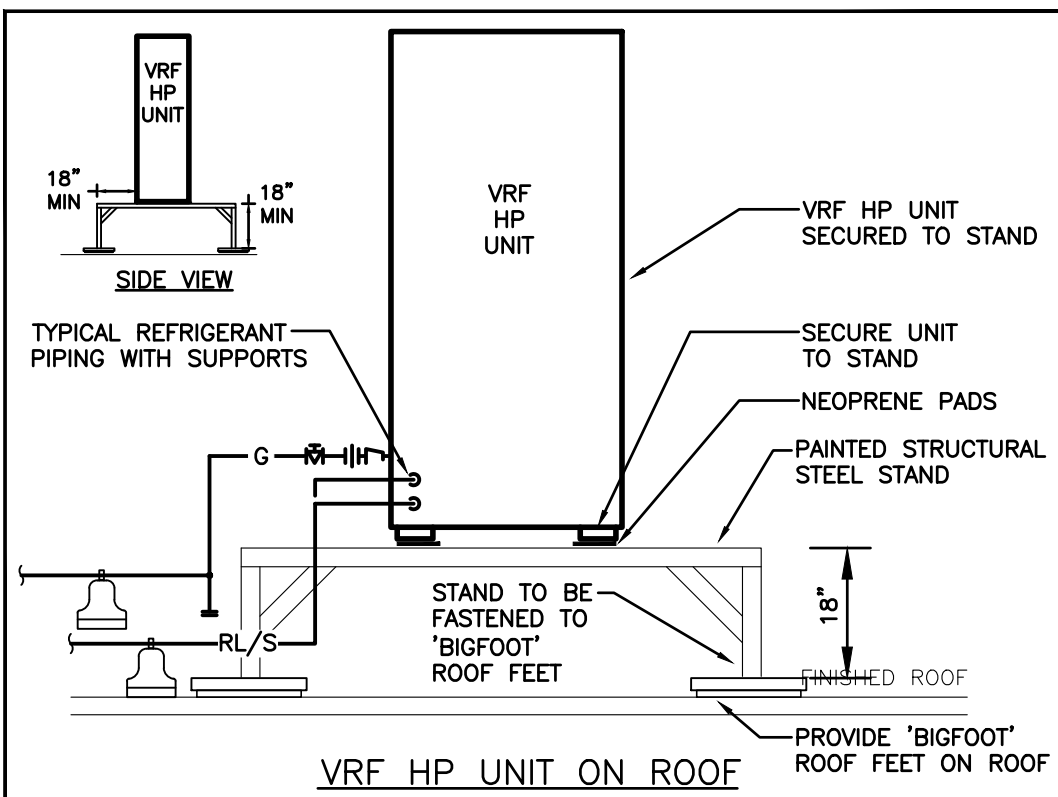
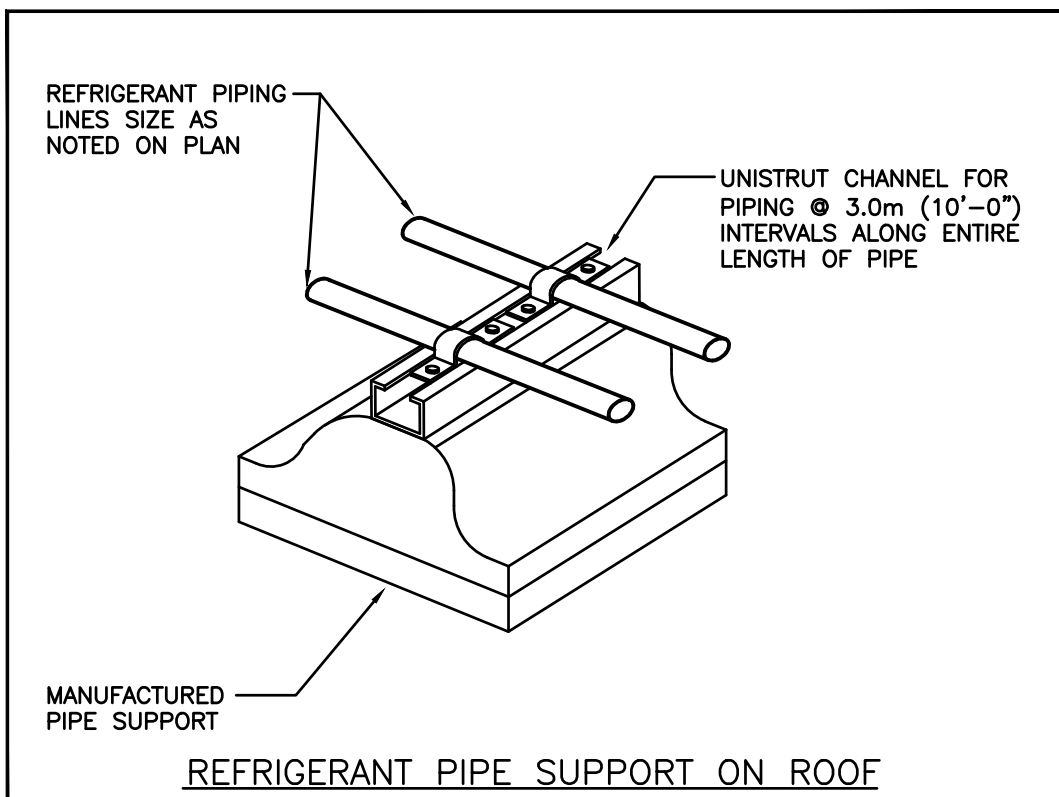
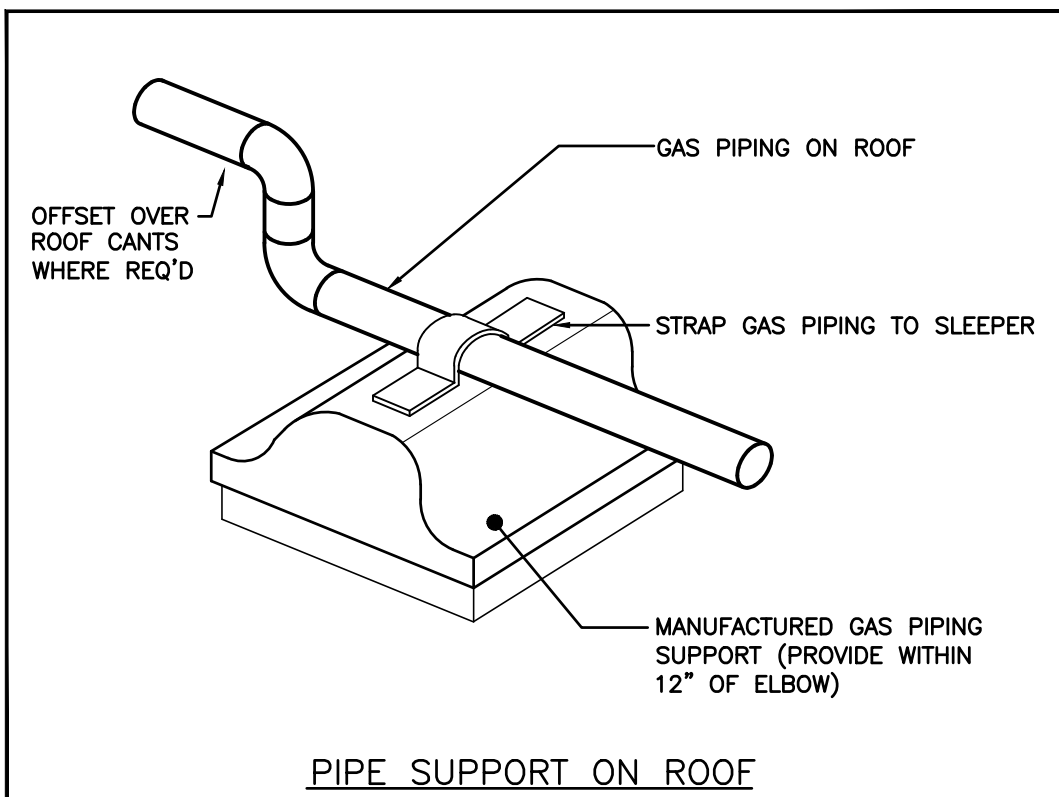
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BASEMENT PLAN

PROJECT NO: A20002.7		SCALE: AS NOTED	
DRAWN: AH		DRAWING NO: M401	REV.
CHECKED: AH			
DATE: FEB 2021			



The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

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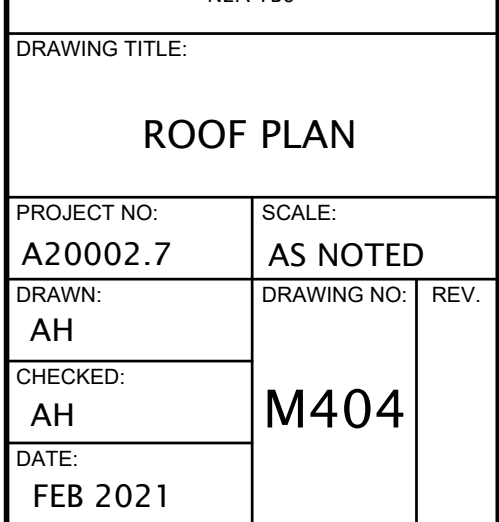
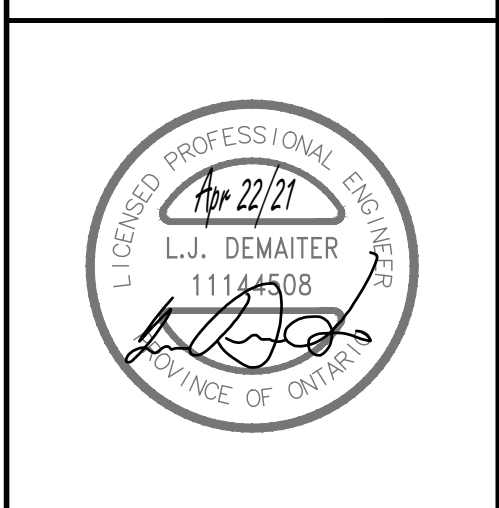
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A hand-drawn diagram showing a vertical line with an arrow pointing upwards, labeled "PROJECT NORTH".



Item	Model Number	Type	Quantity	Total Capacity (BTU/h)		Fuel Consumption (BTU/h)		Fan		Outdoor Temperature (°F)			Efficiency		Refrigerant	Piping Connections (inch)			Power			Sound Power (dB)		
				Total Cooling	Total Heating	Cooling	Heating	Airflow (CFM)	Quantity	Cooling DB	Cooling WB	Heating DB	Cooling IEER	Heating COP (HSPF)		Liquid	Suction	GAS	Volts	Phase	Hz		Operating Cooling/Heating (A)	Power Consumption Cooling/Heating (kW)
GHP-1	NNCP144J	HEAT PUMP (VRF)	1	143309	156000	119000	117000	12713	2	87.1	73.9	14.0	28.6	3.84	R410A	1/2	1 1/8	3/4	208V	1Ph	60Hz	3.98/3.53	0.89/0.79	57/54
GHP-2	NNCP168J	HEAT PUMP (VRF)	1	167194	189000	168000	147000	13420	2	87.1	73.9	14.0	28.6	3.84	R410A	5/8	1 1/8	3/4	208V	1Ph	60Hz	4.53/4.21	0.86/0.95	58/55
GHP-3	NNCP168J	HEAT PUMP (VRF)	1	167194	189000	168000	147000	13420	2	87.1	73.9	14.0	28.6	3.84	R410A	5/8	1 1/8	3/4	208V	1Ph	60Hz	4.53/4.21	0.86/0.95	58/55
GHP-4	NNCP168J	HEAT PUMP (VRF)	1	167194	189000	168000	147000	13420	2	87.1	73.9	14.0	28.6	3.84	R410A	5/8	1 1/8	3/4	208V	1Ph	60Hz	4.53/4.21	0.86/0.95	58/55
GHP-5	NNCP120J	HEAT PUMP (VRF)	1	119424	134000	93000	96000	12713	2	87.1	73.9	14.0	28.6	3.84	R410A	1/2	1	3/4	208V	1Ph	60Hz	4.44/4.13	0.89/0.79	57/54
GHP-6	NNCP120J	HEAT PUMP (VRF)	1	119424	134000	93000	96000	12713	2	87.1	73.9	14.0	28.6	3.84	R410A	1/2	1	3/4	208V	1Ph	60Hz	4.44/4.13	0.89/0.79	57/54

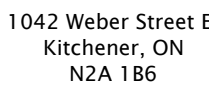
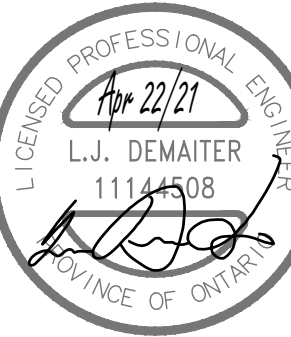
VRF AC UNIT SCHEDULE																	
Item	Model Number	Type	Quantity	Nominal Capacity (BTU/h)		Room Design Temp.(Return Air Temp.)(°F)		Air flow rate (CFM)	Piping Connections (inch)		Power				Remarks		
				Cooling	Heating	Cooling DB	Cooling WB		Heating DB	Liquid	Gas	Volts	Phase	Hz		MCA	
RF-1.1	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-1.2	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-1.3	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-1.4	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-1.5	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-2.1	FXMQ72M	DUCTED CEILING	1	72000	81000	75.0	67.1	72.0	1784/2047	3/8	3/4	208/230V	1Ph	60Hz	9.5	C/W ACCESSORY PUMP DACA-CP1-1 & RA FILTER KIT	
RF-2.2	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-2.3	FXAQ09P	WALL MOUNTED	1	9500	10500	75.0	67.1	72.0	175/280	1/4	1/2	208/230V	1Ph	60Hz	0.4	C/W ACCESSORY PUMP DACA-CP1-1	
RF-2.4	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	742/1218	3/8	5/8	208/230V	1Ph	60Hz	1.8		
RF-2.5	FXFQ48T	CEILING CASSETTE	1	48000	54000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-3.1	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-3.2	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-3.3	FXAQ07P	WALL MOUNTED	1	7500	8500	75.0	67.1	72.0	671/1112	1/4	1/2	208/230V	1Ph	60Hz	1.3	C/W ACCESSORY PUMP DACA-CP1-1	
RF-3.4	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-3.5	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	160/260	3/8	5/8	208/230V	1Ph	60Hz	0.4		
RF-3.6	FXFQ30T	CEILING CASSETTE	1	30000	34000	75.0	67.1	72.0	671/1112	3/8	5/8	208/230V	1Ph	60Hz	1.3		
RF-3.7	FXAQ09P	WALL MOUNTED	1	9500	10500	75.0	67.1	72.0	175/280	1/4	1/2	208/230V	1Ph	60Hz	0.4	C/W ACCESSORY PUMP DACA-CP1-1	
RF-4.1	FXAQ12P	WALL MOUNTED	1	12000	13500	75.0	67.1	72.0	180/290	1/4	1/2	208/230V	1Ph	60Hz	0.4	C/W ACCESSORY PUMP DACA-CP1-1	
RF-4.2	FXAQ12P	WALL MOUNTED	1	12000	13500	75.0	67.1	72.0	180/290	1/4	1/2	208/230V	1Ph	60Hz	0.4	C/W ACCESSORY PUMP DACA-CP1-1	
RF-4.3	FXAQ18P	WALL MOUNTED	1	18000	20000	75.0	67.1	72.0	400/500	1/4	1/2	208/230V					



Material	Quantity	Description
NNCP120J	2	Heat pump
NNCP144J	1	Heat pump
NNCP168J	3	Heat pump
FXAQ07P	6	Wall Mounted Type
FXAQ08P	3	Wall Mounted Type
FXAQ12P	2	Wall Mounted Type
FXAQ18P	2	Wall Mounted Type
FXAQ24P	1	Wall Mounted Type
FXFO15T	1	Round flow cassette
FXFO30T	18	Round flow cassette
FXFQ8T	2	Round flow cassette
FXMQ72M	1	Ceiling Concealed DC Duct Unit
FXUQ18P	1	Ceiling-Suspended Type
FXUQ36P	1	Ceiling-Suspended Type
ACDC24	1	AC/DC Power Cord
CLCW2B1	1	Remote Monitoring Adaptor
YGAS560J1S	6	Anti-Vibration Mount
BYCQ125B-W1	21	Standard Decoration Panel
DACA-CP1-1	14	Optional Condensate Pump
DMS502B71	1	BACnet interface
RBPP22Y	15	Y branch, 2 pipes
RBPP33Y	8	Y branch, 2 pipes
RBPP72Y	9	Y branch, 2 pipes
R410A	119.0lbs	Total extra refrigerant charge
1/4	76.9R	Pipe diameter (inch)
3/8	857.3R	Pipe diameter (inch)
1/2	236.9R	Pipe diameter (inch)
5/8	702.2R	Pipe diameter (inch)
3/4	5.1R	Pipe diameter (inch)
7/8	220.0R	Pipe diameter (inch)
1 1/8	230.0R	Pipe diameter (inch)

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MS01

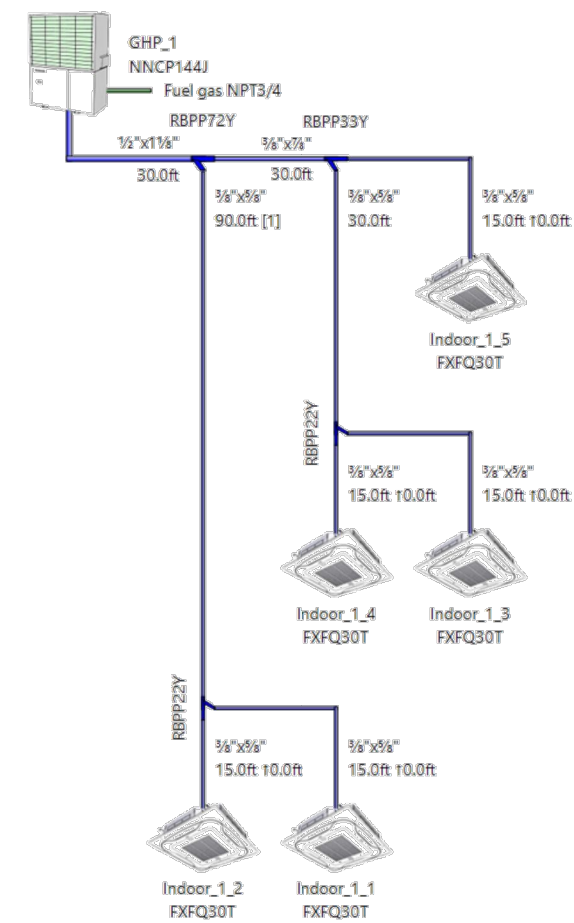
DATE: FEB 2021



Yanmar_SmartSelect Report

Piping diagram

Piping diagram for GHP_1 (NNCP144J): 104%



Longest equivalent length = 139.1ft, Longest equivalent after first branch = 109.1ft, Longest real length = 135.0ft, Total length = 255.0ft.
Cooling capacity length correction factor = 0.9, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 9.7lbs + (225.0ft x 0.036 [Ø ¾]) + (30.0ft x 0.074 [Ø ½]) = 20.1lbs.

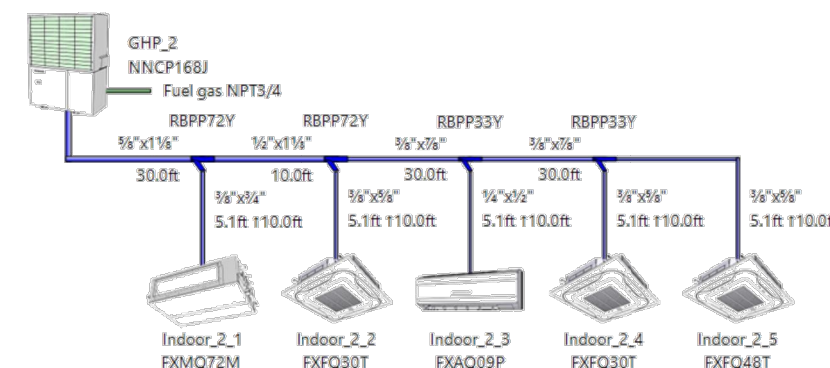
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Yanmar_SmartSelect Report

Piping diagram for GHP_2 (NNCP168J): 113%



Longest equivalent length = 111.7ft, Longest equivalent after first branch = 81.7ft, Longest real length = 105.1ft, Total length = 125.6ft.
Cooling capacity length correction factor = 1.0, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 12.6lbs + (5.1ft x 0.015 [Ø ¼]) + (80.5ft x 0.036 [Ø ¾]) + (10.0ft x 0.074 [Ø ½]) + (30.0ft x 0.114 [Ø ¾]) = 19.8lbs.

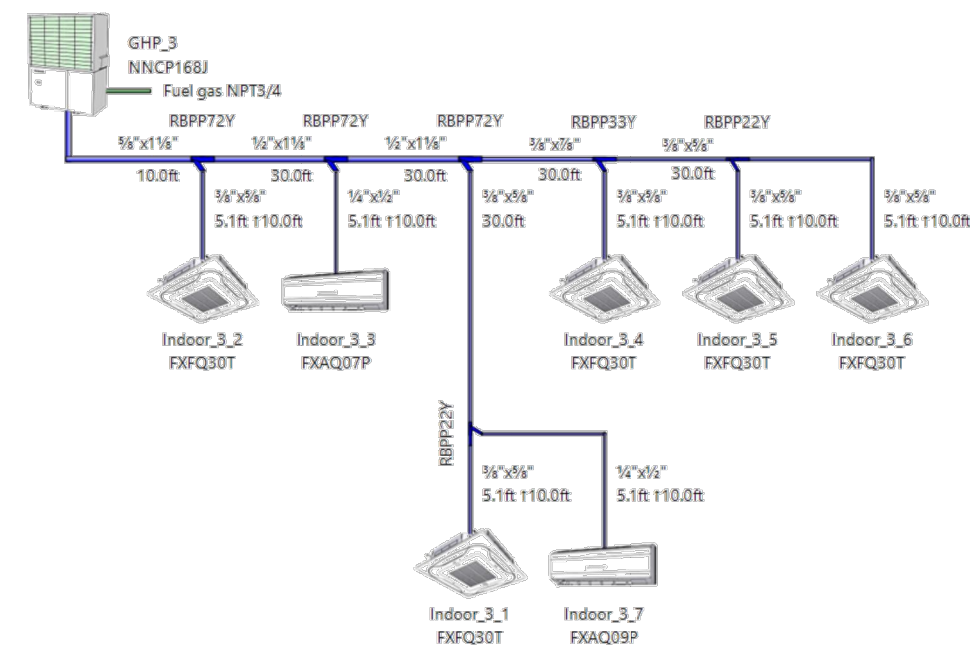
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Yanmar_SmartSelect Report

Piping diagram for GHP_3 (NNCP168J): 99%



Longest equivalent length = 143.3ft, Longest equivalent after first branch = 133.3ft, Longest real length = 135.1ft, Total length = 195.9ft.
Cooling capacity length correction factor = 0.9, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 12.6lbs + (10.3ft x 0.015 [Ø ¼]) + (115.6ft x 0.036 [Ø ¾]) + (60.0ft x 0.074 [Ø ½]) + (10.0ft x 0.114 [Ø ¾]) = 22.5lbs.

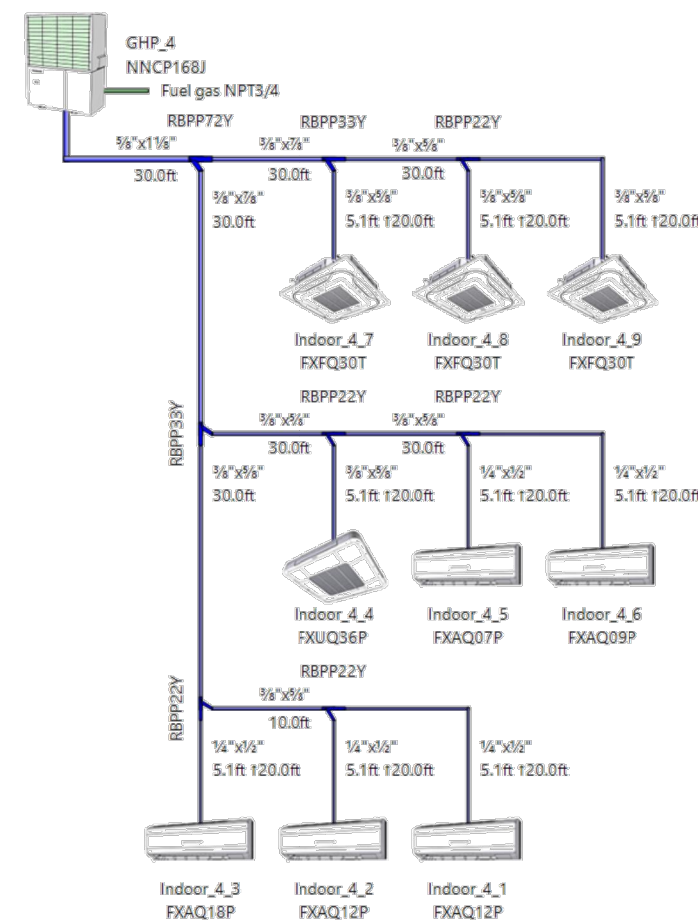
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Yanmar_SmartSelect Report

Piping diagram for GHP_4 (NNCP168J): 110%



Longest equivalent length = 131.7ft, Longest equivalent after first branch = 101.7ft, Longest real length = 125.1ft, Total length = 286.2ft.
Cooling capacity length correction factor = 0.9, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 12.6lbs + (25.6ft x 0.015 [Ø ¼]) + (210.5ft x 0.036 [Ø ¾]) + (30.0ft x 0.114 [Ø ¾]) = 24.0lbs.

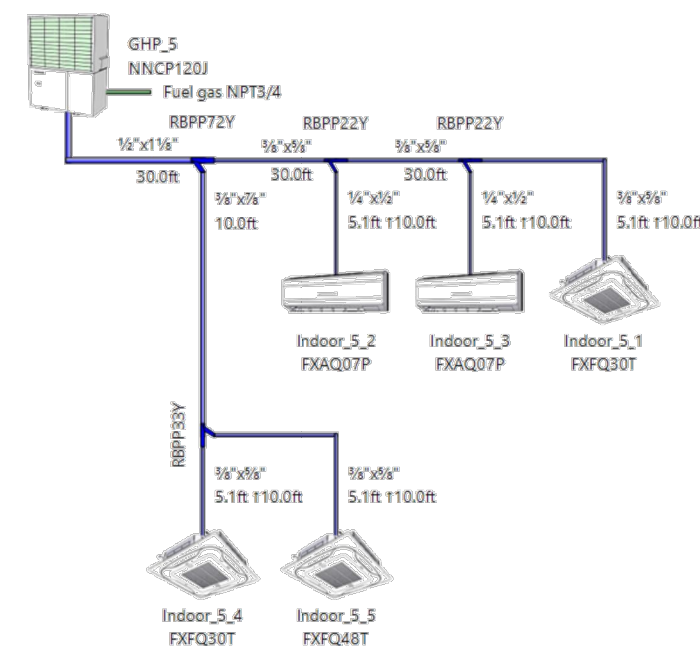
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Yanmar_SmartSelect Report

Piping diagram for GHP_5 (NNCP120J): 102%



Longest equivalent length = 100.0ft, Longest equivalent after first branch = 70.0ft, Longest real length = 95.1ft, Total length = 125.6ft.
Cooling capacity length correction factor = 1.0, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 9.7lbs + (10.3ft x 0.015 [Ø ¼]) + (85.4ft x 0.036 [Ø ¾]) + (30.0ft x 0.074 [Ø ½]) = 15.2lbs.

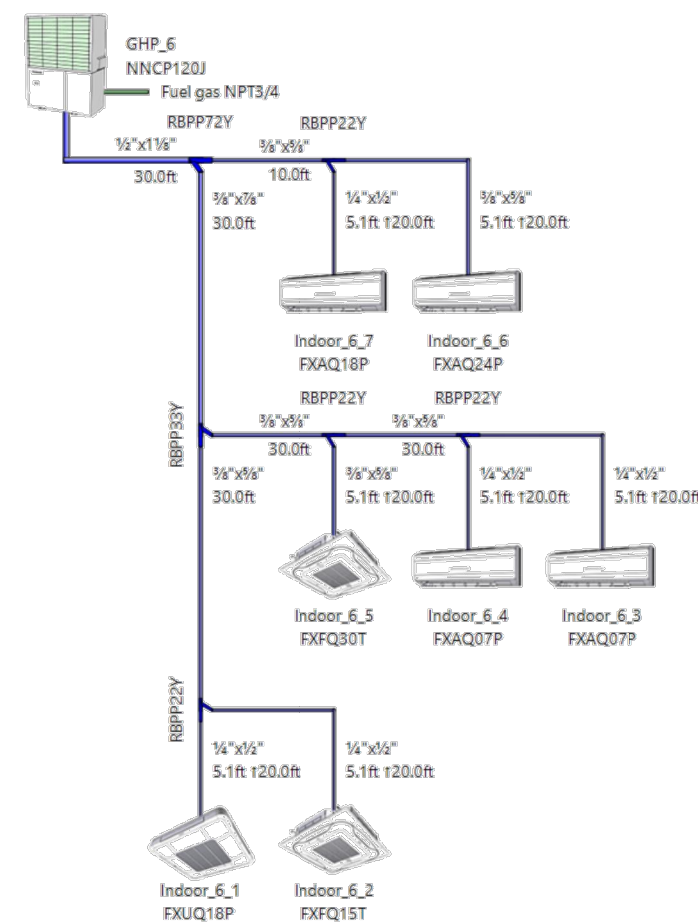
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Yanmar_SmartSelect Report

Piping diagram for GHP_6 (NNCP120J): 100%

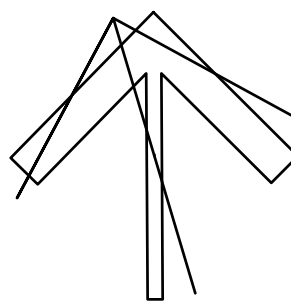


Longest equivalent length = 131.7ft, Longest equivalent after first branch = 101.7ft, Longest real length = 125.1ft, Total length = 195.9ft.
Cooling capacity length correction factor = 0.9, heating capacity length correction factor = 1.0, Outdoor setting = M
Extra refrigerant = 9.7lbs + (25.6ft x 0.015 [Ø ¼]) + (140.3ft x 0.036 [Ø ¾]) + (30.0ft x 0.074 [Ø ½]) = 17.4lbs.

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PROJECT NORTH



SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:

VRF SYSTEM PIPING
SCHEMATICS

PROJECT NO:

A20002.7

DRAWN:

AH

CHECKED:

AH

DATE:

FEB 2021

SCALE:

AS NOTED

DRAWING NO:

REV.

M502

ISSUED FOR PERMIT AND TENDER

ISSUED FOR CLIENT REVIEW

REVISION

NO DATE:

2 2.04.23

1 2.04.08

1

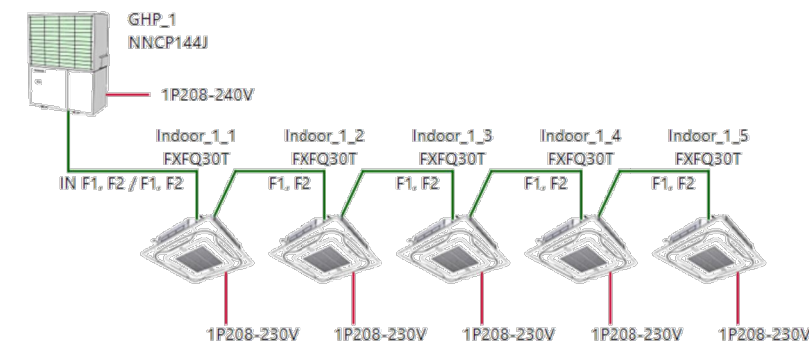
The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Detail is based on actual building construction and shall be approved for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets, fittings and connections which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not issue the drawings. © 2021 DEI & Associates Inc.



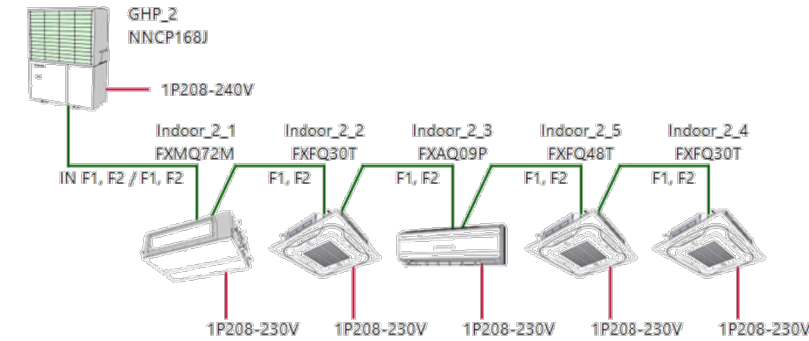
Yanmar_SmartSelect Report

Wiring diagram

Wiring diagram for GHP_1 (NNCP144J): 104%



Wiring diagram for GHP_2 (NNCP168J): 113%



Wiring diagram for GHP_3 (NNCP168J): 99%

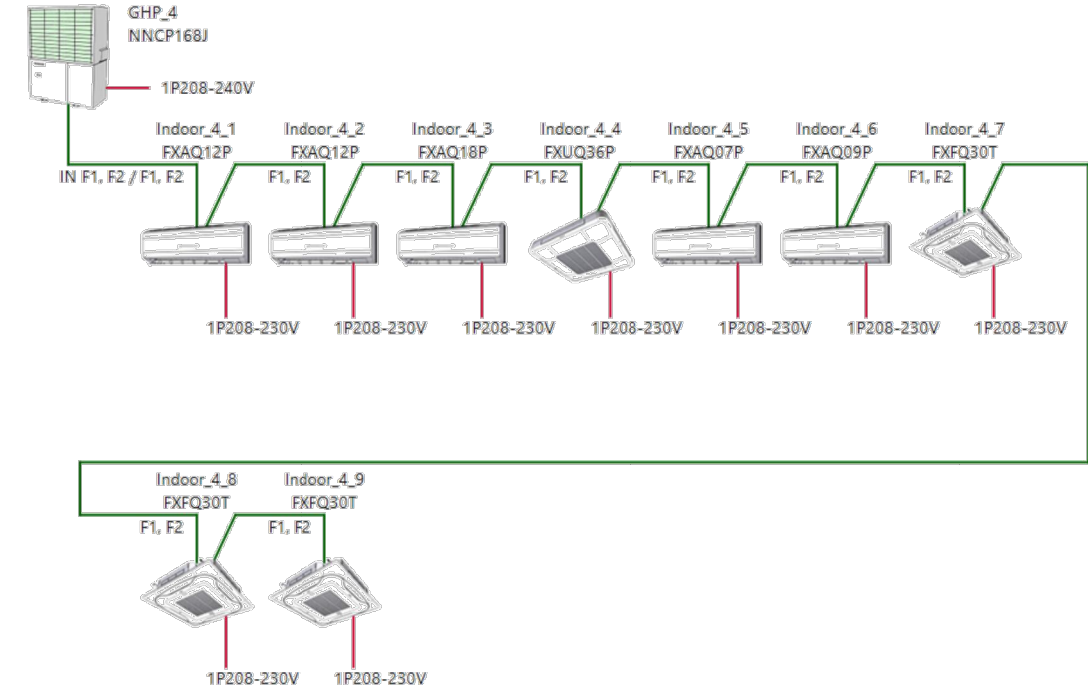
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Yanmar_SmartSelect Report

Wiring diagram for GHP_4 (NNCP168J): 110%



Wiring diagram for GHP_5 (NNCP120J): 102%

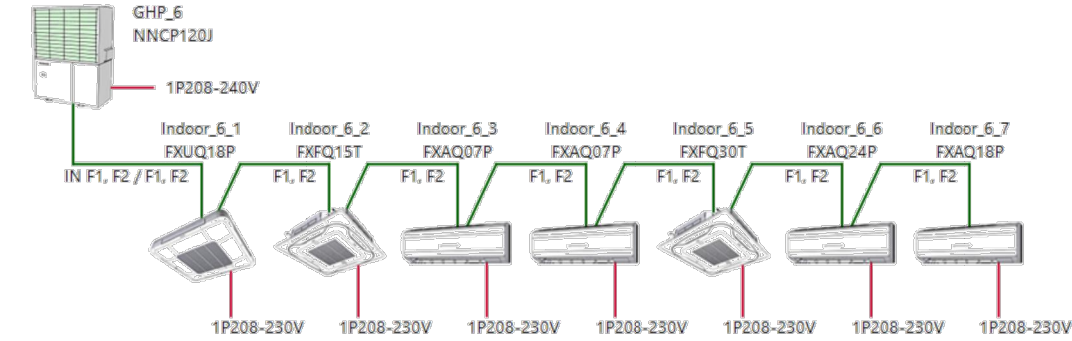
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Yanmar_SmartSelect Report

Wiring diagram for GHP_6 (NNCP120J): 100%



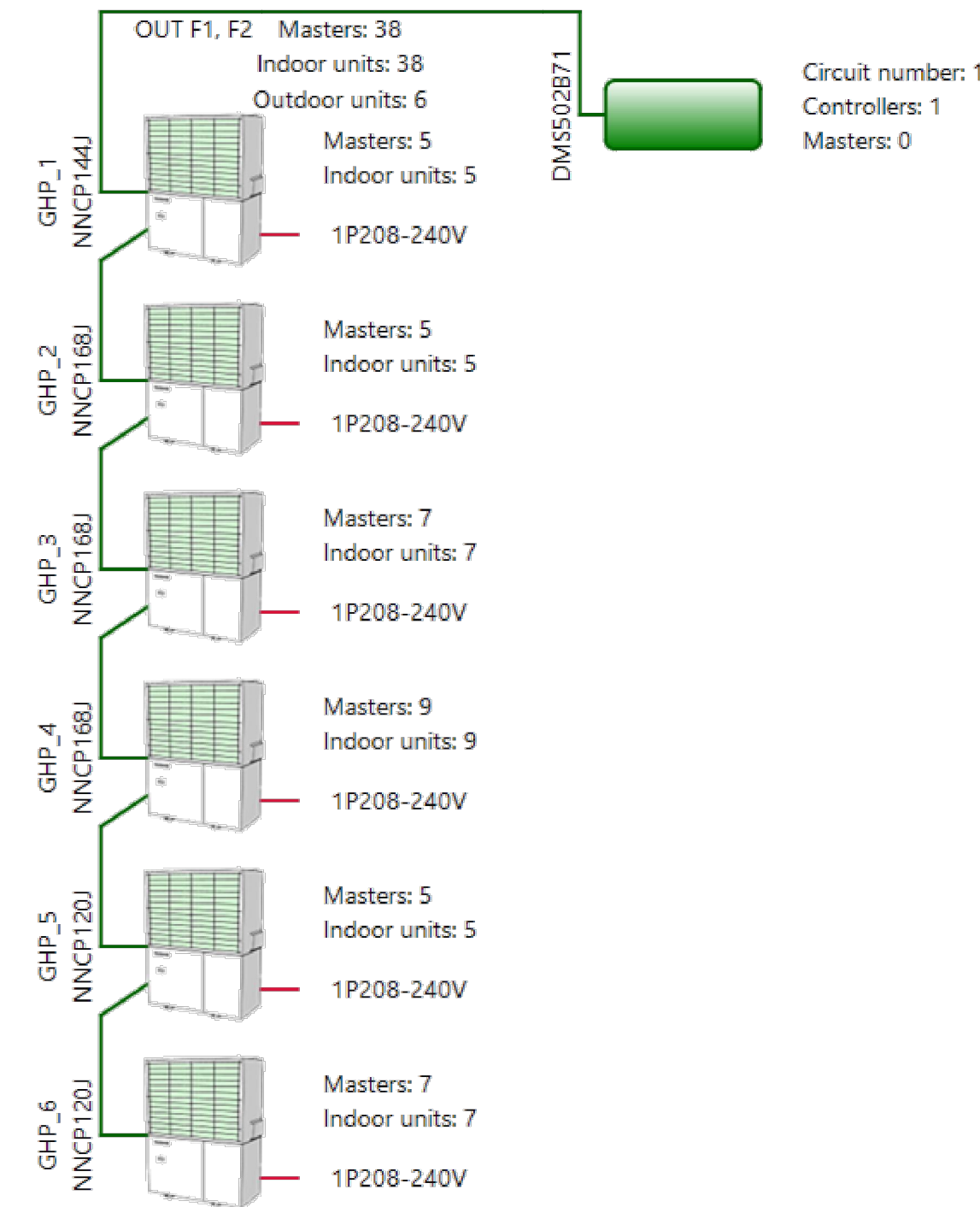
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Yanmar_SmartSelect Report

Central wiring diagram

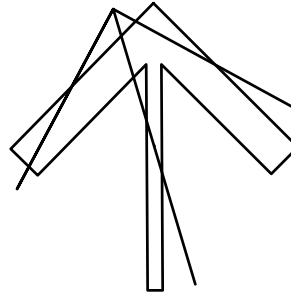


Option list

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PROJECT NORTH



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PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:

VRF SYSTEM WIRING
SCHEMATICS

PROJECT NO:

A20002.7

DRAWN:

AH

CHECKED:

AH

DATE:

FEB 2021

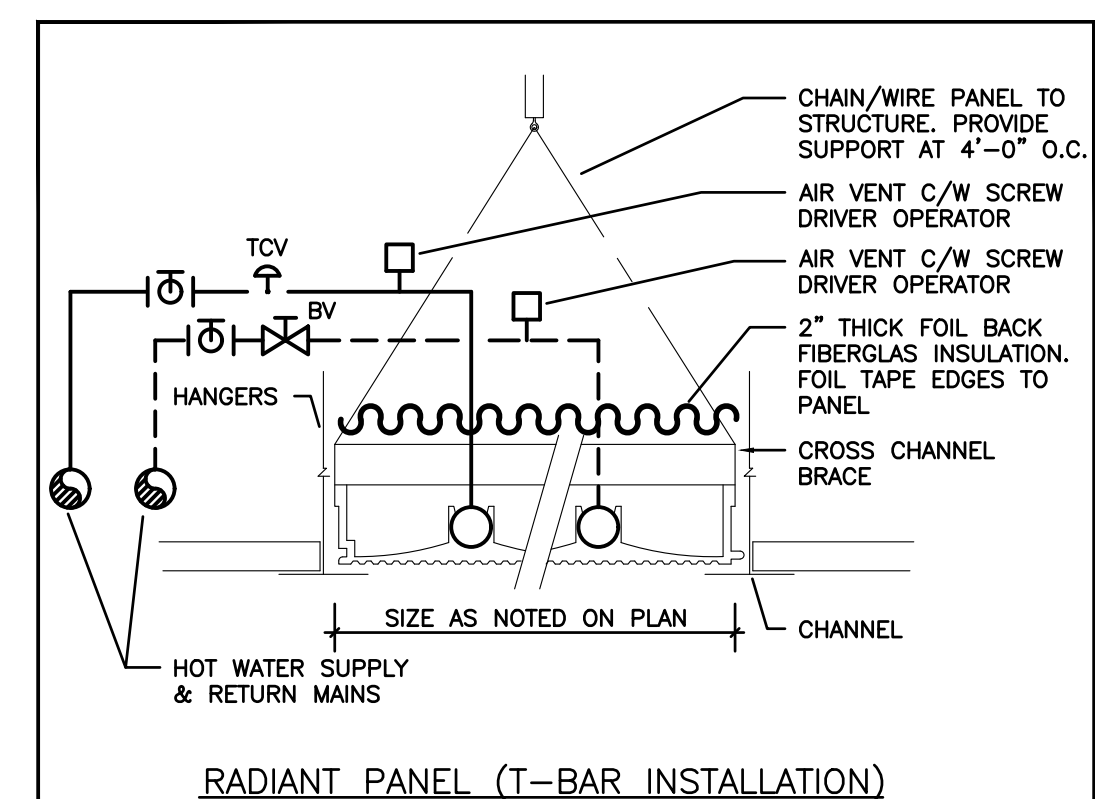
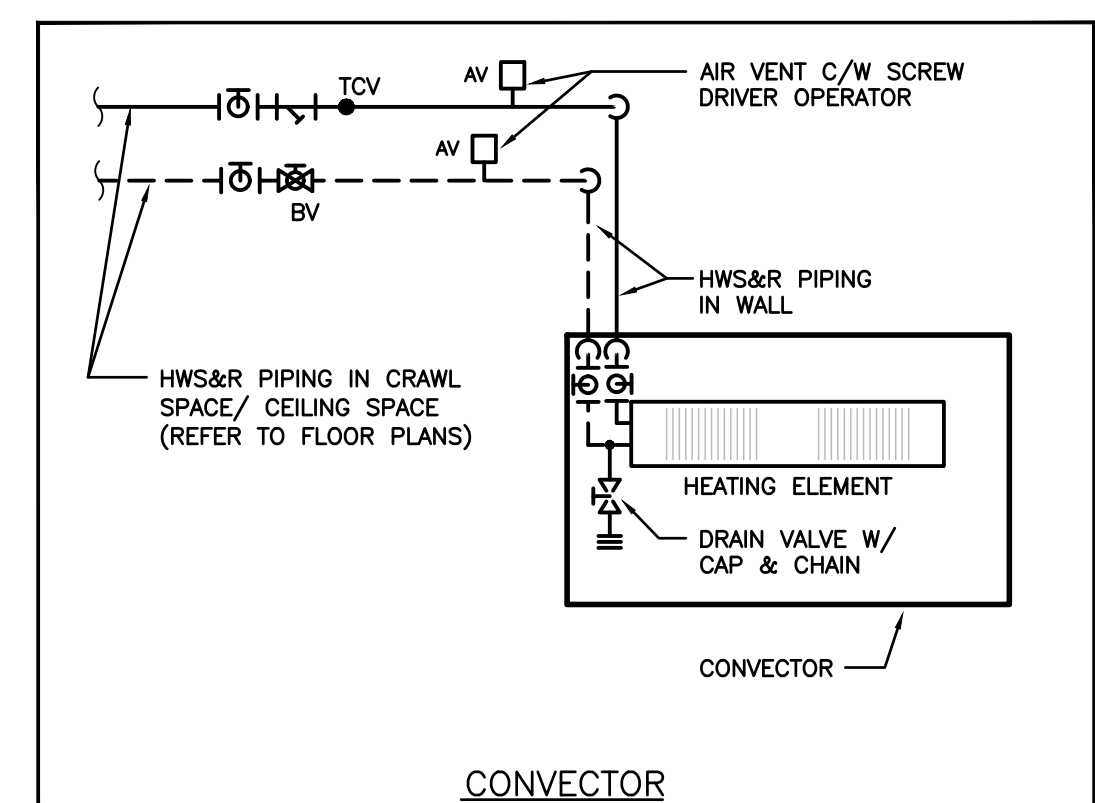
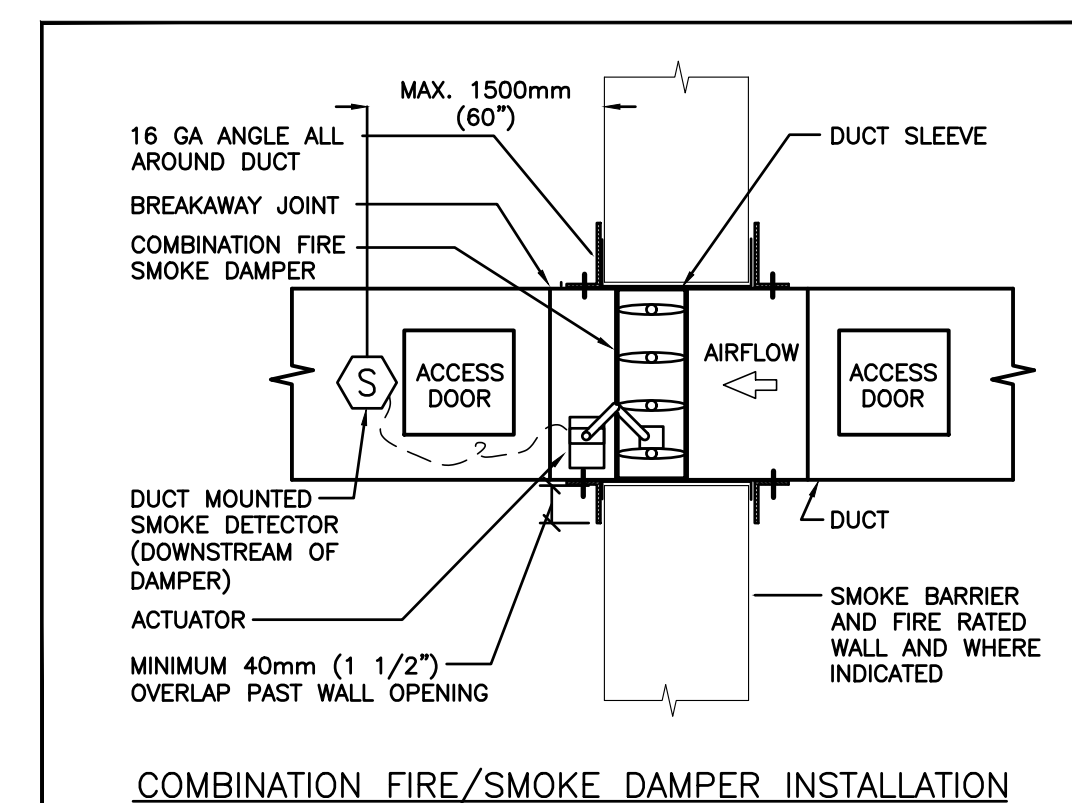
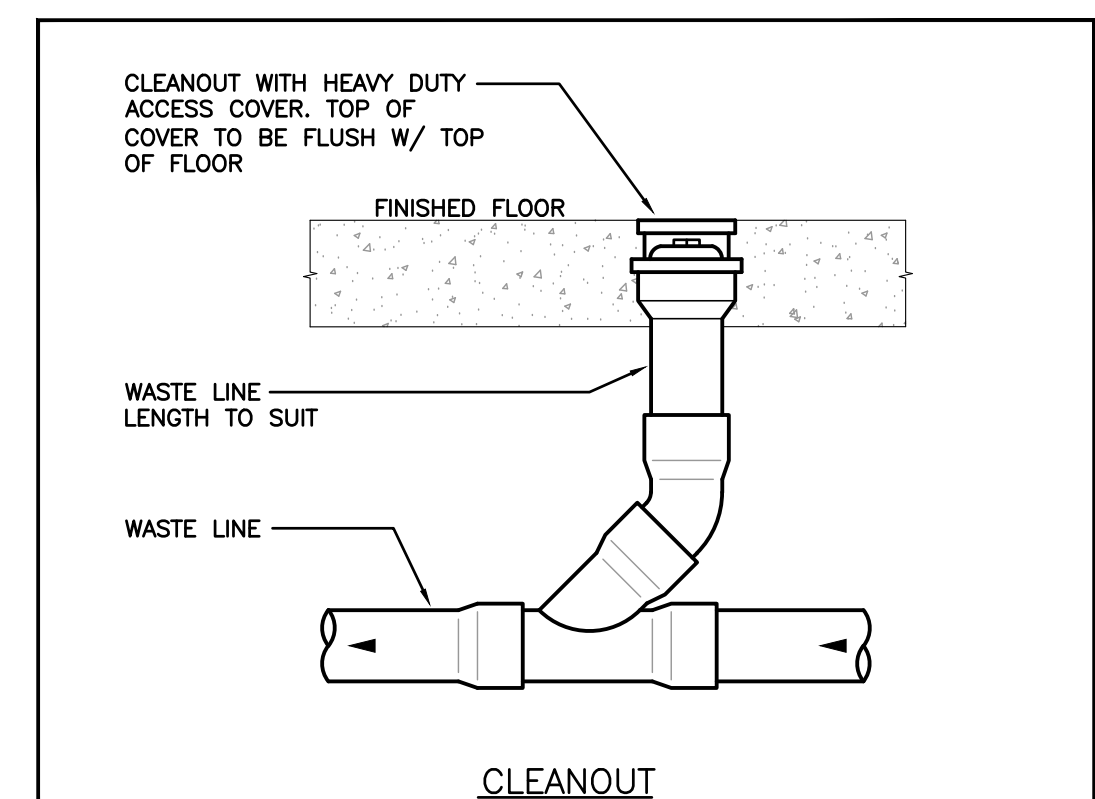
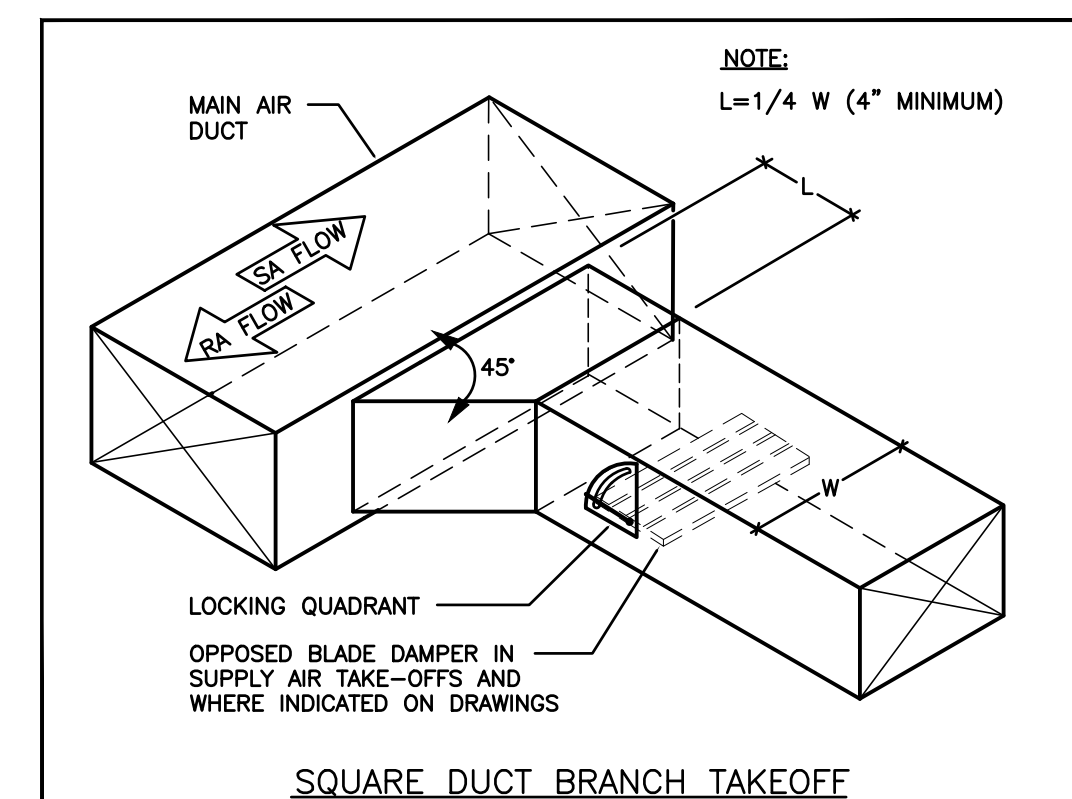
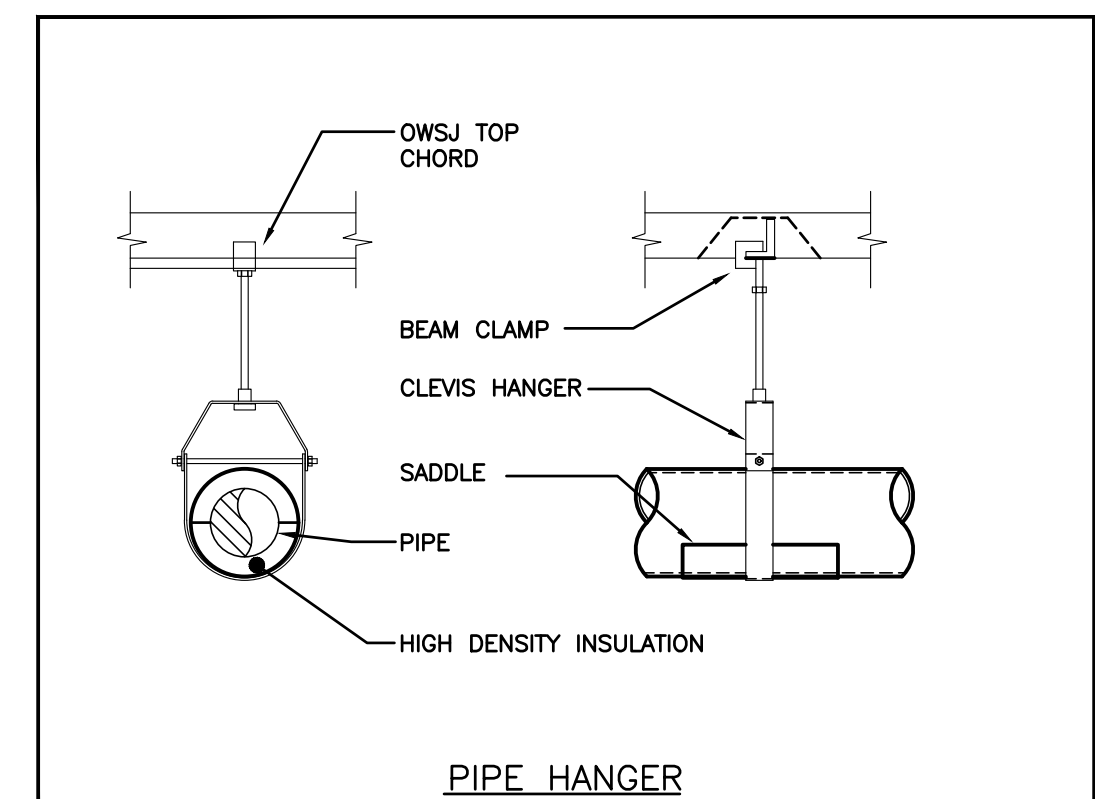
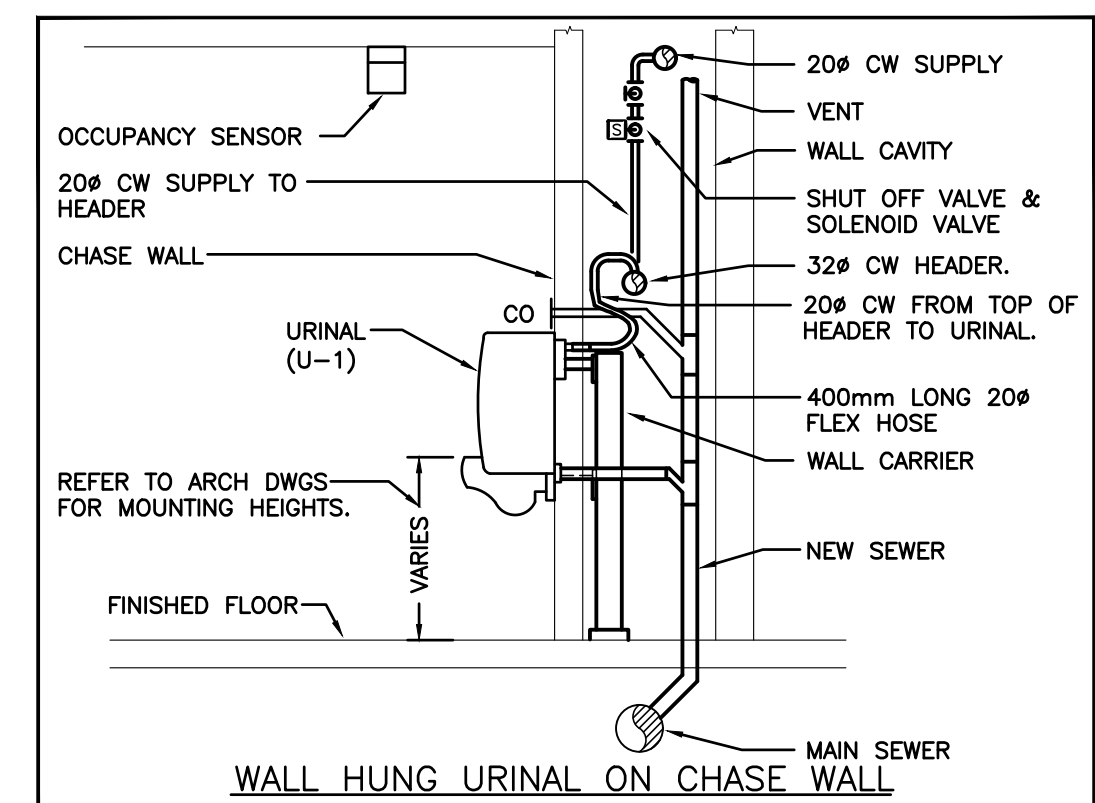
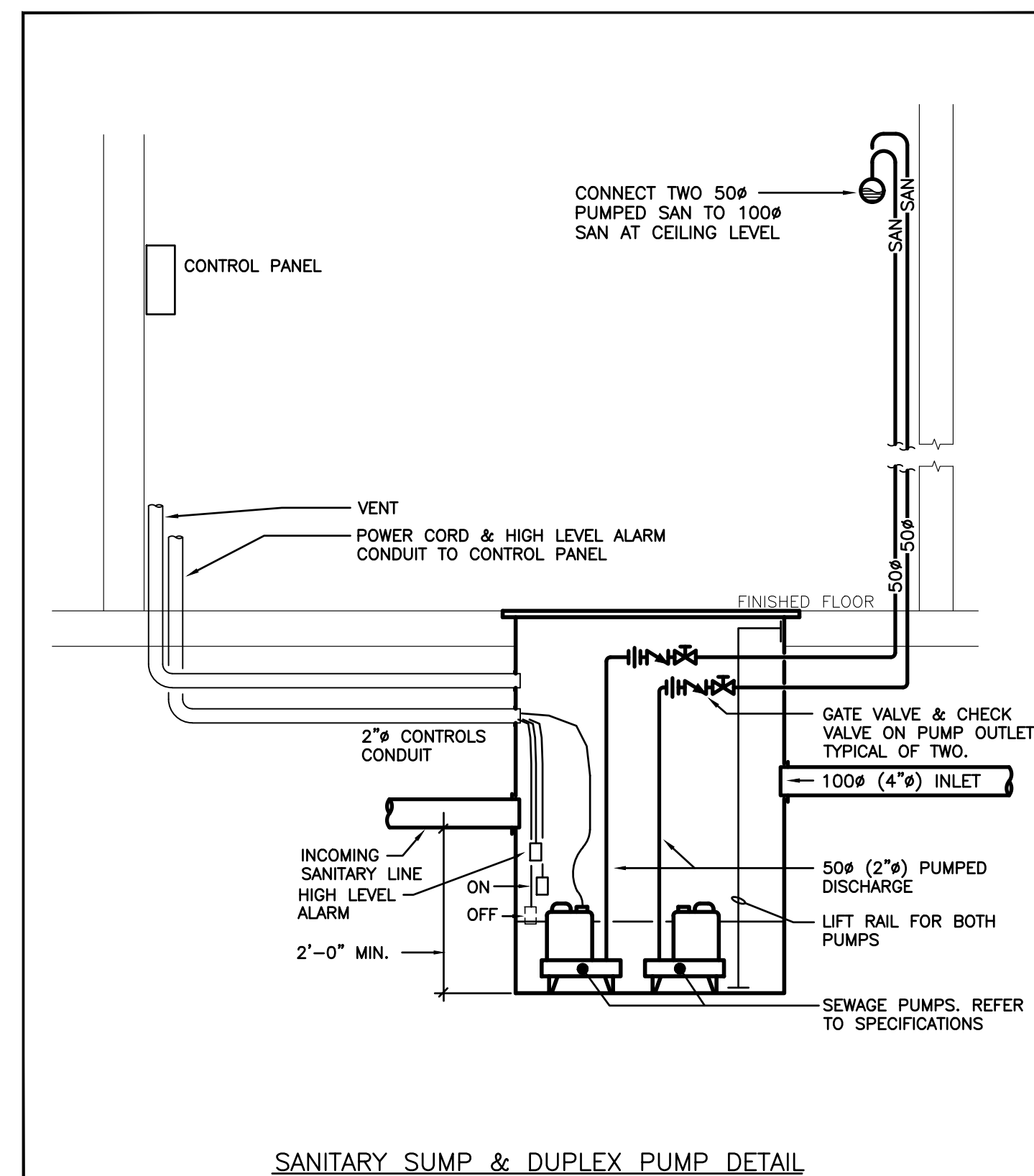
SCALE:

AS NOTED

DRAWING NO:

REV.

M503

[illegible]

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain any necessary additional service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required clearances.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

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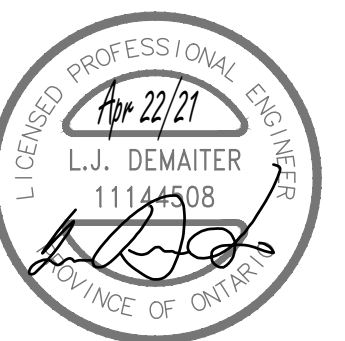
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DEI
Consulting Engineers

MECHANICAL | ELECTRICAL | AQUATIC

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 Phone: 519-735-3555 Fax: 519-735-2515
 Website: deiassociates.ca
 Project Number: 20152



**SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE**

1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:

MECHANICAL DETAILS

PROJECT NO: A20002.7	SCALE: AS NOTED	
DRAWN: AH	DRAWING NO:	REV.
CHECKED: AH	M601	
DATE: FEB 2021		

[illegible]

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval of the Consultant of any deviation from service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to match existing conditions.

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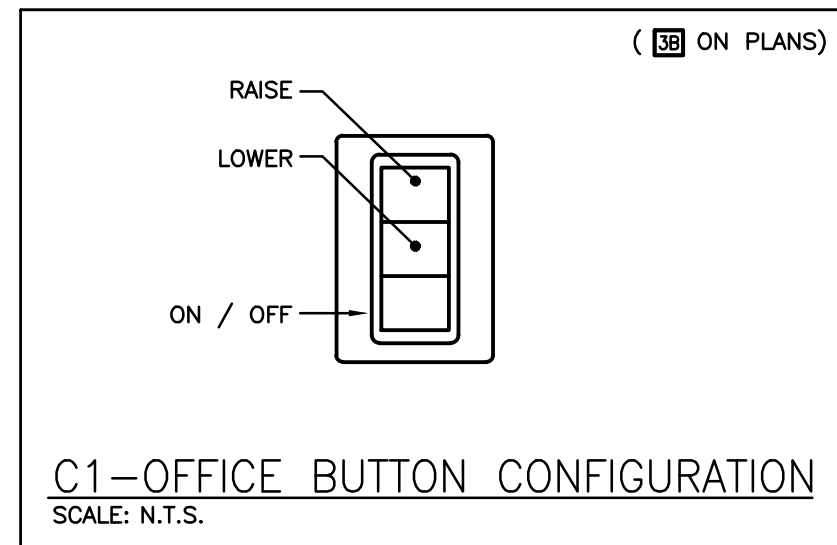
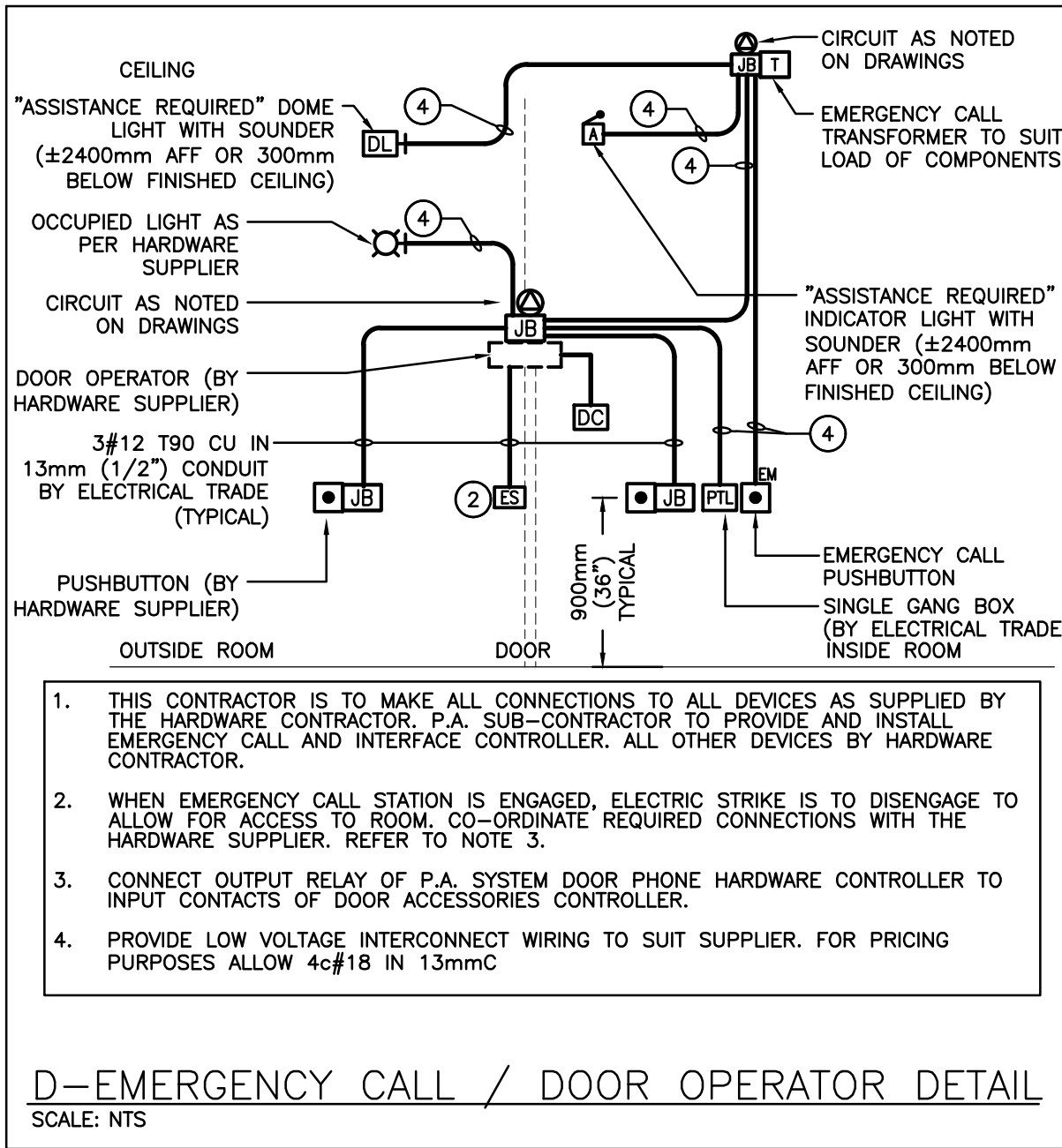
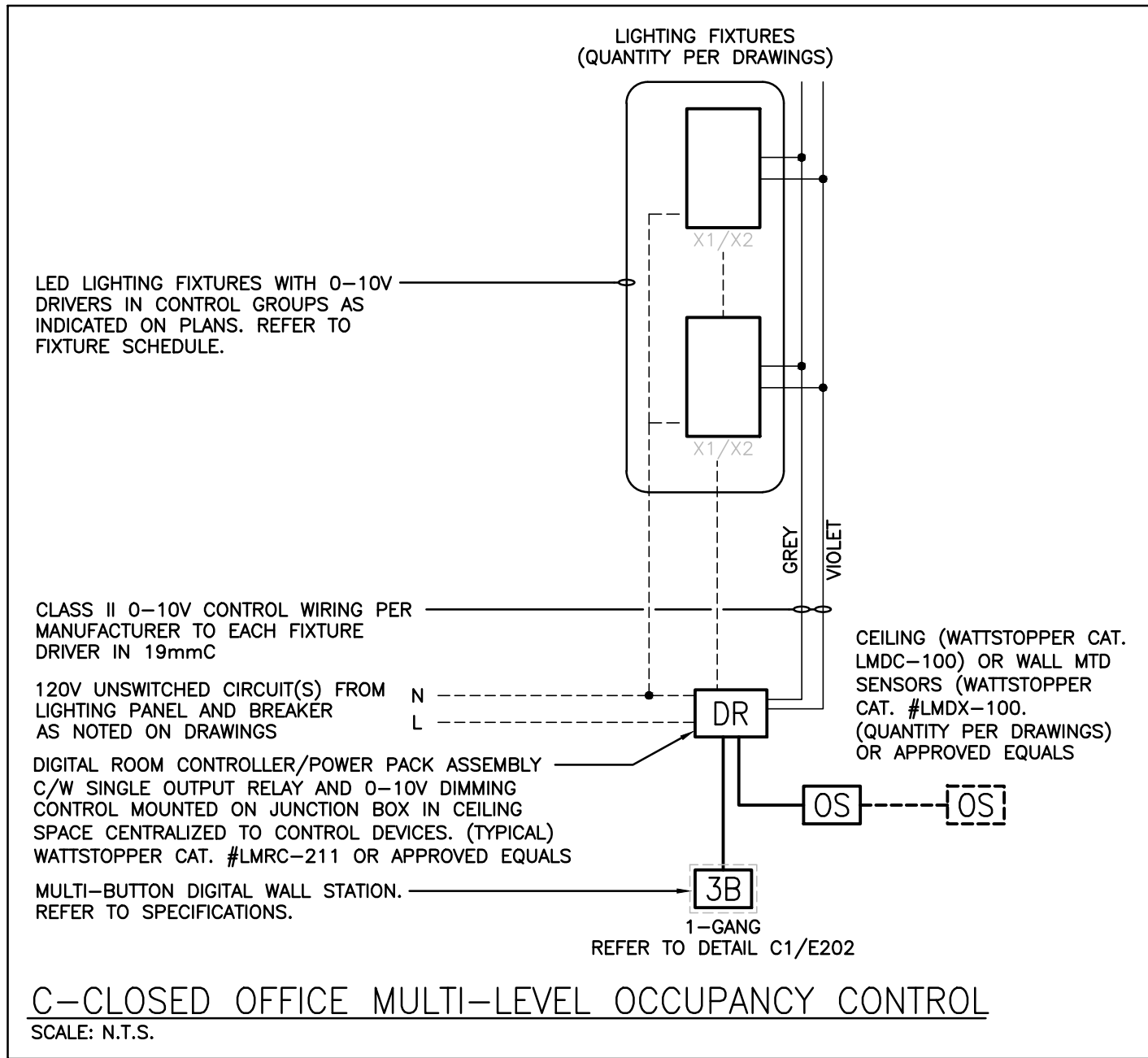
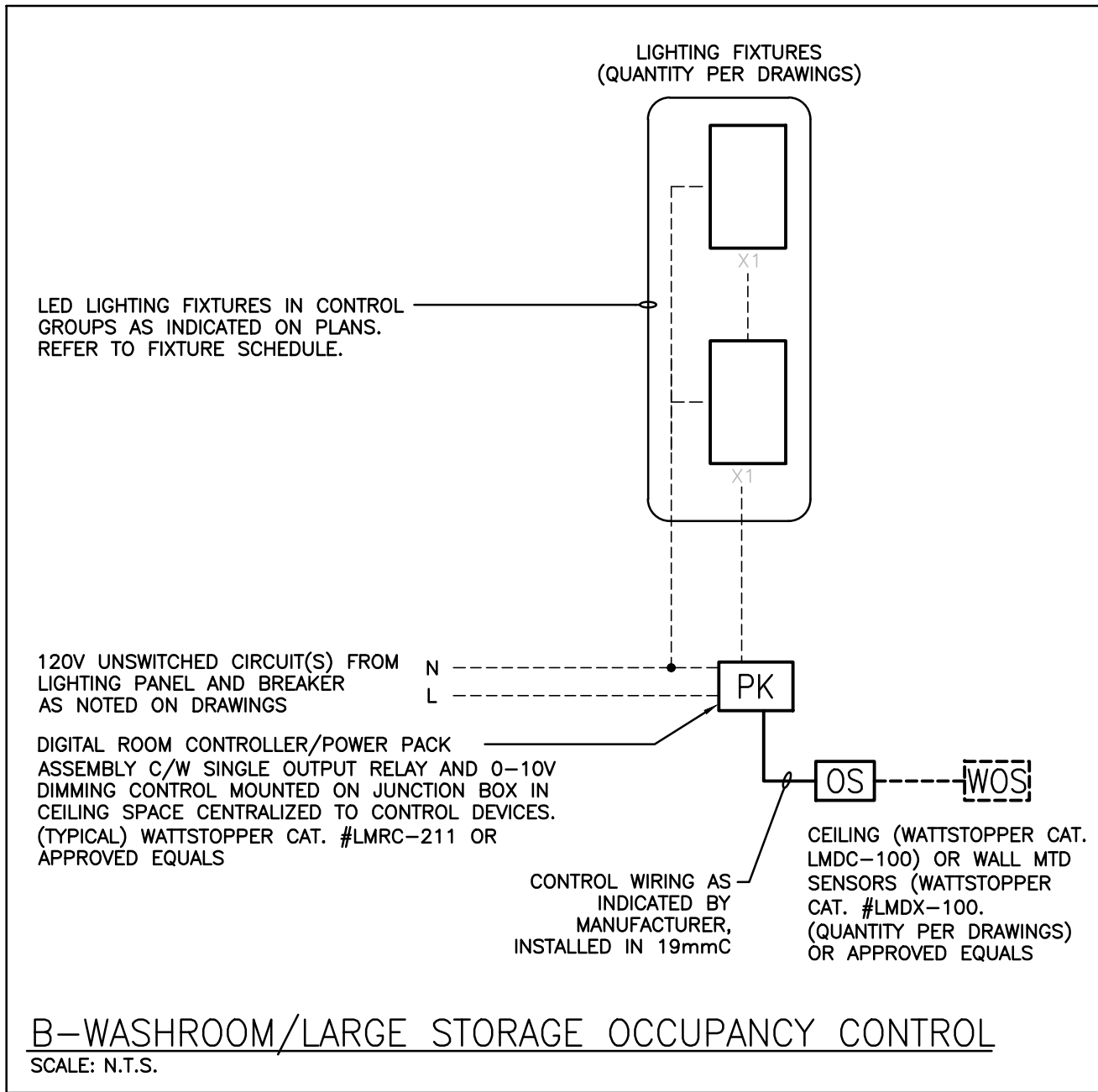
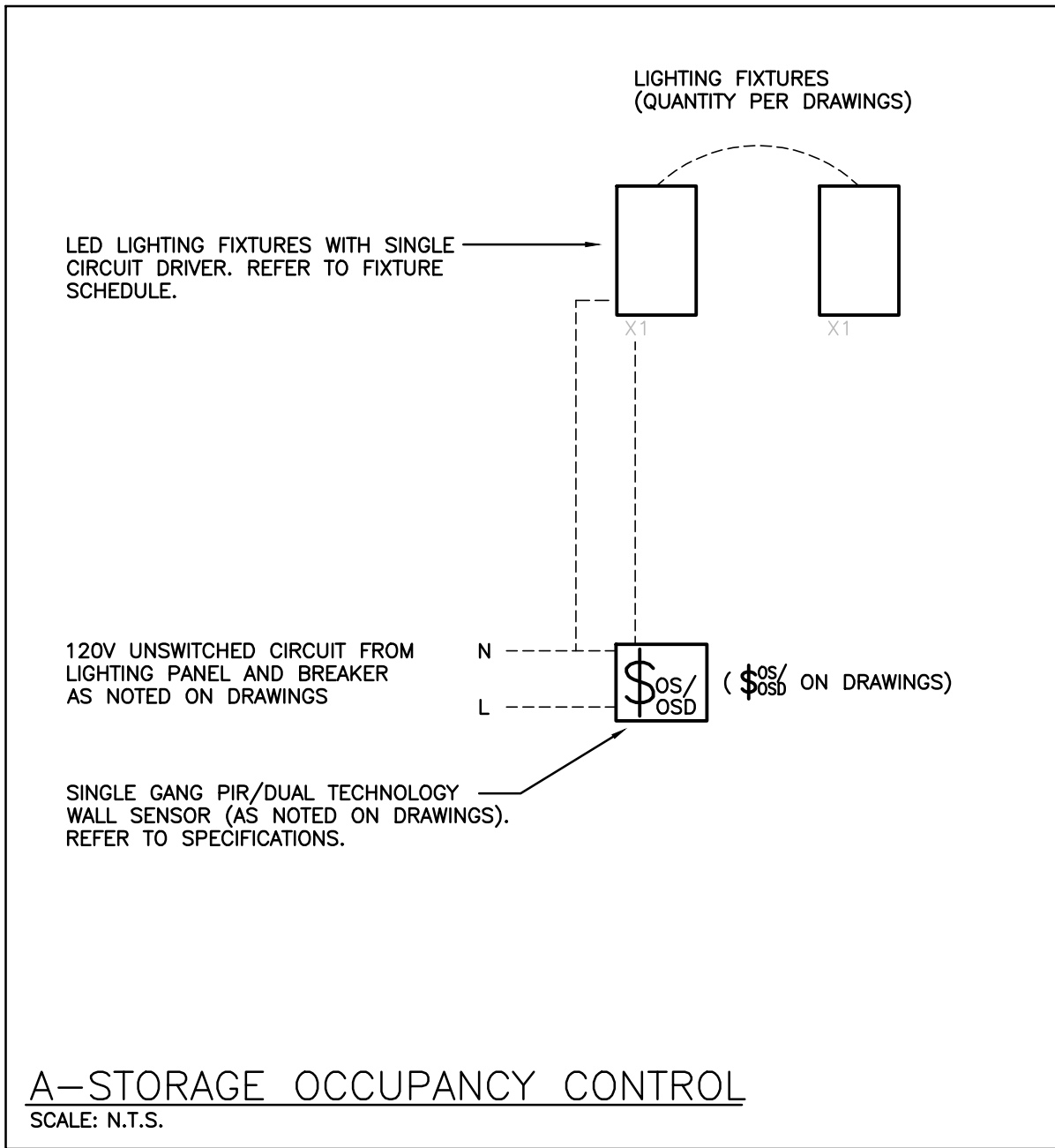
SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE

1042 Weber Street E.
Kitchener, ON
N2A 1B6

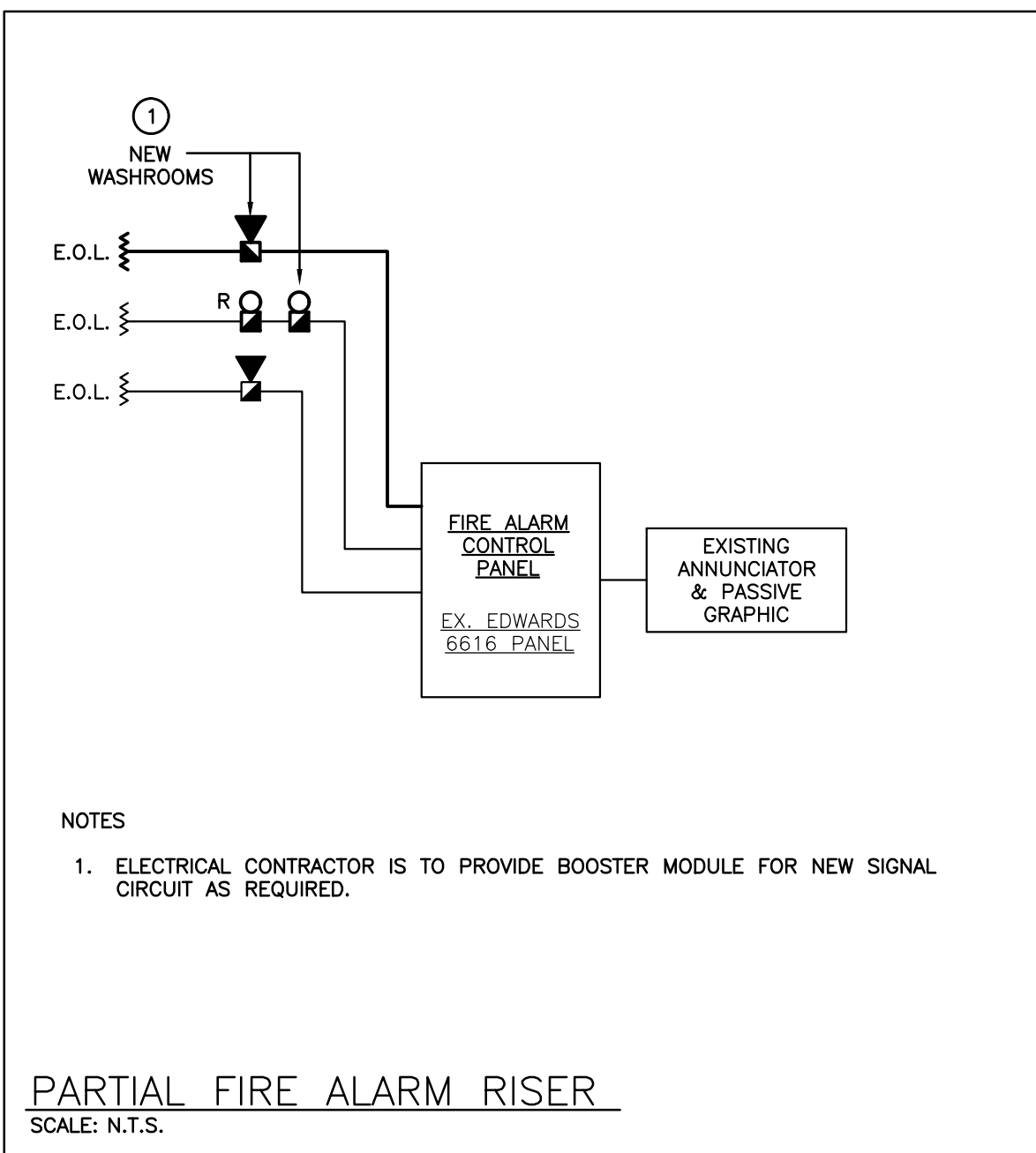
DRAWING TITLE

LEGEND AND KEY PLAN

PROJECT NO: A20002.7	SCALE: AS NOTED	
DRAWN: TM	DRAWING NO:	REV.
CHECKED: J.J.	E101	
DATE: FEB 2021		



EQUIPMENT WIRING SCHEDULE																	E=ELECTRICAL M=MECHANICAL O=OTHERS
Electrical Item	Description	Provided by	Voltage	Size	hp/kW/amps	Phase	Magnetic	Manual	Contact	Combination	Variable	Frequency Drive	On/Off/Auto	Start/Stop	High/Low/Off	Pilot Light	Remarks
1	GAS HEAT PUMP GHP-1,6	M	208	0.9	kW	1											ROOF
2	GAS HEAT PUMP GHP-2,3,4	M	208	1.0	kW	1											ROOF
3	GAS HEAT PUMP GHP-5	M	208	0.9	kW	1											ROOF
4	INDOOR UNITS RF-2-1	M	208	9.5	MCA	1											
5	RECESS/SUSP. RF FAN COIL	M	208	2.0	MCA	1											
6	WALL MOUNT RF FAN COIL	M	208	0.6	MCA	1											
7	CONDENSATE PUMP	M	120	FHP	1												
8	URINAL CONTROLLER	M	120	FHP	1												



LED LIGHT FIXTURE SCHEDULE

Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	Description
L3	COOPER CAT. #24-GR-LD5-38-A125-UNV-LB40-CD-1 C/W SK-24-WS LITHONIA CAT. #2GTL-4-40L-EZ1-LP840 C/W 2X4SMKSHF PAF SIGNIFY CAT. #2TG43LB40-4-FS-02F-UNV-DIM C/W FMA24	120V	LED 3800 LUMENS 4000K 35W	RECESSED	2X4 (610mmX1220mm) LED TROFFER C/W PATTERN 12 LENS, WHITE FINISH AND SURFACE MOUNTING KIT.
LU	METALUX CAT. #4SLSTP4040DD-120V LITHONIA CAT. #ZL1D-L48-5000LM-FST-MVOLT-35K-80CRI-WH SIGNIFY CAT. #SS440LB30-UNV-DIM	120V	LED 3500 LUMENS 4000K 44W	SURFACE	4' (1220mm) LENSED LED STRIP FIXTURE C/W WHITE FINISH.
EMERG. BATT.	BEGHELLI TEMPESTA SERIES: EM-1 #TA-LED-EM-120-TB-90SP (RECESSED TBAR MOUNT)	12V/120V	N/A	AS NOTED	VANDAL RESISTANT LONG LIFE, SEALED BATTERY, C/W 17W LED MODULES, POLYCARBONATE BODY AND 90 MINUTE BATTERY DURATION

NOTES: ① FOR INFORMATION REGARDING LENS INFORMATION REFER TO SPECIFICATION. ② LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT. ③ IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THIS TO THE ELECTRICAL CONSULTANTS ATTENTION PRIOR TO SHOP DRAWING REVIEW. ④ WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT ARCHITECT THE FINISH WILL BE SELECTED FROM MANUFACTURER'S OPTIONAL COLOUR CHART (i.e. RAL COLOURS OR EQUAL). PROVIDE THIS COLOUR CHART WITH SHOP DRAWING SUBMITTAL.

LIGHTING CONTROL SYSTEMS SEQUENCE OF OPERATION

Space Type	Room Names	Control Sequence / Control Device(s):	Control System
Custodial Office	TYPICAL	Sequence: ON: Lights turned on to 50% output setting via occupancy sensor(s). ADJUST: The occupant manually adjusts lighting within the room to desired level or preset in each group via wall scene station. OFF: 5 minutes after the room has been vacated, the lights will automatically turn off.	DIGITAL ROOM CONTROL SYSTEM
Washrooms/Storage	TYPICAL	Sequence: ON: Lights turned on automatically via occupancy sensor (where applicable). OFF: 5 minutes after the room has been vacated, the lights will automatically turn off.	LINE VOLTAGE OCCUPANCY CONTROL SYSTEM

ISSUED FOR PERMIT AND TENDER	21.04.23	1	21.04.06	ISSUED FOR CLIENT REVIEW
NO. DATE:	2	21.04.23	1	21.04.06
REVISION	NO. DATE:	2	21.04.23	1

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets, piping and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2021 DEI & Associates Inc.

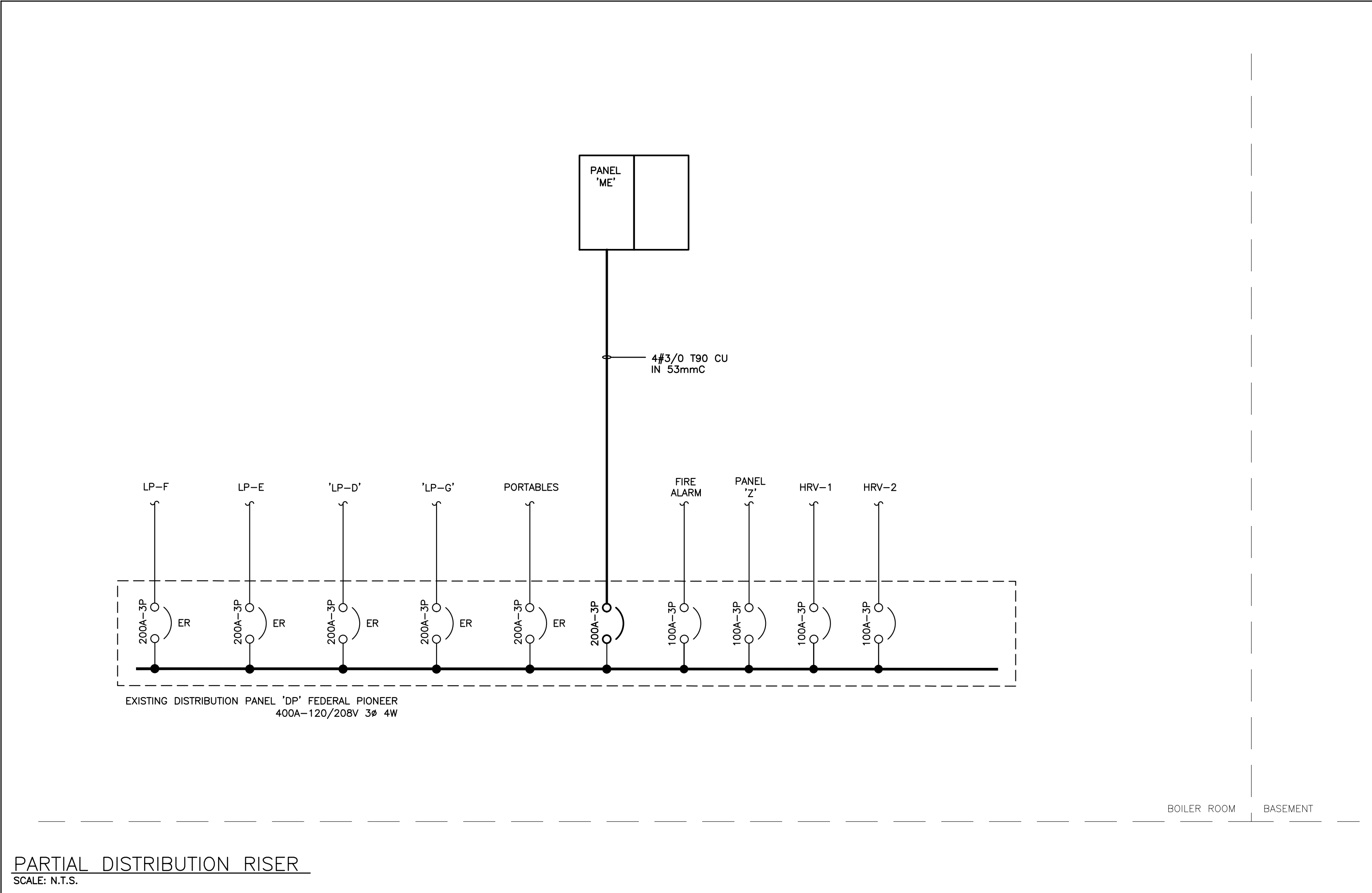
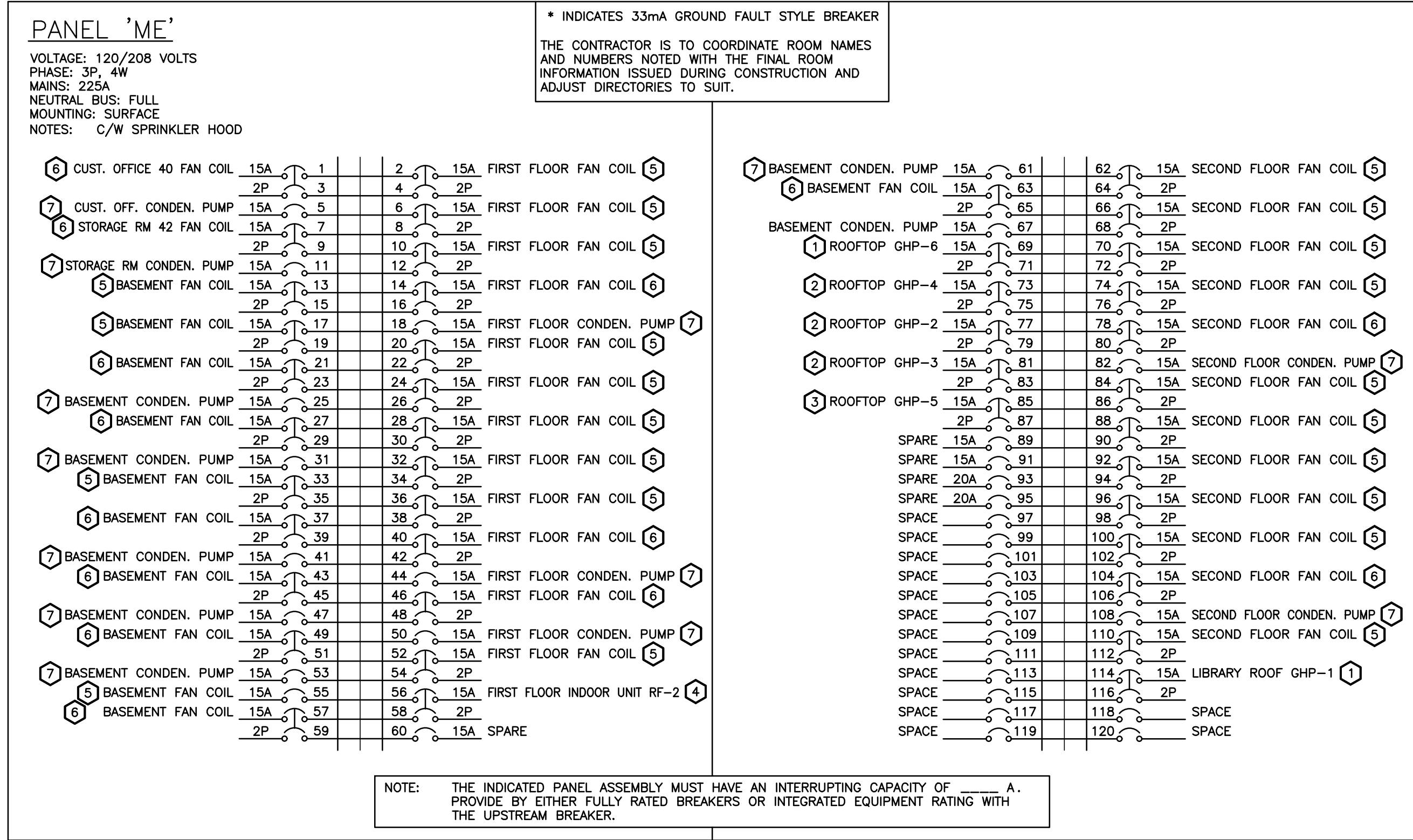
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MECHANICAL | ELECTRICAL | PLUMBING
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Phone: 519-755-3555 Fax: 519-755-4555
Website: deiasociates.ca
Project Number: 20192

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JACKSON
4/22/21
PROVINCE OF ONTARIO

SUNNYSIDE PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:
SCHEDULES AND DETAILS

PROJECT NO: A20002.7	SCALE: AS NOTED
DRAWN: TM	DRAWING NO.: E102
CHECKED: JJ.	REV.
DATE: FEB 2021	



EXISTING PANEL 'F' SCHEDULE

VOLTAGE: 120/208 VOLTS
PHASE: 3P, 4W
MAINS: 225A
NEUTRAL BUS:
MOUNTING: SURFACE
NOTES: SQUARE D TYPE E2

ER	EXISTING 15A	1	2	15A	EXISTING	ER
ER	EXISTING 15A	3	4	15A	EXISTING	ER
ER	EXISTING 15A	5	6	15A	EXISTING	ER
ER	EXISTING 15A	7	8	15A	EXISTING	ER
ER	EXISTING 15A	9	10		SPACE	ER
ER	EXISTING 15A	11	12	15A	EXISTING	ER
ER	EXISTING 15A	13	14	15A	EXISTING	ER
ER	EXISTING 15A	15	16		SPACE	ER
ER	EXISTING 15A	17	18		SPACE	ER
ER	EXISTING 15A	19	20		SPACE	ER
ER	EXISTING 15A	21	22		SPACE	ER
ER	EXISTING 15A	23	24		SPACE	ER
ER	EXISTING 15A	25	26		SPACE	ER
ER	EXISTING 15A	27	28		SPACE	ER
ER	EXISTING 15A	29	30		SPACE	ER
ER	EXISTING 15A	31	32	15A	EXISTING	ER
ER	EXISTING 15A	33	34	15A	EXISTING	ER
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ER	EXISTING 15A	63	64		SPACE	ER
ER	EXISTING 15A	65	66		SPACE	ER
ER	EXISTING 15A	67	68		SPACE	ER
ER	EXISTING 15A	69	70		SPACE	ER
ER	EXISTING 15A	71	72		SPACE	ER

PROPOSED PANEL 'F' SCHEDULE

AT THE COMPLETION OF THE PROJECT, PROVIDE A NEW TYPE WRITTEN PANEL DIRECTORY AND INCLUDE A COPY IN THE MAINTENANCE MANUALS

ER	EXISTING 15A	1	2	15A	EXISTING	ER
ER	EXISTING 15A	3	4	15A	EXISTING	ER
ER	EXISTING 15A	5	6	15A	EXISTING	ER
ER	EXISTING 15A	7	8	15A	EXISTING	ER
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ER	EXISTING 15A	63	64		SPACE	ER
ER	EXISTING 15A	65	66		SPACE	ER
ER	EXISTING 15A	67	68		SPACE	ER
ER	EXISTING 15A	69	70		SPACE	ER
ER	EXISTING 15A	71	72		SPACE	ER

DESIGNATION

'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED
'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION (CONFIRM ON SITE)
'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN
'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED.
'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
'D' INDICATES EXISTING BREAKER TO BE REMOVED COMPLETE. PROVIDE FILLER PLATES AS REQUIRED.

NOTES: THIS CONTRACTOR IS TO INVESTIGATE BREAKERS AND REVISE PANEL SCHEDULES TO SUIT RENOVATION, NOTING ANY BREAKERS THAT BECOME SPARE DUE TO DEMOLITION. THIS CONTRACTOR IS ALSO TO NOTIFY THE CONSULTANT OF ANY BREAKERS THAT ARE INDICATED TO BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

ISSUED FOR PERMIT AND TENDER
ISSUED FOR CLIENT REVIEW
NO. DATE: 1 21.04.06
2 21.04.23

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as practical building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all utility piping and accessories which may be required. Provide the same to meet the required conditions.
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55 Northland Road, Waterloo, ON N2L 1Y8
Phone: 519-745-3555 Fax: 519-745-4555
Website: deiasociates.ca
Project Number: 20024

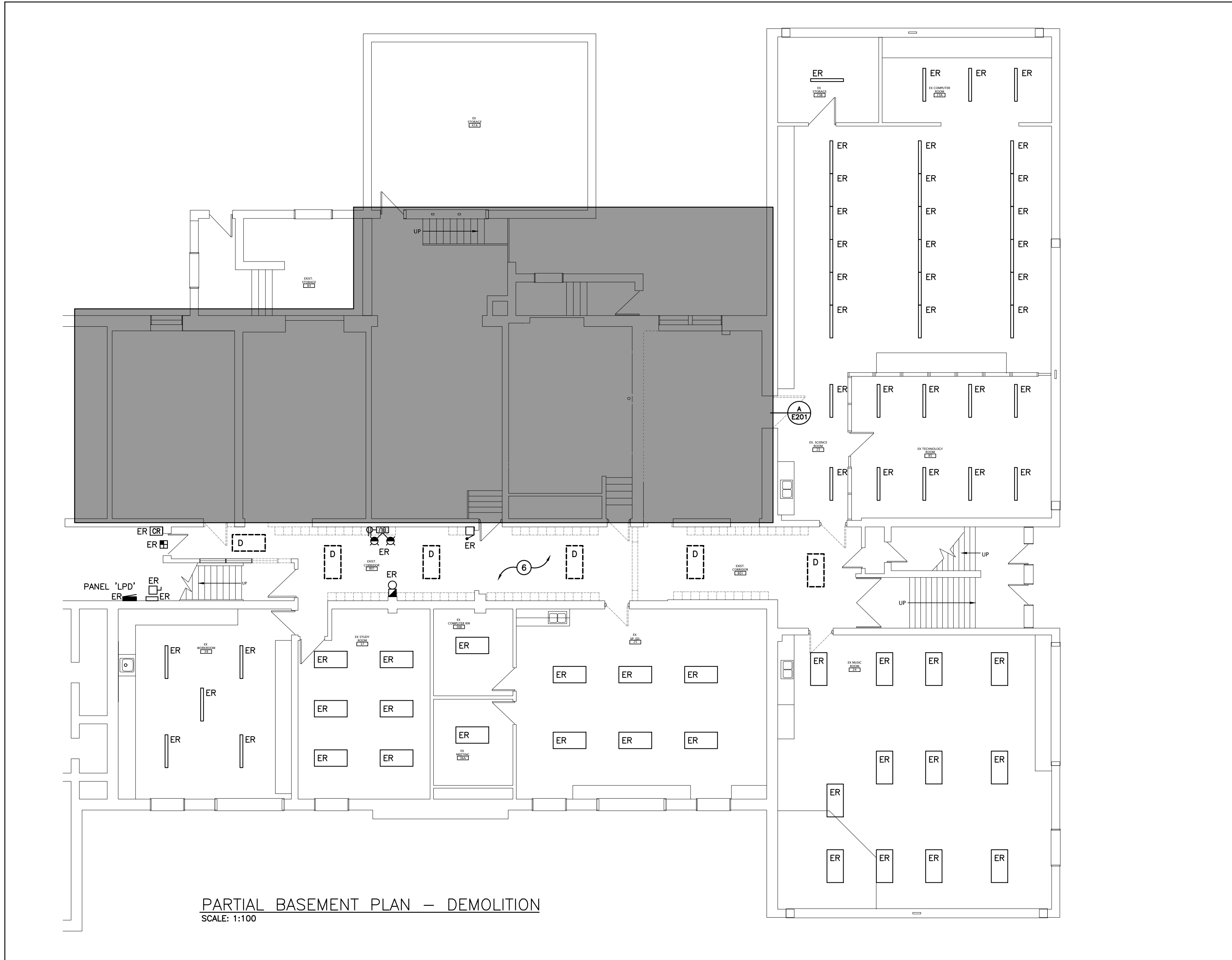
REGISTERED PROFESSIONAL ENGINEER
4/22/21
PROVINCE OF ONTARIO

UNIVERSITY OF GUELPH
UNIVERSITY OF GUELPH

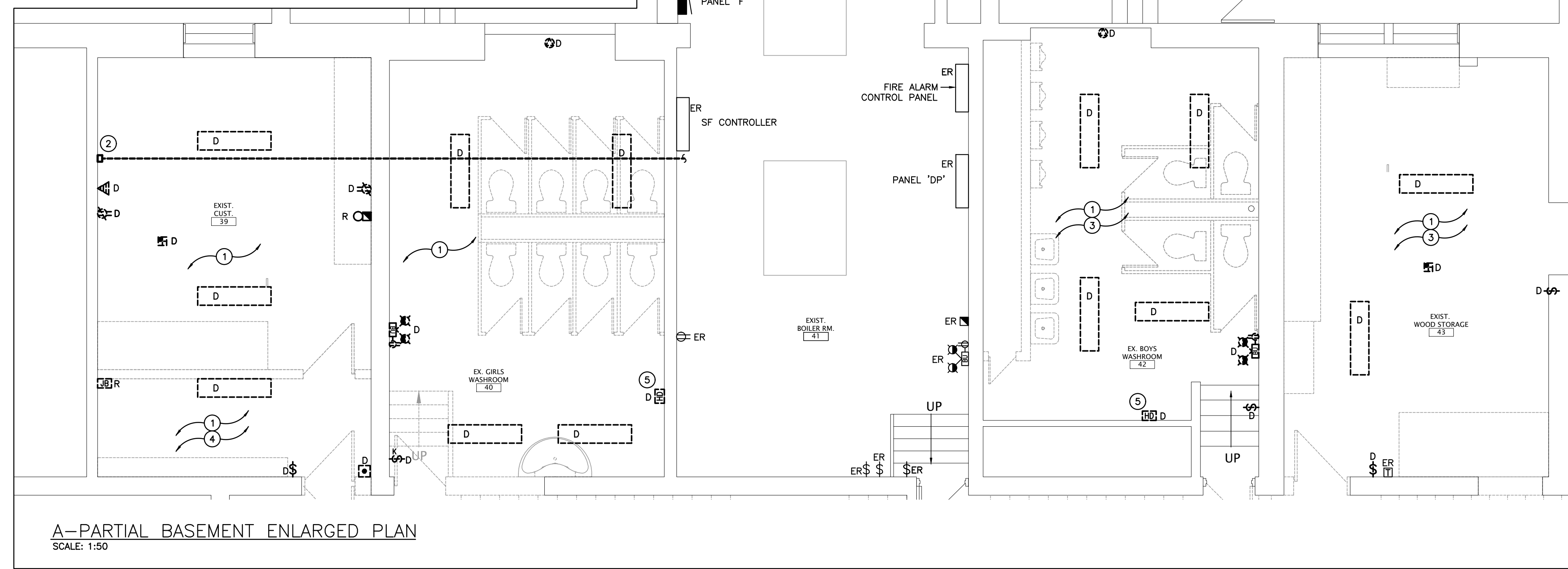
SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:
PARTIAL DISTRIBUTION RISER
AND PANEL SCHEDULES

PROJECT NO: A20002.7
SCALE: AS NOTED
DRAWN: TM
CHECKED: JJ.
DATE: FEB 2021
DRAWING NO: REV.
E103



PARTIAL BASEMENT PLAN – DEMOLITION
SCALE: 1:100



A-PARTIAL BASEMENT ENLARGED PLAN
SCALE: 1:50

GENERAL DEMOLITION NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT, UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED, UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

SPECIFIC DEMOLITION NOTES

- 1 INDICATED FIXTURES AND CONTROLS TO BE REMOVED. EXISTING CIRCUIT TO REMAIN FOR CONNECTION TO NEW FIXTURES AND CONTROLS, REFER TO RENOVATION PLANS.
- 2 INDICATED FIRE RATED CONDUIT AND TERMINATIONS (TOTAL OF 8) ARE TO BE RELOCATED TO NEW CUSTODIAN OFFICE. EXTEND FEEDERS AS REQUIRED.
- 3 EXISTING FIRE RATED WIRING AND FEEDER ALONG CEILING TO REMAIN.
- 4 WITHIN AREA ALL JUNCTION BOXES AND FEEDER TO BE RELOCATED TO NEW CUSTODIAN OFFICE. EXTEND FEEDERS AS REQUIRED. REFER TO RENOVATION PLAN FOR FURTHER INFORMATION.
- 5 INDICATES EXISTING HAND DRYER TO BE REMOVED. ELECTRICAL CONTRACTOR IS TO MAINTAIN EXISTING CIRCUIT AND RECONNECT TO NEW HAND DRYER, REFER TO RENOVATION PLAN FOR FURTHER INFORMATION.
- 6 INDICATED FIXTURES TO BE REMOVED. EXISTING CIRCUIT AND LIGHTING CONTROLS TO CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES. DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.

ISSUED FOR PERMIT AND TENDER	
2	21.04.23
1	21.04.06
NO.	DATE
REVISION	

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
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PROJECT NORTH

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Website: deiasociates.ca
Project Number: 20032

REGISTERED PROFESSIONAL ENGINEER
J. JACKSON
4/22/21
PROVINCE OF ONTARIO

WATERLOO REGION
UNIVERSITY SCHOOL BOARD

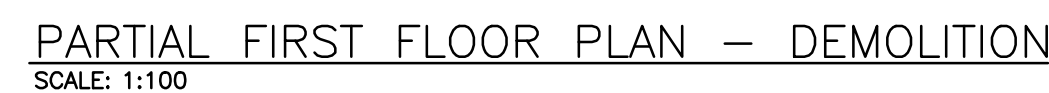
SUNNYSIDE
PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
Kitchener, ON
N2A 1B6

DRAWING TITLE:
**BASEMENT DEMOLITION
PLANS**

PROJECT NO: A20002.7	SCALE: AS NOTED
DRAWN: TM	DRAWING NO. REV.
CHECKED: JJ.	E201
DATE: FEB 2021	

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DUE AND WIRING TO SUIT UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL DEVICES ARE TO BE REMOVED AND REINSTALL ALL CEILING MOUNTED DEVICES, TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.



DRAWING TITLE

PROJECT NO:
A20002.7

DRAWN:

TM

CHECKED:

J.J.

DATE: _____

FEB 2021

AS NOTED

DRAWING NO:	R
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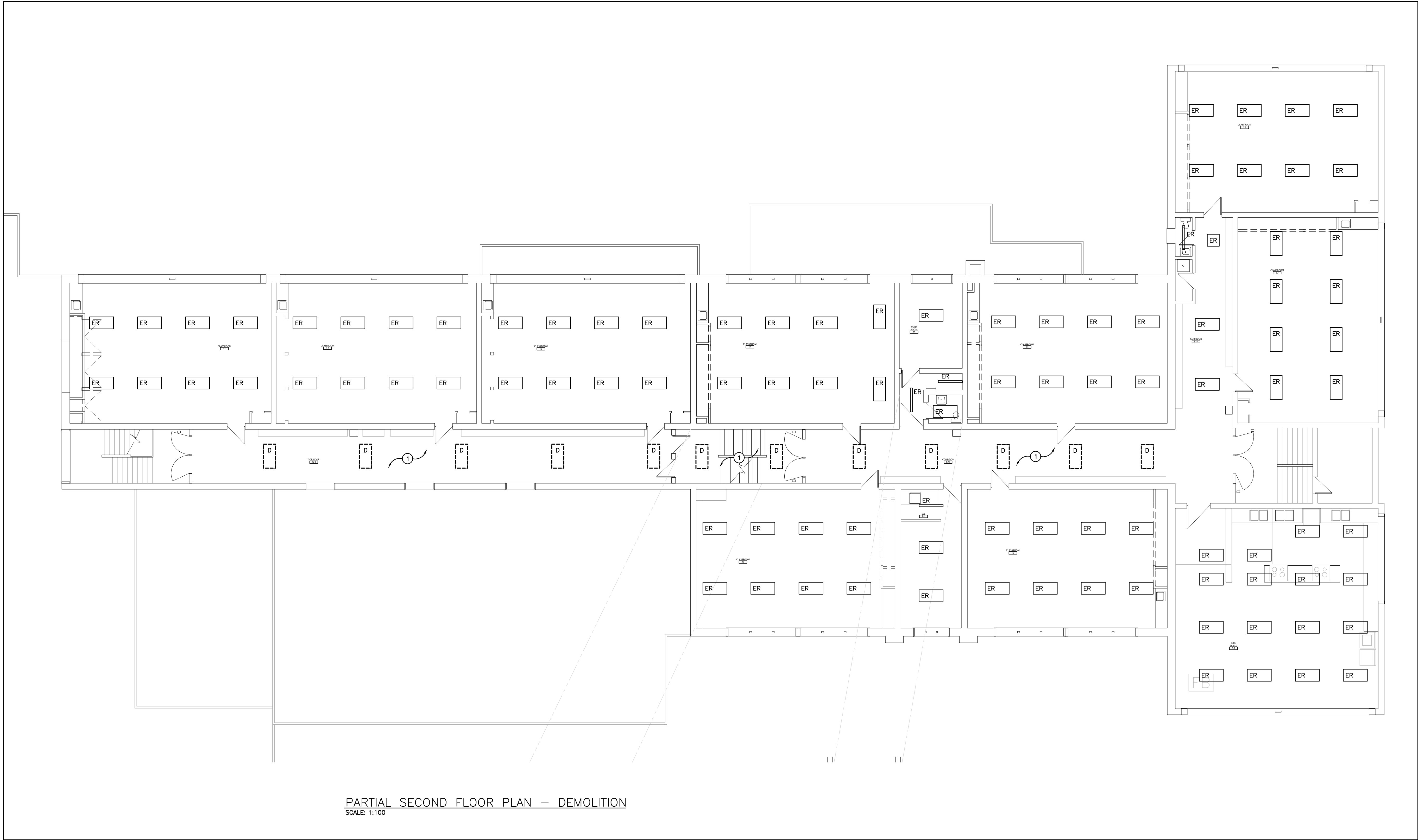
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5222

E202

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[illegible]



PARTIAL SECOND FLOOR PLAN – DEMOLITION
SCALE: 1:100

GENERAL DEMOLITION NOTES

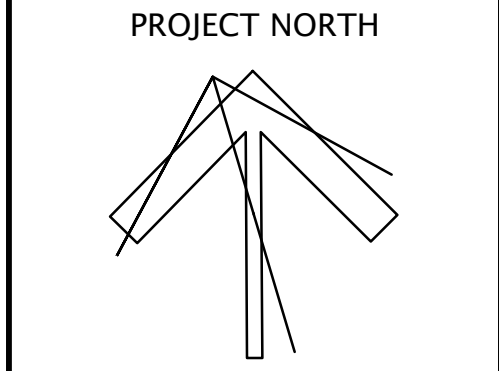
- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT, UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

SPECIFIC DEMOLITION NOTES

- 1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES. DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.

NO.	DATE	REVISION
1	21.04.23	ISSUED FOR PERMIT AND TENDER
2	21.04.26	ISSUED FOR CLIENT REVIEW

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
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Project Number: 20192



WATERLOO REGION DISTRICT SCHOOL BOARD
SUNNYSIDE PUBLIC SCHOOL
HVAC & WASHROOM UPGRADE
1042 Weber Street E.
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N2A 1B6

DRAWING TITLE: SECOND FLOOR DEMOLITION PLANS			
PROJECT NO: A20002.7	SCALE: AS NOTED		
DRAWN: TM	DRAWING NO:	E203	REV.
CHECKED: JJ.			
DATE: FEB 2021			



GENERAL RENOVATION NOTES

- 'ER' INDICATES EXISTING ITEM TO REMAIN.
- 'R' INDICATES EXISTING ITEM IN RELOCATED POSITION.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

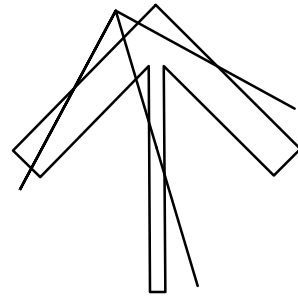
SPECIFIC RENOVATION NOTES

- 1 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND EXISTING CONTROLS MADE DURING DEMOLITION. CONTRACTOR IS TO SUPPLY AND INSTALL ANY ADDITIONAL SUPPORT REQUIRED FOR NEW FIXTURES. REFER TO SPECIFICATIONS.

ISSUED FOR PERMIT AND TENDER	
1	21.04.06
ISSUED FOR CLIENT REVIEW	
2	21.04.23
NO. DATE: REVISION	

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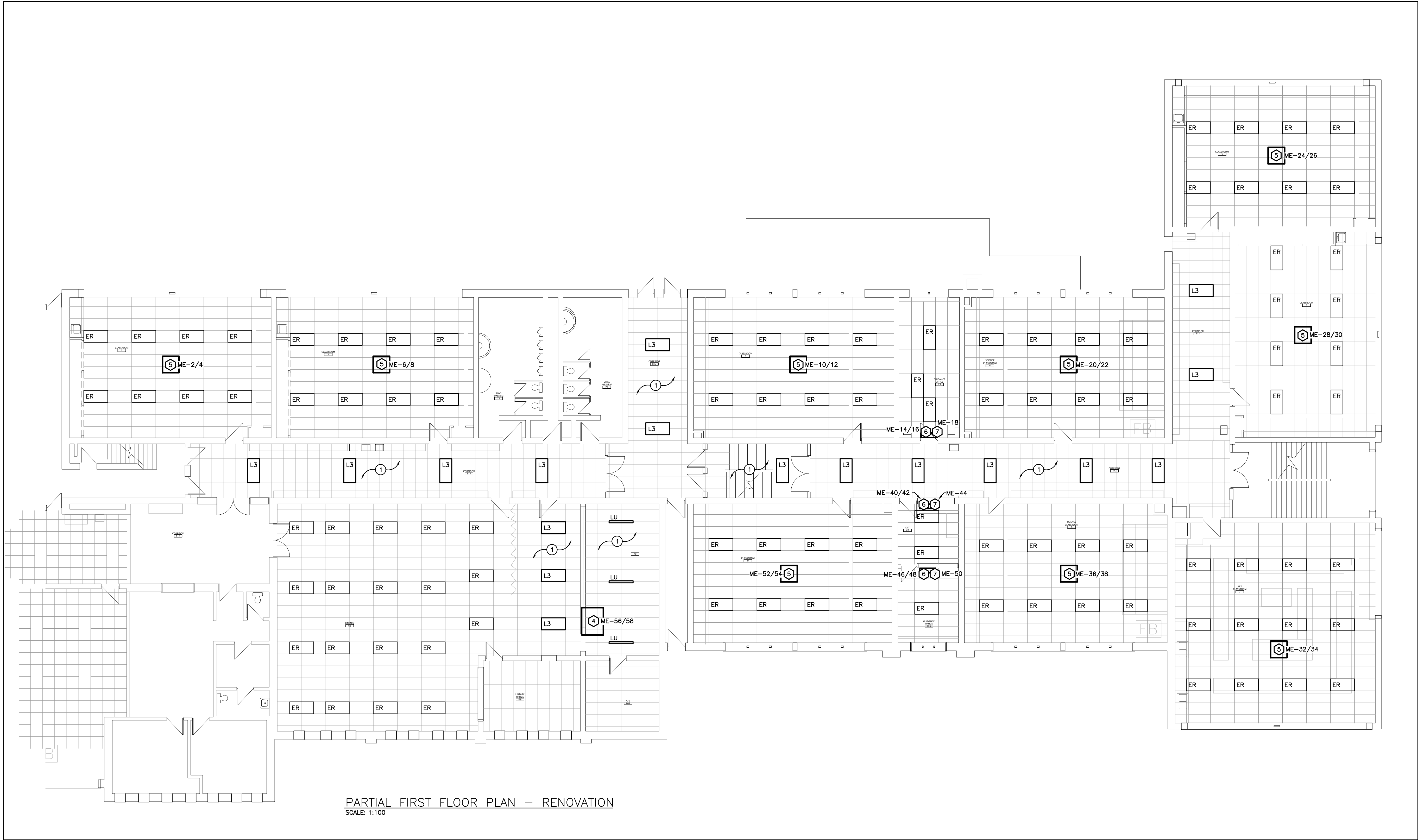


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PUBLIC SCHOOL
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DRAWING TITLE:

BASEMENT
RENOVATION PLANS

PROJECT NO:	SCALE:
A20002.7	AS NOTED
DRAWN:	DRAWING NO:
TM	
CHECKED:	REV.
JJ.	E301
DATE:	
FEB 2021	



PARTIAL FIRST FLOOR PLAN – RENOVATION
SCALE: 1:100

GENERAL RENOVATION NOTES

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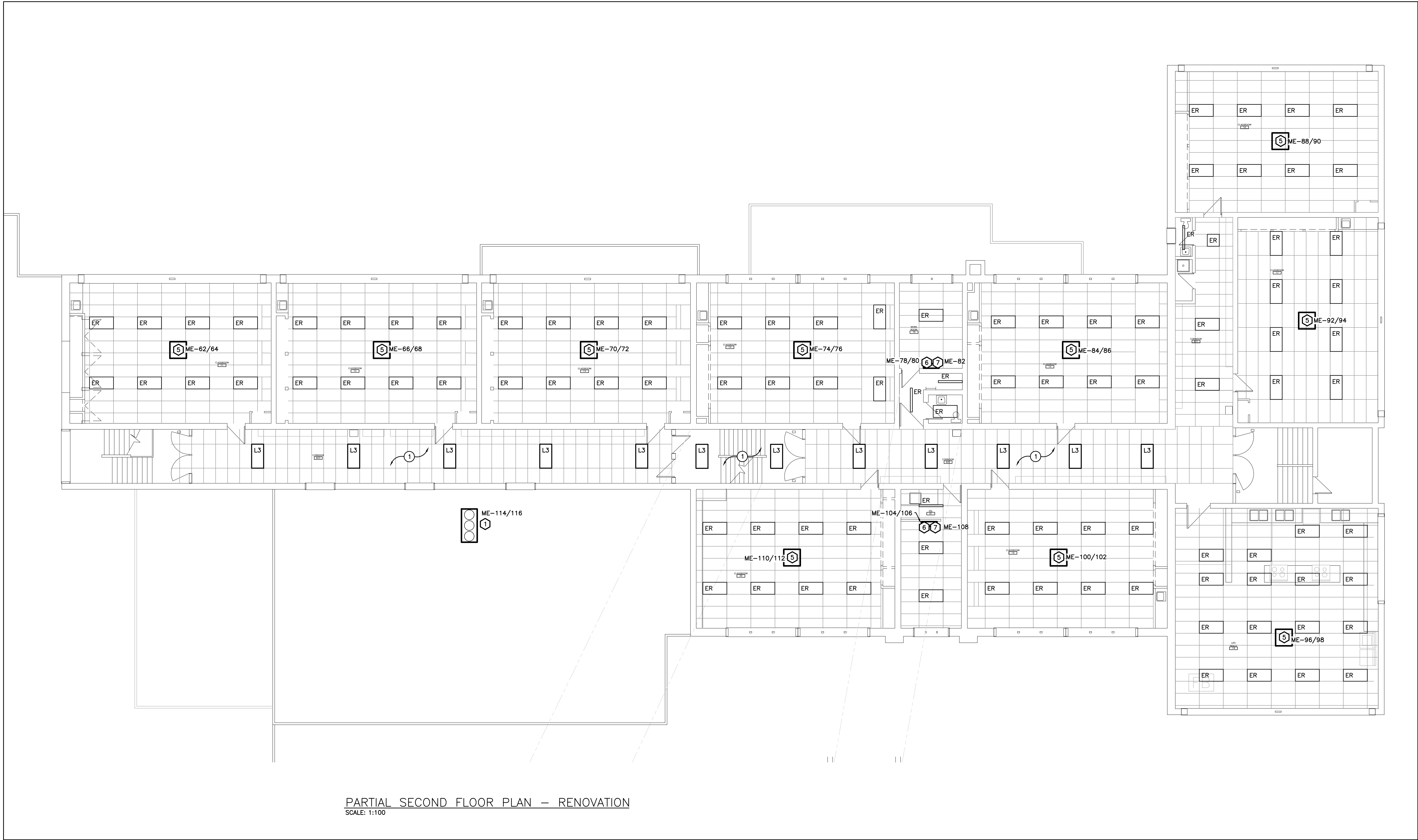
PROJECT NORTH

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Phone: 519-755-3555 Fax: 519-755-4555
Website: deiassociates.ca
Project Number: 20202

REGISTERED PROFESSIONAL ENGINEER
J. JACKSON
4/22/21
PROVINCE OF ONTARIO

WATERLOO REGION
UNIVERSITY SCHOOL BOARD
SUNNYSIDE
PUBLIC SCHOOL
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DRAWING TITLE: FIRST FLOOR RENOVATION PLANS			
PROJECT NO: A20002.7	SCALE: AS NOTED		
DRAWN: TM	DRAWING NO:	E302	REV.
CHECKED: JJ.			
DATE: FEB 2021			



PARTIAL SECOND FLOOR PLAN – RENOVATION
SCALE: 1:100

GENERAL RENOVATION NOTES

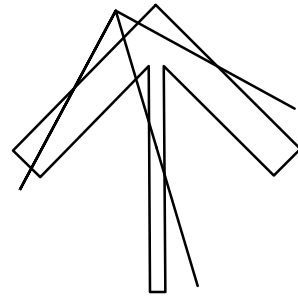
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- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

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DRAWING TITLE:

SECOND FLOOR
RENOVATION PLANS

PROJECT NO:

A20002.7

DRAWN:

TM

CHECKED:

JJ.

DATE:

FEB 2021

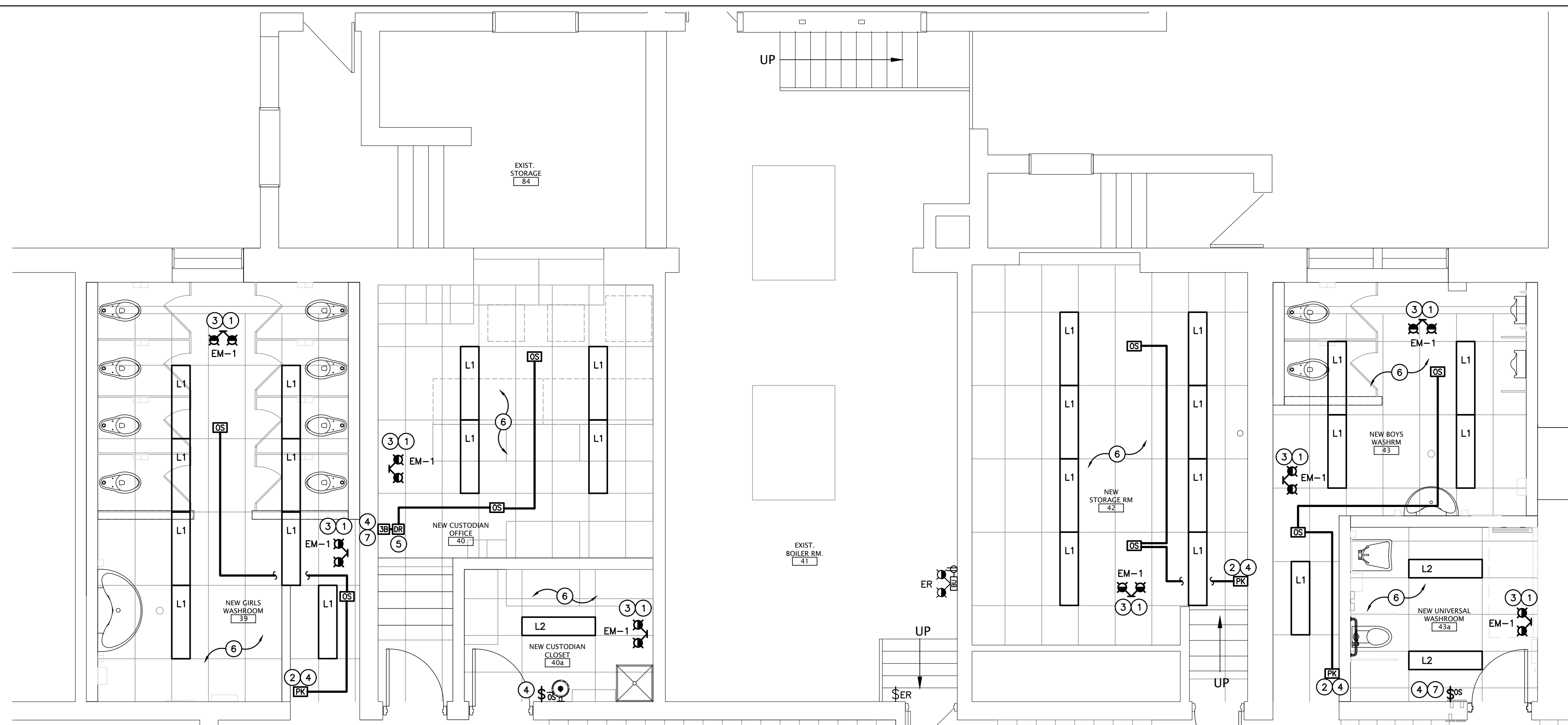
SCALE:

AS NOTED

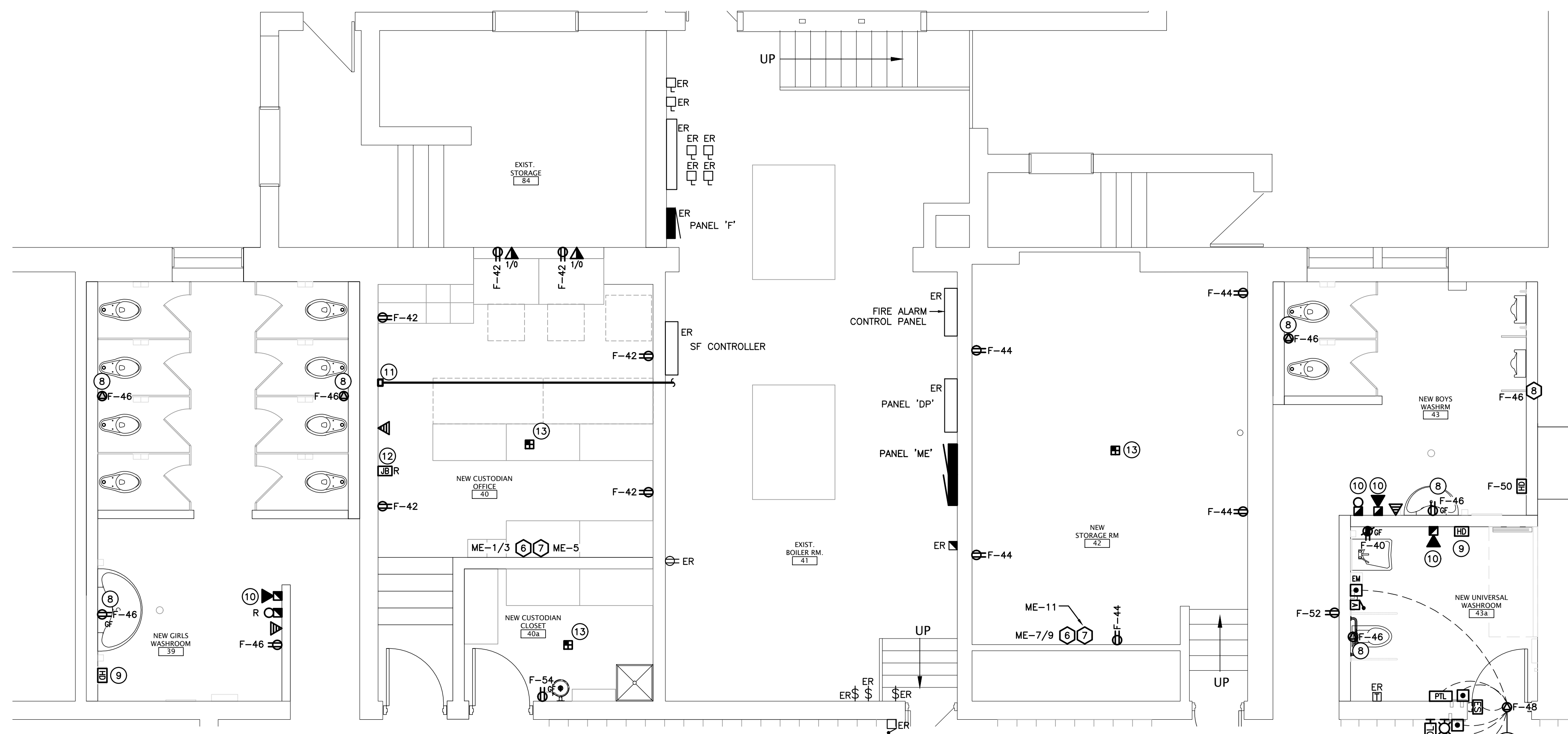
DRAWING NO:

REV.

E303



LIGHTING



POWER AND SYSTEMS

A-PARTIAL LOWER LEVEL - RENOVATION PLAN
SCALE: 1:50

GENERAL RENOVATION NOTES

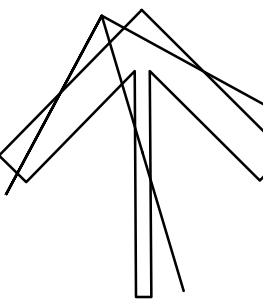
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- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN.
- REVISE PANEL DIRECTORIES TO SUIT CHANGES (TYPED).

SPECIFIC RENOVATION NOTES

- 1 INDICATED DEVICE IS TO BE CEILING MOUNTED. PROVIDE ADEQUATE SUPPORT.
- 2 INDICATES POWER PACK INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
- 3 CONNECT NEW EMERGENCY BATTERY UNIT TO UNSWITCHED SIDE OF EXISTING LIGHTING BRANCH CIRCUIT WHICH SERVES THIS AREA.
- 4 RE-WORK EXISTING LIGHTING CIRCUIT WITHIN THIS ROOM TO SUIT NEW SWITCHING ARRANGEMENT/CONTROLS.
- 5 INDICATES DIGITAL ROOM CONTROLLER INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
- 6 CONNECT NEW LIGHTING FIXTURES IN THIS AREA TO EXISTING LIGHTING BRANCH CIRCUIT AND NEW CONTROLS AS NOTED.
- 7 INDICATES NEW WALL MOUNT STATION DEVICE. FISH PARTITION OR FEED TO SURFACE BOX WITH WIREMOLD PER SPECS.
- 8 INDICATES 120V FEED TO 24VDC STEP DOWN TRANSFORMER MOUNTED ABOVE CEILING OR AT A HIGH LEVEL FOR AUTOMATIC PLUMBING FIXTURE(S). COORDINATE WITH MECHANICAL TRADE.
- 9 CONNECT HAND DRYER TO EXISTING CIRCUIT, EXTEND CIRCUIT AS REQUIRED.
- 10 INDICATES NEW FIRE ALARM DEVICES TO BE INSTALLED ON SIGNAL CIRCUIT. CONTRACTOR IS TO PROVIDE BOOSTER MODULE FOR NEW SIGNAL DEVICE(S).
- 11 INDICATES NEW LOCATION OF FIRE RATED CONDUIT AND TERMINATIONS (TOTAL OF 8).
- 12 INDICATES LOCATION OF NEW JUNCTION BOX AND ASSOCIATED FEEDERS REMOVED FROM OLD CUSTODIAN ROOM.
- 13 INDICATES NEW HEAT DETECTOR TO BE CONNECTED TO EXISTING INITIATING CIRCUIT.

ALL RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE
PER 2019 OESC CODE UPDATES - RULE 26-706.

PROJECT NORTH



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DRAWING TITLE:
ENLARGED LOWER LEVEL -
RENOVATION PLAN

PROJECT NO: A20002.7	SCALE: AS NOTED
DRAWN: TM	DRAWING NO. REV.
CHECKED: JJ.	E401
DATE: FEB 2021	

GENERAL NOTES

- ## BASIC MATERIALS

- ### DRAW BREAKDOWN

- ## WIRING DEVICES

- 1.16 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.
- 1.17 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES.
- 1.18 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
- 1.19 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

FIRE ALARM SYSTEMS

- ### EQUIPMENT

1. HAND DRYERS
- .1 HAND DRYERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION WITH THE FOLLOWING FEATURES:
- .1 SURFACE MOUNTING.
- .2 FIXED NOZZLE.
- .3 WHITE FINISH WITH AUTOMATIC ACTIVATION.
- .4 RATING OF 1000W, 120V, THREE SPEED, SET TO MEDIUM SPEED AND LOW HEAT.
- .5 WORLD DRYER CAT. #SMARTDRI
- .6 APPROVED ALTERNATE: AMERICAN DRYER CAT. #GXT

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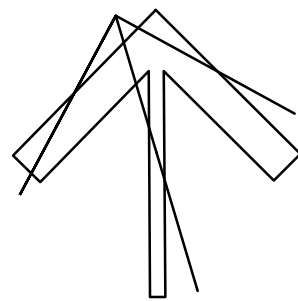
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DRAWING TITLE

ELECTRICAL SPECIFICATIONS

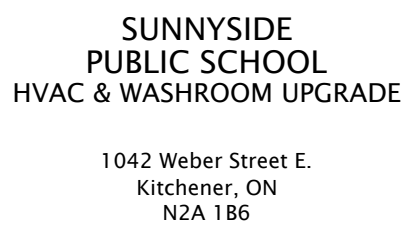
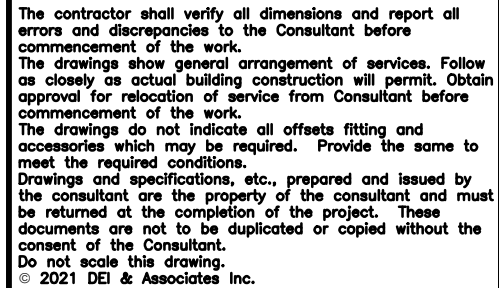
PROJECT NO: A20002.7	SCALE: AS NOTED	
DRAWN: TM	DRAWING NO: E501	REV.
CHECKED: JJ.		
DATE: FEB 2021		

FIXTURES ARE TO BE PROVIDED AS NOTED IN THE LIGHT FIXTURE SCHEDULE C/W THE FOLLOWING FEATURES:

- ## SHOP DRAWINGS AND PRODUCT DATA

- ## FIRESTOPPING

1. FIRESTOPPING MATERIAL AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN CONDUITS, DUCTS, AND ADJACENT FIRE SEPARATION.
 2. PROVIDE MATERIALS AND SYSTEMS CAPABLE OF MAINTAINING EFFECTIVE BARRIER AGAINST FLAME, SMOKE, AND GASES.
 3. COMPLY WITH THE REQUIREMENTS OF CAN4-S115-M35, AND DO NOT EXCEED OPENING SIZE FOR WHICH THEY HAVE BEEN TESTED.
 4. SYSTEMS TO HAVE AN F OR FT RATING (AS APPLICABLE) NOT LESS THAN THE FIRE PROTECTION RATING REQUIRED FOR CLOSURES IN A FIRE SEPARATION. PROVIDE "FIREWRAP" BLANKET AROUND SERVICES PENETRATING FIREWALLS.
 5. EXTENT OF BLANKET MUST CORRESPOND TO ULC RECOMMENDATIONS. IN GENERAL WRAP INDIVIDUAL CONDUITS WITH APPROVED FIREWRAP MATERIALS ON EACH SIDE OF FIREWALL. REFER TO ARCHITECTURAL DRAWINGS FOR FT RATINGS. PROVIDE 1 AND/OR 2 LAYERS OF FIREWRAP WITH TRANSVERSE AND LONGITUDINAL SEAMS OVERLAPPED AND/OR BUTTED (SECOND LAYER OFFSET FROM FIRST LAYER). CUT EDGES ARE TO BE SEALED WITH ALUMINUM FOIL TAPE. PROVIDE 50 MM STAINLESS STEEL BANDING AT 200 MM INTERVALS. INSTALL FIREWRAP TO MANUFACTURERS' RECOMMENDATIONS FOR PROPER FT RATING. ACCEPTABLE MANUFACTURERS ARE 3M FIREMASTER DUCTWRAP OR APPROVED EQUAL.
 6. THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE SOLVENTS.
 7. FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND TROWEL.
 8. FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO RECEIVE FINISHES.
 9. FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.
 10. INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL AUTHORITY.
 11. SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.
 12. ACCEPTABLE MANUFACTURERS:
 - FYREESLEEVE INDUSTRIES INC.
 - GENERAL ELECTRIC PENSIL FIRESTOP SYSTEMS
 - INTERNATIONAL PROTECTIVE COATINGS CORP.
 - RECTORSEAL CORPORATION (METACAULK)
 - PROSET SYSTEMS
 - 3M
 - AD SYSTEMS
 - HILTI
 - ROYAL
- NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.



DRAWING TITLE

ELECTRICAL SPECIFICATIONS

PROJECT NO: A20002.7	SCALE: AS NOTED	
DRAWN: TM	DRAWING NO: E502	REV.
CHECKED: JJ.		
DATE: FEB 2021		