GLADYS SPEERS PS RENOVATIONS

2150 SAMWAY RD, OAKVILLE, ONTARIO L6L 2P6



REVIEWED BY OAKVILLE FIRE DEPARTMENT

FINAL INSPECTION REQUIRED BY OAKVILLE FIRE DEPARTMENT

MAINTAINED OPERATIONAL IN CONFORMANCE WITH THE ONTARIO FIRE CODE



IN COLOUR AND MARKED THEREON OR ON ATTACHED

22-111973

DATE:

REVIEWED CONSTRUCTION MUST COMFORM TO THE ONTARIO BUILDING CODE

TO ARCHITECT BEFORE PROCEEDING WITH THE WORK

2. REPORT TO ARCHITECT AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION ALL DISCREPANCIES, OMISSIONS, ERRORS, DEPARTURES FROM BUILDING BY-LAWS, O.B.C., OR GOOD PRACTICE AND POINTS CONSIDERED TO BE OF AMBIGUOUS INTENT. SO THAT THE ARCHITECT MAY, IF NECESSARY, ISSUE INSTRUCTIONS BY ADDENDA. THE ARCHITECT WILL NOT BE RESPONSIBLE FOR ORAL INSTRUCTIONS.

3. DO NOT SCALE DRAWINGS.

- 4. EXTEND, MAKE GOOD, REPAIR AND CLEAN EXISTING SUBSTRATES, FINISHES, AND COMPONENTS AS REQUIRED TO MATCH EXISTING. PROVIDE ADDITIONAL MATERIALS AND COMPONENTS AS REQUIRED. MAINTAIN CONTINUITY TO EXISTING WORK, FLUSH, PLUMB AND IN ALIGNMENT, AND WITHOUT DETRIMENTS TO VISUAL APPEARANCE. MATCH EXISTING MATERIALS AND METHODS. VARIATIONS WILL BE ACCEPTED BY ARCHITECT'S WRITTEN AUTHORIZATION ONLY, AND WHERE AUTHORIZED MUST MEET OR EXCEED QUALITY AND PERFORMANCE OF EXISTING.
- 5. PROTECT EXISTING WORK TO REMAIN AS REQUIRED. BE RESPONSIBLE FOR REPAIRS, MAKING GOOD AND CLEANING IN EVENT PROTECTION IS NOT ADEQUATE.
- S. PROTECT PUBLIC AND OTHER PRIVATE PROPERTY BEYOND IMMEDIATE WORK AREA. CONTRACTOR TO HOLD OWNER HARMLESS AGAINST ALL CLAIMS ASSOCIATED
- . MAINTAIN CONTINUITY OF ALL EXISTING FIRE SEPARATIONS, ASSEMBLIES, AND PROTECTIVE CLADDING.
- 8. ALL WORK IS TO BE PROVIDED AS COMPLETE, OPERATING SYSTEMS EXCEPT AS NOTED. PREPARE ALL EXISTING SUBSTRATES TO RECEIVE NEW FINISHES AS REQUIRED ACCORDING TO RECOMMENDATIONS OF MANUFACTURER OF NEW FINISH MATERIALS.
- IO.PROVIDE PURPOSE-MADE ALUMINUM REDUCING STRIPS AT ALL DISSIMILAR FLOOR FINISH MATERIALS, INCLUDING JUNCTION OF EXISTING MATERIALS TO NEW MATERIALS. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL.
- I1.MOVE MATERIALS AND DEBRIS FROM IMMEDIATE WORK AREA TO EXTERIOR RUBBISH BINS IN CLOSED DUST-TIGHT CONTAINERS. LOCATE BINS TO APPROVAL OF OWNER
- 12.CO-ORDINATE AND PAY FOR ALL CHARGES AND FEES ASSOCIATED WITH THE WORK TO BE PERFORMED AS LEVIED BY THE AUTHORITIES HAVING JURISDICTION. PROCURE ALL ENCROACHMENT AGREEMENTS AS REQUIRED TO PERMIT WORK TO
- 3.PROVIDE DUSTTIGHT CONSTRUCTION HOARDING. SUBMIT SHOP DRAWINGS. 4.PERFORM ALL SITE PREPARATIONS AND DEMOLITIONS AS REQUIRED TO PERMIT
- NEW WORK TO COMMENCE AND BE ACCOMMODATED. 15.THE SCHEDULE AND SEQUENCE OF THE WORK WILL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE OWNER INTENDS TO OCCUPY AND OPERATE IN THE PREMISES
- 6.PROVIDE ACCESS TO ALL CONTROL DEVICES AND MAINTAIN ACCESS TO ALL EXISTING CONTROL DEVICES WHICH ARE COVERED BY FINISHES. PROVIDE PRE-MANUFACTURED ACCESS PANELS TO SUIT. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL.
- 7.REMOVE ALL EXISTING INACTIVE AND ABANDONED MECHANICAL AND ELECTRICAL SERVICE LINES. MAKE GOOD.
- 18.CONFORM TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. 19.MAINTAIN ACCESS TO EXITS AT ALL TIMES. PROVIDE ALTERNATE EXITS IN CONSULTATION WITH AND AT APPROVAL OF BUILDING OFFICIAL. PROVIDE TEMPORARY EXIT SIGNS AND ADJUST EXISTING EXIT SIGNS AS REQUIRED. AT COMPLETION OF WORK, REMOVE TEMPORARY SIGNS AND RESTORE SIGNAGE.

INFORMATION FOR THIS SITE PLAN TAKEN FROM DOCUMENTS PROVIDED BY THE HALTON DISTRICT SCHOOL BOARD



Date 2022/01/3 CONSULTANTS COORDINATION CONSULTANTS COORDINATION 022/02/1 CLIENTS REVIEW CONSULTANTS COORDINATION CONSULTANTS COORDINATION CONSULTANTS COORDINATION 022/04/2 PRE-TENDER SUBMISSION ISSUED FOR PERMIT AND 022/05/0

PERMIT NO: 22-111973

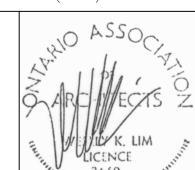
TOWN OF OAKVILLE

Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



Unit 100 - 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9 Tel:(416)591-6575 Fax:(416)591-1010



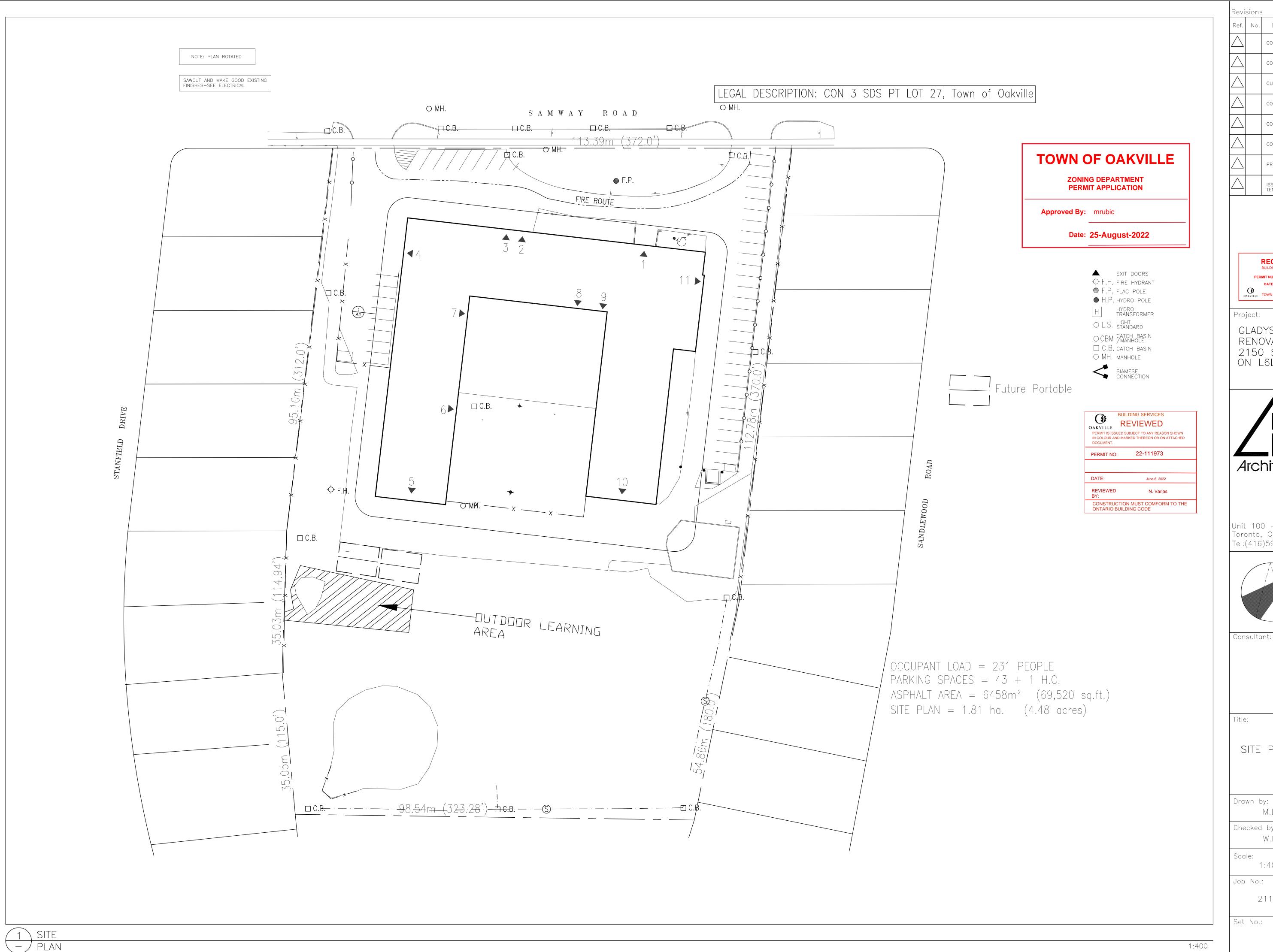
Consultant:

Title:

TITLE SHEET

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by: W.L.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
21153	
Set No.:	1 AU

N.T.S.



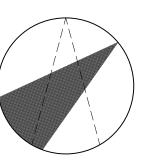
Date 2022/01/3 CONSULTANTS COORDINATION CONSULTANTS COORDINATION 2022/02/0 CLIENTS REVIEW 022/02/18 CONSULTANTS COORDINATION CONSULTANTS COORDINATION CONSULTANTS COORDINATION PRE-TENDER SUBMISSION 022/04/2 ISSUED FOR PERMIT AND TENDER 2022/05/02

> RECEIVED PERMIT NO: 22-111973 **DATE**: 05/26/2022 OAKVILLE TOWN OF OAKVILLE

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



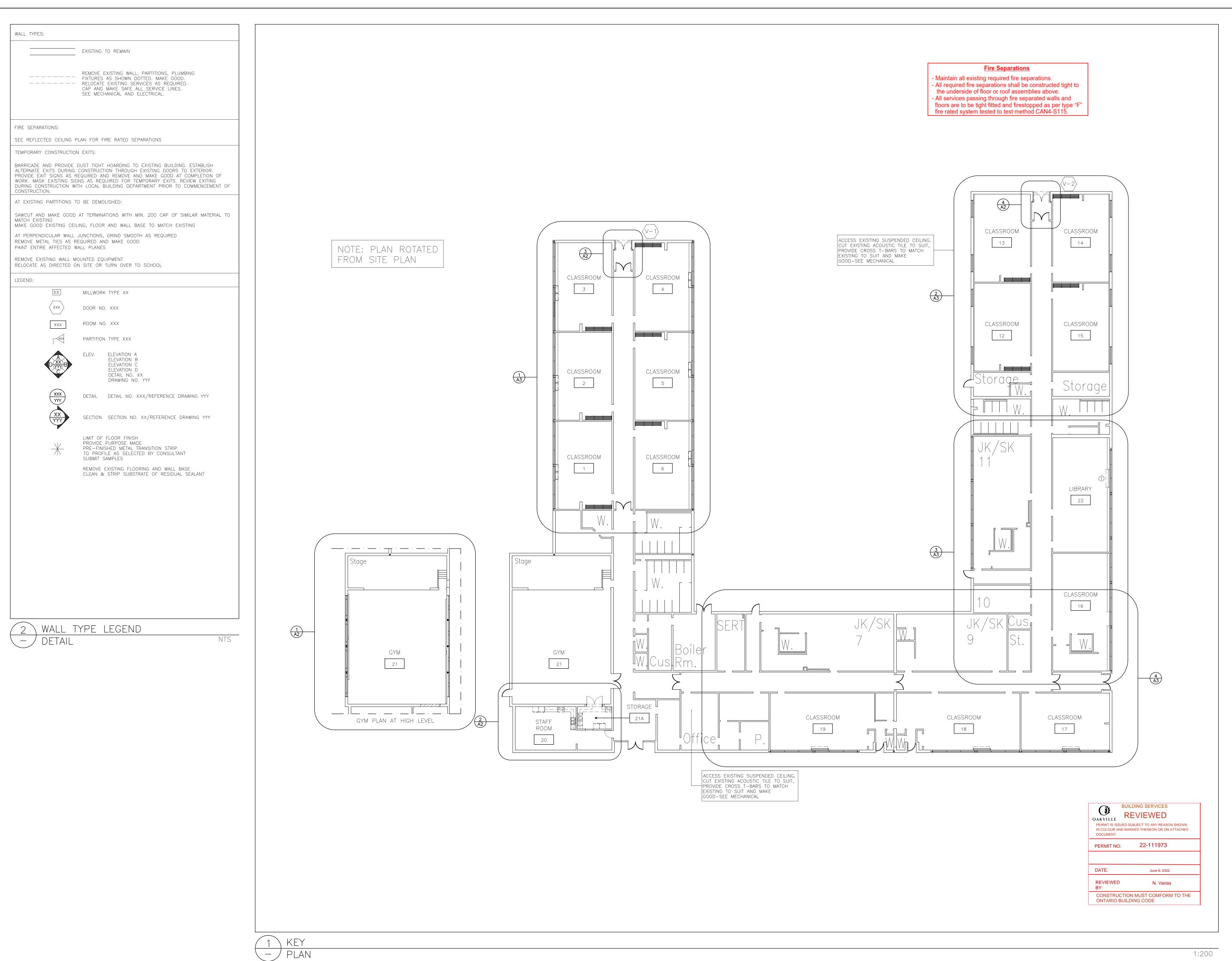
Unit 100 - 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9 Tel:(416)591-6575 Fax:(416)591-1010





SITE PLAN

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by:	Plotted:
W.L.	
Scale:	Issued:
1:400	
Job No.:	Drawing No.:
21153	
	L CD1
Set No.	



Revisions Date Description 2022/01/3 CONSULTANTS COORDINATION CONSULTANTS COORDINATION 2022/02/0 CLIENTS REVIEW 022/02/18 2022/02/2 CONSULTANTS COORDINATION CONSULTANTS COORDINATION 2022/04/1 2022/04/1 CONSULTANTS COORDINATION 022/04/2 PRE-TENDER SUBMISSION ISSUED FOR PERMIT AND TENDER 022/05/02

PERMIT NO: 22-111973

DATE: 05/26/2022

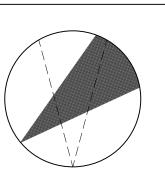
TOWN OF OAKVILLE

Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



Unit 100 — 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9 Tel:(416)591—6575 Fax:(416)591—1010



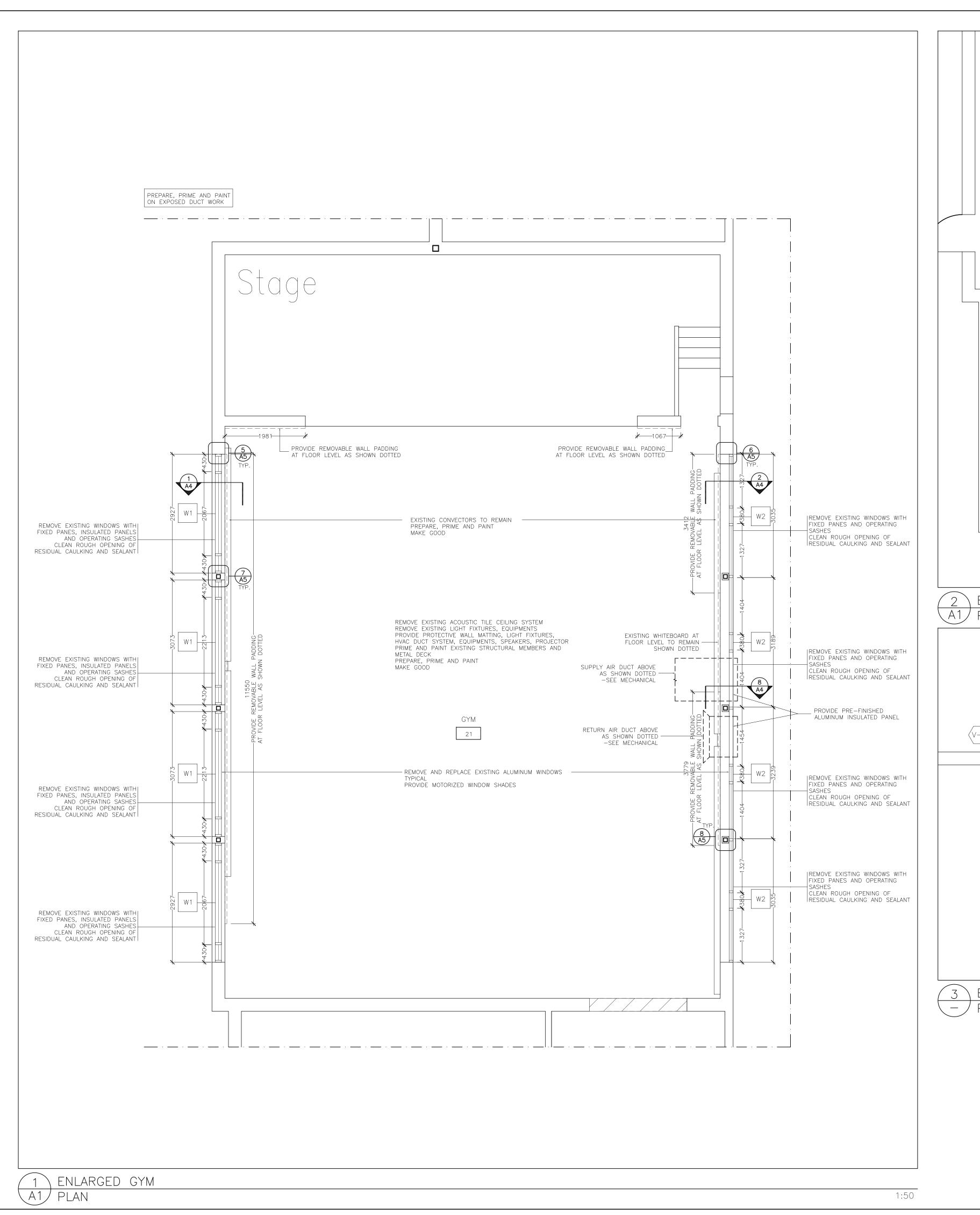


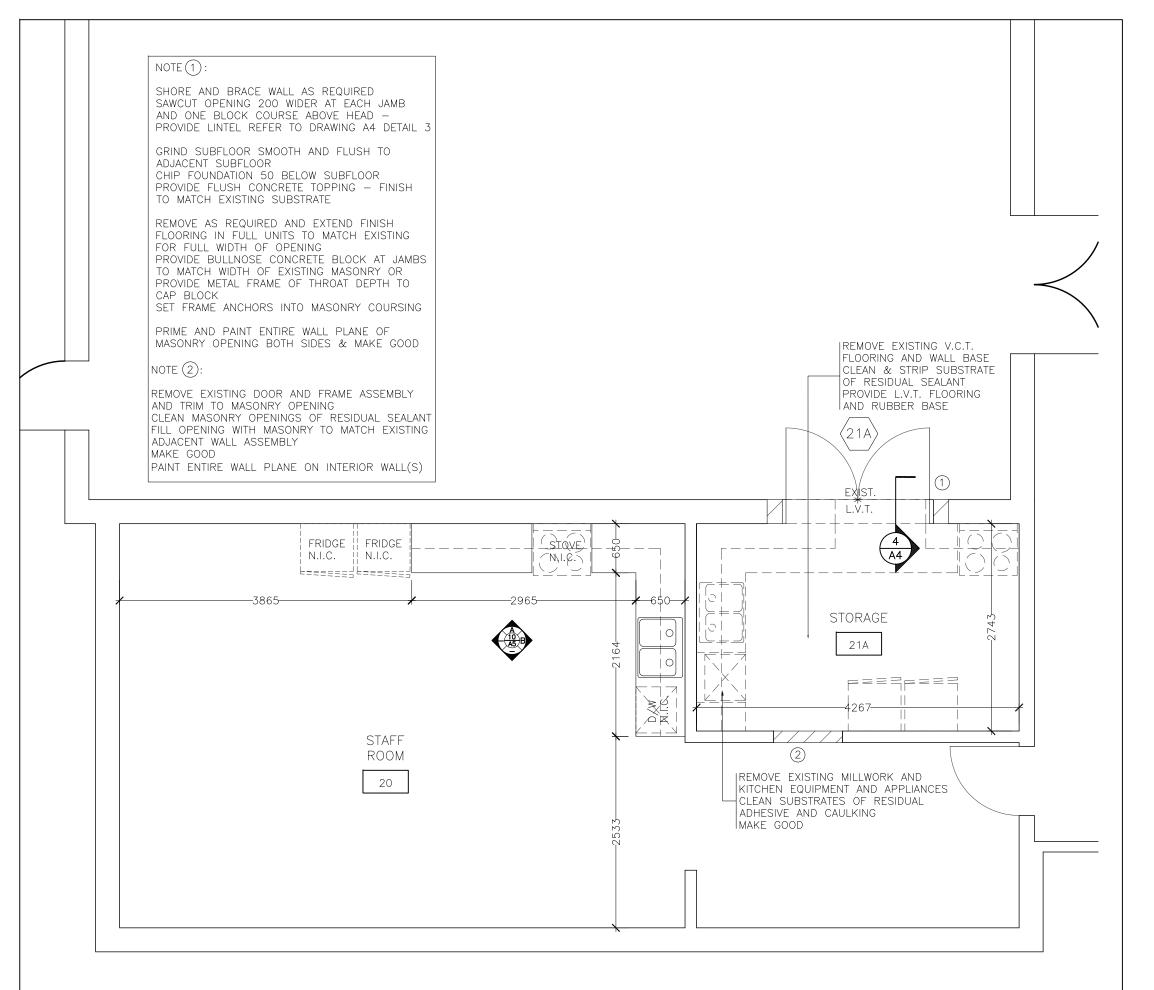
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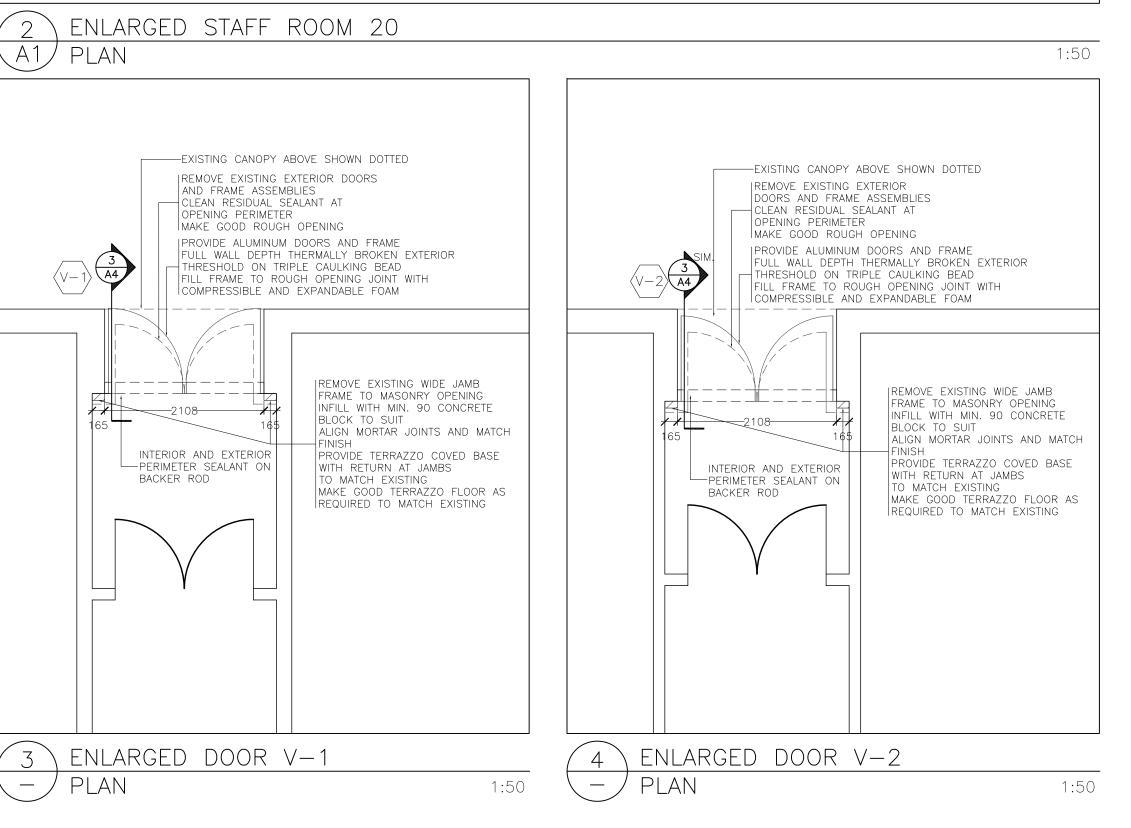
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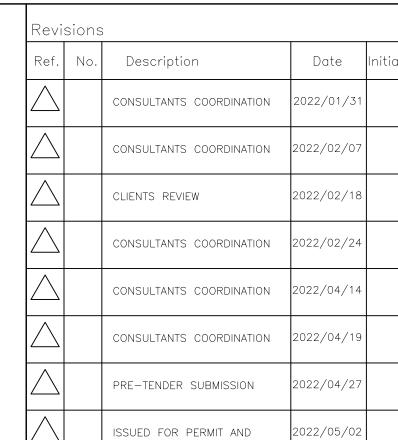
KEY PLAN, WALL TYPE LEGEND

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by: W.L.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
21153	
	\wedge 1
Set No.:	









RECEIVED
BUILDING SERVICES

PERMIT NO: 22-111973

DATE: 05/26/2022

OAKVILLE

TOWN OF OAKVILLE

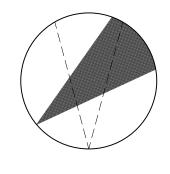
TENDER

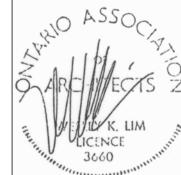
Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



Unit 100 — 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9 Tel:(416)591—6575 Fax:(416)591—1010





Consultant:

Title:

BUILDING SERVICES

June 6, 2022

N. Varias

PERMIT IS ISSUED SUBJECT TO ANY REASON SHOWN IN COLOUR AND MARKED THEREON OR ON ATTACHED

CONSTRUCTION MUST COMFORM TO THE

PERMIT NO: 22-111973

ONTARIO BUILDING CODE

OAKVILLE

DOCUMENT.

DATE:

REVIEWED

ENLARGED PLANS

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by: W.L.	Plotted:
Scale: 1:50	Issued:
Job No.:	Drawing No.:
21153	
Set No.:	- A2



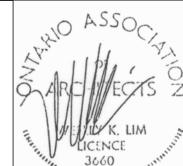
Date 2022/04/1 CONSULTANTS COORDINATION 2022/04/27 PRE-TENDER SUBMISSION 2022/05/02 ISSUED FOR PERMIT AND

> BUILDING SERVICES REVIEWED PERMIT IS ISSUED SUBJECT TO ANY REASON SHOWN IN COLOUR AND MARKED THEREON OR ON ATTACHED PERMIT NO: 22-111973 June 6, 2022 N. Varias CONSTRUCTION MUST COMFORM TO THE ONTARIO BUILDING CODE

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE,

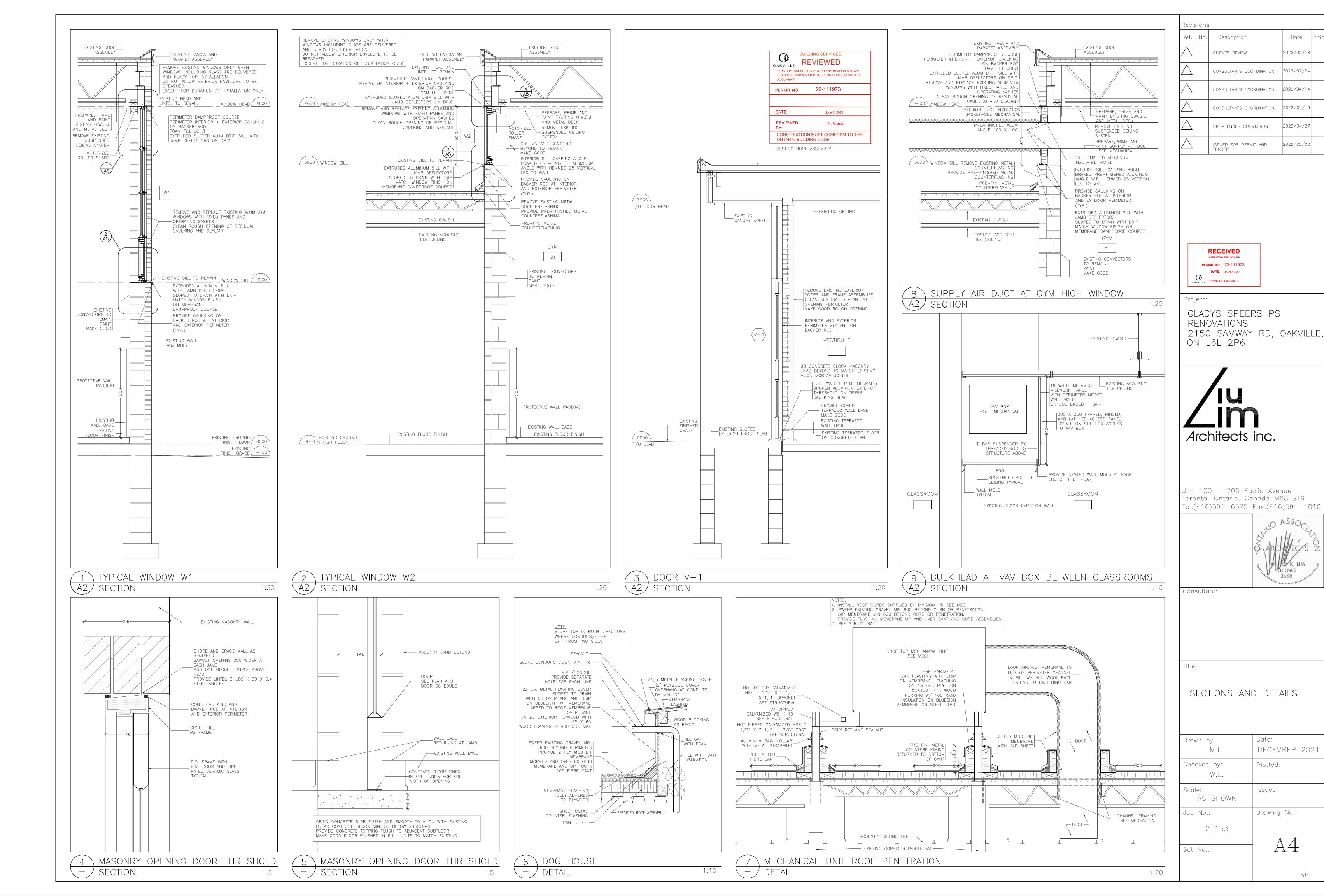


Unit 100 - 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9



ENLARGED PLANS

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by:	Plotted:
W.L.	
Scale:	Issued:
1:100	
Job No.:	Drawing No.:
21153	
Set No.:	



Date

022/02/1

2022/02/2

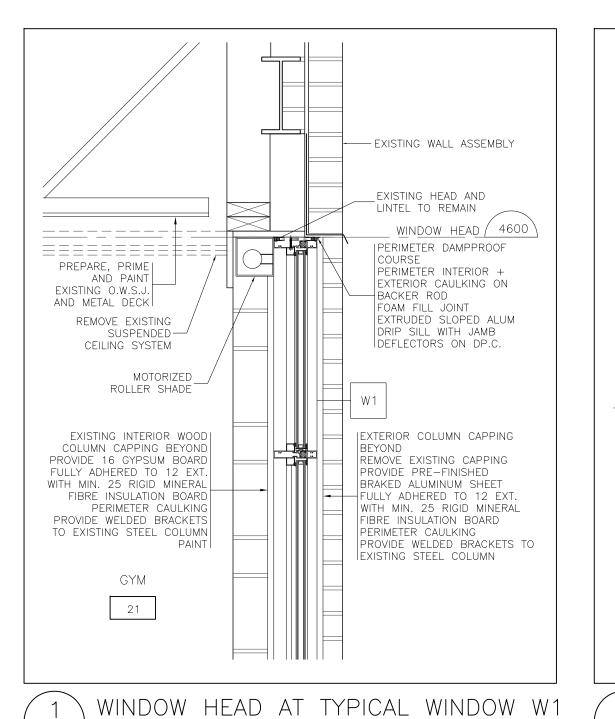
2022/04/1

2022/04/1

022/04/2

022/05/0

LICENCE



EXTRUDED ALUM. FRAME
W/ INSULATED GLAZING INTERIOR SILL CAPPING

W/ INSULATED GLAZING
INT. – 6MM CLEAR FLOAT
GLASS WITH LOW

BRAKED PRE-FINISHED

EXTRUDED ALUM. SILL

W/ JAMB DEFLECTORS

MATCH WINDOW FINISH

PERIMETER DAMPPROOF COURSE PERIMETER INTERIOR + EXTERIOR

EXTRUDED SLOPED ALUM DRIP SILL

WITH JAMB DEFLECTORS ON DP.C.

CAULKING ON BACKER ROD

FOAM FILL JOINT

WINDOW JAMB AT TYPICAL WINDOW W2

SLOPED TO DRAIN W/ DRIP

(A2/ PLAN

ALUMINUM ANGLE WITH

HEMMED 25 VERTICAL

LEG TO WALL

GLASS WITH LOW

EXT. - 6MM CLEAR

TEMPERED GLASS

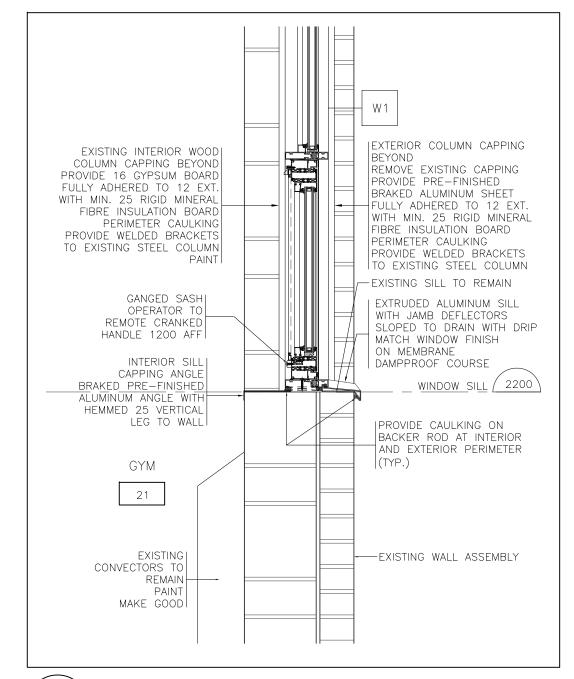
E COATING

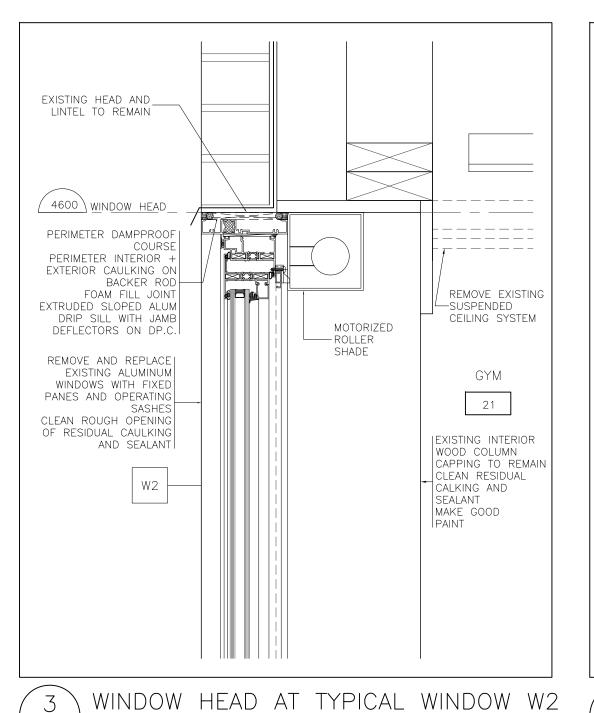
| W2 |

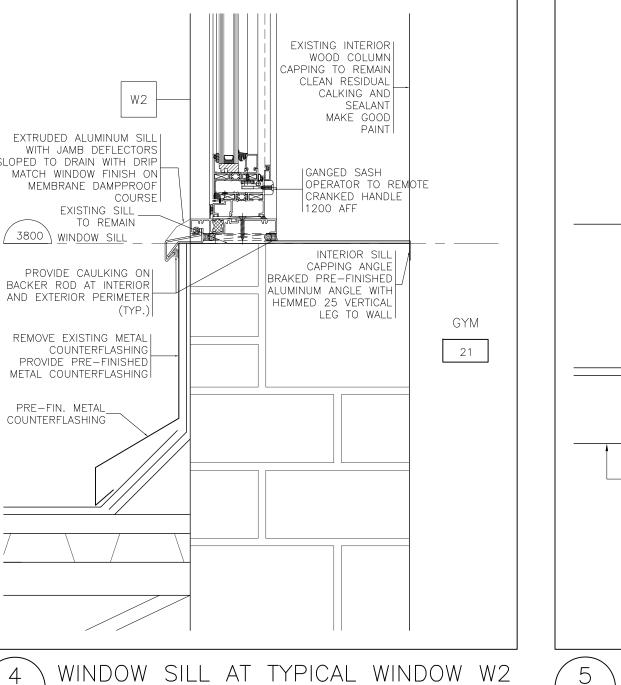
A4 DETAIL

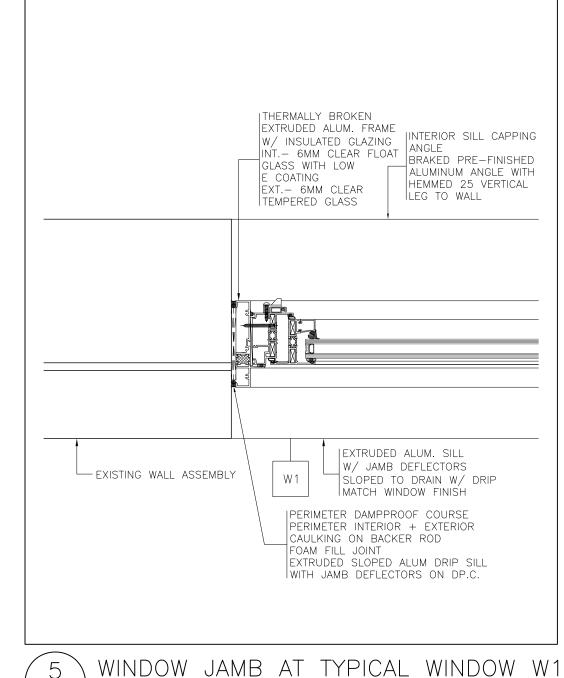
EXISTING WALL ASSEMBLY

A2 PLAN









BUILDING SERVICES

REVIEWED

22-111973

June 6, 2022

N. Varias

PERMIT IS ISSUED SUBJECT TO ANY REASON SHOWN

IN COLOUR AND MARKED THEREON OR ON ATTACHED

CONSTRUCTION MUST COMFORM TO THE

ONTARIO BUILDING CODE

OAKVILLE

DOCUMENT.

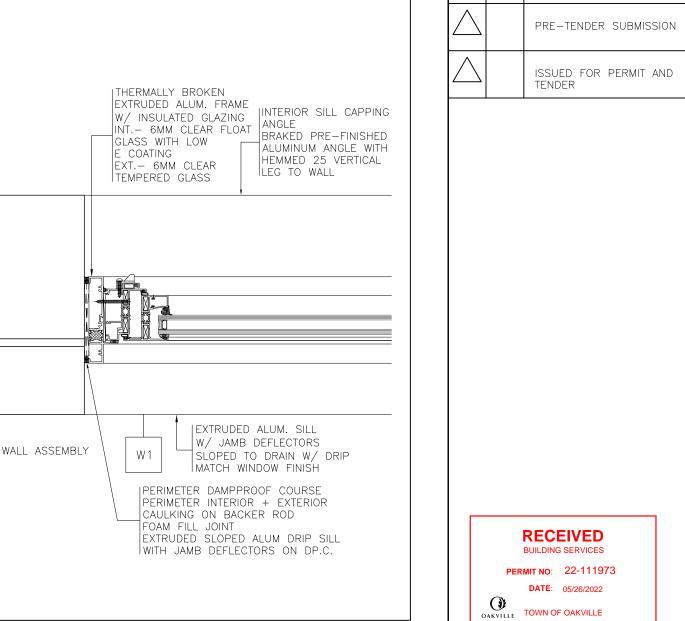
DATE:

REVIEWED

PERMIT NO:

A2/PLAN

1:10



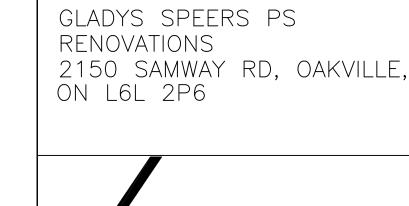
Revisions

Description

Date

022/04/2

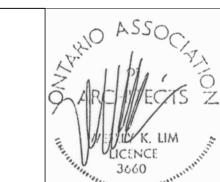
022/05/02



Project:



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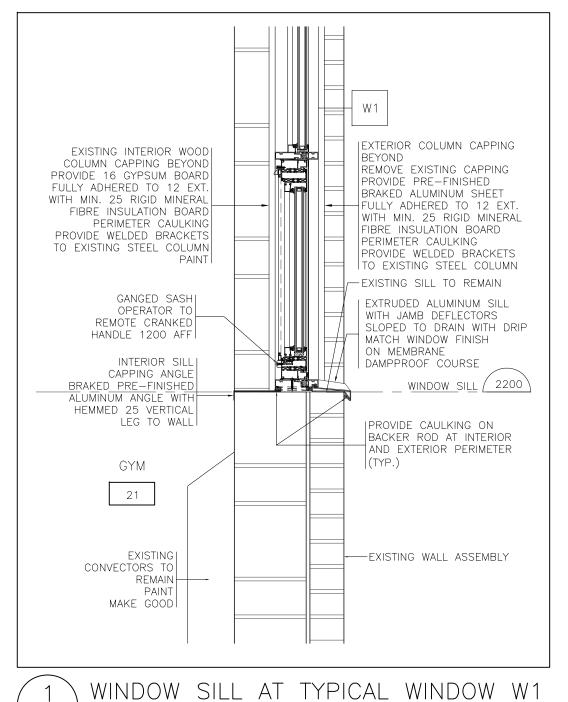


Consultant:

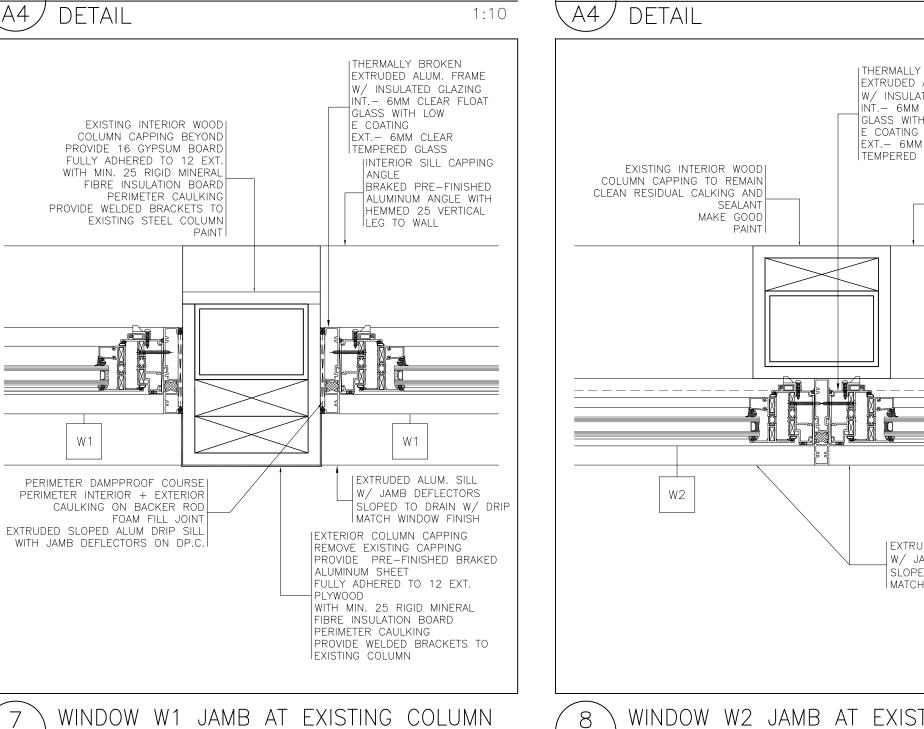
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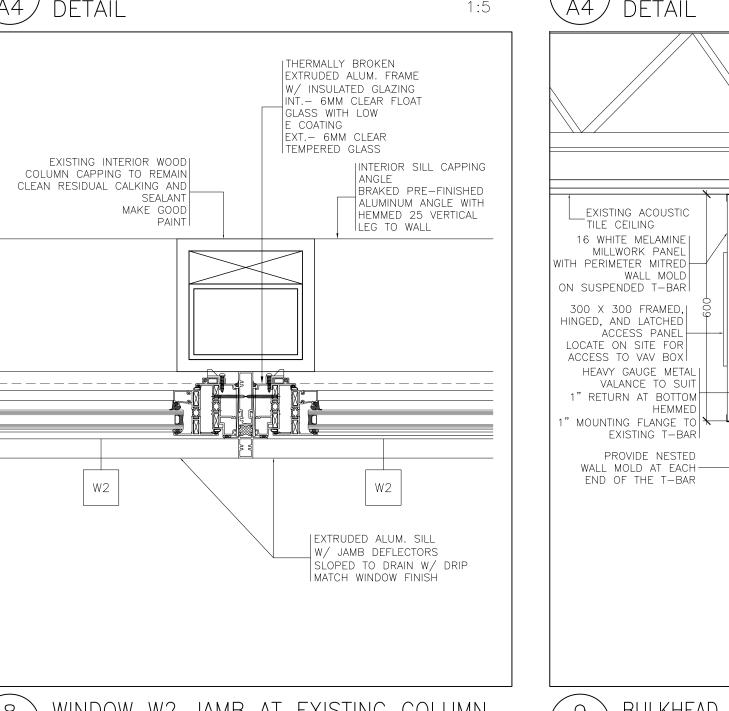
SECTIONS AND DETAILS

Drawn by:	Date:
M.L.	DECEMBER 2021
Checked by: W.L.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
21153	
Set No.:	- A5

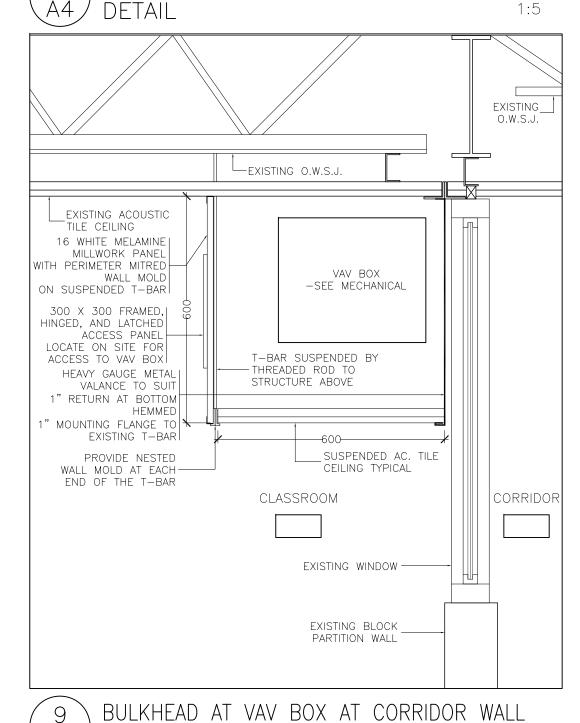






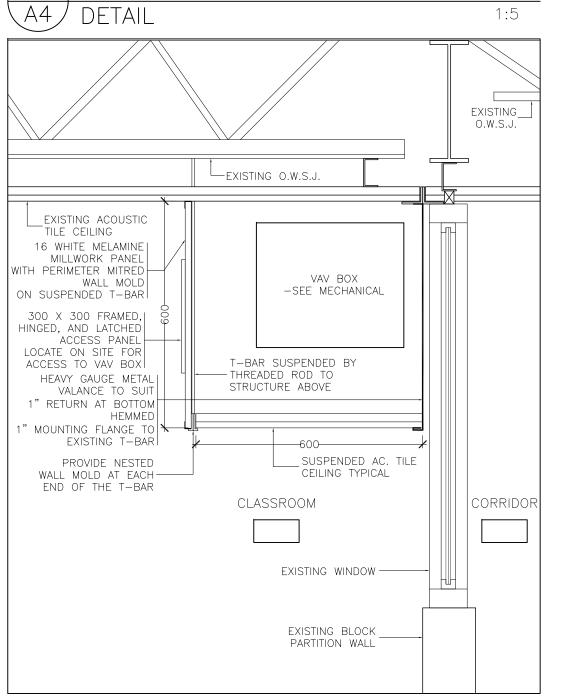


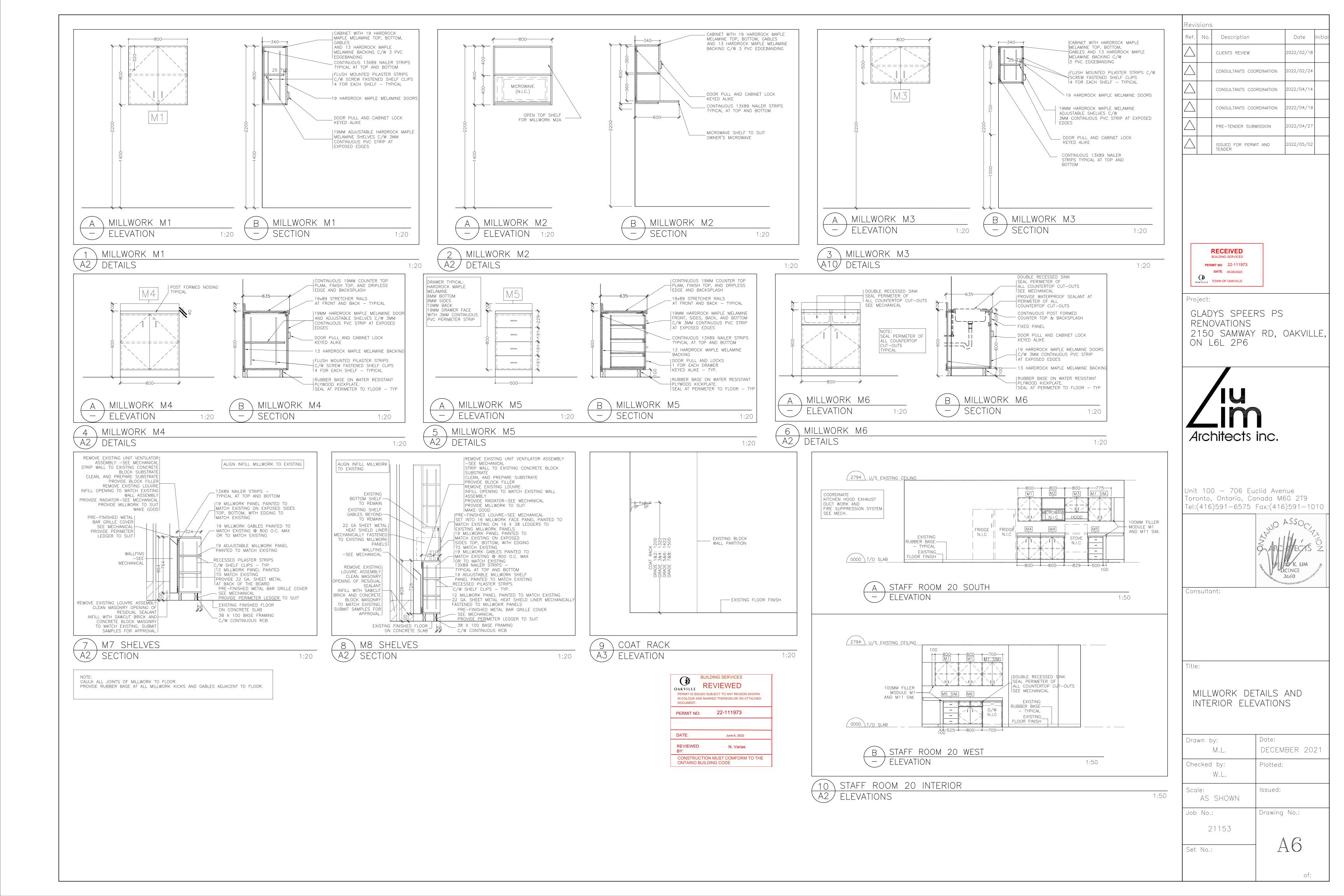


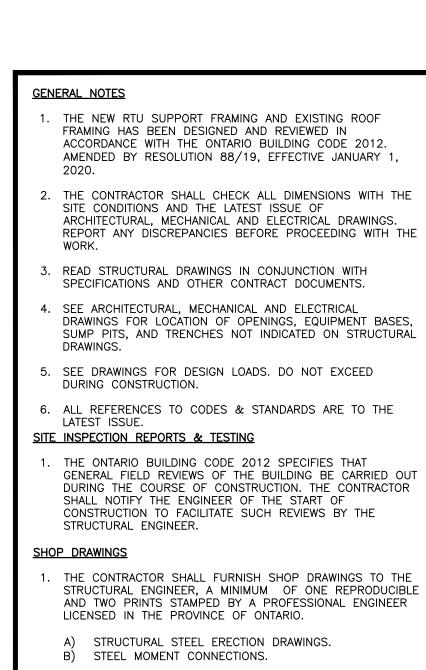


SECTION

、A2丿







1. THE ONTARIO BUILDING CODE 2012 SPECIFIES THAT GENERAL FIELD REVIEWS OF THE BUILDING BE CARRIED OUT DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE START OF CONSTRUCTION TO FACILITATE SUCH REVIEWS BY THE

STRUCTURAL METAL

- 1. CONFORM TO CSA STANDARD CAN/CSA S16 LIMIT STATES DESIGN OF STEEL STRUCTURES.
- 2. CONFORM TO CSA STANDARD W55.3. RESISTANCE WELDING QUALIFICATIONS CODE FOR FABRICATORS OF STRUCTURAL MEMBERS USED IN BUILDINGS.
- 3. CONFORM TO CSA STANDARD W59, WELDED STEEL CONSTRUCTION (METAL ARC WELDING).
- 4. WELDING ELECTRODES CSA STANDARD W48, FILLER METALS AND ALLIED MATERIALS FOR METAL ARC WELDING.
- STRUCTURAL STEEL CSA STANDARD G40.20/G40.21, GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL/STRUCTURAL QUALITY STEELS. GRADE 350W FOR GENERAL PURPOSE STRUCTURAL STEEL SHAPES, 300W FOR ANGLES, CHANNELS, RODS AND PLATES. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO CSA STANDARD G40.20 GRADE 350W, HOT FORM WELDED OR HOLLOW STRUCTURAL SECTION, CLASS H.
- 6. HIGH STRENGTH BOLTS, NUTS AND WASHERS A.S.T.M. STANDARD A325, STANDARD SPECIFICATION FOR STRUCTURAL BOLTS, STEEL, HEAT TREATED 120/105 ksi MINIMUM TENSILE STRENGTH OR A325M, STANDARD SPECIFICATION FOR HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS
- 7. ANCHOR RODS A.S.T.M. F1554 GRADE 36
- 8. PRIMER:
- A) HOT DIPPED GALVANIZED AS PER CAN/CSA-G164 HOT DIP GALVANIZING OF IRREGULARLY SHAPED ARTICLES.

DESIGN LOADS

BUILDING IMPORTANCE:

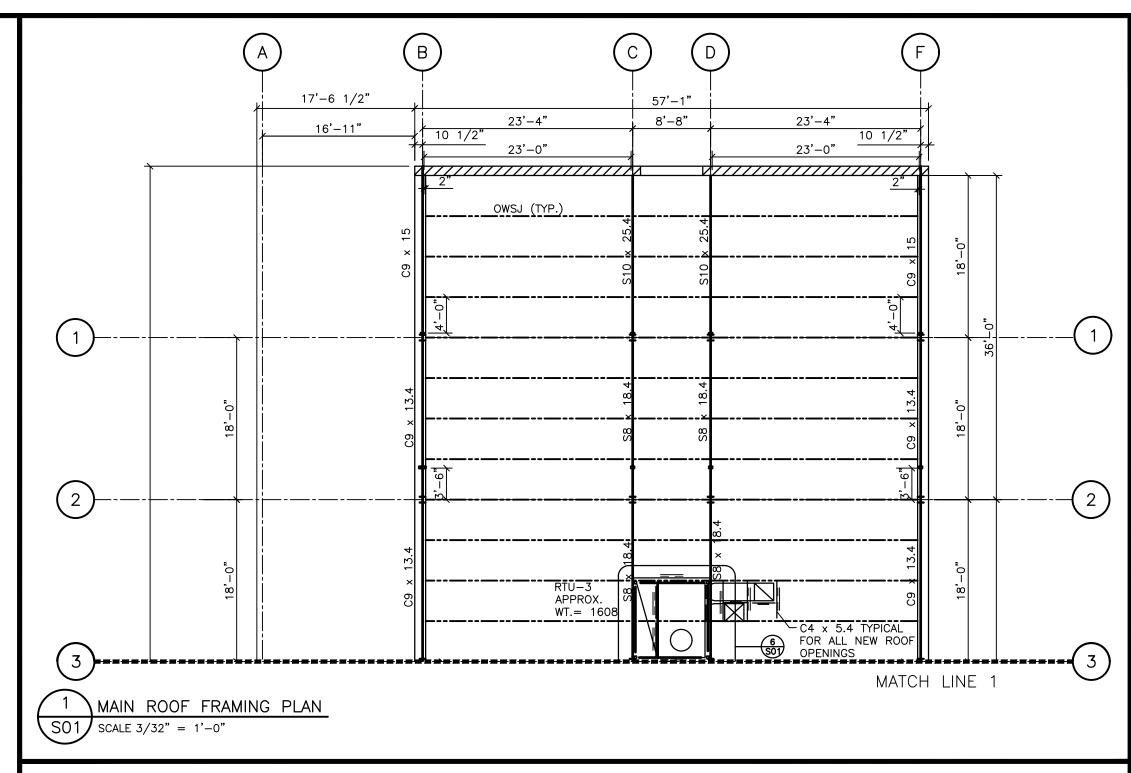
SNOW LOAD: 30.71 PSF

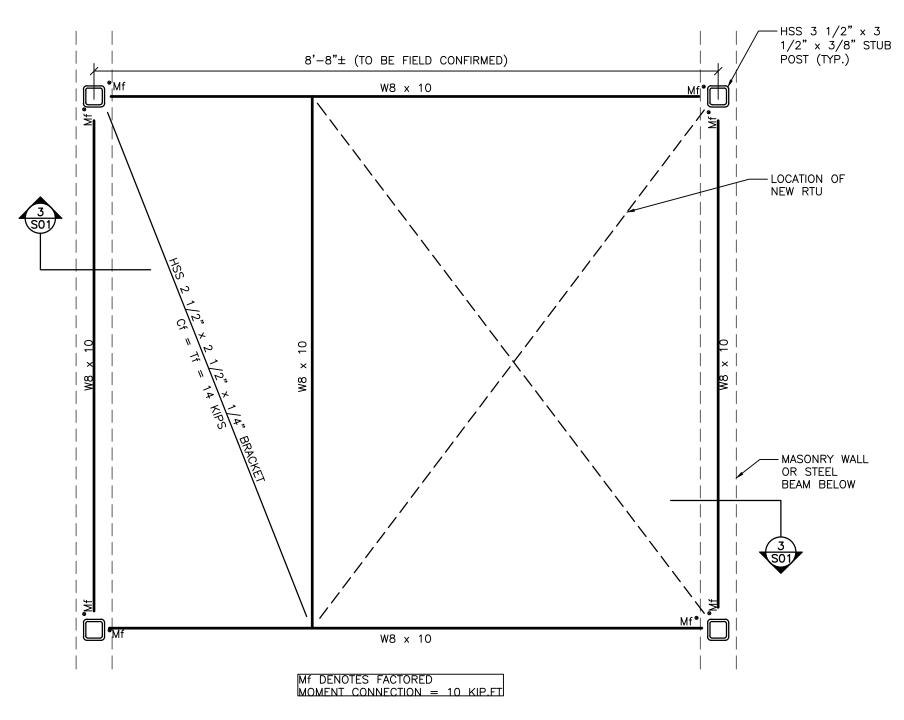
<u>ROOF</u>

DEAD LOAD: 22.0 PSF

WIND LOAD

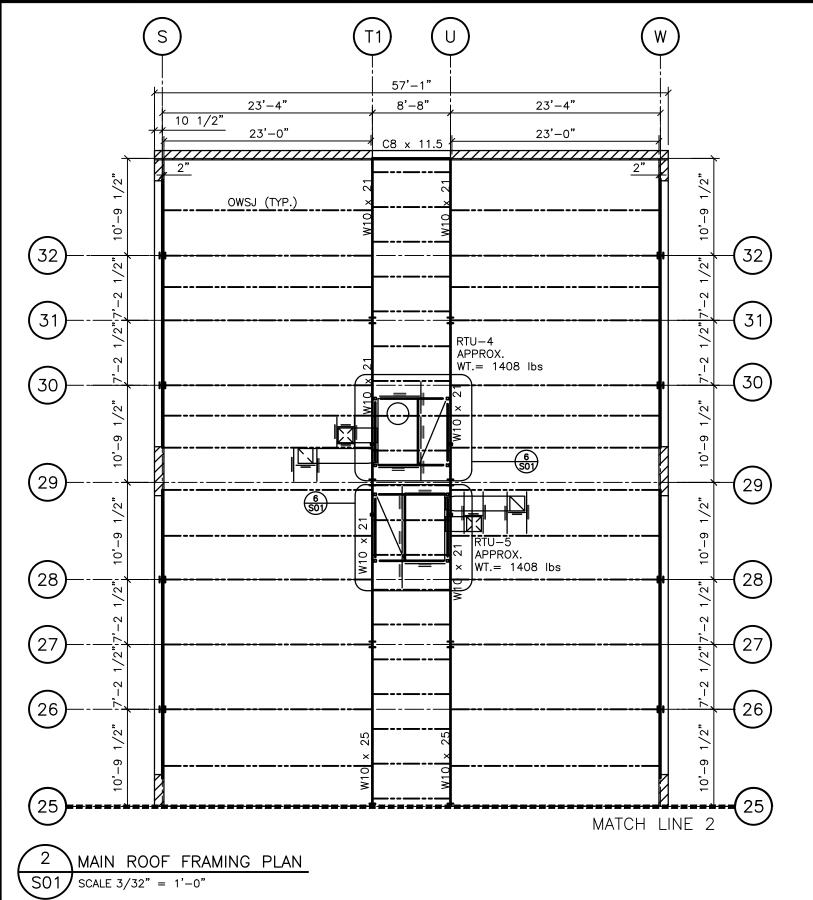
q 1/50= 9.82 PSF

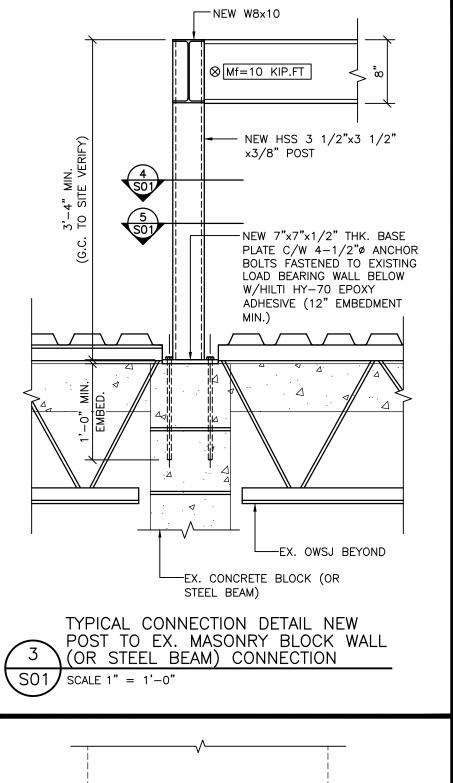


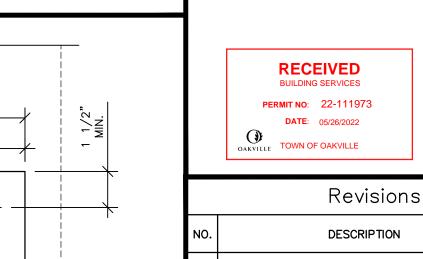


6 TYPICAL NEW RTU SUPPORT FRAMING PLAN

S01 SCALE 3/4" = 1'-0"







	N
NEW HSS 3 1/2"x3 1/2"	
x3/8" POST	
MASONRY BLOCK WALL BELOW	
NEW 7"x7"x1/2" THK. BASE PLATE C/W 4-1/2"Ø ANCHOR BOLTS FASTENED TO EXISTING LOAD BEARING WALL BELOW	
W/HILTI HY-70 EPOXY ADHESIVE (12" EMBEDMENT MIN.)	L
TYPICAL BASE PLATE DETAIL (AT MASONRY BLOCK WALL)	

, | 5 1/2**"** |

4"±

TYPICAL BASE PLATE DETAIL
(AT EXISTING STEEL BEAM LOCATIONS)

S01 | SCALE 3" = 1'-0"

4" LB. 1/4" CONT. WELD

S01 SCALE 3" = 1'-0"

Issue Table	
ISSUE DESCRIPTION	DATE
ISSUED FOR CLIENT REVIEW	04/18/22
ISSUED FOR TENDER	04/26/22
ISSUED FOR PERMIT	05/03/22

DATE

BUILDING DIVISION

REVIEWED

Structural Plans Review

22-111973

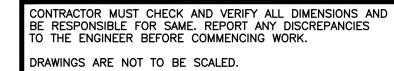
6/3/2022

OAKVILLE

DATE:

REVIEWED

PERMIT NO:



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2121 ARGENTIA ROAD, 4TH FLOOR MISSISSAUGA, ONTARIO, L5N 2X4 TEL:905.607.7244, FAX:905.607.7288 1.888.607.5245 WWW.IRCGROUP.COM

x 1/2" BASE PLATE

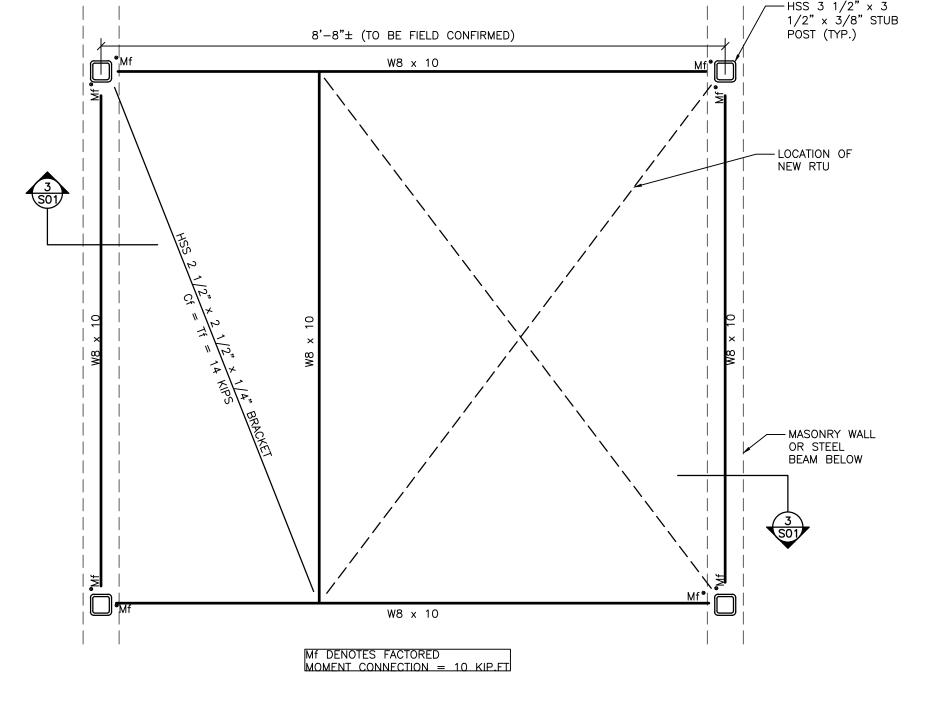
-- NEW HSS 3 1/2"x3 1/2" x3/8" POST

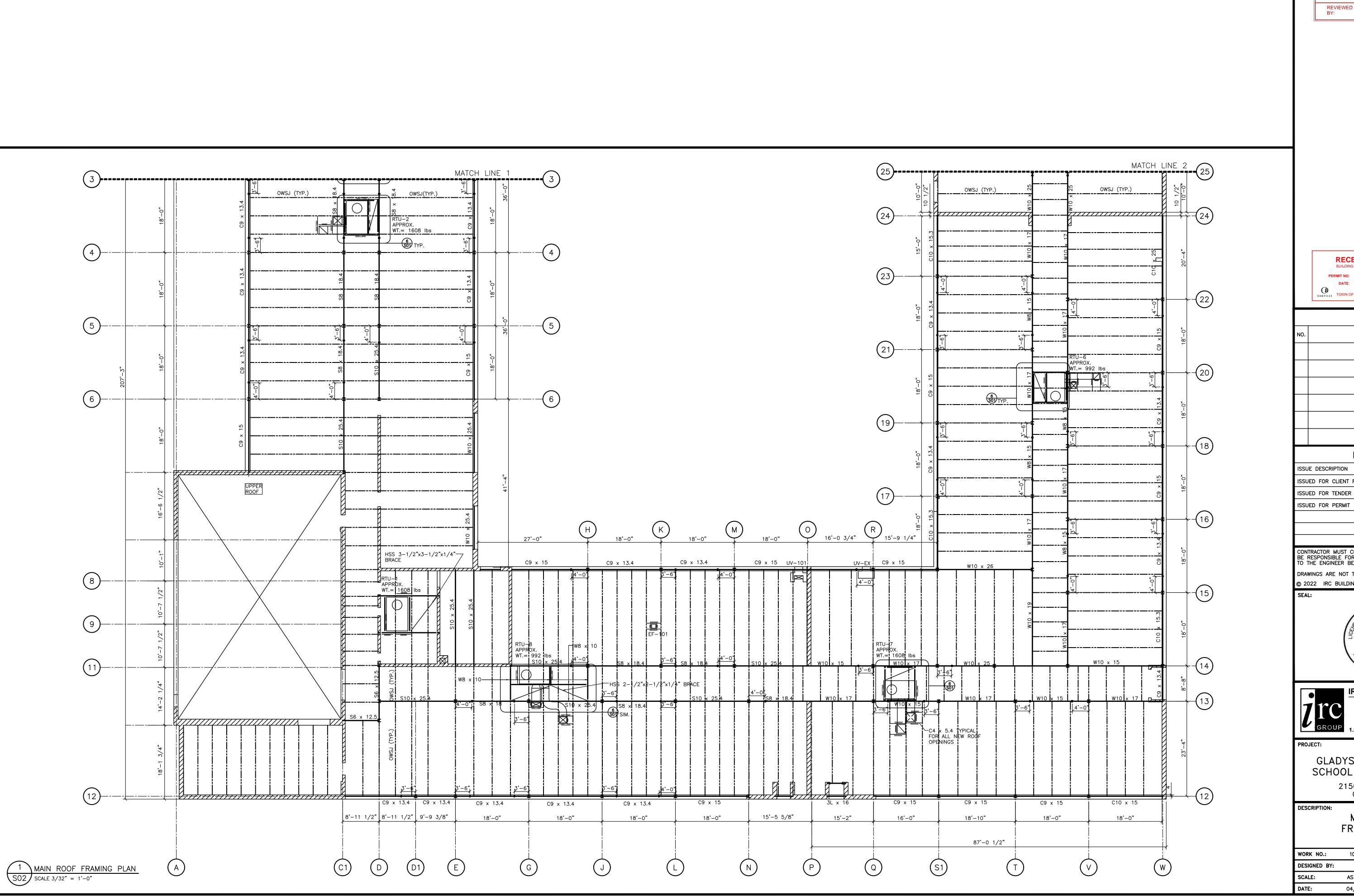
— TOP FLANGE OF EXISTING STEEL BEAM BELOW

GLADYS SPEERS PUBLIC SCHOOL HVAC UPGRADES 2150 SAMWAY ROAD OAKVILLE, ON

NOTES, PARTIAL PLAN, SECTIONS AND DETAILS

WORK NO.:	100156847	CADD NO.:	DS001
DESIGNED BY:	G.T.	DRAWN BY:	A.T.
SCALE:	AS NOTED	DRAWING NO.:	CO1
DATE:	04/18/22		201





BUILDING DIVISION REVIEWED OAKVILLE 22-111973 PERMIT NO: Structural Plans Review

RECEIVED

PERMIT NO: 22-111973 **DATE**: 05/26/2022 TOWN OF OAKVILLE

Revisions

	Revisions	
NO.	DESCRIPTION	DATE
	Issue Table	
ISSU	JE DESCRIPTION	DATE
ISSU	JED FOR CLIENT REVIEW	04/18/22

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE COMMENCING WORK.

04/26/22

05/03/22

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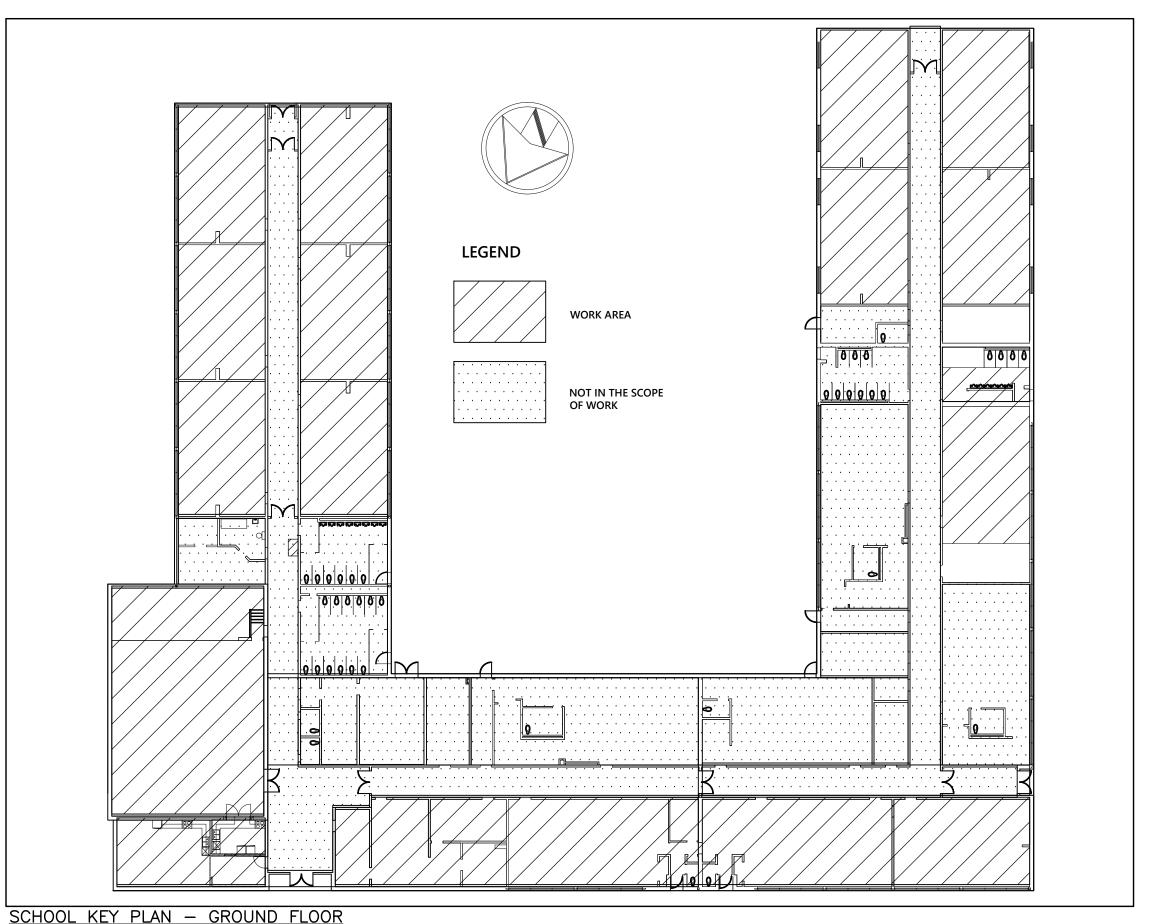
IRC Building Sciences Group A Rimkus Company 2121 ARGENTIA ROAD, 4TH FLOOR MISSISSAUGA, ONTARIO, L5N 2X4 TEL:905.607.7244, FAX:905.607.7288 1.888.607.5245 WWW.IRCGROUP.COM

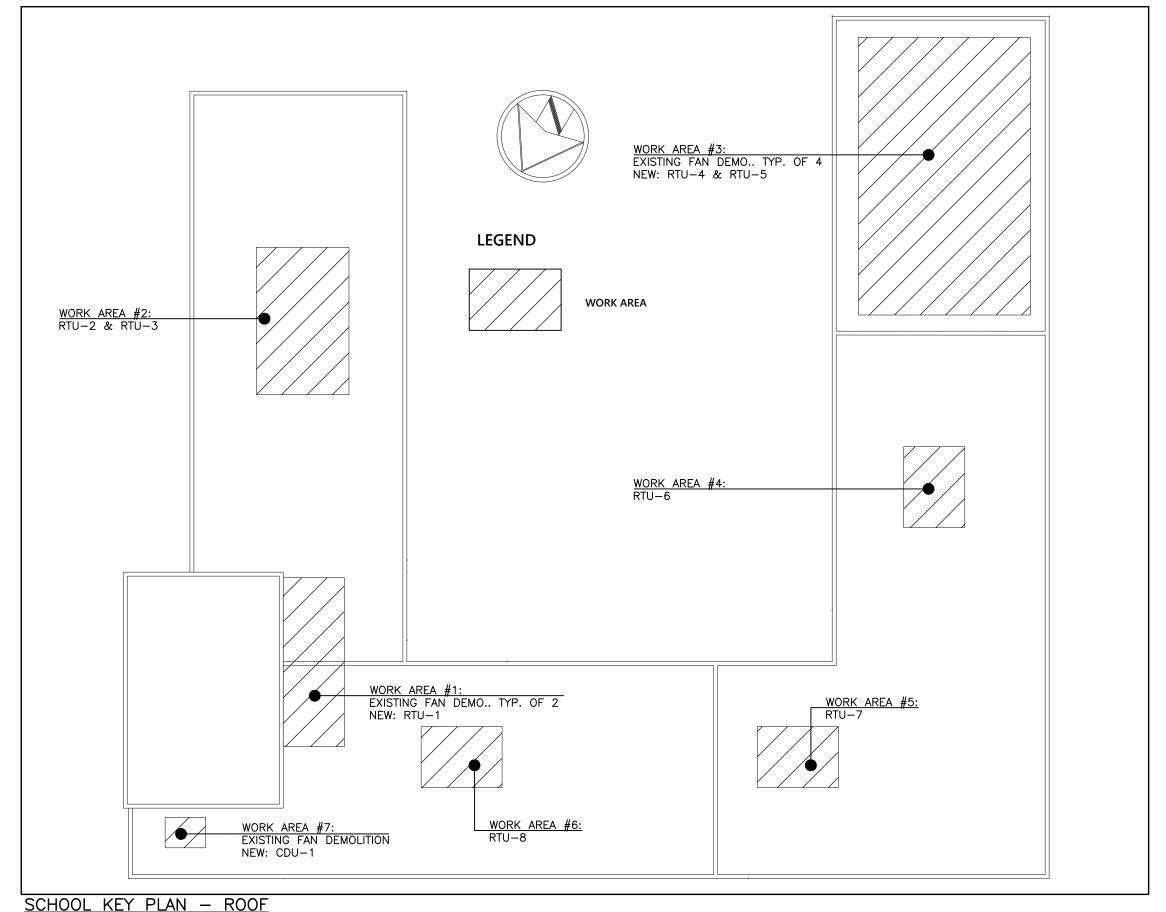
GLADYS SPEERS PUBLIC SCHOOL HVAC UPGRADES

2150 SAMWAY ROAD OAKVILLE, ON

MAIN ROOF FRAMING PLAN

WORK NO.:	100156847	CADD NO.:	DS002
DESIGNED BY:	G.T.	DRAWN BY:	A.T.
SCALE:	AS NOTED	DRAWING NO.:	C
DATE:	04/18/22		502





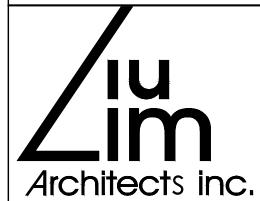
	ELECTRICAL LEGEND
	DIRECT POWER OUTLET FOR USE AS NOTED INCLUDING FINAL CONNECTION
Image: control of the	NON-FUSED DISCONNECT SWITCH
ď	FUSED DISCONNECT SWITCH
$\Phi_{\!\scriptscriptstyle \mathrm{GFI}}$	20A, 120V U-GROUND DUPLEX RECEPTACLE. GROUND FAULT INTERRUPTER
WP	WEATHERPROOF
EX	DENOTES: EXISTING TO REMAIN
R	DENOTES: EXISTING TO BE REMOVED
N	DENOTES: NEW
RE	DENOTES: EXISTING TO BE RELOCATED
\$	SINGLE POLE TOGGLE SWITCH WITH SINGLE GANG
#	SINGLE POLE TOGGLE SWITCH WITH THREE GANG
-	ELECTRICAL PANEL, SURFACE OR FLUSH RESPECTIVELY
#	15A, 120V U-GROUND DUPLEX RECEPTACLE MOUNTED AT HIGH LEVEL
ф _{GFI}	15A, 120V U-GROUND GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE
Δ	DATA OUTLET C/W 3/4"C WITH 90° BEND AT TOP AND PVC END BUSHING TO ACCESSIBLE CEILING SPACE

Revisions Date Description 2022/02/17 50% REVIEW 2022/03/09 75% REVIEW 2022/03/31 100% REVIEW 2022/04/26 ISSUED FOR TENDER

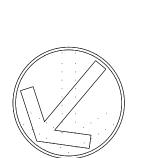
> RECEIVED PERMIT NO: 22-111973 **DATE**: 05/26/2022

Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



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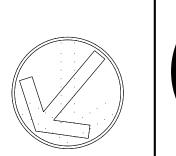


HA ENGINEERING Inc.

KEY PLANS, SYMBOL LIST, NOTES, - ELELCTRICAL

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OAKVILLE TOWN OF OAKVILLE



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EPDM END CAP SEAL, FRICTION

FIT TO METAL PIPE

EQUIPMENT WIRING DIAGRAM

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SCALE: 1:400							SCHOOL KEY PLAN — ROOF SCALE: 1:400		
						ME	CHANICAL EQUIPMENT WIRING SCHEDULE		
EQUIPMENT DESCRIPTION	POWER SOURCE	STARTER TYPE	MCA/BHP/ KW/AMP	VOLTS/PH./ FREQUENCY	BREAKER SIZE OR FUSE SIZE	FEEDER SIZE	REMARKS		
RTU-1	BOILER RM DISTRIBUTION PANEL 'DP-1'	INTEGRAL	48.0 MCA	208/3/60	60A	3#AWG6+G IN 35mmC	PROVIDE NEW FUSED DISCONNECT AND CONNECT TO NEW DISTRIBUTION PANEL 'DP-1'. PROVIDE ALL WIRING BETWEEN THE PANEL 'DP-1', DISCONNECT, WEATHERPROOF DISCONNECT AND EQUIPMENT. ALL WIRING TO BE IN RIGID METAL CONDUIT. LAST 900 MM SHALL BE LIQUID-TIGHT FLEXIBLE FEEDERS.		
RTU-2			48.0 MCA		60A	3#AWG6+G IN 35mmC			
RTU-3			48.0 MCA		60A	3#AWG6+G IN 35mmC			
RTU-4			37.0 MCA		50A	3#AWG2+G IN 41mmC			
RTU-5			37.0 MCA		50A	3#AWG2+G IN 41mmC			
RTU-6			30.0 MCA		45A	3#AWG4+G IN 35mmC			
RTU-7			48.0 MCA		60A	3#AWG6+G IN 35mmC			
RTU-8			30.0 MCA	V	45A	3#AWG8+G IN 27mmC			
CDU-1			17.1 MCA	208/1/60	20A	3#AWG12+G IN 21mmC	PROVIDE NEW FUSED DISCONNECT AND CONNECT ON NEW DISTRIBUTION PANEL 'DP-1'. PROVIDE ALL WIRING BETWEEN THE PANEL 'DP-1', DISCONNECT, WEATHERPROOF DISCONNECT AND EQUIPMENT. ALL WIRING TO BE IN RIGID METAL CONDUIT. LAST 900 MM SHALL BE LIQUID-TIGHT FLEXIBLE FEEDERS.		
AC-1	•		1.0 MCA	208/1/60	20A	3#AWG12+G IN 21mmC	PROVIDE NEW FUSED DISCONNECT AND CONNECT ON NEW DISTRIBUTION PANEL 'DP-1'. PROVIDE ALL WIRING BETWEEN THE PANEL 'DP-1', DISCONNECT AND EQUIPMENT. ALL IN DOOR WIRING TO BE IN EMT CONDUIT. PROVIDE LOCAL DISCONNECT SWITCH.		
BL-1	CORRIDOR PANEL 'A'		N/A	120/1/60	15A	3#AWG12+G IN 21mmC	PROVIDE NEW FUSED DISCONNECT AND CONNECT ON EXISTING DISTRIBUTION PANEL 'A'. PROVIDE ALL WIRING BETWEEN THE PANEL 'A', DISCONNECT AND MOTORIZED BLINDS. ALL IN DOOR WIRING TO BE IN EMT CONDUIT. PROVIDE LOCAL DISCONNECT SWITCH.		
H-1	CORRIDOR PANEL 'A'	V	1.0 MCA	120/1/60	15A	3#AWG12+G IN 21mmC	PROVIDE NEW FUSED DISCONNECT AND CONNECT ON EXISTING DISTRIBUTION PANEL 'A'. PROVIDE ALL WIRING BETWEEN THE PANEL 'A', DISCONNECT AND MOTORIZED BLINDS. ALL IN DOOR WIRING TO BE IN EMT CONDUIT. PROVIDE LOCAL DISCONNECT SWITCH.		

NOTES:

PROVIDE CONNECTION TO MECHANICAL EQUIPMENT TO ENSURE THAT FULL OPERATIONAL SYSTEMS ARE DELIVERED TO THE OWNER.

PROVIDE POWER CONNECTION TO ALL EQUIPMENT LISTED IN THE SCHEDULE. REFER ROOF LAYOUT FOR EXACT LOCATION OF EQUIPMENT.

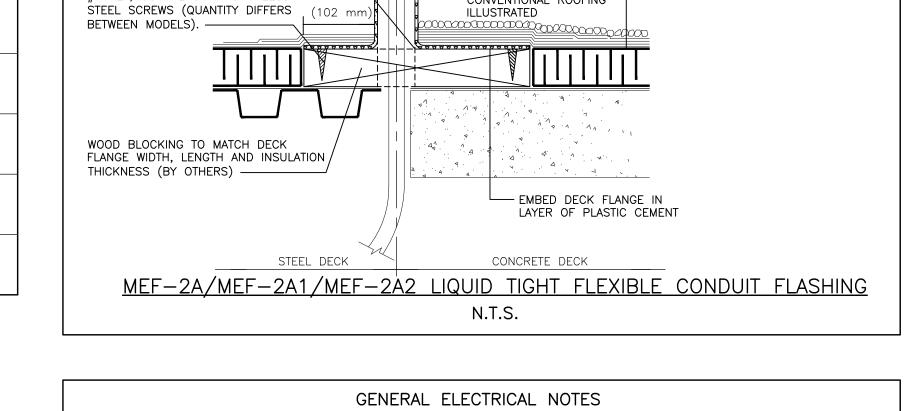
PROVIDE SEPARATE DISCONNECTS FOR INDIVIDUAL MECHANICAL EQUIPMENT. SIZE AS INDICATED IN THE SCHEDULE.

DISCONNECTS LOCATIONS SHALL BE VERIFIED AND CO-COORDINATED ON SITE.

CONNECT NEW UNITS TO EXISTING FIRE ALARM SYSTEM. INCLUDE ALL REQUIRED WIRING AND DEVICES. PROVIDE VERIFICATION OF THE FIRE ALARM SYSTEM.

CONNECT NEW UNITS TO EXISTING BAS. INCLUDE ALL REQUIRED WIRING AND DEVICES. PROVIDE VERIFICATION OF THE BAS.

NEW LIGHTING FIXTURE SCHEDULE							
TYPE	MANUFACTURER	CATALOGUE	DESCRIPTION				
Α	ORION	HHSL1-E1-120V-FD-840-06W	HARRIS LED HIGH BAY STAR LINE, GEN1, 120-277V, C/W WIREGUARD				



— LIQUID TIGHT FLEXIBLE

CONVENTIONAL ROOFING

CONDUIT (BY OTHERS) SEE TABLE FOR

HEIGHT DATA

TABLE

HEIGHT

12" (305mm)

12" (305mm)

15" (381mm)

THERMAL MEF-2A LIQUID TIGHT FLEXIBLE CONDUIT FLASHING ----

EPDM BASE SEAL, BONDED

TO METAL BASE ----

MODEL

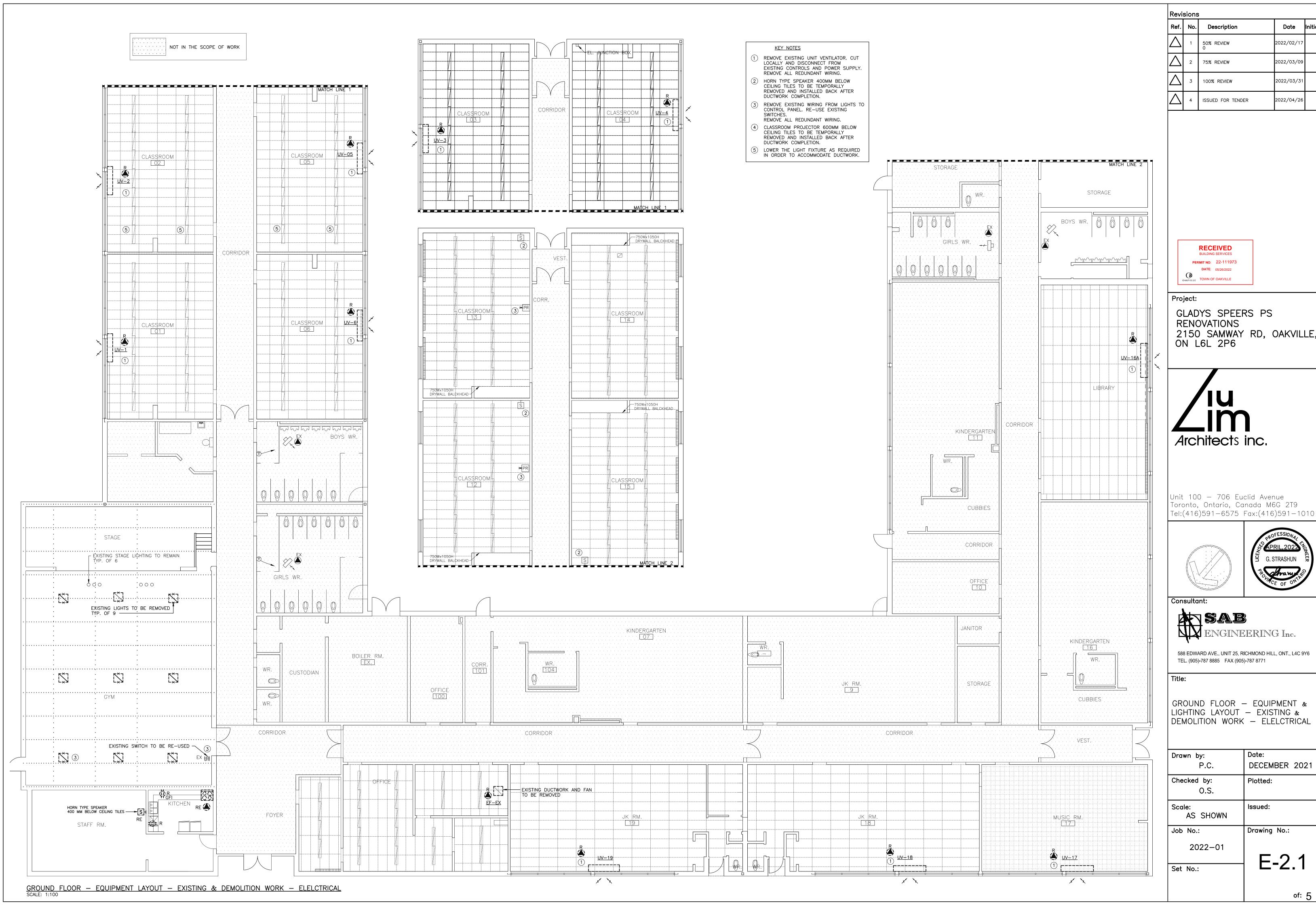
MEF-2A

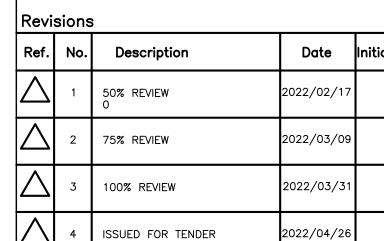
MEF-2A1

MEF-2A2

#14X2", COUNTERSUNK STAINLESS

- IT IS MANDATORY FOR THE ELECTRICAL CONTRACTOR TO VISIT SITE AND REVIEW EXISTING CONDITIONS AND DEMOLITION SCOPE OF WORK TO SUIT EXISTING ARCHITECTURAL AND STRUCTURAL CONDITIONS AND MECHANICAL DRAWINGS.
- CAREFULLY EXAMINE OTHER EXISTING UTILITY LINES SUCH AS GAS, WATER ETC. PRIOR TO START THE ELECTRICAL CONSTRUCTION WORKS AND COORDINATE WITH OTHER TRADES AND REPORT OF ANY DISCREPANCY PRIOR TO
- 3. REFER TO ELECTRICAL AND MECHANICAL LAYOUTS FOR EXACT LOCATION OF ALL EQUIPMENT.
- 4. LOCATIONS OF ALL NEW DISCONNECT SWITCHES, VFDS AND STARTERS SHALL BE CONFIRMED WITH DIVISION 15 PRIOR TO INSTALLATION.





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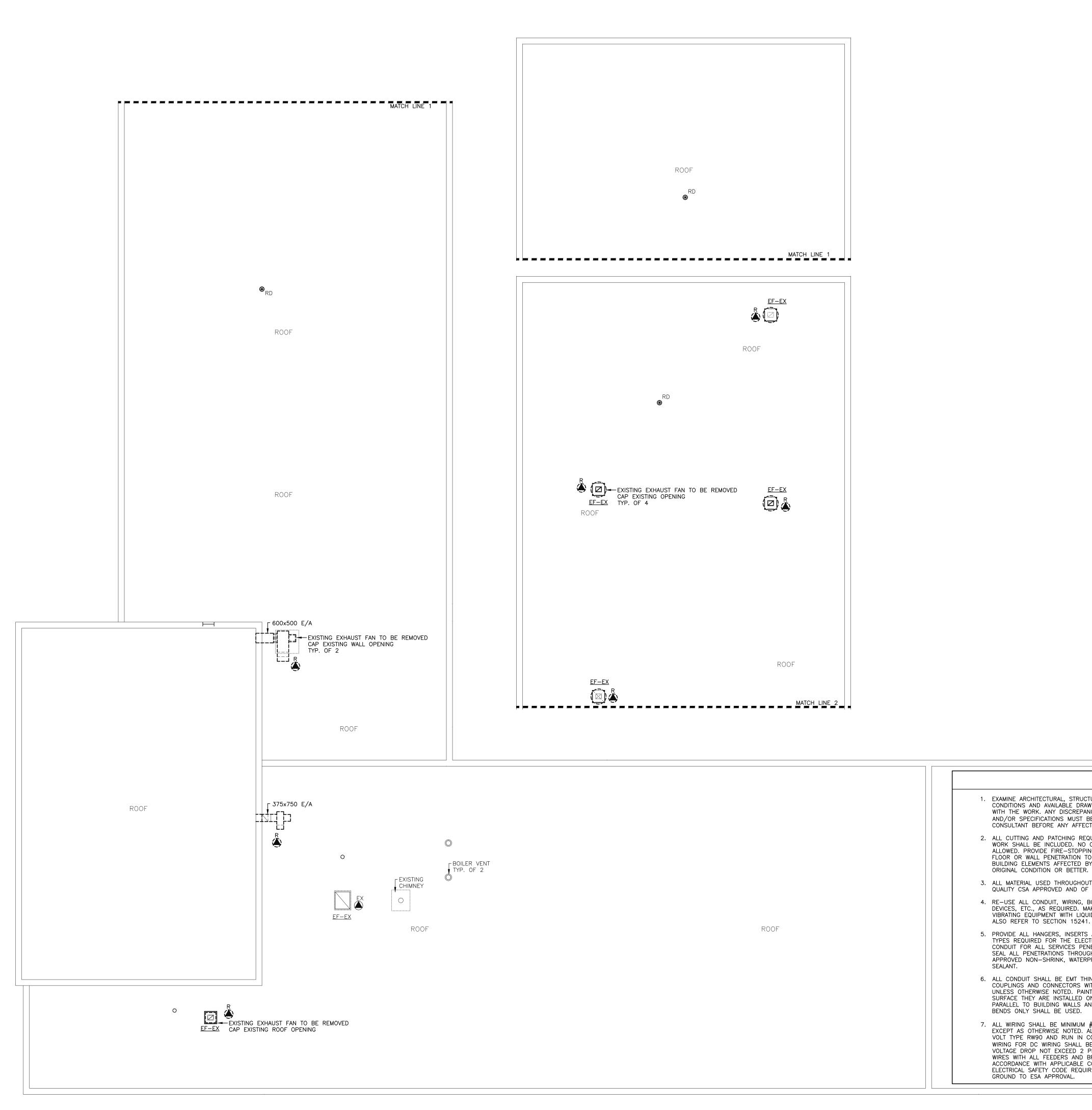




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GROUND FLOOR — EQUIPMENT & LIGHTING LAYOUT — EXISTING & DEMOLITION WORK - ELELCTRICAL

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Consultant:



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Set No.:

ROOF - EQUIPMENT LAYOUT EXISTING & DEMOLITION WORK ELECTRICAL

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ELECTRICAL GENERAL NOTES

ALL PERMITS.

- 1. EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONDITIONS AND AVAILABLE DRAWINGS BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS MUST BE REFEREED TO THE CONSULTANT BEFORE ANY AFFECTED WORK IS COMMENCED.
- 2. ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK SHALL BE INCLUDED. NO CHASING BLOCKWORK WILL BE ALLOWED. PROVIDE FIRE-STOPPING TO SUIT FT RATING OF THE FLOOR OR WALL PENETRATION TO SUIT. MAKE GOOD ALL BUILDING ELEMENTS AFFECTED BY THIS WORK TO THEIR
- 3. ALL MATERIAL USED THROUGHOUT SHALL BE NEW, OF BEST QUALITY CSA APPROVED AND OF ONE MANUFACTURE.
- 4. RE-USE ALL CONDUIT, WIRING, BOXES, SWITCHES, OUTLETS, DEVICES, ETC., AS REQUIRED. MAKE FINAL CONNECTIONS TO VIBRATING EQUIPMENT WITH LIQUID TIGHT FLEXIBLE CONDUIT. ALSO REFER TO SECTION 15241.
- 5. PROVIDE ALL HANGERS, INSERTS AND SUPPORTS OF APPROVED TYPES REQUIRED FOR THE ELECTRICAL WORK. PROVIDE CONDUIT FOR ALL SERVICES PENETRATING THE FLOOR SLAB. SEAL ALL PENETRATIONS THROUGH FLOOR SLABS WITH AN APPROVED NON-SHRINK, WATERPROOF AND FIREPROOF
- 6. ALL CONDUIT SHALL BE EMT THINWALL WITH STEEL SET SCREW COUPLINGS AND CONNECTORS WITH INSULATED THROATS UNLESS OTHERWISE NOTED. PAINT CONDUIT TO MATCH EXISTING SURFACE THEY ARE INSTALLED ON. IN FINISHED AREA, RUN PARALLEL TO BUILDING WALLS AND CONCENTRIC RIGHT ANGLE BENDS ONLY SHALL BE USED.
- 7. ALL WIRING SHALL BE MINIMUM #12 AND #8 GAUGE COPPER, EXCEPT AS OTHERWISE NOTED. ALL WIRING SHALL BE 600 VOLT TYPE RW90 AND RUN IN CONDUITS. MINIMUM SIZE WIRING FOR DC WIRING SHALL BE #10 GAUGE. MAXIMUM VOLTAGE DROP NOT EXCEED 2 PERCENT. PROVIDE GROUND WIRES WITH ALL FEEDERS AND BRANCH CIRCUITS IN ACCORDANCE WITH APPLICABLE CODES AND ONTARIO ELECTRICAL SAFETY CODE REQUIREMENTS. PROVIDE MAIN

8. PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN AND AS REQUIRED TO MAKE THE EQUIPMENT FULLY OPERATIONAL. SUPPLY AND INSTALL ALL STARTERS AND WIRE COMPLETE. COORDINATE THE FINAL LOCATION OF DISCONNECT SWITCHES AND VFD DEVICES SUCH AS TO MAINTAIN THE PRESCRIBED CLEARANCES AND AVOID INTERFERENCE WITH OTHER EQUIPMENT.

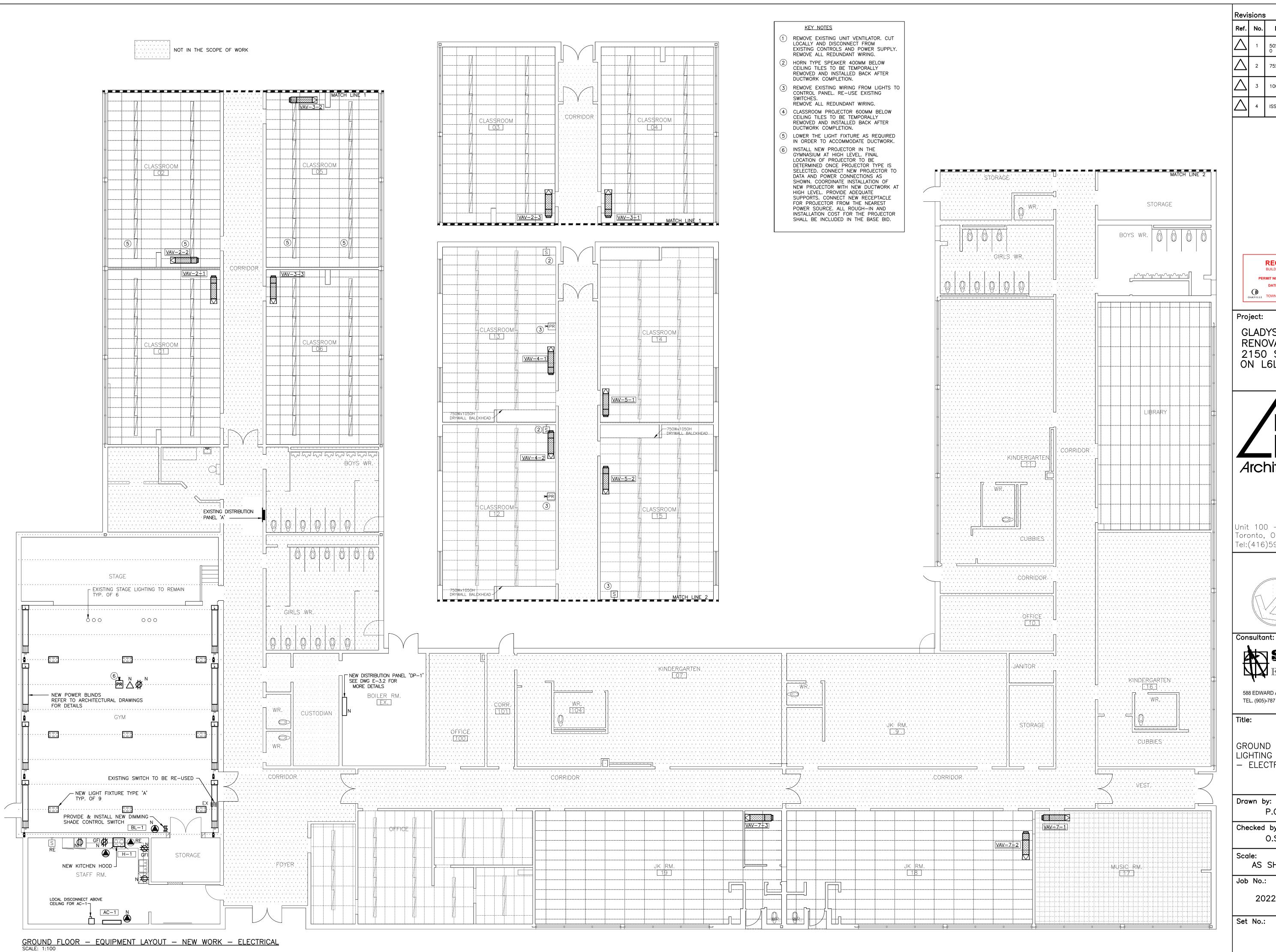
OBTAIN ALL APPROVALS FROM PUBLIC AUTHORITIES HAVING JURISDICTION, BEFORE COMMENCING WORK AND PAY ALL ASSOCIATED INSPECTION FEES AND

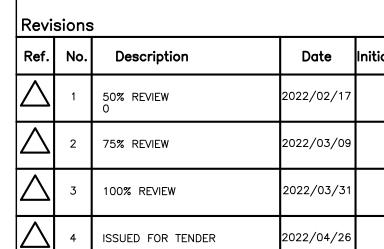
ROOF

ROOF

- 9. CONTRACTORS SHALL NOTE THAT THIS RFQ IS AN ALTERATION TO AN EXISTING BUILDING AND SHALL THOROUGHLY INVESTIGATE THE EXISTING ELECTRICAL INSTALLATION AND
- 10. DEMOLITION OF EXISTING SERVICES: REMOVE POWER CONNECTIONS AS SHOWN ON DRAWINGS C/W CONDUIT AND WIRING TO SOURCE.
- 11. ALL WORK SHALL BE DONE WITH MINIMUM POSSIBLE INTERRUPTION TO EXISTING BUILDING SYSTEMS AND IN THE TIME SCHEDULE PERMITTED BY THE PROJECT MANAGER. INCLUDE FOR AFTER HOURS/WEEKEND WORK FOR POWER SHUTDOWN & CONNECTION WORK.
- 12. PROVIDE LAMACOID LABEL AT EACH EQUIPMENT DISCONNECT SWITCH STATING PANEL SOURCE, OVER-CURRENT PROTECTION AND BRANCH WIRING SIZE.
- 13. RE-USE EXISTING SWITCHES AS NOTED. REMOVE OLD WIRING. PROVIDE AND INSTALL NEW WIRING.
- 14. COORDINATE ROUTING OF ALL CONDUITS FOR THE NEW EQUIPMENT WITH DUCTWORK, STRUCTURAL AND ALL OTHER EXISTING SERVICES. PROVIDE JUNCTION BOXES AS REQUIRED TO AVOID APPLYING EXECESSEVE FORCE TO THE WIRES. ALL CATCHING AND REPAIR OF EXISTING SURFACES IS INCLUDED.
- 15. PROVIDE ALL ROOF CONES AS REQUIRED FOR THE ELECTRICAL CONDUITS PENETRATION THROUGH THE ROOF. REFER TO

ROOF PLAN — EQUIPMENT LAYOUT — EXISTING & DEMOLITION WORK — ELELCTRICAL SCALE: 1:100



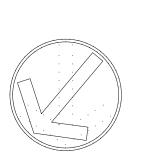


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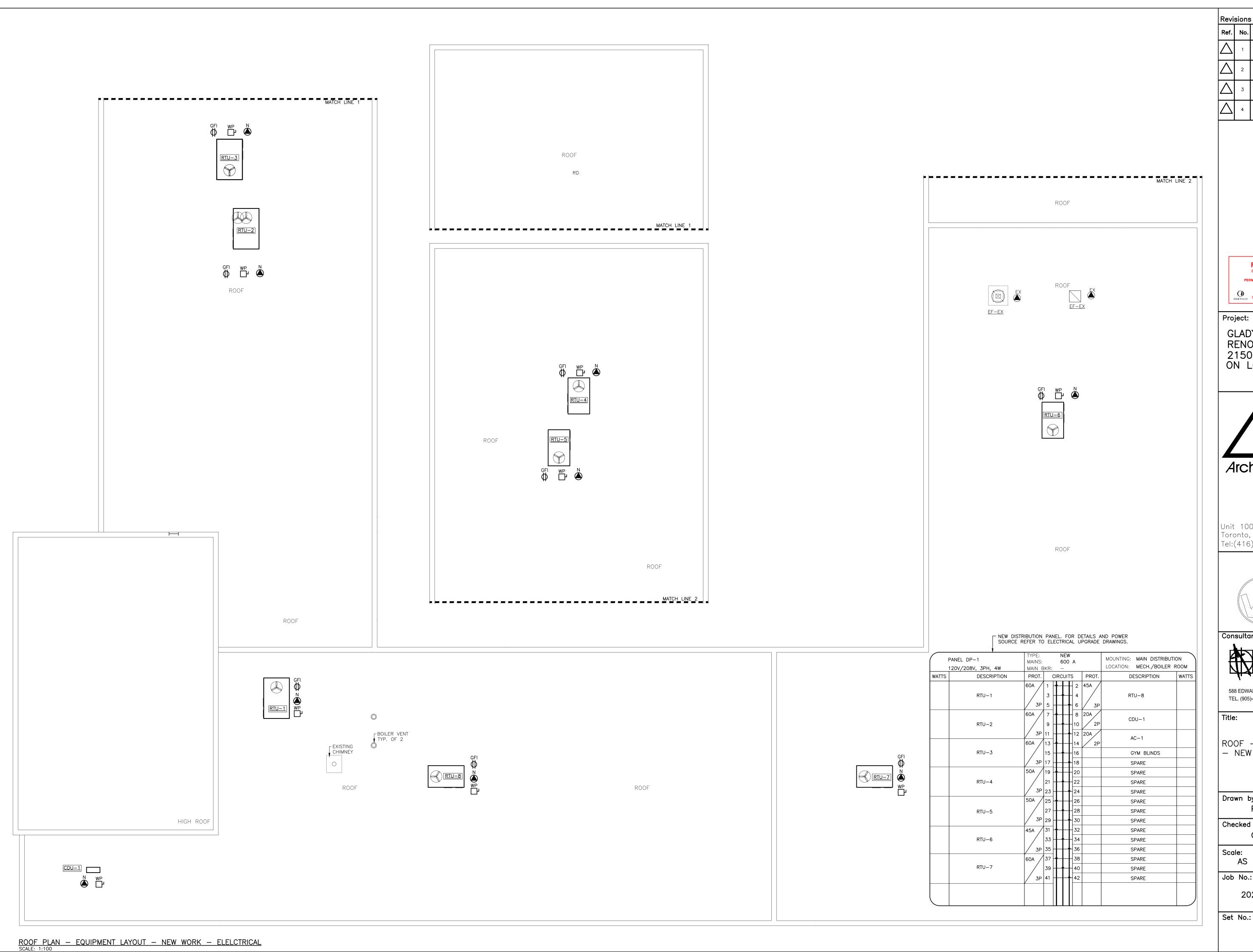




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GROUND FLOOR - EQUIPMENT & LIGHTING LAYOUT - NEW WORK ELECTRICAL

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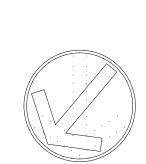
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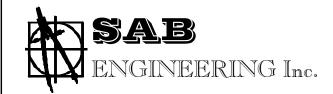


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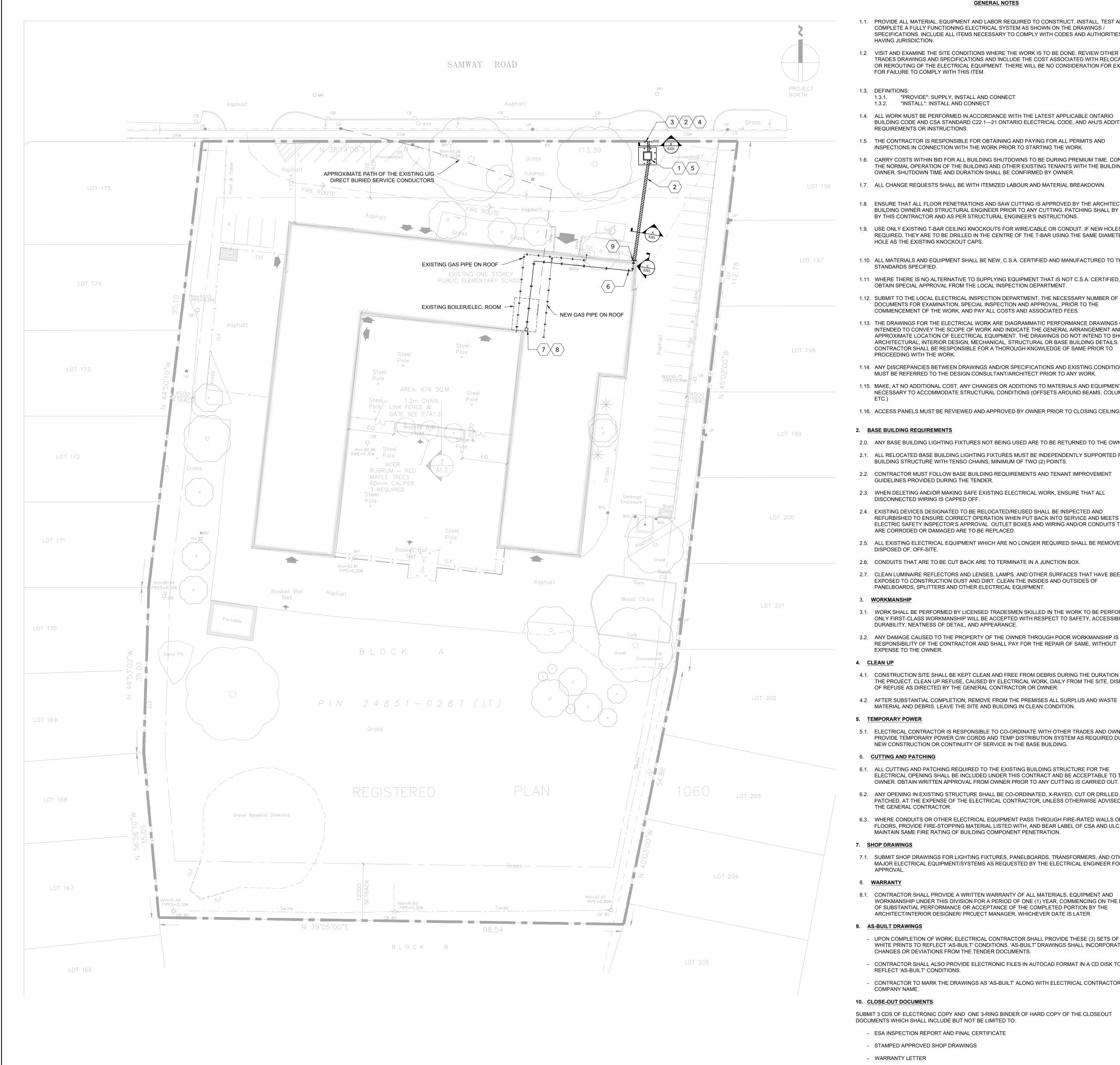
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ROOF — EQUIPMENT LAYOUT — NEW WORK — ELECTRICAL

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GENERAL NOTES

- 1.1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT, INSTALL, TEST AND COMPLETE A FULLY FUNCTIONING ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS / SPECIFICATIONS. INCLUDE ALL ITEMS NECESSARY TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION.
- 1.2. VISIT AND EXAMINE THE SITE CONDITIONS WHERE THE WORK IS TO BE DONE. REVIEW OTHER TRADES DRAWINGS AND SPECIFICATIONS AND INCLUDE THE COST ASSOCIATED WITH RELOCATING OR REROUTING OF THE ELECTRICAL EQUIPMENT. THERE WILL BE NO CONSIDERATION FOR EXTRAS FOR FAILURE TO COMPLY WITH THIS ITEM.
- 1.3. DEFINITIONS: 1.3.1. "PROVIDE": SUPPLY, INSTALL AND CONNECT 1.3.2. "INSTALL": INSTALL AND CONNECT
- 1.4. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE ONTARIO BUILDING CODE AND CSA STANDARD C22.1—21 ONTARIO ELECTRICAL CODE, AND AHJ'S ADDITIONAL REQUIREMENTS OR INSTRUCTIONS.
- 1.5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS AND

OWNER. SHUTDOWN TIME AND DURATION SHALL BE CONFIRMED BY OWNER.

- INSPECTIONS IN CONNECTION WITH THE WORK PRIOR TO STARTING THE WORK. 1.6. CARRY COSTS WITHIN BID FOR ALL BUILDING SHUTDOWNS TO BE DURING PREMIUM TIME. CONFIRM THE NORMAL OPERATION OF THE BUILDING AND OTHER EXISTING TENANTS WITH THE BUILDING
- 1.7. ALL CHANGE REQUESTS SHALL BE WITH ITEMIZED LABOUR AND MATERIAL BREAKDOWN.
- 1.8. ENSURE THAT ALL FLOOR PENETRATIONS AND SAW CUTTING IS APPROVED BY THE ARCHITECT. BUILDING OWNER AND STRUCTURAL ENGINEER PRIOR TO ANY CUTTING. PATCHING SHALL BY DONE BY THIS CONTRACTOR AND AS PER STRUCTURAL ENGINEER'S INSTRUCTIONS.
- 1.9. USE ONLY EXISTING T-BAR CEILING KNOCKOUTS FOR WIRE/CABLE OR CONDUIT. IF NEW HOLES ARE REQUIRED, THEY ARE TO BE DRILLED IN THE CENTRE OF THE T-BAR USING THE SAME DIAMETER HOLE AS THE EXISTING KNOCKOUT CAPS.
- 1.10. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, C.S.A. CERTIFIED AND MANUFACTURED TO THE
- 1.11. WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT THAT IS NOT C.S.A. CERTIFIED, OBTAIN SPECIAL APPROVAL FROM THE LOCAL INSPECTION DEPARTMENT.
- DOCUMENTS FOR EXAMINATION, SPECIAL INSPECTION AND APPROVAL, PRIOR TO THE COMMENCEMENT OF THE WORK, AND PAY ALL COSTS AND ASSOCIATED FEES. 1.13. THE DRAWINGS FOR THE ELECTRICAL WORK ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY,
- INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF ELECTRICAL EQUIPMENT. THE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL, INTERIOR DESIGN, MECHANICAL, STRUCTURAL OR BASE BUILDING DETAILS. CONTRACTOR SHALL BE RESPONSIBLE FOR A THOROUGH KNOWLEDGE OF SAME PRIOR TO PROCEEDING WITH THE WORK
- 1.14. ANY DISCREPANCIES BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND EXISTING CONDITIONS MUST BE REFERRED TO THE DESIGN CONSULTANT/ARCHITECT PRIOR TO ANY WORK.
- 1.15. MAKE, AT NO ADDITIONAL COST, ANY CHANGES OR ADDITIONS TO MATERIALS AND EQUIPMENT NECESSARY TO ACCOMMODATE STRUCTURAL CONDITIONS (OFFSETS AROUND BEAMS, COLUMNS,
- 1.16. ACCESS PANELS MUST BE REVIEWED AND APPROVED BY OWNER PRIOR TO CLOSING CEILINGS.

2. BASE BUILDING REQUIREMENTS

- 2.0. ANY BASE BUILDING LIGHTING FIXTURES NOT BEING USED ARE TO BE RETURNED TO THE OWNER.
- 2.1. ALL RELOCATED BASE BUILDING LIGHTING FIXTURES MUST BE INDEPENDENTLY SUPPORTED FROM BUILDING STRUCTURE WITH TENSO CHAINS, MINIMUM OF TWO (2) POINTS.
- 2.2. CONTRACTOR MUST FOLLOW BASE BUILDING REQUIREMENTS AND TENANT IMPROVEMENT GUIDELINES PROVIDED DURING THE TENDER.
- 2.3. WHEN DELETING AND/OR MAKING SAFE EXISTING ELECTRICAL WORK, ENSURE THAT ALL DISCONNECTED WIRING IS CAPPED OFF.
- 2.4. EXISTING DEVICES DESIGNATED TO BE RELOCATED/REUSED SHALL BE INSPECTED AND REFURBISHED TO ENSURE CORRECT OPERATION WHEN PUT BACK INTO SERVICE AND MEETS ELECTRIC SAFETY INSPECTOR'S APPROVAL. OUTLET BOXES AND WIRING AND/OR CONDUITS THAT ARE CORRODED OR DAMAGED ARE TO BE REPLACED.
- 2.5. ALL EXISTING ELECTRICAL EQUIPMENT WHICH ARE NO LONGER REQUIRED SHALL BE REMOVED AND
- 2.6. CONDUITS THAT ARE TO BE CUT BACK ARE TO TERMINATE IN A JUNCTION BOX.
- 2.7. CLEAN LUMINAIRE REFLECTORS AND LENSES, LAMPS, AND OTHER SURFACES THAT HAVE BEEN EXPOSED TO CONSTRUCTION DUST AND DIRT. CLEAN THE INSIDES AND OUTSIDES OF PANELBOARDS, SPLITTERS AND OTHER ELECTRICAL EQUIPMENT.

- 3.1. WORK SHALL BE PERFORMED BY LICENSED TRADESMEN SKILLED IN THE WORK TO BE PERFORMED. ONLY FIRST-CLASS WORKMANSHIP WILL BE ACCEPTED WITH RESPECT TO SAFETY, ACCESSIBILITY, DURABILITY, NEATNESS OF DETAIL, AND APPEARANCE.
- 3.2. ANY DAMAGE CAUSED TO THE PROPERTY OF THE OWNER THROUGH POOR WORKMANSHIP IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL PAY FOR THE REPAIR OF SAME, WITHOUT EXPENSE TO THE OWNER.

4. CLEAN UP

- 4.1. CONSTRUCTION SITE SHALL BE KEPT CLEAN AND FREE FROM DEBRIS DURING THE DURATION OF THE PROJECT. CLEAN UP REFUSE, CAUSED BY ELECTRICAL WORK, DAILY FROM THE SITE, DISPOSE OF REFUSE AS DIRECTED BY THE GENERAL CONTRACTOR OR OWNER.
- 4.2. AFTER SUBSTANTIAL COMPLETION, REMOVE FROM THE PREMISES ALL SURPLUS AND WASTE MATERIAL AND DEBRIS. LEAVE THE SITE AND BUILDING IN CLEAN CONDITION.

5. TEMPORARY POWER

- 5.1. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO CO-ORDINATE WITH OTHER TRADES AND OWNER TO PROVIDE TEMPORARY POWER C/W CORDS AND TEMP DISTRIBUTION SYSTEM AS REQUIRED DUE TO NEW CONSTRUCTION OR CONTINUITY OF SERVICE IN THE BASE BUILDING.
- 6. **CUTTING AND PATCHING**
- 6.1. ALL CUTTING AND PATCHING REQUIRED TO THE EXISTING BUILDING STRUCTURE FOR THE ELECTRICAL OPENING SHALL BE INCLUDED UNDER THIS CONTRACT AND BE ACCEPTABLE TO THE OWNER. OBTAIN WRITTEN APPROVAL FROM OWNER PRIOR TO ANY CUTTING IS CARRIED OUT.
- 6.2. ANY OPENING IN EXISTING STRUCTURE SHALL BE CO-ORDINATED, X-RAYED, CUT OR DRILLED AND PATCHED, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE ADVISED BY THE GENERAL CONTRACTOR.
- 6.3. WHERE CONDUITS OR OTHER ELECTRICAL EQUIPMENT PASS THROUGH FIRE-RATED WALLS OR FLOORS, PROVIDE FIRE-STOPPING MATERIAL LISTED WITH, AND BEAR LABEL OF CSA AND ULC, AND MAINTAIN SAME FIRE RATING OF BUILDING COMPONENT PENETRATION.

7.1. SUBMIT SHOP DRAWINGS FOR LIGHTING FIXTURES, PANELBOARDS, TRANSFORMERS, AND OTHER MAJOR ELECTRICAL EQUIPMENT/SYSTEMS AS REQUESTED BY THE ELECTRICAL ENGINEER FOR

8.1. CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY OF ALL MATERIALS, EQUIPMENT AND WORKMANSHIP UNDER THIS DIVISION FOR A PERIOD OF ONE (1) YEAR, COMMENCING ON THE DATE OF SUBSTANTIAL PERFORMANCE OR ACCEPTANCE OF THE COMPLETED PORTION BY THE ARCHITECT/INTERIOR DESIGNER/ PROJECT MANAGER, WHICHEVER DATE IS LATER.

9. AS-BUILT DRAWINGS

- UPON COMPLETION OF WORK, ELECTRICAL CONTRACTOR SHALL PROVIDE THESE (3) SETS OF WHITE PRINTS TO REFLECT 'AS-BUILT' CONDITIONS. 'AS-BUILT' DRAWINGS SHALL INCORPORATE ANY CHANGES OR DEVIATIONS FROM THE TENDER DOCUMENTS.
- CONTRACTOR SHALL ALSO PROVIDE ELECTRONIC FILES IN AUTOCAD FORMAT IN A CD DISK TO REFLECT 'AS-BUILT' CONDITIONS.
- CONTRACTOR TO MARK THE DRAWINGS AS 'AS-BUILT' ALONG WITH ELECTRICAL CONTRACTORS

10. CLOSE-OUT DOCUMENTS

SUBMIT 3 CDS OF ELECTRONIC COPY AND ONE 3-RING BINDER OF HARD COPY OF THE CLOSEOUT DOCUMENTS WHICH SHALL INCLUDE BUT NOT BE LIMITED TO:

- ESA INSPECTION REPORT AND FINAL CERTIFICATE
- STAMPED APPROVED SHOP DRAWINGS
- WARRANTY LETTER
- AS-BUILT DRAWING (CAD 2004 FILE AND PDF FORMAT)
- FIRE ALARM VERIFICATION REPORT

DESIGN NOTES:

- PROPOSED LOCATION FOR NEW 225KVA PAD MOUNTED TRANSFORMER SUPPLIED AND INSTALLED BY UTILITY. EXACT LOCATION AND ORIENTATION TO BE CONFIRMED BY UTILITY PRIOR TO CONSTRUCTION.
- $\langle 2 \rangle$ ALL DUCT BANKS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
- PRIMARY CABLES TERMINATION TO THE TRANSFORMER BY UTILITY.
- COORDINATE WITH UTILITY TO PROVIDE NEW PRIMARY SERVICE FROM UTILITY POLE TO PRIMARY DUCT BANKS INSIDE THE SCHOOL PROPERTY ZONE.
- ELECTRICAL CONTRACTOR TO PROVIDE CABLES, GROUNDING, GUARD POSTS AND FOUNDATION FOR THE NEW SERVICE AS PER UTILITY AND ESA REQUIREMENTS.
- 6 PROVIDE SUPPORT FOR SERVICE CONDUITS ON WALL AND ROOF. COORDINATE WITH MECHANICAL AND ROOF CONTRACTOR FOR THE EXACT CONDUIT PATH AND ELEVATION.
- NEW DOGHOUSE ABOVE THE ELECTRICAL ROOM TO BE USED FOR TERMINATION OF CONDUCTORS TO NEW 600A/3P FUSED SERVICE DISCONNECT.

(8) COORDINATE WITH THE ROOFING CONTRACTOR FOR THE EXACT LOCATION AND SIZE

- OF THE DOGHOUSE. REFER TO THE STRUCTURAL DRAWINGS FOR DOGHOUSE AND ROOFTOP CONDUIT SUPPORT DETAIL. ⟨ 9 ⟩ CONDUIT STUB UP POINT AND CONNECTION FROM RIGID PVC TO RIGID GALVANIZED
- STEEL FOR EXTERIOR RUN.
- 10- CONTRACTOR TO INFORM UTILITY WHEN DUCT INSTALLATION IS READY FOR INSPECTION. THIS SHALL BE DONE BEFORE ANY BACKFILL. 11- COORDINATE AND INFORM ESA FOR ALL REQUIRED INSPECTIONS DURING
- CONSTRUCTION. 12- THE EXACT DUCT BANK PATH SHALL BE DETERMINED IN COORDINATION WITH UTILITY AND EXISTING UNDERGROUND SERVICES. FOLLOW ALL REQUIRED CLEARANCE FROM

OTHER UNDERGROUND SERVICES. ANY REQUIRED CROSSOVER WITH THE EXISTING

SERVICES SHALL MEET OAKVILLE HYDRO AND CORRESPONDING SERVICE PROVIDER. 13- RESTORE ALL SITE SURFACES TO THE PREVIOUS CONDITION. REINSTALL ASPHALT,

LANDSCAPING, CONCRETE PAVEMENT, CURBS.

BUILDING ELECTRICAL SERVICE SIZE CALCULATION BASED ON RULE 8-204 OF OESC

1.	TOTAL AREA	3,000 m ²
2.	TOTAL CLASSROOM AREA	1,450 m ²
3.	BASIC LOAD (CLASSROOM @ 50W/m ²)	72,500 W
4.	BASIC LOAD @ 10W/m ²	15,500 W
5.	OTHER LOADS	115,425 W
6.	TOTAL (BY ADDING 3,4 & 5)	203,425 W
7.	LESS ELEC. HEATING	N/A
8.	LOAD PER SQUARE METER	67.81 W/m ²
9.	TOTAL LOAD WITH DEMAND FACTORS	116,969 W
10.	CONTINUOUS LOAD (X1.25)	146,212 W
11.	MINIMUM SERVICE SIZE @ 208V/3Ø	405.85 A (600A)

MAXIMUM SHORT CIRCUIT AT MAIN SERVICE DISCONNECT

- INFINITE SHORT CIRCUIT ON PRIMARY
- 225KVA TRANSFORMER WITH 2% IMPEDANCE AVAILABLE SHORT CIRCUIT AT SECONDARY TERMINALS: 31,200KA CONSIDERING 60m SECONDARY SERVICE LENGTH
- MAXIMUM AVAILABLE SHORT CIRCUIT AT MAIN SERVICE DISCONNECT

ALL NEW EQUIPMENT TO BE RATED FOR MINIMUM 22KAIC.

Revisions Ref. No. Description Date 022/02/17 50% REVIEW 2022/04/19 OAKVILLE HYDRO ESA PLAN REVIEW 022/04/20 2022/04/21 TENDER

> RECEIVED PERMIT NO: 22-111973 DATE: 05/26/2022

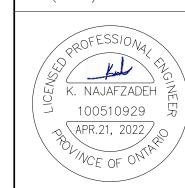
> > TOWN OF OAKVILLE

Project:

GLADYS SPEERS PS 2150 SAMWAY RD, OAKVILLE,



Unit 100 - 706 Euclid Avenue Toronto, Ontario, Canada M6G 2T9 Tel:(416)591-6575 Fax:(416)591-1010



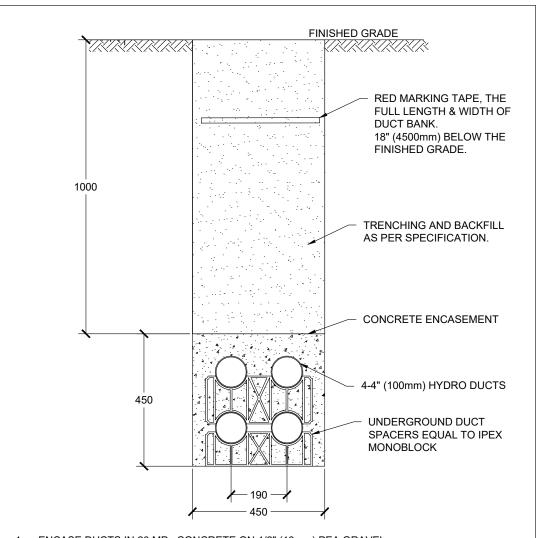
Consultant:



588 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 9Y6 TEL. (905)-787 8885 FAX (905)-787 8771

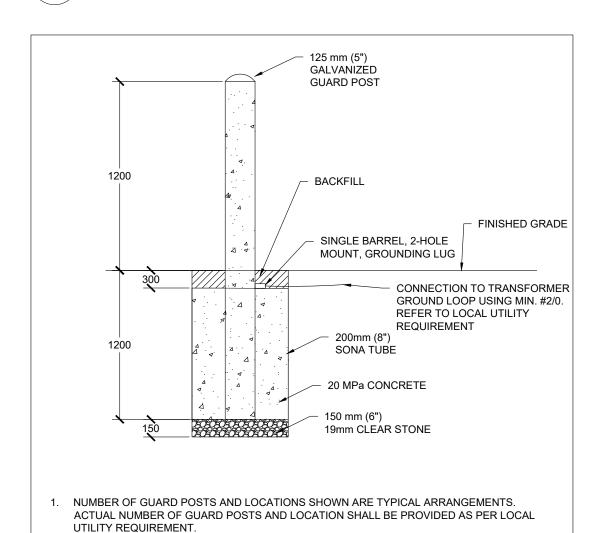
ELECTRICAL SERVICES SITE PLAN

Date:
APRIL 2022
Plotted:
Issued:
Drawing No.:
E-200



- 1. ENCASE DUCTS IN 20 MPa CONCRETE ON 1/2" (13mm) PEA GRAVEL. 2. SLOPE DUCT BANK A MINIMUM OF 3" (75mm) PER 100' (30.5M) (AWAY FROM BUILDING). CONCRETE ENCASED DUCTS SHALL BE CSA APPROVED PVC TYPE II. 4. PROVIDE 1-3/16" (4.75mm) MIN. POLYPROPYLENE FISH ROPE IN EACH CONCRETE ENCASED OR DIRECT BURIED DUCT. SEAL DUCT ENDS WITH AN APPROVED DUCT PLUG.
- EXACT CONSTRUCTION DETAILS SHALL CONFORM TO LOCAL UTILITY REQUIREMENTS AND DETAILS.

A SECONDARY DUCT BANK E-201 NTS

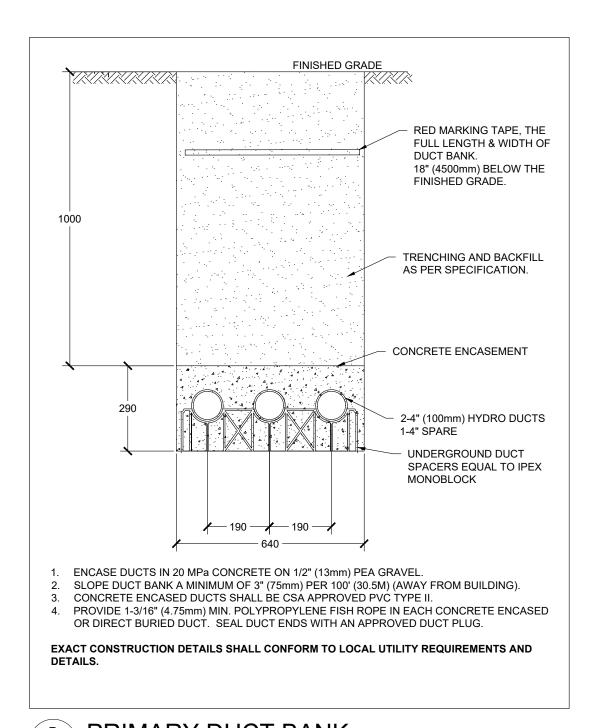


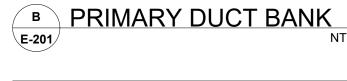
2. PAINT GUARD POST WITH SAFETY YELLOW PAINT. FOR PROPER ADHESION OF PAINT, GUARD POST SHALL BE CLEANED AND PRIMED PRIOR TO PAINTING. A REFLECTIVE STRIP IF REQUIRED SHALL BE PLACED AT EACH POST. 3. CONTRACTOR TO INSTALL A 300mm CONSTRUCTION JOINT AROUND THE GUARD POSTS

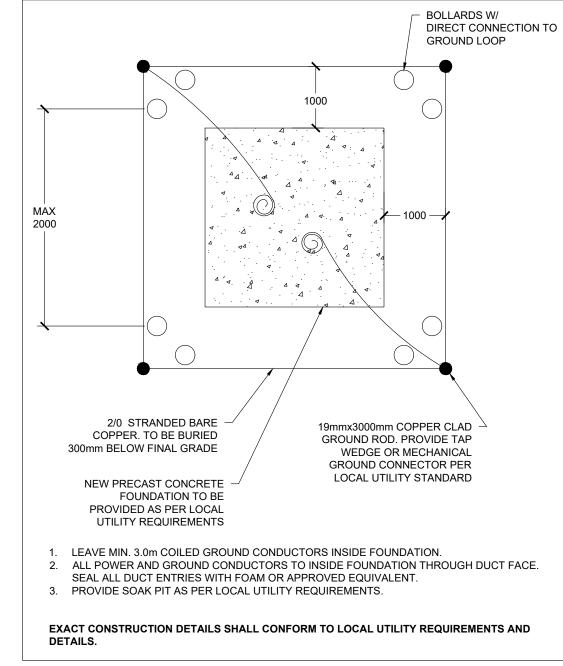
EXACT CONSTRUCTION DETAILS SHALL CONFORM TO LOCAL UTILITY REQUIREMENTS AND

EXCEPT IN GRASSY BOULEVARDS.

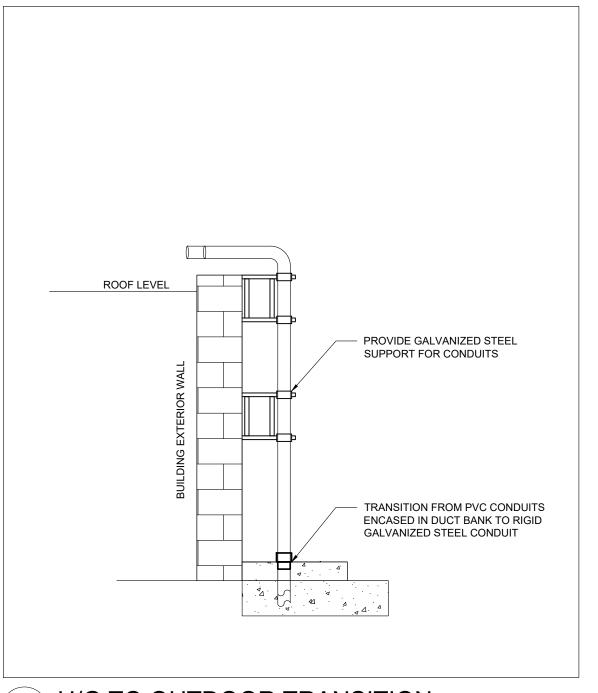
D BOLLARD MOUNTING DETAIL
NTS



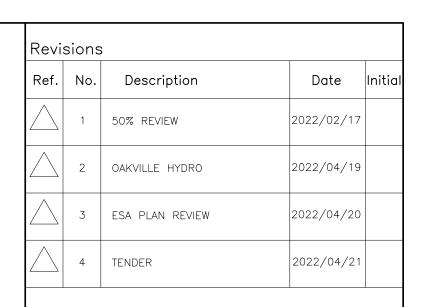




PAD MOUNTED XFMR GROUNDING
NTS



c U/G TO OUTDOOR TRANSITION NTS



RECEIVED PERMIT NO: 22-111973 **DATE**: 05/26/2022 OAKVILLE TOWN OF OAKVILLE

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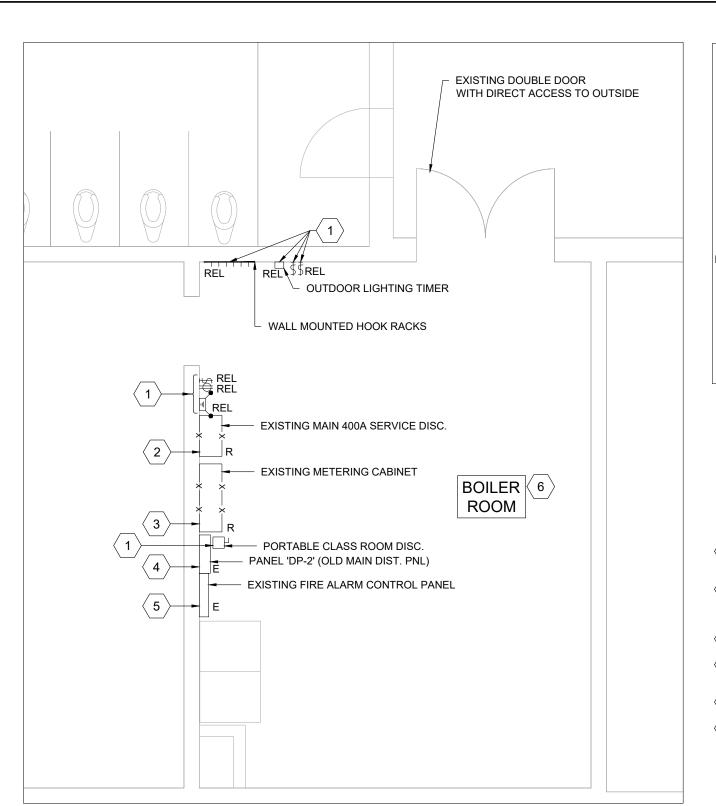
Consultant:



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ELECTRICAL SERVICES DETAILS

Set No.:	E-201
Job No.: 2022-04	Drawing No.:
Scale: AS SHOWN	Issued:
Checked by: K.N.	Plotted:
Drawn by: K.N.	Date: APRIL 2022



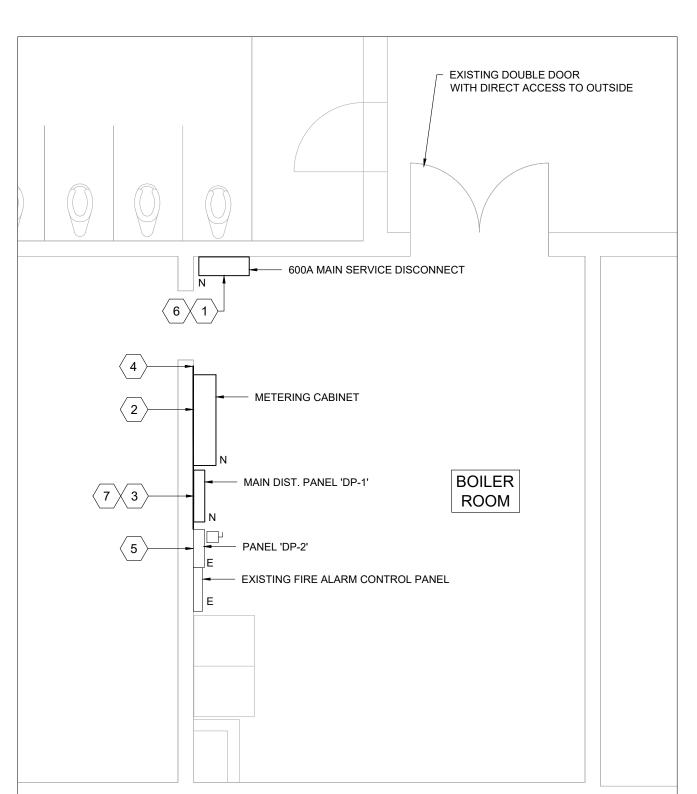
BOILER ROOM - DEMO WORK

_-----PANEL Z 200A-3P PANEL W/PP-X - 100A-3P 100A-3P - PORTABLE
PANEL N - 100A-3P 100A-2P - SPARE
PANEL L - 100A-3P 60A-3P - ?
PANEL X - 100A-3P 100A-3P - PANEL A
PANEL B - 100A-3P 40A-3P - BOILER
A/C UNIT - 40A-2P 20A-3P - PUMPS
A/C UNIT - 40A-2P 40A-2P - PUMPS __x__x__x___x___ INCOMING POWER METERING SUPPLY CABINET OAKVILLE HYDRO POLE MOUNTED XFMR ? - 40A-2P 'MAIN DIST. PANEL' 400A, 208Y/120V, 3Ø, 4W SIEMENS P2 CAT#P2C54ML400CBS

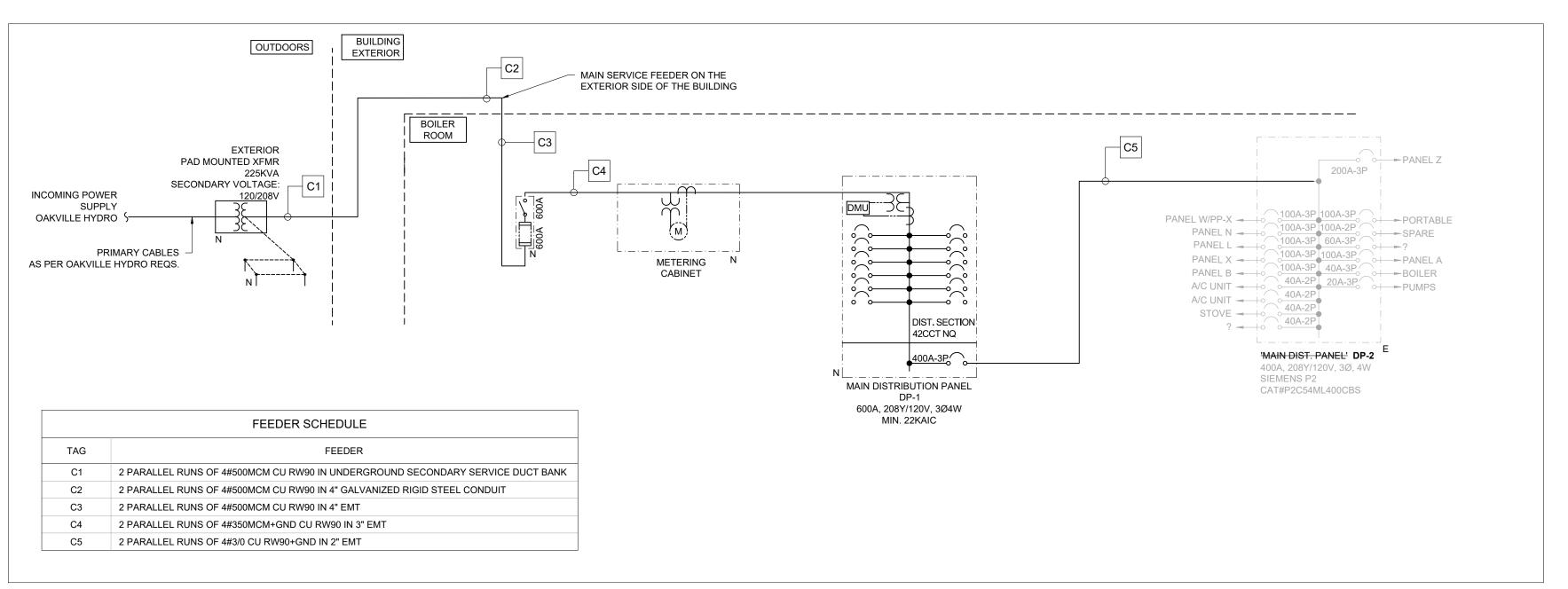
SINGLE LINE DIAGRAM - DEMO WORK

DEMO NOTES:

- 1 ALLOW FOR RELOCATION OF THE EXISTING EQUIPMENT TO MAKE SPACE READY FOR NEW INSTALLATION.
- 2 REMOVE THE EXISTING 400A FUSED DISCONNECT SWITCH C/W WIRING AND CONDUIT. REMOVE THE SERVICE CONDUCTOR GUARDS. PATCH, REPAIR AND PAINT CONDUCTOR PENETRATION POINT ON BOILER ROOM FLOOR TO MATCH EXISTING.
- \langle 3 \rangle EXISTING OAKVILLE HYDRO METERING TO BE REMOVED.
- \langle 4 \rangle EXISTING MAIN PANEL TO REMAIN, RE-FED AND RENAME AS SHOWN IN THE NEW CONSTRUCTION NOTES.
- \langle 5 \rangle EXISTING FIRE ALARM CONTROL PANEL TO REMAIN.
- 6 ALLOW FOR RELOCATION OF ANY WALL/CEILING MOUNTED EQUIPMENT AS REQUIRED FOR NEW SERVICE AND DOGHOUSE INSTALLATION.







SINGLE LINE DIAGRAM - NEW WORK

- \langle 1 \rangle PROVIDE AND INSTALL NEW 600A FUSED DISCONNECT SWITCH, RATED FOR SERVICE ENTRANCE EQUIPMENT C/W SYSTEM BACKBOARD AND FEEDERS AS SHOWN IN THE SINGLE LINE DIAGRAM.
- ⟨ 2 ⟩ PROVIDE AND INSTALL NEW 1200mmX1200mmX300mm METERING CABINET C/W REMOVABLE 1100mmX1100mm BACK-PLATE AS PER OAKVILLE HYDRO REQUIREMENTS.
- (3) PROVIDE AND INSTALL NEW 600A, 120/208V, 3Ø4W MAIN DISTRIBUTION PANEL C/W A DIGITAL METERING UNIT AND BRANCH CIRCUITS AS SHOWN IN THE SLD. NEW MAIN DISTRIBUTION PANEL MUST COMPLETE WITH AT LEAST 42CCT NQ DISTRIBUTION TO BE USED FOR NEW HVAC EQUIPMENT INSTALLATION.
- \langle 4 \rangle EXTEND THE EXISTING SYSTEM BACKBOARD TO SUITE NEW EQUIPMENT INSTALLATION.
- RENAME THE OLD MAIN DISTRIBUTION PANEL TO PANEL 'DP-2'. PROVIDE AND INSTALL LAMACOID LABEL. PROVIDE AN UPDATE, TYPED, PRINTED PANEL SCHEDULE TO REPLACE
- \langle 6 \rangle COORDINATE WITH ROOFING CONTRACTOR FOR THE EXACT LOCATION AND SIZE OF THE NEW DOGHOUSE. ALLOW FOR RELOCATION OF THE EXISTING EQUIPMENT IN BOILER ROOM AS REQUIRED.
- \langle 7 \rangle PANEL 'DP-1' SPECIFICATION & FEATURES
- ENCLOSURE TYPE 2, WITH DOOR AND LOCK BOX CAT# MH68HH
- THE EXISTING SCHEDULE.

- DIMENSIONS: 74"H x 27"W x 5.75"D
 BUSSING: 600A RATED COPPER BUS, SILVER/TIN PLATED DRIP HOOD INCREASE TOP END GUTTER 6"
- SOLID NEUTRAL INCREASE LEFT SIDE GUTTER 7" GROUND BAR PM5563 W/ DISPLAY 22KA SCCR MAIN LUG 600A

APPROVED VENDOR: SQUARE D

BRANCH USER PLACEMENT

GENERAL SERVICE UPGRADE NOTES:

- 1. CHECK THE SITE AND DO ALL REQUIRED MEASURING. CHECK THE REQUIRED BENDING RADIUS FOR ALL FEEDERS AND BRANCH CIRCUITS PRIOR ORDERING EQUIPMENT.
- 2. CHECK THE PHASE ROTATION BEFORE AND AFTER SERVICE CHANGE OVER.
- 3. REFER TO THE STRUCTURAL DRAWINGS FOR CONDUIT ROOF TOP SUPPORT AND DOGHOUSE
- 4. PROPERLY SEAL ALL CONDUITS TO AVOID ANY CONDENSATION BUILDUP AS PER OESC RULE
- 5. MODIFY THE EXISTING BUILDING GROUNDING AS REQUIRED TO SUITE NEW WORK AND OESC REQUIREMENTS.

ELECTRICAL LEGEND ABBREVIATION EXISTING TO REMAIN EXISTING TO BE DEMOLISHED/REMOVED NEW MATERIAL/EQUIPMENT/SERVICES MATERIAL/EQUIPMENT/SERVICES TO BE RELOCATED. REL EXISTING IN RELOCATED POSITION WEATHER PROOF NOT IN CONTRACT SINGLE LINE DIAGRAM CIRCUIT BREAKER «O O» DRAWOUT CIRCUIT BREAKER FUSED SWITCH POWER DISTRIBUTION TRANSFORMER (M) | (M) | METER - METERING CABINET AUTOMATIC TRANSFER SWITCH (CIRCUIT BREAKER TYPE) AUTOMATIC TRANSFER SWITCH (NON-CIRCUIT BREAKER

Revi	sions	3		
Ref.	No.	Description	Date	Initi
	1	50% REVIEW	2022/02/17	
	2	OAKVILLE HYDRO	2022/04/19	
	3	ESA PLAN REVIEW	2022/04/20	
	4	TENDER	2022/04/21	
		Ref. No. 1 2 3 ^	1 50% REVIEW 2 OAKVILLE HYDRO 3 ESA PLAN REVIEW	Ref. No. Description Date 1 50% REVIEW 2022/02/17 2 OAKVILLE HYDRO 2022/04/19 3 ESA PLAN REVIEW 2022/04/20

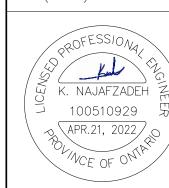
RECEIVED PERMIT NO: 22-111973 **DATE**: 05/26/2022 OAKVILLE TOWN OF OAKVILLE

Project:

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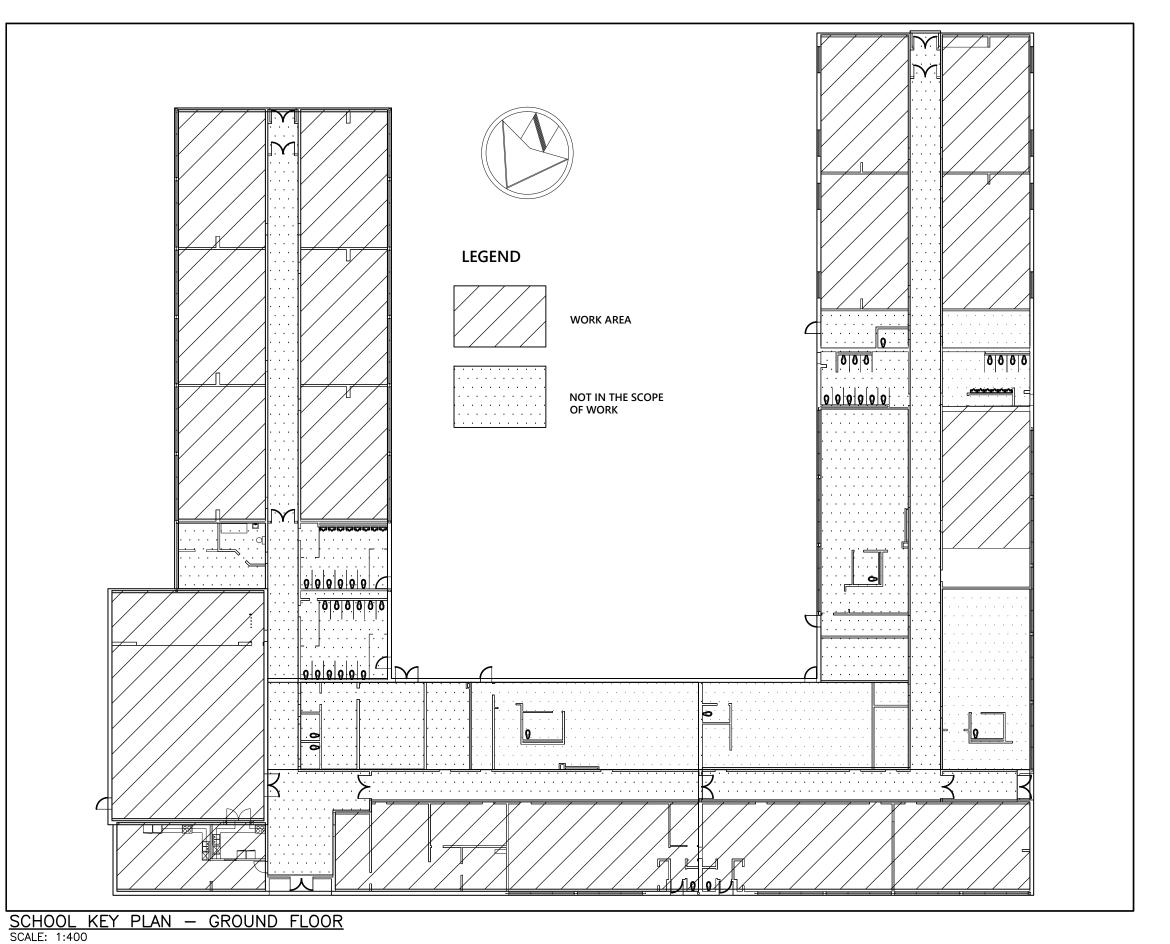
Consultant:

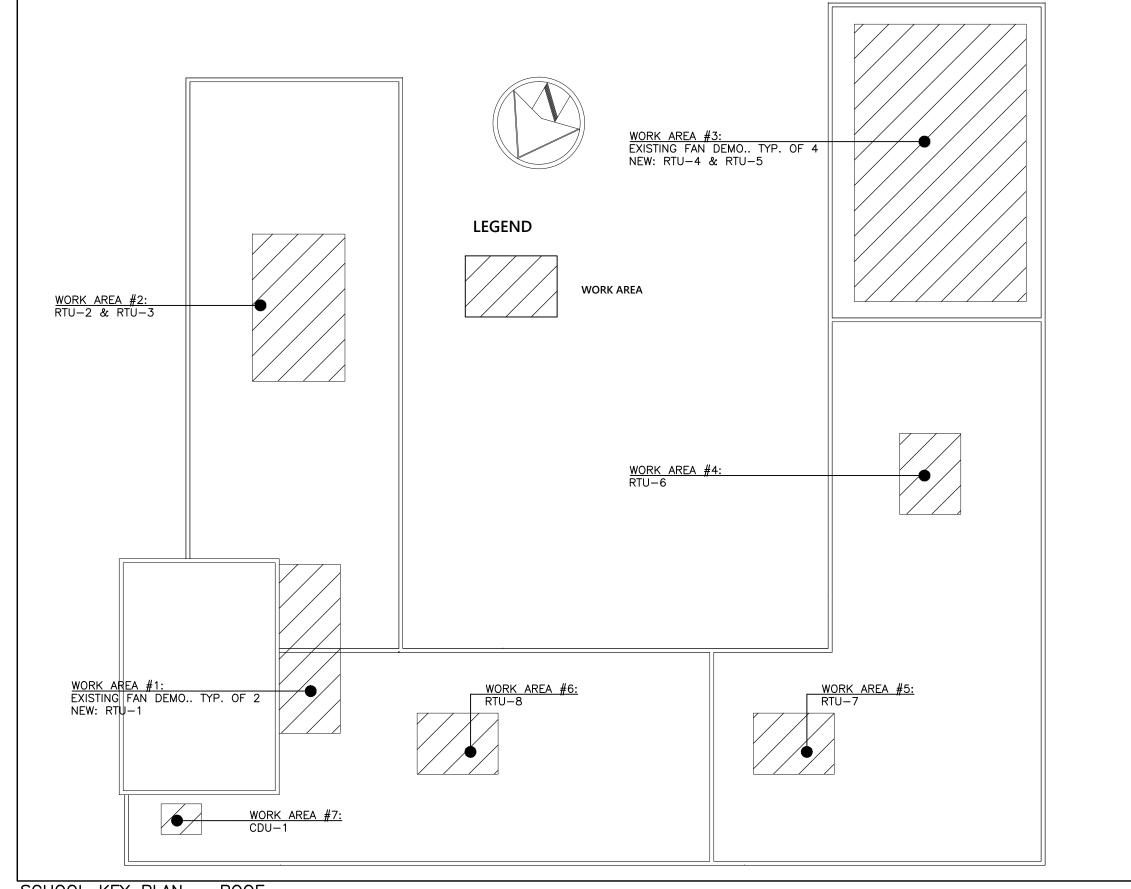


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ELECTRICAL SERVICES FLOOR PLAN SINGLE LINE DIAGRAM

Drawn by: K.N.	Date: APRIL 2022
Checked by: K.N.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
2022-04	
Set No.:	E-300





BALANCING VALVE **—————** CHECK VALVE **├├** STRAINER – OVER 50mm PROVIDE WITH VALVED FLUSHING DRAIN €+----PIPE TURNING DOWN PIPE TURNING UP PIPE REDUCER PLUMBING TRAP **℃** THERMOMETER PRESSURE GUAGE \odot SMOKE SENSOR ⊘FD FLOOR DRAIN FUNNEL FLOOR DRAIN

RAIN WATER LEADER

VENT THROUGH ROOF

HEATING WATER SUPPLY

HEATING WATER RETURN

DOMESTIC COLD WATER PIPE

DOMESTIC HOT WATER PIPE

CUT POINT OF EXISTING SERVICE

CONNECT TO EXISTING

COMPLETE WITH

EXHAUST FAN

EXISTING TO REMAIN

TO BE RELOCATED

VARIABLE FREQUENCY DRIVE

OUTSIDE AIR, EXHAUST AIR

PERIMETER CONVECTOR TYPE CV-1, FINNED ELEMENT LENGTH 2,200 MM, HEATING OUTPUT 2,000 W.

DENOTES: SUPPLY AIR, RETURN AIR,

FINISH REMARKS

B12 | SPIRAL DUCT GRILLES

B12 | EGG CRATE RETURN GRILLE

B12 | SQUARE CONE DIFFUSER

B12 ROUND CONE DIFFUSER

B12 LOUVERED RETURN GRILLE

PERIMETER CONVECTOR

HOSE BIBB

SYMBOLS LIST

SHEET METAL RISER UP - SUPPLY

SHEET METAL RISER DOWN - SUPPLY

SHEET METAL DUCT — FIRST FIGURE INDICATES DIMENSION SHOWN

SHEET METAL RISER UP - RETURN AND EXHAUST

SHEET METAL RISER DOWN - RETURN AND EXHAUST

FUSIBLE LINK FIRE DAMPER WITH ACCESS DOOR IN DUCT

OPEN ENDED DUCT WITH BALANCING DAMPER AND BELLMOUTH INLET

AUTOMATIC CONTROL VALVE - TWO WAY

MIXING OR DIVERTER VALVE (3-WAY)

DESCRIPTION

MOTORIZED DAMPER

SUPPLY AIR GRILLE

FLEXIBLE CONNECTION

EXHAUST OR RECIRC. GRILLE

VOLUME DAMPER

ACCESS DOOR

UNIT HEATER

UNION

ROOM THERMOSTAT

MANUAL AIR VENT

SYMBOL

300x150

──|**├**

 \longrightarrow

HB ⊩

—HWS—

CTE

C/W

EX

VFD

O/A, E/A

SCHEDULE OF GRILLES & DIFFUSERS

VOLUME CONTROL

YES

MODEL

SDG

80ECRG

SCD

RCD

BUILDING SERVICES PERMIT NO: 22-111973 OAKVILLE TOWN OF OAKVILLE

Project:

Revisions

Description

50% REVIEW

75% REVIEW

100% REVIEW

ISSUED FOR TENDER

Date

022/02/17

2022/03/09

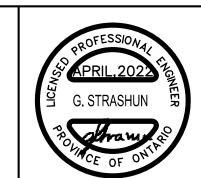
2022/03/3⁻

2022/04/26

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Consultant:

SAB ENGINEERING Inc.

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SYMBOL LIST, EQUIPMENT SCHEDULE, KEY PLANS & NOTES MECHANICAL

Drawn by:	Date:
P.C.	DECEMBER 2021
Checked by:	Plotted:
0.S.	
Scale:	Issued:
AS SHOWN	
Job No.:	Drawing No.:
2022-01	

Set No.:

of: 10

SCHOOL KEY PLAN — ROOF SCALE: 1:400

	SCHEDULE OF ROOFTOP UNIT														
	SUPPLY	SUPPLY	SUPPLY	HEATING	CAPACITY	MIN. OUTDOOR		DX C	OOLING PERFORMANCE		UNIT POWER			UNIT	REMARKS
TAG	AIR FLOW CFM	E.S.P. Pa [in. wg]	FAN HP	INPUT	OUTPUT	AIR (CFM)	TOTAL CAP.	SENS. CAP.	TEMP *(C [°F]	VOLTAGE	AMPS	MOCP	WEIGHT KG [LBS]	, <u>, , , , , , , , , , , , , , , , , , </u>
		[9]		kW [MBH]	kW [MBH]		kW [MBH]	kW [MBH]	EDBT/EWBT	LDBT/LWBT		(MCA)	(A)	רס [נפט]	
RTU-1	4,000	249 [1.0]	2.75	73.3 [250]	58.6 [200]	1,500	33.4 [114]	27.5 [94]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	48	60	730 [1,608]	
RTU-2	4,000	375 [1.5]	2.75	73.3 [250]	58.6 [200]	1,500	33.4 [114]	27.5 [94]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	48	60	730 [1,608]	
RTU-3	4,000	375 [1.5]	2.75	73.3 [250]	58.6 [200]	1,500	33.4 [114]	27.5 [94]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	48	60	730 [1,608]	
RTU-4	2,400	375 [1.5]	2.75	44.0 [150]	35.6 [122]	1,000	21.6 [74]	17.2 [59]	26.7/19.4 [80/67]	14.1/14.1 [57.3/57.1]	208/3/60	37	50	639 [1,408]	
RTU-5	2,400	375 [1.5]	2.75	44.0 [150]	35.6 [122]	1,000	21.6 [74]	17.2 [59]	26.7/19.4 [80/67]	14.1/14.1 [57.3/57.1]	208/3/60	37	50	639 [1,408]	
RTU-6	2,000	125 [0.5]	1.00	38.1 [130]	30.5 [104]	550	17.8 [61]	13.5 [46]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	30.0	45	450 [992]	
RTU-7	4,000	375 [1.5]	2.75	73.3 [250]	58.6 [200]	1,500	33.4 [114]	27.5 [94]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	48	60	730 [1,608]	
RTU-8	2,000	125 [0.5]	1.00	38.1 [130]	30.5 [104]	150	17.8 [61]	13.5 [46]	26.7/19.4 [80/67]	14.5/14.2 [58.2/57.6]	208/3/60	30.0	45	450 [992]	

NOTE: CLG: AIR EDBT/EWBT 78°F/66°F, LDBT/LWBT 55.9/55.2°F;

MANUFACTURER

MODEL

COOLING CAP.

TONS [MBH]

							SCHE	DULE OF VAV COILS	
	TAG	SERVING	MAX. AIR FLOW L/S (CFM)	MIN. AIR FLOW L/S (CFM)	MIN. PRES. DIFFERENT. (PA)	INLET SIZE DIA. (MM)	OUTLET SIZE (MM)	DIMENSIONS L×H×D MM[IN]	REMARKS
VAV-2-1		CLASSROOM 01	567 (1,200)	400 (850)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-2-2		CLASSROOM 02	567 (1,200)	400 (850)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-2-3		CLASSROOM 03	755 (1,600)	520 (1100)	2.5	300	425x350	470x390x330 [18.5x15.5x13]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-3-1		CLASSROOM 04	755 (1,600)	520 (1100)	2.5	300	425×350	470x390x330 [18.5x15.5x13]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-3-2		CLASSROOM 05	567 (1,200)	400 (850)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-3-3		CLASSROOM 06	567 (1,200)	400 (850)	2.5	250	350x300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-4-1		CLASSROOM 13	567 (1,200)	400 (850)	2.5	250	350x300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-4-2		CLASSROOM 12	567 (1,200)	400 (850)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-5-1		CLASSROOM 14	567 (1,200)	400 (850)	2.5	250	350x300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-5-2		CLASSROOM 15	567 (1,200)	400 (850)	2.5	250	350x300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-7-1		CLASSROOM 17	567 (1,200)	400 (850)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-7-2		CLASSROOM 18	661 (1,400)	450 (950)	2.5	250	350×300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR
VAV-7-3		CLASSROOM 19	661 (1,400)	450 (950)	2.5	250	350x300	390x340x305 [15.5x13.5x12]	C/W MINIMUM 900MM SOUND ATTENUATOR

WEIGHT

MOCP | KG [LB]

REMARKS

CU-1	MITSUBISHI	MUY-GE24NA	2.0 [24]	R410A	9.5 [¾] 18/[%]	875×840	×330	230/	/1/60	20	54 [119] C/W ECOFOOT SNOW STAND			T SNOW STAND
NOTE:	<u>:</u>														
					9	SCHEDULE (OF IND	OOR	A/C UN	ITS					
TAG	TVDE	MANUFACTURER	MODEL	CLG. CAP.	AIR FLOW	POWER SUPPLY	MCA	моср	WEIGHT	EQUIPMEN	NT SIZE	REFRIG.	PIPE (MM	DRAIN	REMARKS
IAG	TYPE	MANUFACTURER	MODEL	(TONS/KW)	(CFM)	(V/PH/Hz)	(A)	(A)	KG [LB]	(HxLxW,	мм)	LIQUID	GAS	(MM)	REMARKS
AC-1	WALL MOUNTED	MITSUBISHI	MSY-GE24NA	2.0/7.3	388-738	230/1ø/60	1.0	20	16.8 [37]	330x1,1	15x240	9.5	18	32	COOLING ONLY; C/W CONDENSATE PUMP
NOTE: CC	COMPLETE WITH WIRED MA REMOTE CONTROLLERS, AND BACNET ADAPTER OR CENTRAL CONTROLLER FOR BACNET INTERFACE WITH EXISTING BUILDING AUTOMATION SYSTEM														

SCHEDULE OF OUTDOOR CONDENSERS

CONNECTION SIZES | EQUIPMENT SIZE | POWER SUPPLY

RL (MM/IN) RG (MM/IN) (HxLxW, MM) (V/PH/MCA)

	SCHEDULE OF CONVECTOR																																		
TAG	MANUFACTURER	MODEL	HEATING OUTPUT (BTU/FT)	HEATIN																			' '										FIN SIZE (IN)	FIN SPACING (FINS/FT)	REMARKS
RAD-1	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 ¼"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-2	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 ¼"	4" x 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-3	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 1/4"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-4	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 ¼"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-5	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 ¼"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-6	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 1/4"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-16A	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 1/4"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-17	ENGINEERED AIR	1 ROW	1,060	82 [180]	71 [160]	1 ¼"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-18	ENGINEERED AIR	1 ROW	1,060	82 [180]	71 [160]	1 1 7"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										
RAD-19	ENGINEERED AIR	3 ROWS (12" CENTERS)	3,010	82 [180]	71 [160]	1 1/4"	4" × 4"	50/FT	WALL MOUNTED/WITHOUT ENCLOSURE																										

TYPE

SERVICE

RETURN

SUPPLY

SUPPLY

RETURN

MANUFACTURER

E.H. PRICE

E.H. PRICE

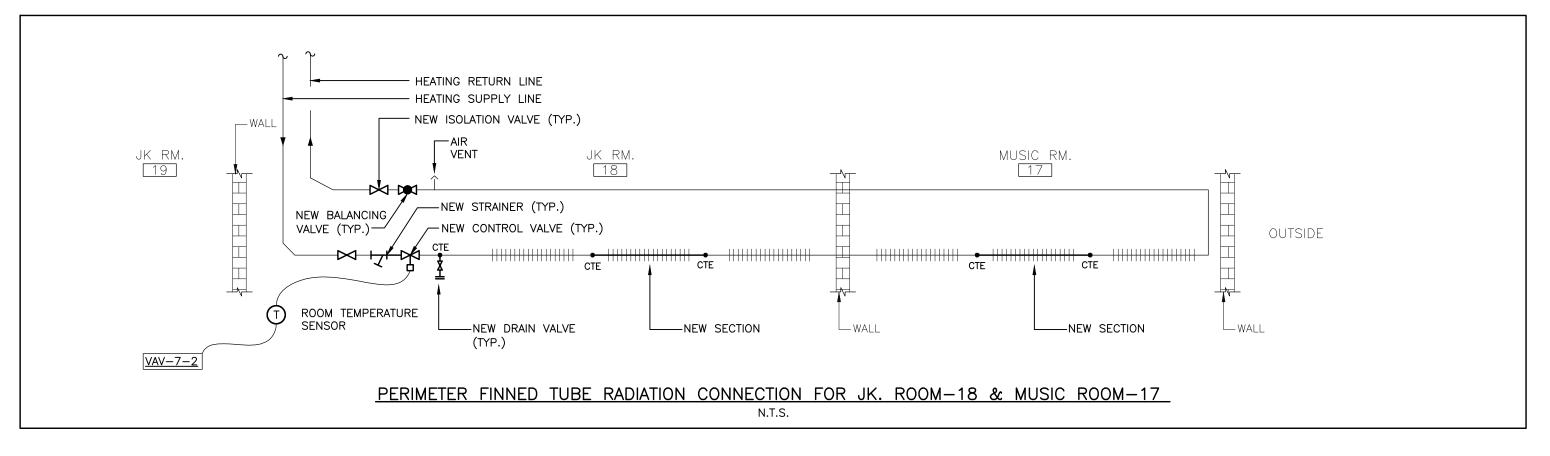
E.H. PRICE

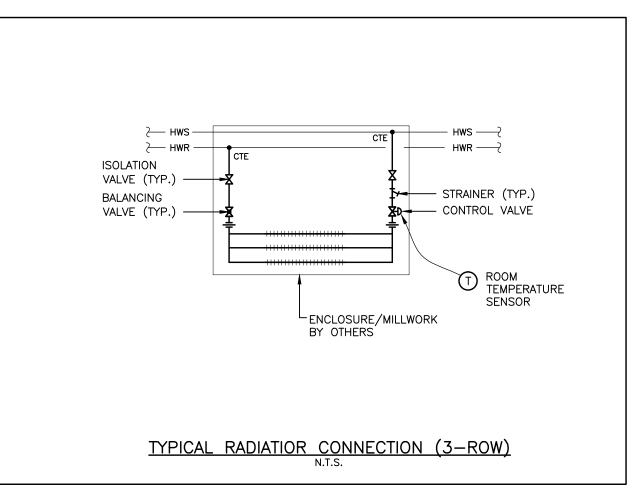
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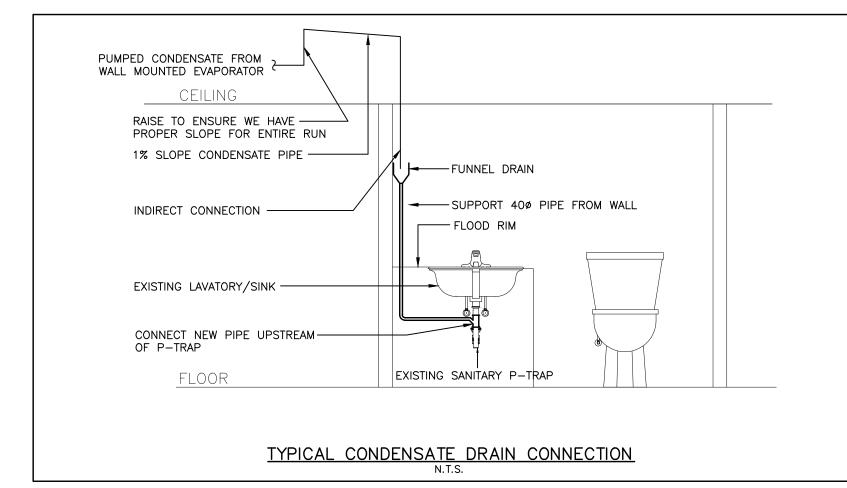
SUPPLY E.H. PRICE

		PLUMBING FIXTURE SERVICES SCHEDULE					
	FIXTURE NAME	TYPE	LOCATION	нот	COLD	DRAIN	VENT
S-1	KITCHEN SINK	COUNTER MOUNTED, DOUBLE COMPARTMENT, STAINLESS STEEL SINK	STAFF ROOM	15	15	40	40

SCHEDULE OF KITCHEN HOOD										
TAG	MANUFACTURER	MODEL	VOLTS	AMPS	REMARKS					
H-1	ANCONA	SLIM-D	120	0.83	750MM (30IN) WIDE, STAINLESS STEEL, MIN 300 CFM					







SUPPLY AIR DUCT -

BRANCH DUCT -

MANUAL DAMPER

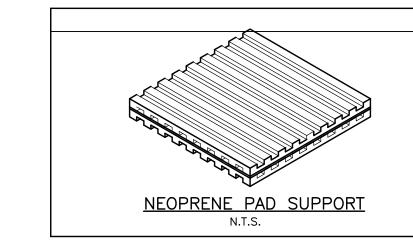
C/W LOCK NUT

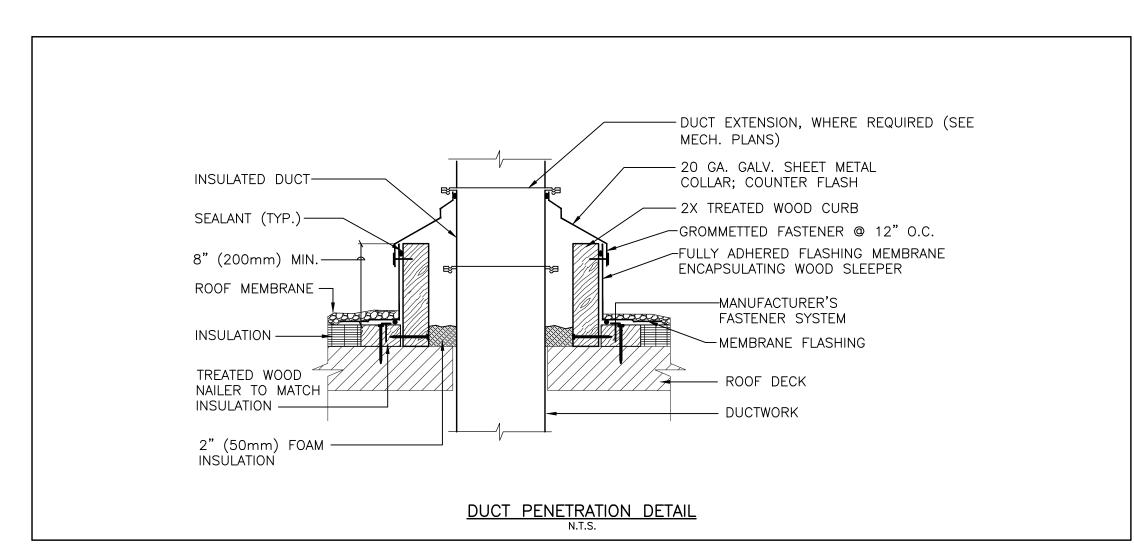
TOP TAKE-OFF 1.5 TIMES

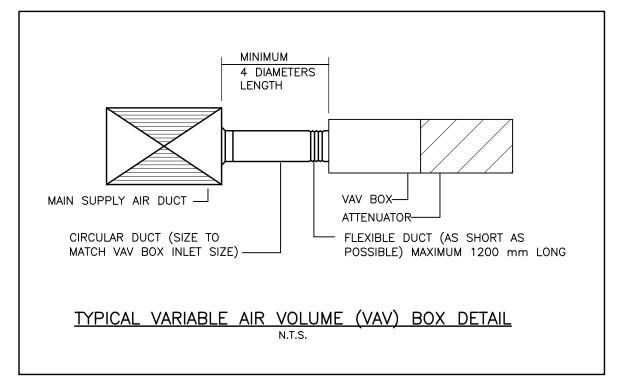
BRANCH DUCT DIAMETER -

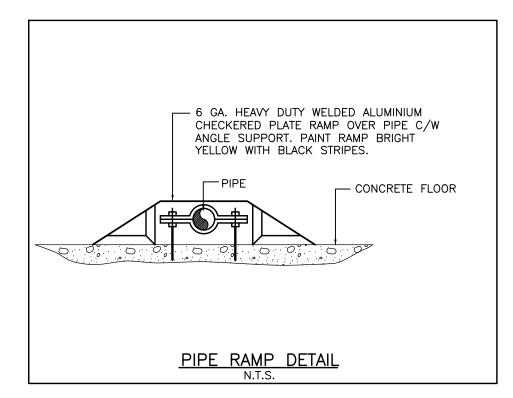
SIDE TAKE-OFF 1.5 TIMES BRANCH DUCT DIAMETER 4

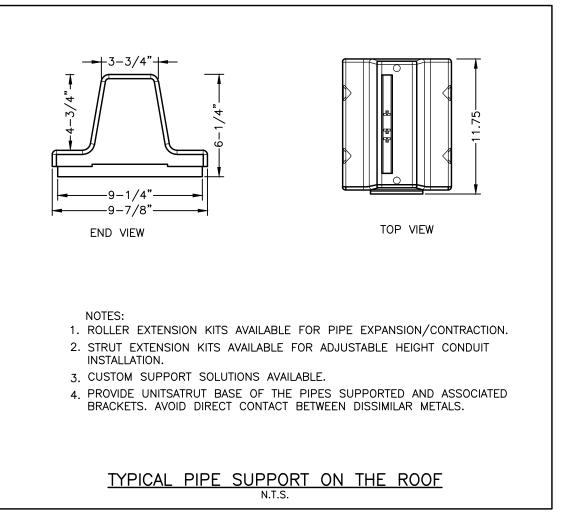
1) REFER TO FLOOR PLANS FOR BRANCH DUCT ARRANGEMENT
2) THIS DETAIL ONLY APPLIED TO RECTANGLE TO ROUND DUCTS
3) BOTTOM TAKE-OFF IS SIMILAR TO TOP TAKE-OFF

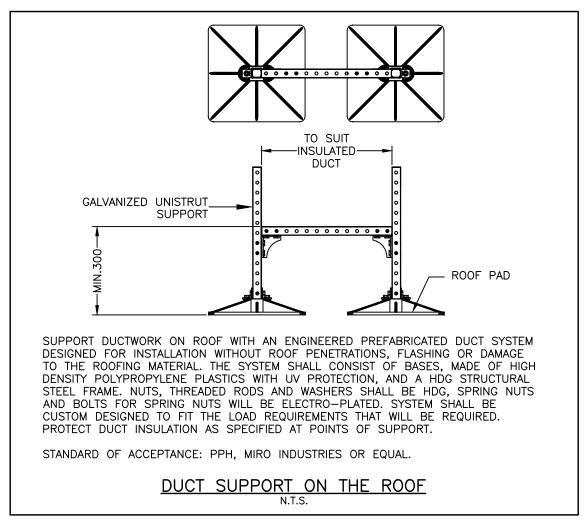


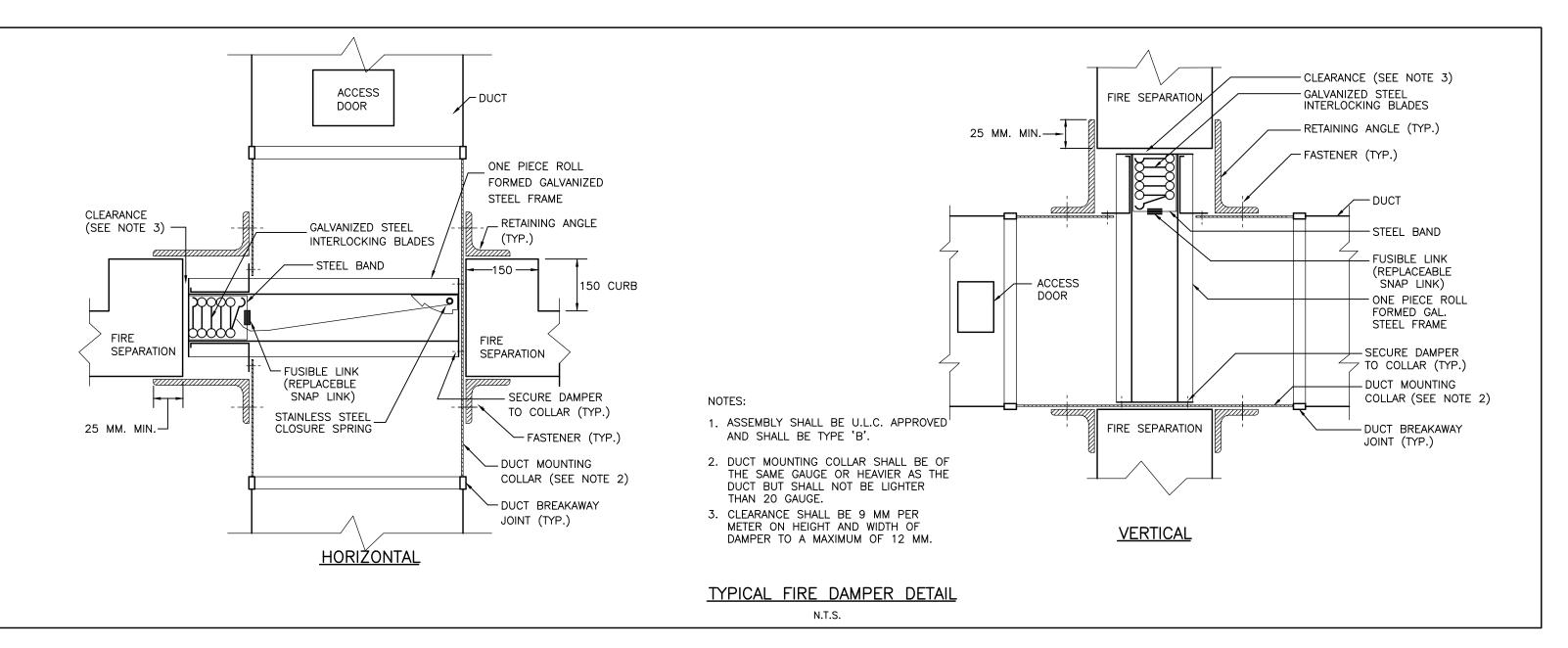


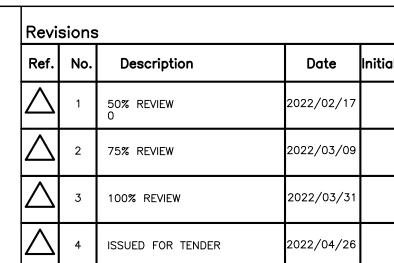












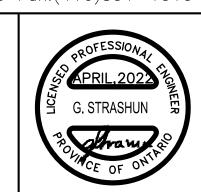


Project:

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Consultant:



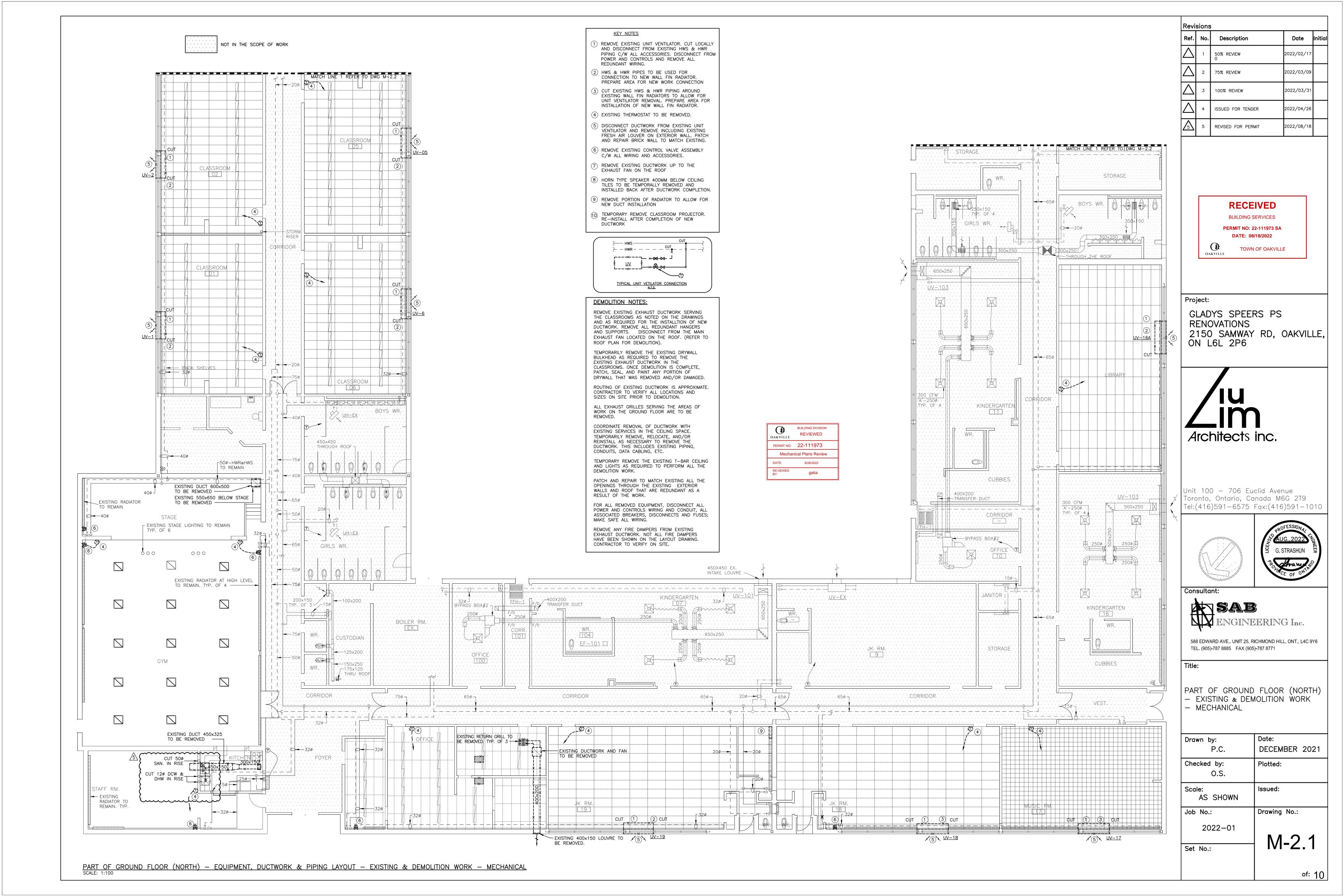
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Title

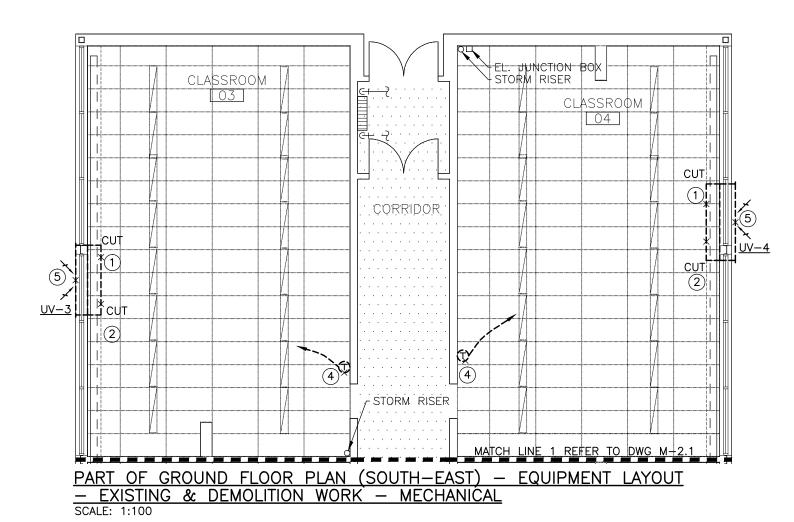
PLUMBING FIXTURE SERVICES SCHEDULE & DETAILS

- MECHANICAL

Drawn by: P.C.	Date: DECEMBER 2021
Checked by: O.S.	Plotted:
Scale: AS SHOWN	Issued:
Job No.: 2022-01	Drawing No.: - M-1.2
Set No.:	



NOT IN THE SCOPE OF WORK



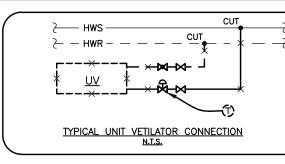
L300×300 GRILLE TYPICAL OF 4 EXISTING RAD TO REMAIN. TYP. —EXISTING HAD TO | REMAIN EXISTING RAD TO REMAIN. HYP. ∰ 300×250¬ _32ø 750Wx1050H PTX DRYWALL BALCKHEAD 320 650 __[⊥]300x250 EXISTING RAD TO REMAIN. TYP. EXISTING RAD TO REMAIN. TYP. ----659 CLASSROOM 750Wx1050H DRYWALL BALCKHEAD SMATCH LINE 1 REFER TO DWG M-2.1 PART OF GROUND FLOOR PLAN (SOUTH-WEST) — EQUIPMENT LAYOUT — EXISTING & DEMOLITION WORK — MECHANICAL SCALE: 1:100

KEY NOTES

- 1 REMOVE EXISTING UNIT VENTILATOR. CUT LOCALLY AND DISCONNECT FROM EXISTING HWS & HWR PIPING C/W ALL ACCESSORIES. DISCONNECT FROM POWER AND CONTROLS AND REMOVE ALL REDUNDANT WIRING.
- (2) HWS & HWR PIPES TO BE USED FOR CONNECTION TO NEW WALL FIN RADIATOR.
 PREPARE AREA FOR NEW WORK CONNECTION
- 3 CUT EXISTING HWS & HWR PIPING AROUND EXISTING WALL FIN RADIATORS TO ALLOW FOR UNIT VENTILATOR REMOVAL. PREPARE AREA FOR INSTALLATION OF NEW WALL FIN RADIATOR.
- 4 EXISTING THERMOSTAT TO BE REMOVED.
- 5 DISCONNECT DUCTWORK FROM EXISTING UNIT VENTILATOR AND REMOVE INCLUDING EXISTING FRESH AIR LOUVER ON EXTERIOR WALL. PATCH AND REPAIR BRICK WALL TO MATCH EXISTING.
- 6 REMOVE EXISTING CONTROL VALVE ASSEMBLY C/W ALL WIRING AND ACCESSORIES.
- 7) REMOVE EXISTING DUCTWORK UP TO THE EXHAUST FAN ON THE ROOF
- 8 HORN TYPE SPEAKER 400MM BELOW CEILING TILES TO BE TEMPORALLY REMOVED AND
- INSTALLED BACK AFTER DUCTWORK COMPLETION.

 (9) REMOVE PORTION OF RADIATOR TO ALLOW FOR
- NEW DUCT INSTALLATION

 10 TEMPORARY REMOVE CLASSROOM PROJECTOR
- 10 TEMPORARY REMOVE CLASSROOM PROJECTOR. RE-INSTALL AFTER COMPLETION OF NEW DUCTWORK



DEMOLITION NOTES:

REMOVE EXISTING EXHAUST DUCTWORK SERVING THE CLASSROOMS AS NOTED ON THE DRAWINGS AND AS REQUIRED FOR THE INSTALLTION OF NEW DUCTWORK. REMOVE ALL REDUNDANT HANGERS AND SUPPORTS. DISCONNECT FROM THE MAIN EXHAUST FAN LOCATED ON THE ROOF. (REFER TO ROOF PLAN FOR DEMOLITION).

TEMPORARILY REMOVE THE EXISTING DRYWALL BULKHEAD AS REQUIRED TO REMOVE THE EXISTING EXHAUST DUCTWORK IN THE CLASSROOMS. ONCE DEMOLITION IS COMPLETE, PATCH, SEAL, AND PAINT ANY PORTION OF DRYWALL THAT WAS REMOVED AND/OR DAMAGED.

ROUTING OF EXISTING DUCTWORK IS APPROXIMATE. CONTRACTOR TO VERIFY ALL LOCATIONS AND SIZES ON SITE PRIOR TO DEMOLITION.

ALL EXHAUST GRILLES SERVING THE AREAS OF WORK ON THE GROUND FLOOR ARE TO BE

COORDINATE REMOVAL OF DUCTWORK WITH EXISTING SERVICES IN THE CEILING SPACE. TEMPORARILY REMOVE, RELOCATE, AND/OR REINSTALL AS NECESSARY TO REMOVE THE DUCTWORK. THIS INCLUDES EXISTING PIPING, CONDUITS, DATA CABLING, ETC.

TEMPORARY REMOVE THE EXISTING T—BAR CEILING AND LIGHTS AS REQUIRED TO PERFORM ALL THE DEMOLITION WORK.

PATCH AND REPAIR TO MATCH EXISTING ALL THE OPENINGS THROUGH THE EXISTING EXTERIOR WALLS AND ROOF THAT ARE REDUNDANT AS A RESULT OF THE WORK.

FOR ALL REMOVED EQUIPMENT, DISCONNECT ALL POWER AND CONTROLS WIRING AND CONDUIT, ALL ASSOCIATED BREAKERS, DISCONNECTS AND FUSES; MAKE SAFE ALL WIRING.

REMOVE ANY FIRE DAMPERS FROM EXISTING EXHAUST DUCTWORK. NOT ALL FIRE DAMPERS HAVE BEEN SHOWN ON THE LAYOUT DRAWING. CONTRACTOR TO VERIFY ON SITE.

Revi	Revisions										
Ref.	No.	Description	Date	Initial							
\triangle	1	50% REVIEW 0	2022/02/17								
\triangle	2	75% REVIEW	2022/03/09								
	3	100% REVIEW	2022/03/31								
	4	ISSUED FOR TENDER	2022/04/26								

PERMIT NO: 22-111973

DATE: 05/26/2022

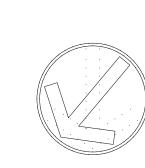
OAKVILLE TOWN OF OAKVILLE

Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE, ON L6L 2P6



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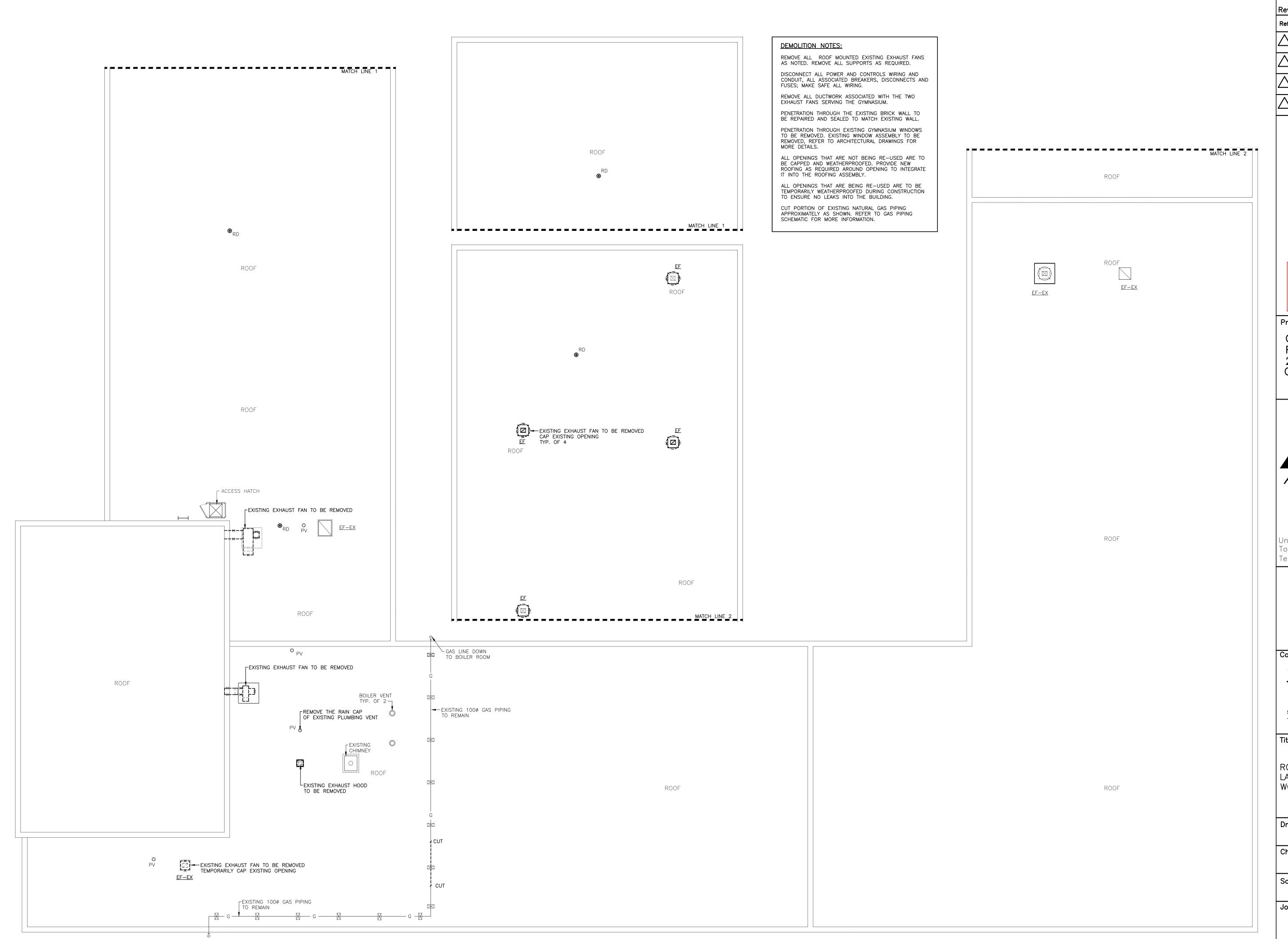
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PART OF GROUND FLOOR (SOUTH)

- EXISTING & DEMOLITION WORK

- MECHANICAL

Drawn by:	Date:
P.C.	DECEMBER 2021
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Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
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Set No.:	101

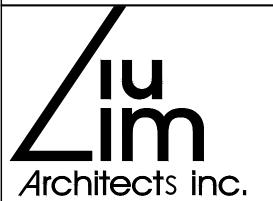


	Revisions				
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	\triangle	3	100% REVIEW	2022/03/31	
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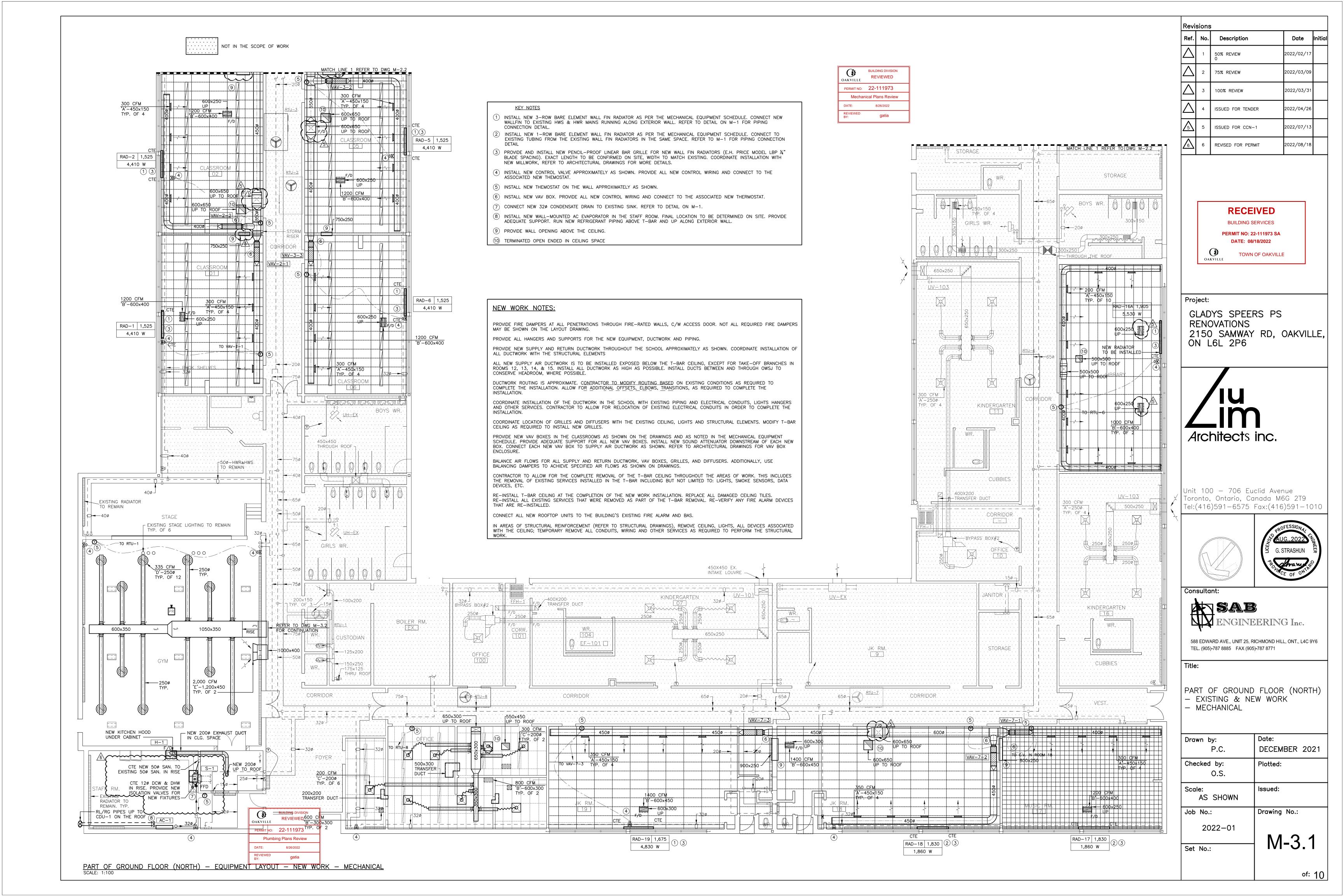
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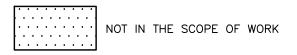
ROOF - EQUIPMENT & GAS PIPING LAYOUT - EXISTING & DEMOLITION WORK - MECHANICAL

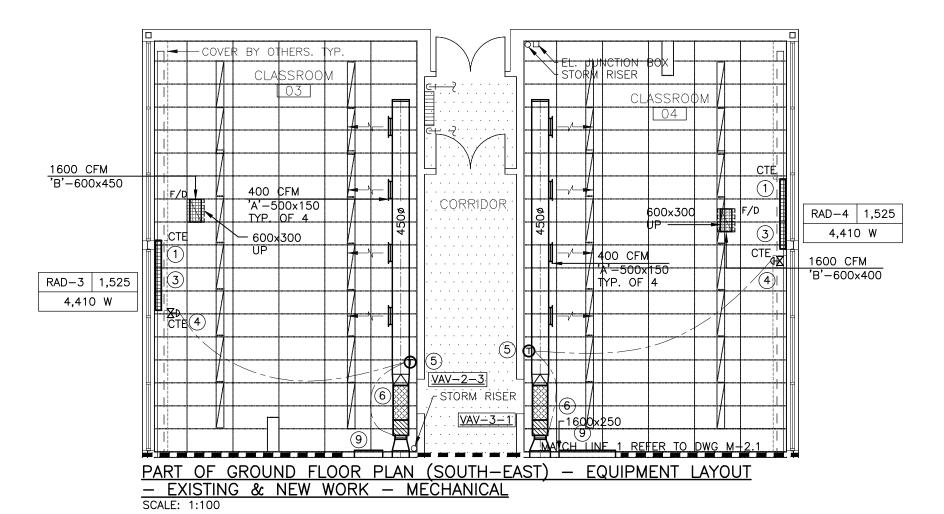
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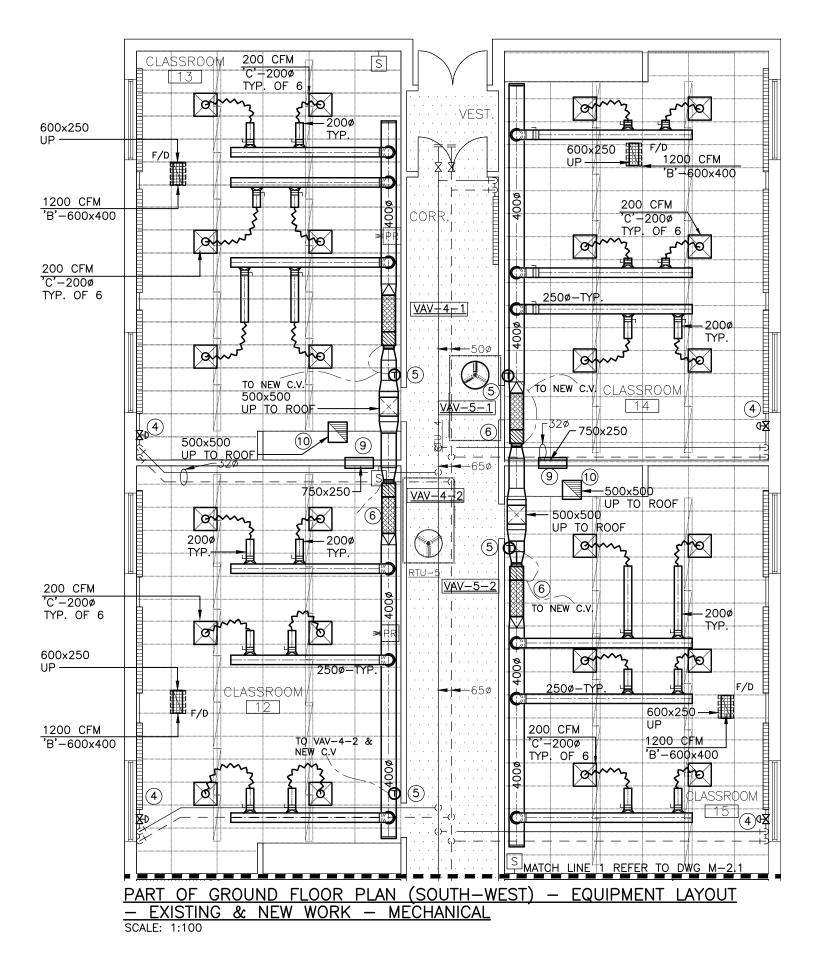
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ROOF PLAN — EQUIPMENT LAYOUT — EXISTING & DEMOLITION WORK — MECHANICAL SCALE: 1:100









KEY NOTES

- 1 INSTALL NEW 3-ROW BARE ELEMENT WALL FIN RADIATOR AS PER THE MECHANICAL EQUIPMENT SCHEDULE. CONNECT NEW WALLFIN TO EXISTING HWS & HWR MAINS RUNNING ALONG EXTERIOR WALL. REFER TO DETAIL ON M-1 FOR PIPING
- 2 INSTALL NEW 1-ROW BARE ELEMENT WALL FIN RADIATOR AS PER THE MECHANICAL EQUIPMENT SCHEDULE. CONNECT TO EXISTING TUBING FROM THE EXISTING WALL FIN RADIATORS IN THE SAME SPACE. REFER TO M-1 FOR PIPING CONNECTION
- 3 PROVIDE AND INSTALL NEW PENCIL-PROOF LINEAR BAR GRILLE FOR NEW WALL FIN RADIATORS (E.H. PRICE MODEL LBP 1/4" BLADE SPACING). EXACT LENGTH TO BE CONFIRMED ON SITE, WIDTH TO MATCH EXISTING. COORDINATE INSTALLATION WITH NEW MILLWORK, REFER TO ARCHITECTURAL DRAWINGS FOR MORE DETAILS.
- 4 INSTALL NEW CONTROL VALVE APPROXIMATELY AS SHOWN. PROVIDE ALL NEW CONTROL WIRING AND CONNECT TO THE ASSOCIATED NEW THEMOSTAT.
- (5) INSTALL NEW THEMOSTAT ON THE WALL APPROXIMATELY AS SHOWN.
- (6) INSTALL NEW VAV BOX. PROVIDE ALL NEW CONTROL WIRING AND CONNECT TO THE ASSOCIATED NEW THERMOSTAT.
- (7) CONNECT NEW 32¢ CONDENSATE DRAIN TO EXISTING SINK. REFER TO DETAIL ON M-1.
- (8) INSTALL NEW WALL-MOUNTED AC EVAPORATOR IN THE STAFF ROOM. FINAL LOCATION TO BE DETERMINED ON SITE. PROVIDE ADEQUATE SUPPORT. RUN NEW REFRIGERANT PIPING ABOVE T-BAR AND UP ALONG EXTERIOR WALL.
- 9 PROVIDE WALL OPENING ABOVE THE CEILING.
- 10 TERMINATED OPEN ENDED IN CEILING SPACE

NEW WORK NOTES:

PROVIDE FIRE DAMPERS AT ALL PENETRATIONS THROUGH FIRE—RATED WALLS, C/W ACCESS DOOR. NOT ALL REQUIRED FIRE DAMPERS MAY BE SHOWN ON THE LAYOUT DRAWING.

PROVIDE ALL HANGERS AND SUPPORTS FOR THE NEW EQUIPMENT, DUCTWORK AND PIPING.

PROVIDE NEW SUPPLY AND RETURN DUCTWORK THROUGHOUT THE SCHOOL APPROXIMATELY AS SHOWN. COORDINATE INSTALLATION OF ALL DUCTWORK WITH THE STRUCTURAL ELEMENTS

ALL NEW SUPPLY AIR DUCTWORK IS TO BE INSTALLED EXPOSED BELOW THE T-BAR CEILING, EXCEPT FOR TAKE-OFF BRANCHES IN ROOMS 12, 13, 14, & 15. INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE. INSTALL DUCTS BETWEEN AND THROUGH OWSJ TO CONSERVE HEADROOM, WHERE POSSIBLE.

DUCTWORK ROUTING IS APPROXIMATE. CONTRACTOR TO MODIFY ROUTING BASED ON EXISTING CONDITIONS AS REQUIRED TO COMPLETE THE INSTALLATION. ALLOW FOR ADDITIONAL OFFSETS, ELBOWS, TRANSITIONS, AS REQUIRED TO COMPLETE THE INSTALLATION.

COORDINATE INSTALLATION OF THE DUCTWORK IN THE SCHOOL WITH EXISTING PIPING AND ELECTRICAL CONDUITS, LIGHTS HANGERS AND OTHER SERVICES. CONTRACTOR TO ALLOW FOR RELOCATION OF EXISTING ELECTRICAL CONDUITS IN ORDER TO COMPLETE THE INSTALLATION.

COORDINATE LOCATION OF GRILLES AND DIFFUSERS WITH THE EXISTING CEILING, LIGHTS AND STRUCTURAL ELEMENTS. MODIFY T—BAR CEILING AS REQUIRED TO INSTALL NEW GRILLES.

PROVIDE NEW VAV BOXES IN THE CLASSROOMS AS SHOWN ON THE DRAWINGS AND AS NOTED IN THE MECHANICAL EQUIPMENT SCHEDULE. PROVIDE ADEQUATE SUPPORT FOR ALL NEW VAV BOXES. INSTALL NEW SOUND ATTENUATOR DOWNSTREAM OF EACH NEW BOX. CONNECT EACH NEW VAV BOX TO SUPPLY AIR DUCTWORK AS SHOWN. REFER TO ARCHITECTURAL DRAWINGS FOR VAV BOX ENCLOSURE.

BALANCE AIR FLOWS FOR ALL SUPPLY AND RETURN DUCTWORK, VAV BOXES, GRILLES, AND DIFFUSERS. ADDITIONALLY, USE

CONTRACTOR TO ALLOW FOR THE COMPLETE REMOVAL OF THE T-BAR CEILING THROUGHOUT THE AREAS OF WORK. THIS INCLUDES THE REMOVAL OF EXISTING SERVICES INSTALLED IN THE T-BAR INCLUDING BUT NOT LIMITED TO: LIGHTS, SMOKE SENSORS, DATA DEVICES, ETC.

RE-INSTALL T-BAR CEILING AT THE COMPLETION OF THE NEW WORK INSTALLATION. REPLACE ALL DAMAGED CEILING TILES. RE-INSTALL ALL EXISTING SERVICES THAT WERE REMOVED AS PART OF THE T-BAR REMOVAL. RE-VERIFY ANY FIRE ALARM DEVICES THAT ARE RE-INSTALLED.

CONNECT ALL NEW ROOFTOP UNITS TO THE BUILDING'S EXISTING FIRE ALARM AND BAS.

IN AREAS OF STRUCTURAL REINFORCEMENT (REFER TO STRUCTURAL DRAWINGS), REMOVE CEILING, LIGHTS, ALL DEVICES ASSOCIATED WITH THE CEILING; TEMPORARY REMOVE ALL CONDUITS, WIRING AND OTHER SERVICES AS REQUIRED TO PERFORM THE STRUCTURAL

Revisions				
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	4	ISSUED FOR TENDER	2022/04/26	

BUILDING SERVICES

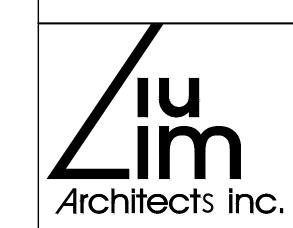
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DATE: 05/26/2022

OAKVILLE TOWN OF OAKV

Project:

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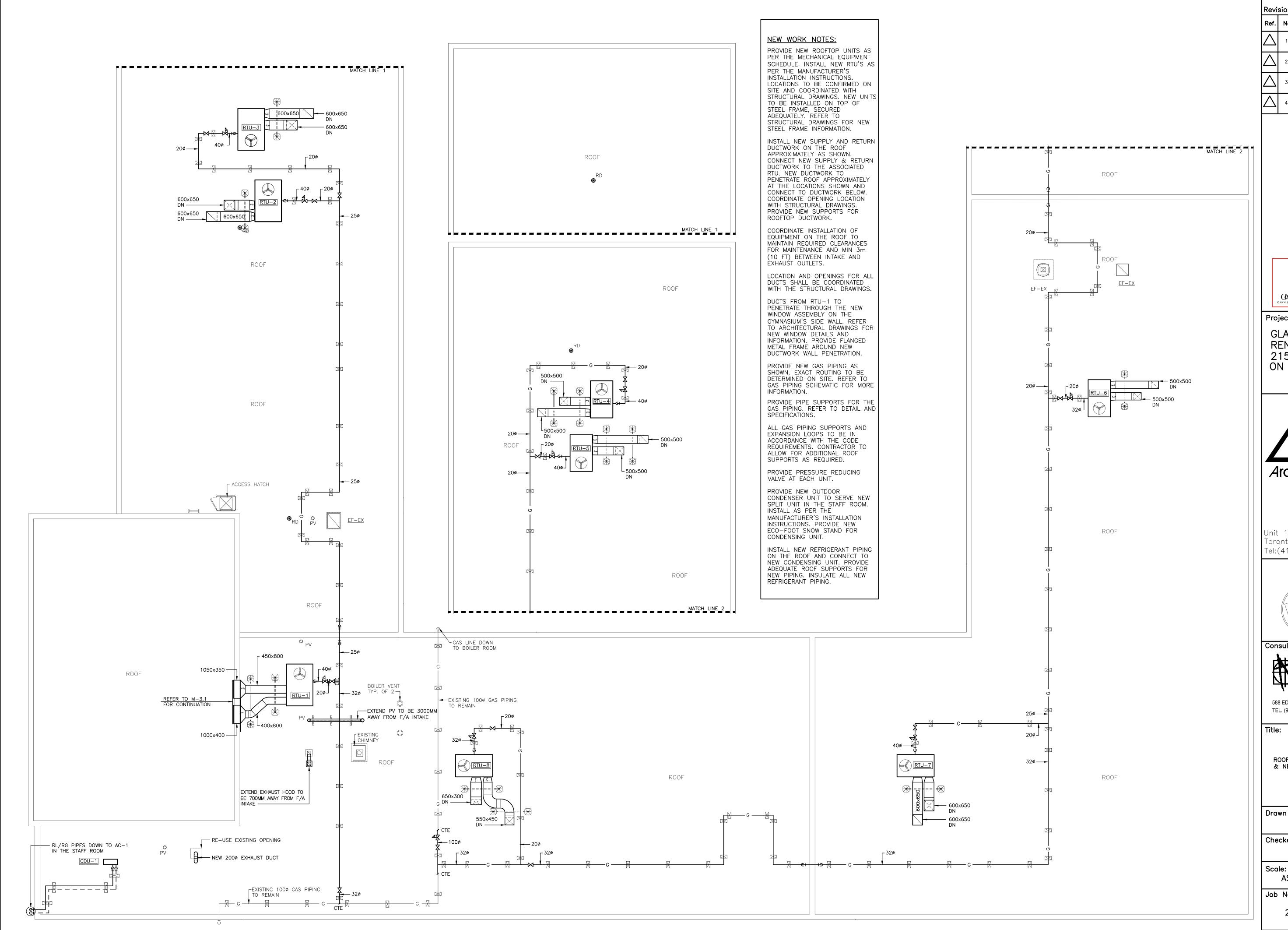
Title

PART OF GROUND FLOOR (SOUTH)

- EXISTING & NEW WORK

- MECHANICAL

Drawn by: P.C.	Date: DECEMBER 2021
Checked by: O.S.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
2022-01	M-3.2
Set No.:	101-0.2
	of: 10

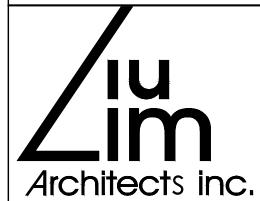


Revisions Description Date 022/02/17 50% REVIEW 2022/03/09 75% REVIEW 2022/03/3⁻ 100% REVIEW 2022/04/26 ISSUED FOR TENDER

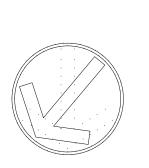
BUILDING SERVICES PERMIT NO: 22-111973 **DATE**: 05/26/2022 TOWN OF OAKVILLE

Project:

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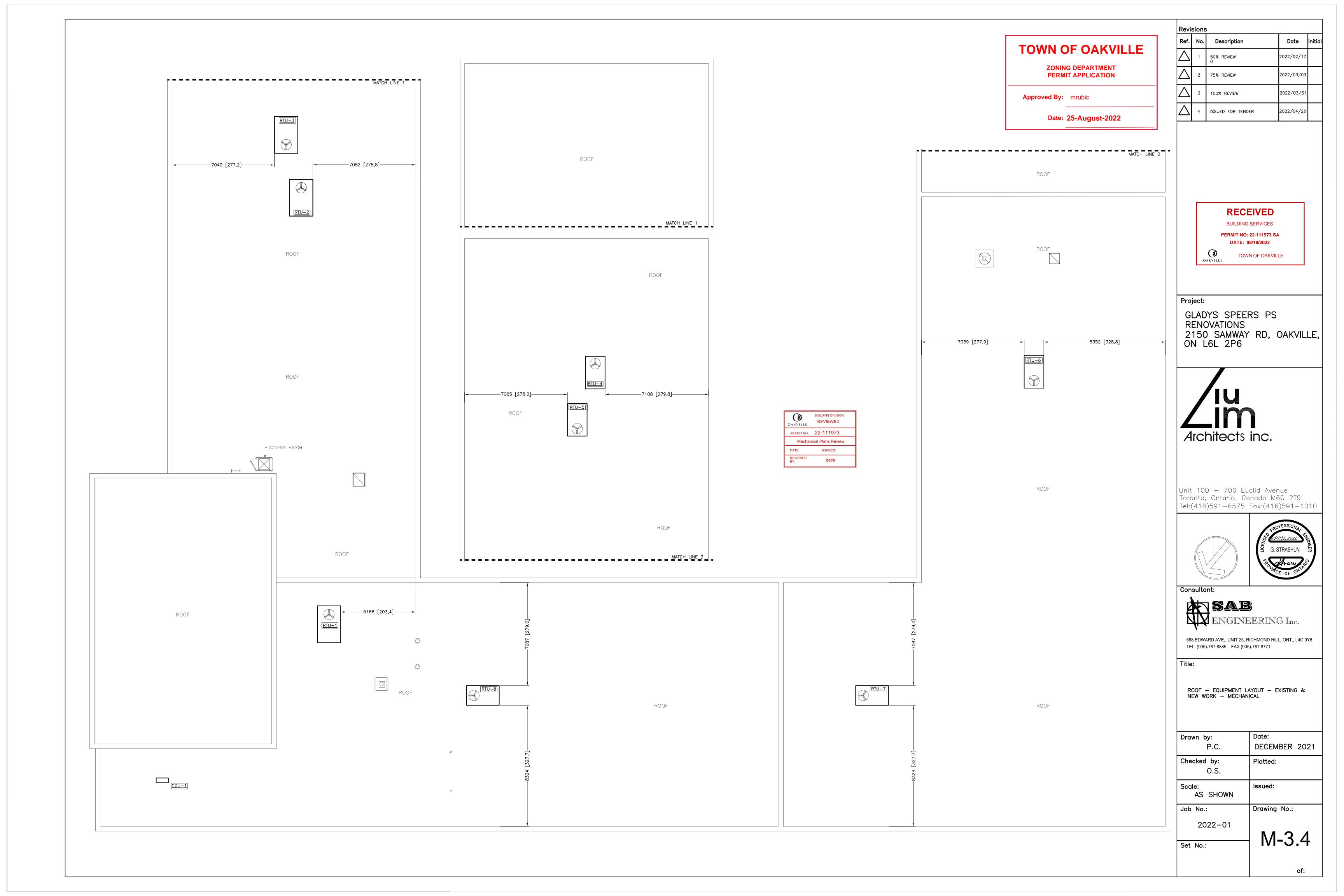
SAB ENGINEE ENGINEERING Inc.

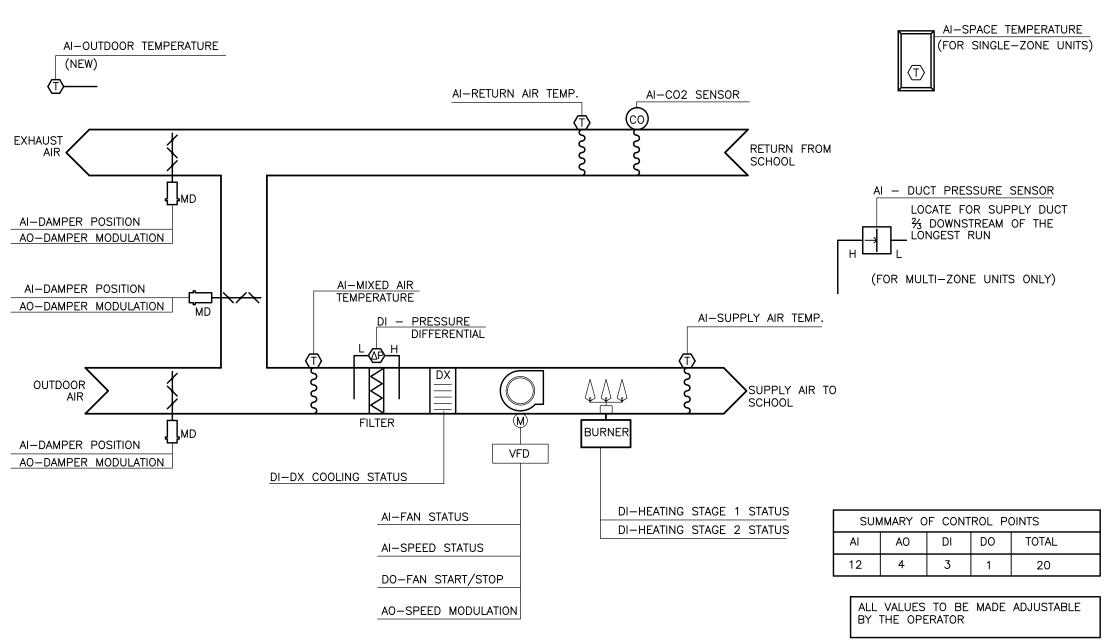
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ROOF — EQUIPMENT LAYOUT — EXISTING & NEW WORK — MECHANICAL

Drawn by:	Date:
P.C.	DECEMBER 2021
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Scale:	Issued:
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2022-01	
	- M-3.3
Set No.:	

ROOF PLAN — EQUIPMENT LAYOUT — NEW WORK — MECHANICAL SCALE: 1:100





SEQUENCE OF OPERATION

SOME ROOFTOP UNITS ARE SINGLE-ZONE, SOME ARE MULTI-ZONE UNITS WITH VAV BOXES. REFER TO EQUPIMENT SCHEDULE ON M-1 FOR MORE DETAILS.

THE ROOFTOP UNIT SHALL BE ENABLED/ DISABLED BY THE BAS IN ACCORDANCE WITH THE BOARD STRATEGY.

HEATING/COOLING MODES: THE ROOFTOP UNIT SHALL BE IN HEATING MODE WHEN THE SCHOOL'S HEATING PLANT IS ENERGIZED. THE ROOFTOP UNIT SHALL BE IN COOLING MODE AT ALL OTHER TIMES. HEATING/COOLING MODE TO BE DICTATED BY BAS.

UNIT SHALL BE CAPABLE OF PERFORMING MORNING WARM-UPS DURING HEATING SEASON AND MORNING COOLING DOWN DURING COOLING PERIOD.

EQUIPMENT ON/OFF

THE ROOFTOP UNIT SHALL BE ENABLED/DISABLED ON A SCHEDULE DETERMINED BY THE OWNER. WHEN DISABLED, THE SUPPLY FAN WILL STOP, THE FRESH AIR AND EXHAUST DAMPERS SHALL BE FULLY CLOSED, THE RETURN DAMPER SHALL BE FULLY OPEN.

EQUIPMENT ON, HEATING MODE, OCCUPIED HOURS

THE SUPPLY FAN SHALL RUN CONTINUOUSLY DURING ALL OCCUPIED HOURS.

SINGLE ZONE UNITS: THE SUPPLY FAN VFD SHALL BE USED FOR BALANCING PURPOSES ONLY. ONCE THE BALANCED FLOW IS REACHED, THE VFD SHALL BE LOCKED AT THIS VALUE DURING OCCUPIED HOURS. IT IS RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THIS BALANCED VALUE BETWEEN THE AIR BALANCER AND THE CONTROLS CONTRACTOR.

MULTI-ZONE UNITS: THE SUPPLY FAN VFD SHALL MODULATE AS REQUIRED TO MAINTAIN THE STATIC PRESSURE IN THE DISCHARGE DUCTWORK AT 375 PA (ADJUSTABLE AFTER BALANCING). THE CORRELATION BETWEEN THE VARIABLE AIR FLOW AND RPM FOR EACH FAN SHALL BE DERIVED FROM THE FAN LAWS AND FAN CURVES.

NOTE: AT THE BEGINNING OF EACH OCCUPIED PERIOD THE SUPPLY FAN SHALL START AT 20% OF NOMINAL RPM. AFTER THE BAS CONFIRMED THAT THE FAN IS RUNNING, THE FANS SHALL RAMP UP TO THEIR REQUIRED RPM OVER A PERIOD OF NO LESS THAN 2 MINUTES.

THE FRESH AIR DAMPER SHALL OPEN TO THE MINIMUM POSITION (MINIMUM POSITION SHALL BE SET DURING AIR BALANCING IN ORDER TO ACHIEVE MINIMUM OUTSIDE AIR FLOW AS SHOWN ON ROOF-TOP UNIT SCHEDULE ON M-1). ONCE BAS CONFIRMS THAT THE FRESH AIR DAMPER HAS OPENED TO THE MINIMUM POSITION, THE DAMPERS ARE TO COME UNDER THE CONTROL OF THE CO2 SENSOR, DAMPERS SHALL BE MODULATED BY THE BAS IN ORDER TO MAINTAIN THE CO2 CONCENTRATION SETPOINT IN RETURN AIR STREAM AT 800 PPM (ADJUSTABLE). THE OPENING OF THE FRESH AIR DAMPER SHALL BE LIMITED BY A MINIMUM MIXED AIR TEMPERATURE OF 5°C. IF MIXED AIR TEMPERATURE DROPS BELOW 5°C, THE FRESH AIR DAMPER SHALL RETURN TO ITS MINIMUM POSITION UNTIL THE MIXED AIR TEMPERATURE RISES BACK TO 10°C.

THE GAS FIRED HEAT EXCHANGER SHALL BE STAGED BY THE UNIT'S CONTROLLER AS REQUIRED TO MAINTAIN THE DISCHARGED AIR TEMPERATURE AT 28°C (ADJUSTABLE). EACH STAGE SHALL RUN FOR A MINIMUM OF 5 MIN. (ADJUSTABLE) AS TO AVOID CYCLING. THE SUPPLY AIR TEMPERATURE SET-POINT SHALL BE RESET BETWEEN 23°C AND 33°C BASED ON THE OUTDOOR AIR TEMPERATURE

IF THE OAT TEMPERATURE IS -14°C OR BELOW, THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET TO 33°C.

IF THE OAT TEMPERATURE IS 10°C OR ABOVE, THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET TO 23°C. IF THE OAT TEMPERATURE IS BETWEEN -14°C AND 10°C, THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE VARY LINEARLY BETWEEN 33°C AND 23°C.

EQUIPMENT ON, HEATING MODE, UNOCCUPIED HOURS

AT THE BEGINNING OF THE UNOCCUPIED PERIOD, THE ROOFTOP UNIT BE DISABLED (FAN OFF, FRESH AIR AND EXHAUST DAMPERS CLOSED, RETURN DAMPER OPEN). THE GAS FIRED HEAT

IF THE TEMPERATURE IN ANY OF THE SPACES SERVED BY THE UNIT DROPS 2°C BELOW THE UNOCCUPIED SETPOINT, THE SUPPLY FAN SHALL START AND RAMP UP UNDER VFD CONTROL. THE FAN SHALL RUN CONTINUOUSLY AND THE UNITS CONTROLLER SHALL STAGE THE GAS BURNER AS REQUIRED UNTIL ALL SPACES ARE SATISFIED; THE FRESH AIR AND EXHAUST DAMPERS SHALL REMAIN CLOSED, THE RETURN DAMPER SHALL STAY FULLY OPEN. THE RUN-TIME OF THE FANS SHALL NOT BE LESS THAN 10 MINUTES. ONCE ALL SPACES ARE SATISFIED, THE UNIT SHALL AGAIN BE

NOTE: ON A CALL TO RUN THE FANS THE SUPPLY FAN SHALL START AT 20% OF NOMINAL RPM. AFTER THE BAS CONFIRMED THAT THE FAN IS RUNNING, THE FAN SHALL RAMP UP TO THEIR REQUIRED RMP OVER A PERIOD OF NO LESS THAN 2 MINUTES.

EQUIPMENT ON, COOLING MODE, OCCUPIED HOURS.

THE SUPPLY FAN SHALL RUN CONTINUOUSLY.

EXCHANGER SHALL BE OFF.

SINGLE ZONE UNITS: THE SUPPLY FAN VFD SHALL BE USED FOR BALANCING PURPOSES ONLY. ONCE THE BALANCED FLOW IS REACHED, THE VFD SHALL BE LOCKED AT THIS VALUE DURING OCCUPIED HOURS. IT IS RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THIS BALANCED VALUE BETWEEN THE AIR BALANCER AND THE CONTROLS CONTRACTOR.

MULTI-ZONE UNITS: THE SUPPLY FAN VFD SHALL MODULATE AS REQUIRED TO MAINTAIN THE STATIC PRESSURE IN THE DISCHARGE DUCTWORK AT 375 PA (ADJUSTABLE AFTER BALANCING). THE

NOTE: AT THE BEGINNING OF EACH OCCUPIED PERIOD THE SUPPLY FAN SHALL START AT 20% OF NOMINAL RPM. AFTER THE BAS CONFIRMED THAT THE FAN IS RUNNING, THE FAN SHALL RAMP UP TO THEIR REQUIRED RPM OVER A PERIOD OF NO LESS THAN 2 MINUTES.

THE FRESH AIR DAMPER SHALL OPEN TO THE MINIMUM POSITION (MINIMUM POSITION SHALL BE SET DURING AIR BALANCING IN ORDER TO ACHIEVE MINIMUM OUTSIDE AIR FLOW AS SHOWN ON ROOF-TOP UNIT SCHEDULE ON M-1). ONCE BAS CONFIRMS THAT THE FRESH AIR DAMPER HAS OPENED TO THE MINIMUM POSITION, THE DAMPERS ARE TO COME UNDER THE CONTROL OF THE CO2 SENSOR. DAMPERS SHALL BE MODULATED BY THE BAS IN ORDER TO MAINTAIN THE CO2 CONCENTRATION SETPOINT IN RETURN AIR STREAM AT 800 PPM (ADJUSTABLE).

THE DX COOLING SECTION SHALL BE MODULATED BY UNIT CONTROLLER AS REQUIRED TO MAINTAIN THE DISCHARGED AIR TEMPERATURE AT 12°C (ADJUSTABLE). THE DX COOLING SECTION SHALL

DISCHARGE AIR TEMPERATURE SHALL BE RE-SET BY THE BAS IN ORDER TO MAINTAIN SPACE TEMPERATURE SETPOINT AT 24°C (ADJUSTABLE)

CORRELATION BETWEEN THE VARIABLE AIR FLOW AND RPM FOR EACH FAN SHALL BE DERIVED FROM THE FAN LAWS AND FAN CURVES.

FREE COOLING SHALL BE PROVIDED BY THE UNIT'S ECONOMIZER BASED ON COMPARATIVE ENTHALPY CONTROL

EQUIPMENT ON, COOLING MODE, UNOCCUPIED HOURS

HAVE A MINIMUM RUN TIME OF 5 MINUTES (ADJUSTABLE).

DURING THE COOLING MODE UNOCCUPIED PERIODS, THE ROOFTOP UNIT SHALL BE DISABLED (FAN OFF, FRESH AIR AND EXHAUST DAMPERS CLOSED, RETURN DAMPER OPEN).

MORNING WARM UP/COOLDOWN

DURING HEATING MODE, AN OPTIMUM MORNING WARM-UP PROGRAM SHALL ENABLE THE ROOFTOP UNIT PRIOR TO THE SCHEDULED START OF THE OCCUPIED MODE. THE FRESH AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED. THE SUPPLY FAN SHALL START AND RAMP UP UNDER VFD CONTROL. THE FAN SHALL RUN CONTINUOUSLY AND THE UNITS CONTROLLER SHALL STAGE THE GAS BURNER AS REQUIRED TO BRING THE SPACE TEMPERATURES TO THE DESIRED OCCUPIED SETPOINT. THE START TIME FOR THE MORNING WARM UP SHALL BE A MAXIUMUM OF 2 HOURS PRIOR TO NORMAL OCCUPANCY.

DURING COOLING MODE, AAN OPTIMUM MORNING COOL-DOWN PROGRAM SHALL ENABLE THE ROOFTOP UNIT PRIOR TO THE SCHEDULED START OF THE OCCUPIED MODE. THE FRESH AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED. THE SUPPLY FAN SHALL START AND RAMP UP UNDER VFD CONTROL. THE FAN SHALL RUN CONTINUOUSLY AND THE UNITS CONTROLLER SHALL STAGE THE DX SECTION AS REQUIRED TO BRING THE SPACE TEMPERATURES TO THE DESIRED OCCUPIED SETPOINT. THE START TIME FOR THE MORNING COOL DOWN SHALL BE A MAXIUMUM OF 2 HOURS PRIOR TO NORMAL OCCUPANCY.

<u>ALARMS</u>

THE BAS SHALL GENERATE ALARMS IN CASE OF:

ANY FAN FAILURE ANY VFD FAILURE;

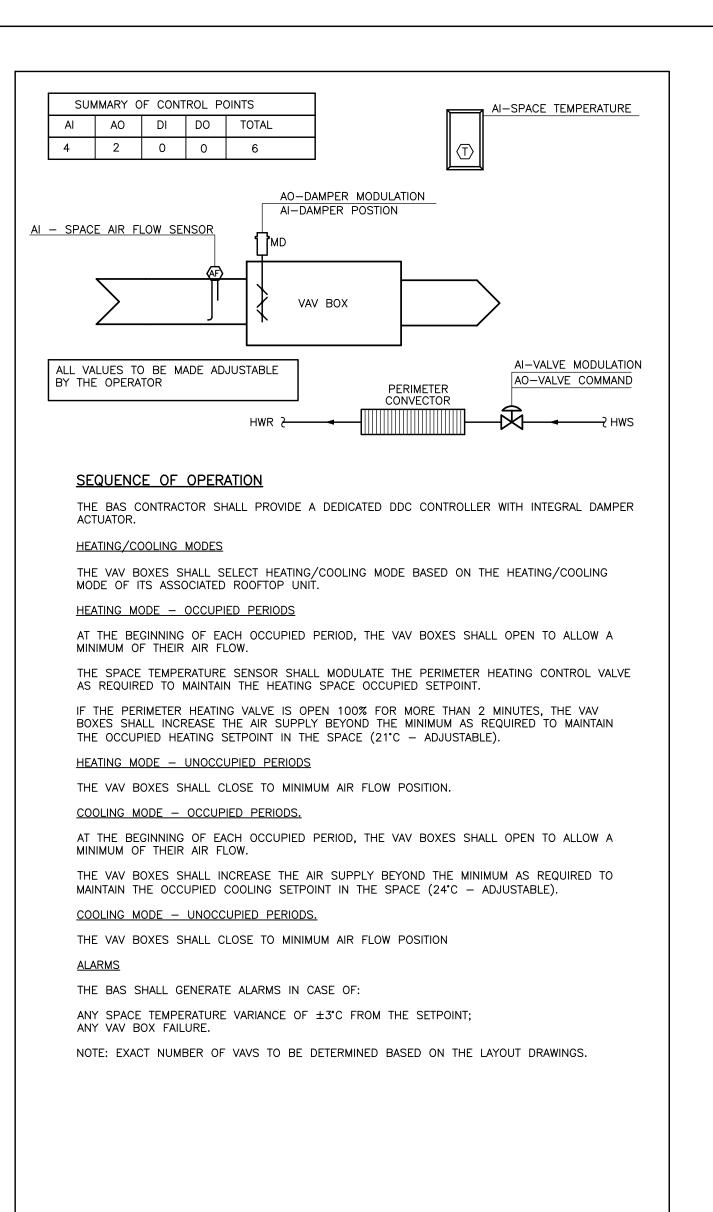
ANY DAMPER FAILURE DISCHARGE AIR PRESSURE RISES ABOVE 400 PA; DISCHARGED AIR VARIANCE OF +3°C FROM THE SETPOINT

MIXED AIR TEMPERATURE LOWER THAN 4°C (IN ADDITION TO ALARM, THE FRESH AIR DAMPERS SHALL CLOSE);

DISCHARGED AIR LOWER THAN 8°C (IN ADDITION TO ALARM, THE FRESH AIR DAMPER SHALL CLOSE);

DISCHARGED AIR LOWER THAN 5°C (IN ADDITION TO ALARM, THE ENTIRE AIR HANDLER SHALL SHUT DOWN AND WILL REQUIRE MANUAL RE-START); PRESSURE DIFFERENTIAL ACROSS THE FILTERS HIGHER THAN 254 PA.

CONTROL DIAGRAM FOR RTUS



<u> TYPICAL VAV BOX — CONTROL DIAGRAM</u>



SEQUENCE OF OPERATION

SPLIT AIR CONDITIONING SYSTEMS

THE SPLIT AIR CONDITIONING SYSTEMS SHALL BE ENERGIZED DURING THE COOLING OCCUPIED PERIODS ONLY. WHEN THE SYSTEMS ARE ENERGIZED, THE INDOOR EVAPORATOR FANS SHALL RUN AS REQUIRED TO MAINTAIN THE COOLING/OCCUPIED SPACE SETPOINT (DEFAULT: 25°C, ADJUSTABLE.).

THE OUTDOOR CONDENSING UNIT SHALL OPERATE AS REQUIRED TO REJECT THE HEAT FROM THE BUILDING AND COLLECTED BY THE EVAPORATORS. DURING UNOCCUPIED PERIODS, THE SPLIT AIR CONDITIONING SYSTEMS SHALL SHUT DOWN.

BAS TO ENSURE THAT HEATING AND COOLING SHALL NOT OPERATE AT THE SAME TIME.

<u>BAS ALARMS</u>

THE BAS SHALL GENERATE ALARMS IN ADDITION TO THOSE INCLUDED IN SECTION 23 09 23 AS FOLLOWS:

• SPACE TEMPERATURE IN ANY CONTROLLED AREA VARIES ±5°C FROM SETPOINT FOR MORE THAN 15 MINUTES. ANY SPLIT CONDENSING UNIT FAILURE

REFER TO SPECIFICATIONS SECTION FOR THE CONTROL OF THE A/C SYSTEM.

CONTROLS SUB-CONTRACTOR TO CONNECT TO THE AC SYSTEM VIA BACNET AND PROVIDE MINIMUM REQUIRED POINTS. PROVIDE ALL REQUIRED WIRING AND CONDUITS BETWEEN INDOOR AND OUTDOOR UNIT AND CONTROLLERS. COORDINATE WITH THE AC SYSTEM MANUFACTURER.

WALL MOUNTED CASSETTE - CONTROL DIAGRAM

SUMMARY OF CONTROL POINTS AO DI DO TOTAL

BY THE OPERATOR

ALL VALUES TO BE MADE ADJUSTABLE

FOR EACH INDOOR UNIT PROVIDE AT LEAST:

 ROOM TEMPERATURE SETTING ROOM TEMPERATURE RESETTING

 ROOM TEMPERATURE INDOOR UNIT START/STOP

 OPERATING MODE INDOOR UNIT STATUS FOR OUTDOOR UNIT PROVIDE:

 OUTDOOR UNIT START/STOP OUTDOOR UNIT STATUS

ALL VALUES TO BE MADE ADJUSTABLE BY THE OPERATOR.

ALL SENSORS AND DEVICES TO BE NEW.

DOWNSTREAM OF THE LONGEST RUN.

PROVIDE NEW WIRING IN CONDUIT AS REQUIRED. PROVIDE NEW DUCT-MOUNTED SMOKE SENSORS FOR EACH RTU.

CONNECT THE SF TO FIRE ALARM SYSTEM. UNIT SHALL SHUT-DOWN IN CASE OF FIRE. LOCATE PRESSURE DIFFERENTIAL SENSOR FOR SUPPLY DUCT 3/3

Revisions Description Date 22/02/1 50% REVIEW 75% REVIEW 022/03/09 022/03/3 00% REVIEW 022/04/26 ISSUED FOR TENDER

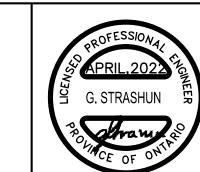
> BUILDING SERVICES **PERMIT NO**: 22-111973 **DATE**: 05/26/2022 TOWN OF OAKVILLE

Project:

GLADYS SPEERS PS RENOVATIONS 2150 SAMWAY RD, OAKVILLE ON L6L 2P6



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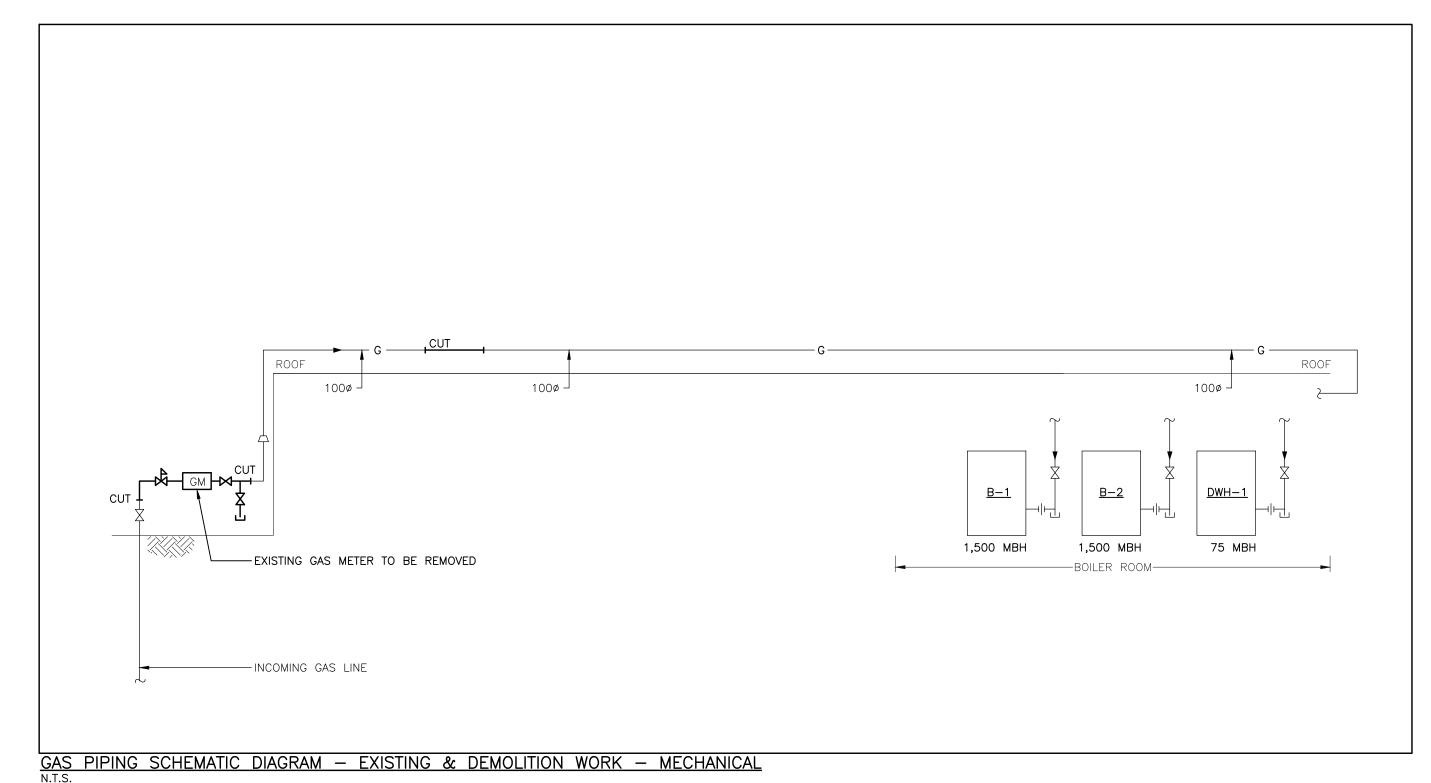
Consultant:

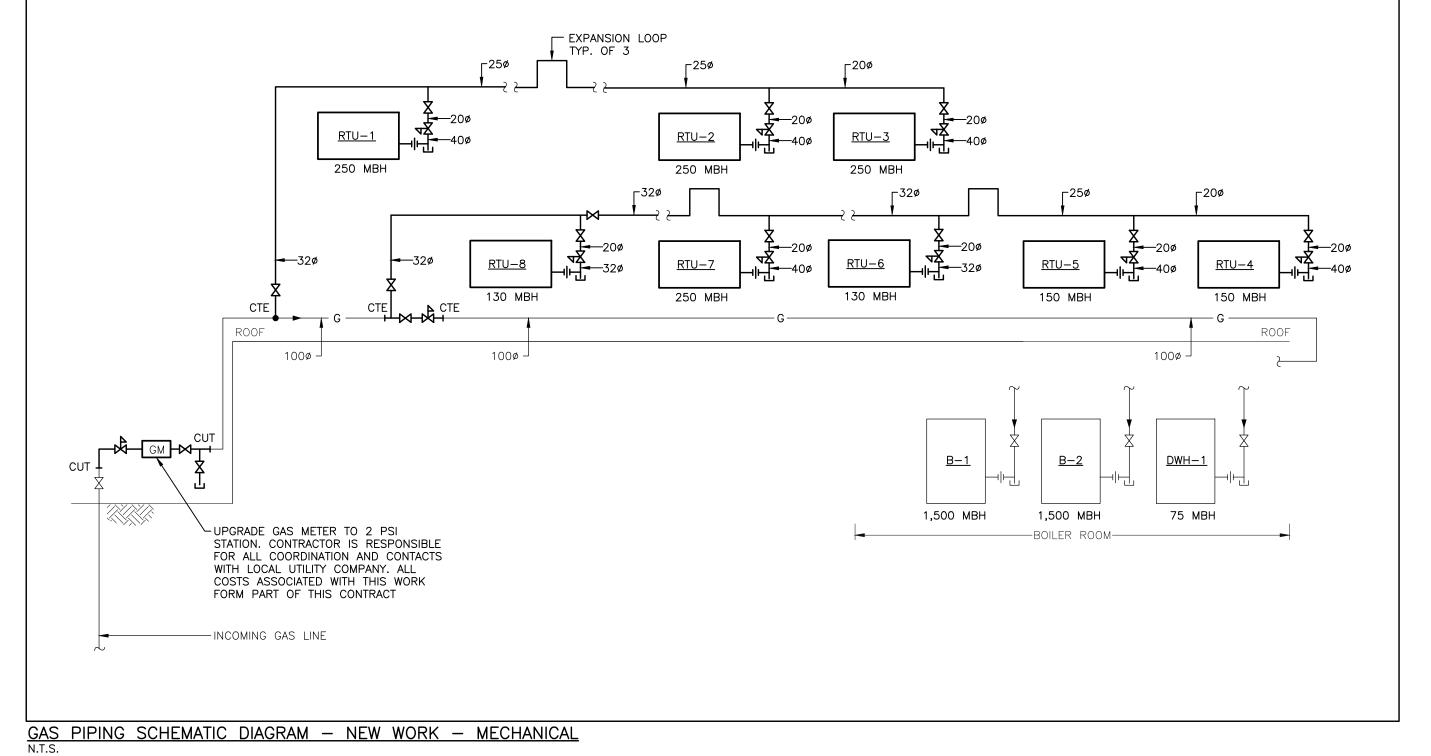
588 EDWARD AVE., UNIT 25, RICHMOND HILL, ONT., L4C 9Y6 TEL. (905)-787 8885 FAX (905)-787 8771

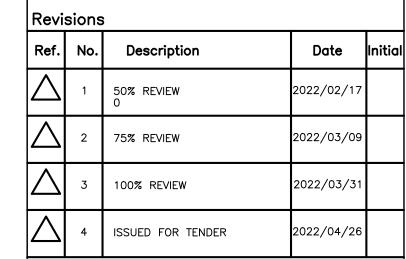
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CONTROL SCHEMATICS MECHANICAL

Drawn by: DECEMBER 2021 Plotted: Checked by: Scale: Issued: AS SHOWN Job No.: Drawing No.: 2022-01







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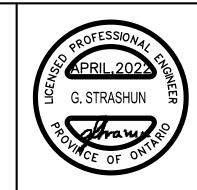
OAKVILLE TOWN OF OAKVILLE

Project:

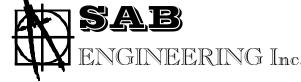
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Title:

GAS PIPING SCHEMATIC

— EXISTING, DEMOLITION & NEW
WORK — MECHANICAL

Drawn by: P.C.	Date: DECEMBER 2021
Checked by: O.S.	Plotted:
Scale: AS SHOWN	Issued:
Job No.:	Drawing No.:
2022-01	M-4.2
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