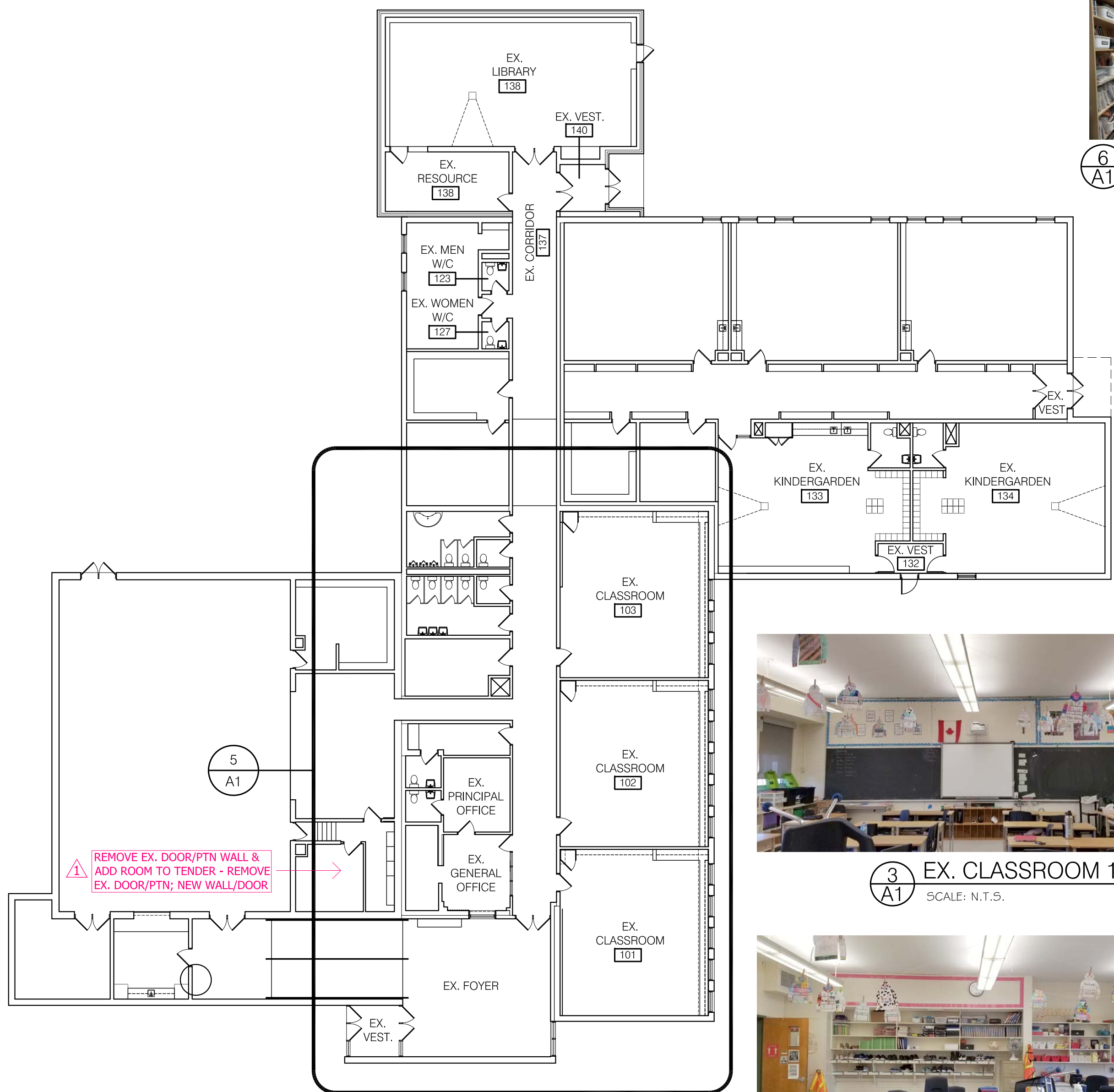


1 LOCATION PLAN
SCALE: N.T.S.

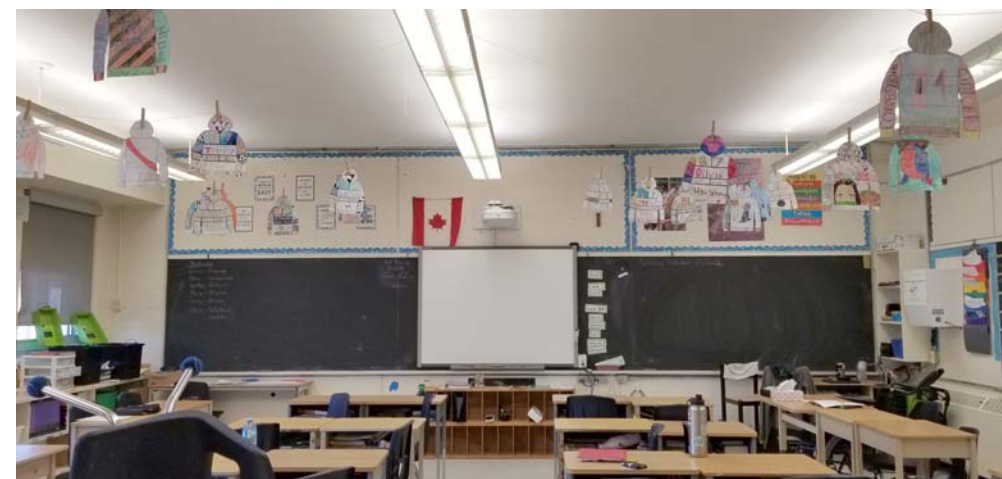
CABINET SECTION
TO BE REMOVED



6 PHOTO
SCALE: N.T.S.



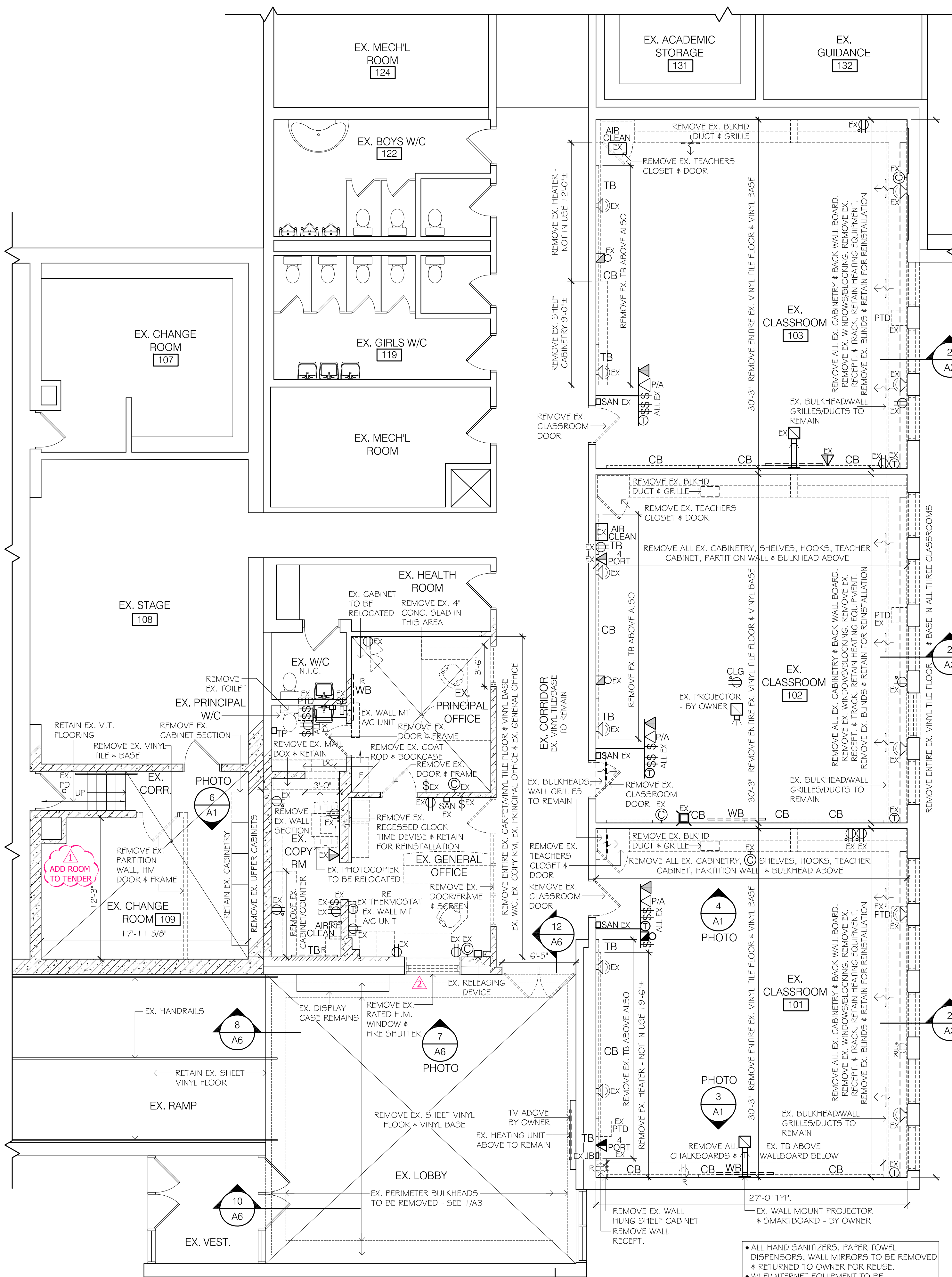
2 KEY PLAN - EXISTING
SCALE: 1/16" = 1'-0"



3 EX. CLASSROOM 101
SCALE: N.T.S.



4 EX. CLASSROOM 101
SCALE: N.T.S.



5 EX. MAIN FLOOR PLAN - DEMOLITION
SCALE: 3/16" = 1'-0" SEE MECH/LECL DWGS FOR FURTHER DEMO.

- ALL HAND SANITIZERS, PAPER TOWEL DISPENSORS, WALL MIRRORS TO BE REMOVED & RETURNED TO OWNER FOR REUSE.
- WI FURNITURE EQUIPMENT TO BE REMOVED/REINSTALLED BY OWNER.
- REMOVAL & REINSTALLATION OF PROJECTORS & SMARTBOARDS BY OWNER.
- FURNITURE N.I.C. - BY OWNER.

WILCOX ARCHITECTS INC.
74 LINDSAY ST. SOUTH
LINDSAY, ONTARIO
PHONE: 705-328-0175
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ONTARIO ASSOCIATION OF ARCHITECTS
CLARENCE A. WILCOX
LICENCE 3966

Peterborough Victoria Northumberland and Clarington Catholic District School Board

PROJECT NORTH

ELECTRICAL LEGEND - DEMOLITION	
SYMBOL	DESCRIPTION
	PROJECTOR WITH WALL ARM
	PROJECTOR - CEILING HUNG
	RECEPTACLE
	RECEPTACLE ABOVE COUNTER HT.
	WALL CLOCK
	WALL BOX SPEAKER
	TELEPHONE
	COMMUNICATION
	PUBLIC ANNOUNCEMENT SPEAKER
	THERMOSTAT
	ALARM
	JUNCTION BOX
	AIR CLEANER
	EX. DOOR
	NEW DOOR
	PAPER TOWEL DISPENSOR
	HAND SANITIZER
	SOAP DISPENSOR
	TOILET PAPER DISPENSOR

EX = EXISTING
N = NEW
R = REMOVE
RE = REMOVE/RELOCATE

	WINDOW REVISION	JAN. 31/2024
	REVISED FOR TENDER	JAN. 12/2024
	FOR TENDER	JAN. 20/2023
	ISSUED:	DATE:

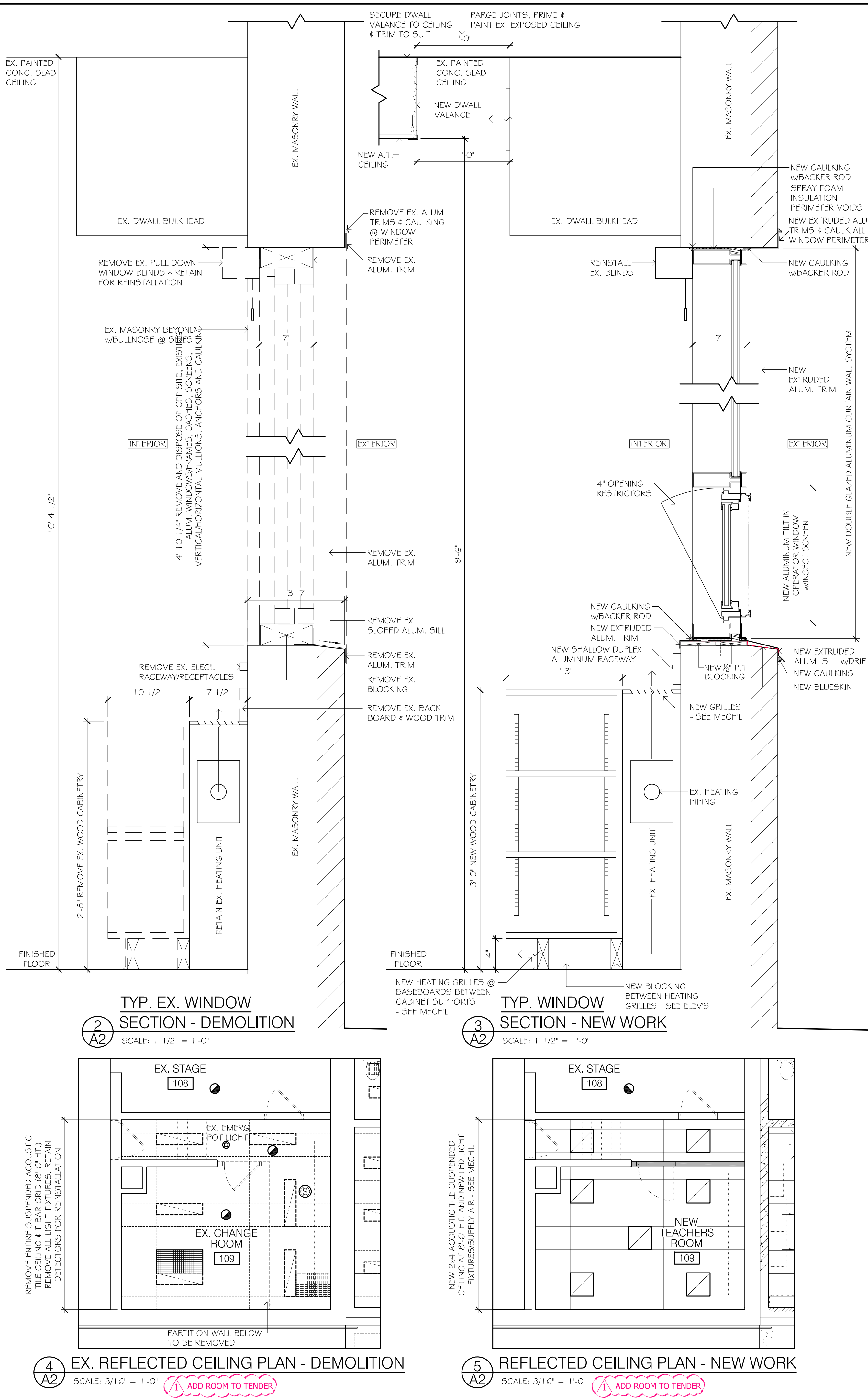
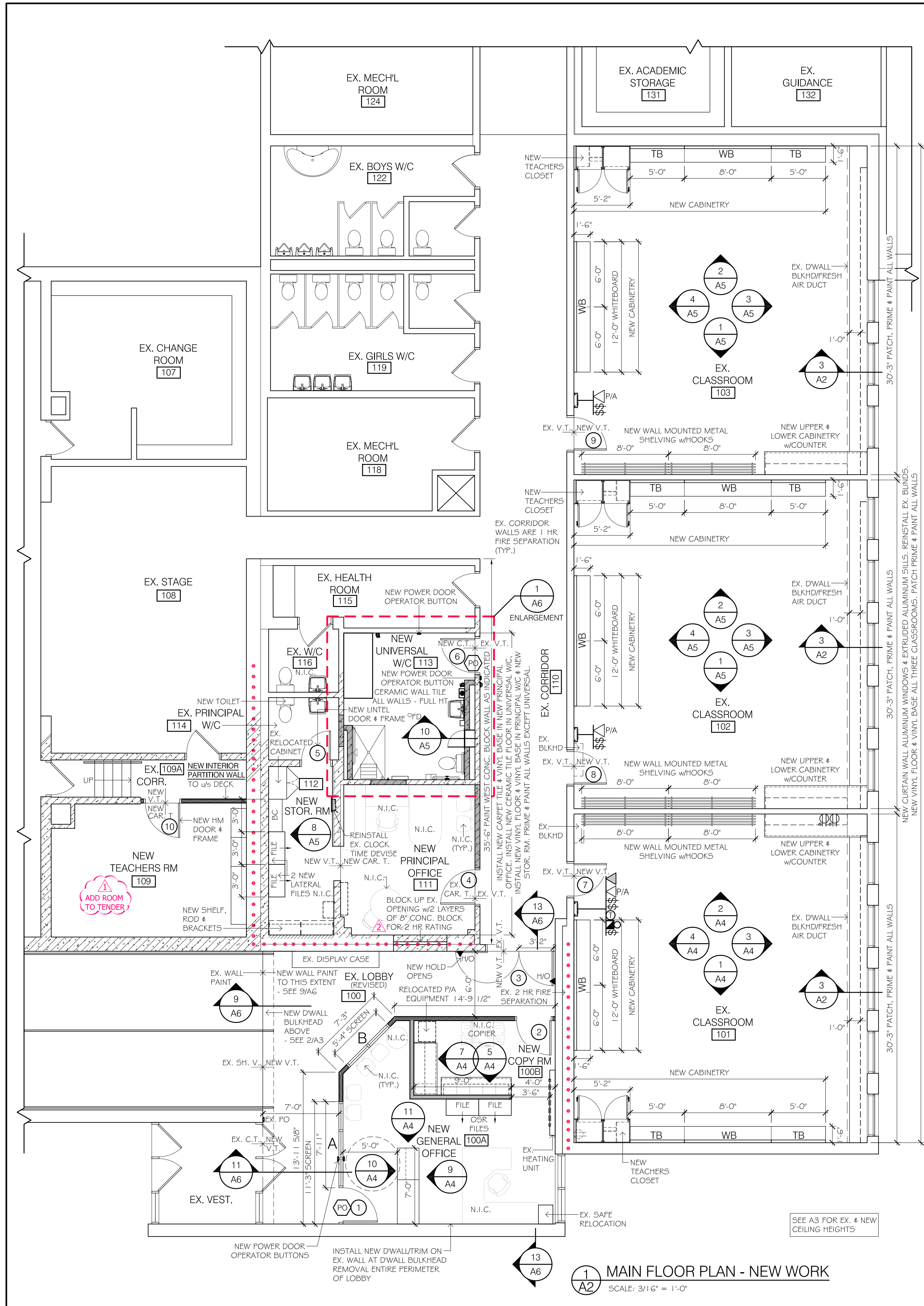
THIS DRAWING IS COMPLEMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

PROJECT:
RENOVATIONS TO ST. MARY CATHOLIC C.E.S. GRAFTON

103b LYLE ST. S, GRAFTON, ON, K0K 2G0

DRAWING TITLE:
**LOCATION PLAN
KEY PLAN - EXISTING
EX. MAIN FLOOR PLAN - DEMOLITION**

SCALE: A5 NOTED	DRAWING NUMBER:
DRAWN BY: SV	A1
CHECKED BY: GW	OF 6 22030



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PROJECT NORTH

GENERAL NOTES

- ALL DIMENSIONS/SECTION PROFILES ARE APPROXIMATE AND FOR GENERAL REFERENCE ONLY. CONFIRM ALL DIMENSIONS/DETAILS ON SITE.
- PROVIDE TEMPORARY HOARDINGS AS REQUIRED TO PROTECT THE BUILDING FROM THE ELEMENTS & MAINTAIN THE SECURITY OF THE BUILDING AT ALL TIMES.
- REPAIR ALL DAMAGES INCURRED DUE TO RENOVATIONS AND FINISH TO MATCH EXISTING U.O.N.
- REMOVAL AND REINSTALLATION OF ALL BLINDS & FURNITURE BY OWNER U.O.N.
- ALL WORK TO MEET OR EXCEED O.B.C. STANDARDS.

TYPICAL NOTES

- SUPPLY AND INSTALL FACTORY ASSEMBLED AND PREFINISHED EXTRUDED ALUMINUM CURTAIN WALL WINDOWS AS SPECIFIED, COMPLETE WITH TRIMMINGS, FILLERS, GLAZING, OPERABLE HARDWARE, ALUMINUM MESH INSECT SCREENS, WEATHERSTRIPPING, EXTERIOR AND INTERIOR CAULKING, BLOCKING, ANCHORAGES, ATTACHMENTS, SHIMS & INSULATION AS REQUIRED FOR A COMPLETE INSTALLATION. FOAM & CAULK ALL NEW WINDOW PERIMETERS INSIDE & OUT. (TYP.)
- ALL WINDOW FRAMES & ALUMINUM TRIM TO BE CLEAR ANODIZED

WALL LEGEND

SYMBOL	DESCRIPTION
	EXISTING REMOVALS
	EXISTING WALLS TO BE RETAINED
	NEW INTERIOR PARTITION WALL <ul style="list-style-type: none">1/2" D.WALL3/8" MTL STUDS @ 16" o.c.w/ 3/2" MIN. WOOL SOUND INSUL.1/2" D.WALL TO 1/2" OF NEW A.T. CLG - U.O.N.

ABBREVIATIONS:
EX. = EXISTING
N = NEW
R = REMOVE
TB = TACK BOARD
SH. V. = SHEET VINYL
SD = SOAP DISPENSOR
CONC. = CONCRETE
BLKHD = BULKHEAD
H.M. = HOLLOW METAL
HD = POWER HAND DRYER
B.F. = BARRIER FREE
CLG = CEILING
CAR. T. = CARPET TILE
FD = FLOOR DRAIN
C.T. = CERAMIC TILE
RE = RELOCATE
C.B. = CONCRETE BLOCK
TP = TOILET PAPER DISP.
SH = SHELF
PT = PAINT
S.S. = STAINLESS STEEL
TB = TACK BOARD
WB = WHITE BOARD
MI = MIRROR
PT = PAPER TOWEL DISP.
V.T. = VINYL TILE
F.F. = FINISHED FLOOR
T&B = TOP & BOTTOM

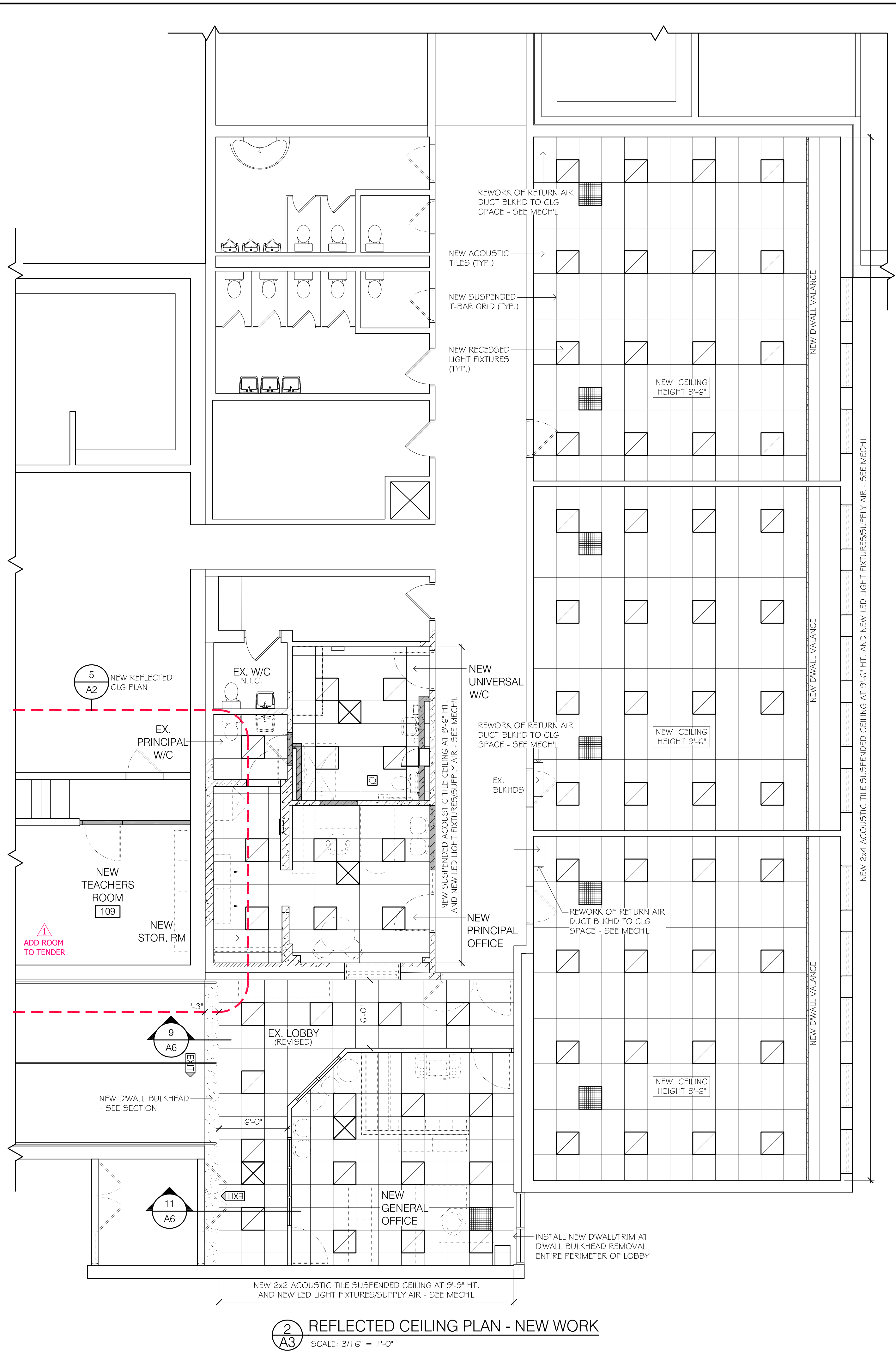
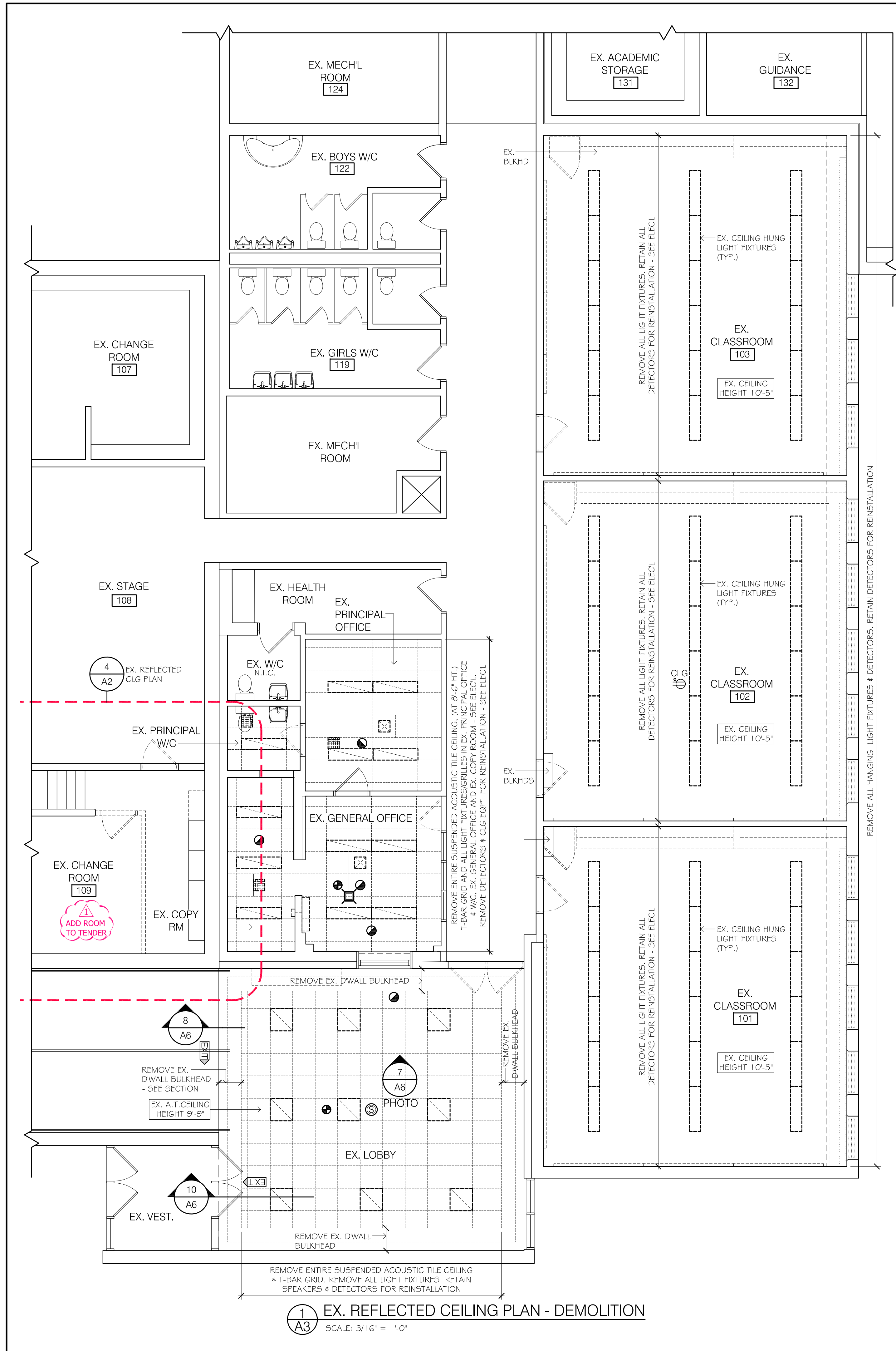
	WINDOW REVISION	JAN. 31/2024
	REVISED FOR TENDER	JAN. 12/2024
	FOR TENDER	JAN. 20/2023
	ISSUED:	DATE:

THIS DRAWING IS COMPLEMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

PROJECT:
RENOVATIONS TO ST. MARY CATHOLIC C.E.S. GRAFTON
103b LYLE ST. S, GRAFTON, ON, K0K 2G0

DRAWING TITLE:
MAIN FLOOR PLAN - NEW WORK WINDOW SECTIONS

SCALE: A5 NOTED	DRAWING NUMBER:
DRAWN BY: SV	A2 OF 6 22030
CHECKED BY: GW	



ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	2x2 RECESSED LED LIGHT - SEE ELEC'L
	2x2 RECESSED SUPPLY
	2x2 RECESSED RETURN AIR
	CEILING SPEAKER
	EXHAUST FAN

SEE ELEC'L/MECH'L FOR FURTHER DETAILS

REVISED FOR TENDER	JAN. 12/2024
FOR TENDER	JAN. 20/2023
ISSUED:	DATE:

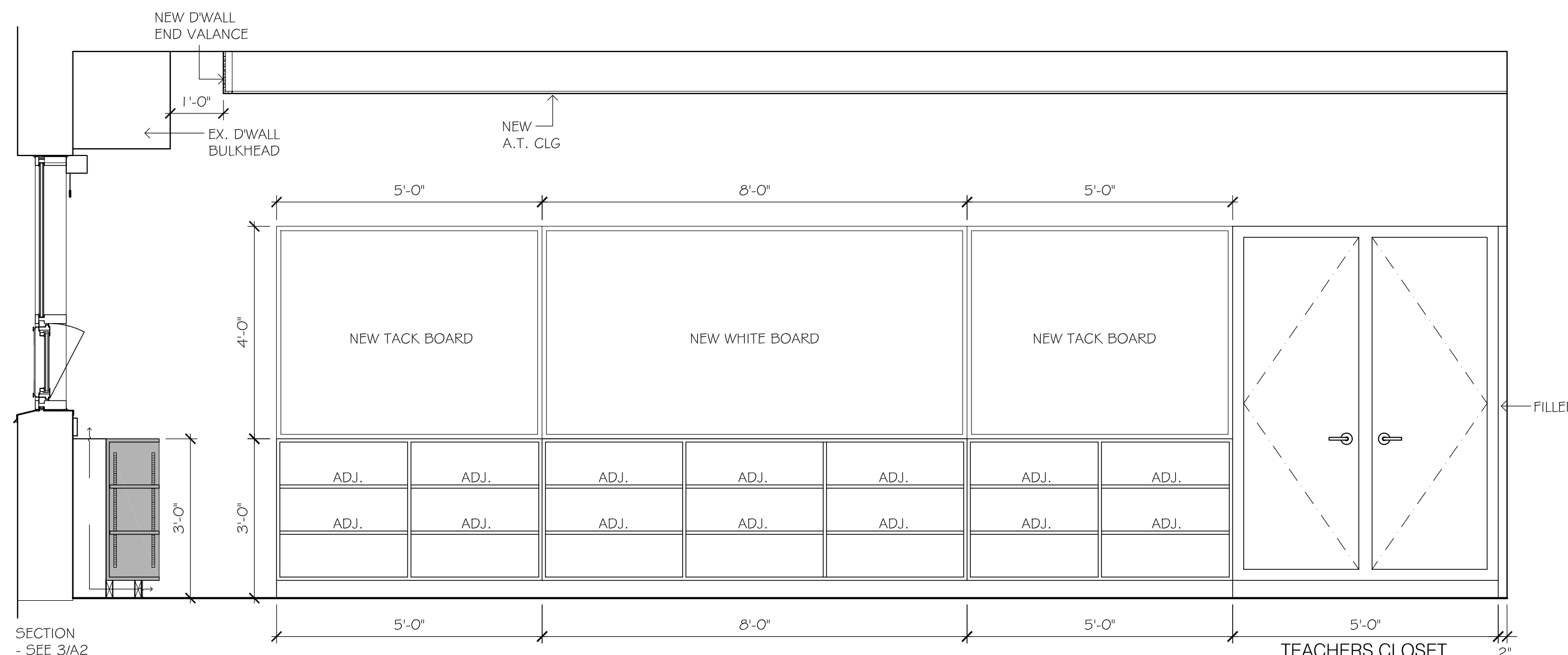
THIS DRAWING IS COMPLEMENTARY & MUST BE READ IN CONJUNCTION WITH ALL THE OTHER DRAWINGS AND/OR SPECIFICATIONS. REPORT ANY INCONSISTENCIES TO THE ARCHITECT.

PROJECT:
RENOVATIONS TO ST. MARY CATHOLIC C.E.S. GRAFTON

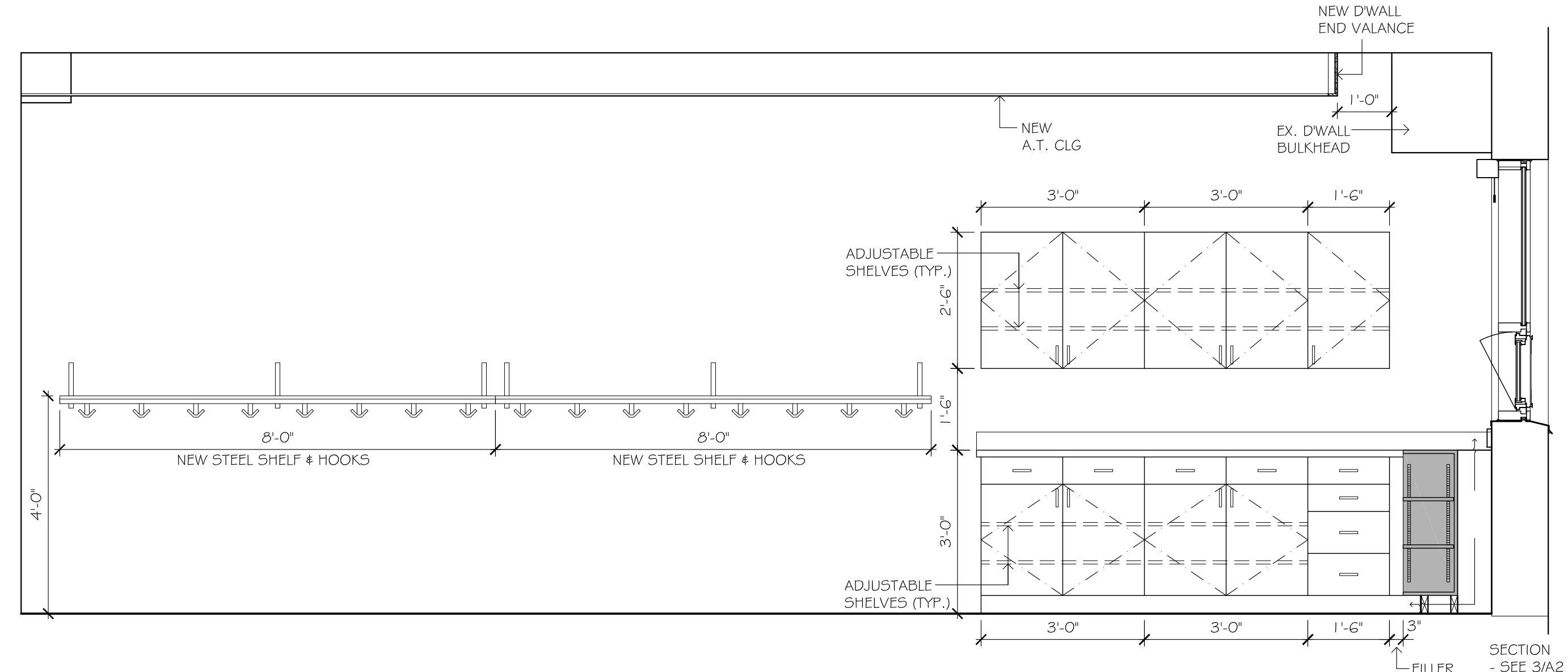
103b LYLE ST. S, GRAFTON, ON, K0K 2G0

DRAWING TITLE:
REFLECTED CEILING PLAN

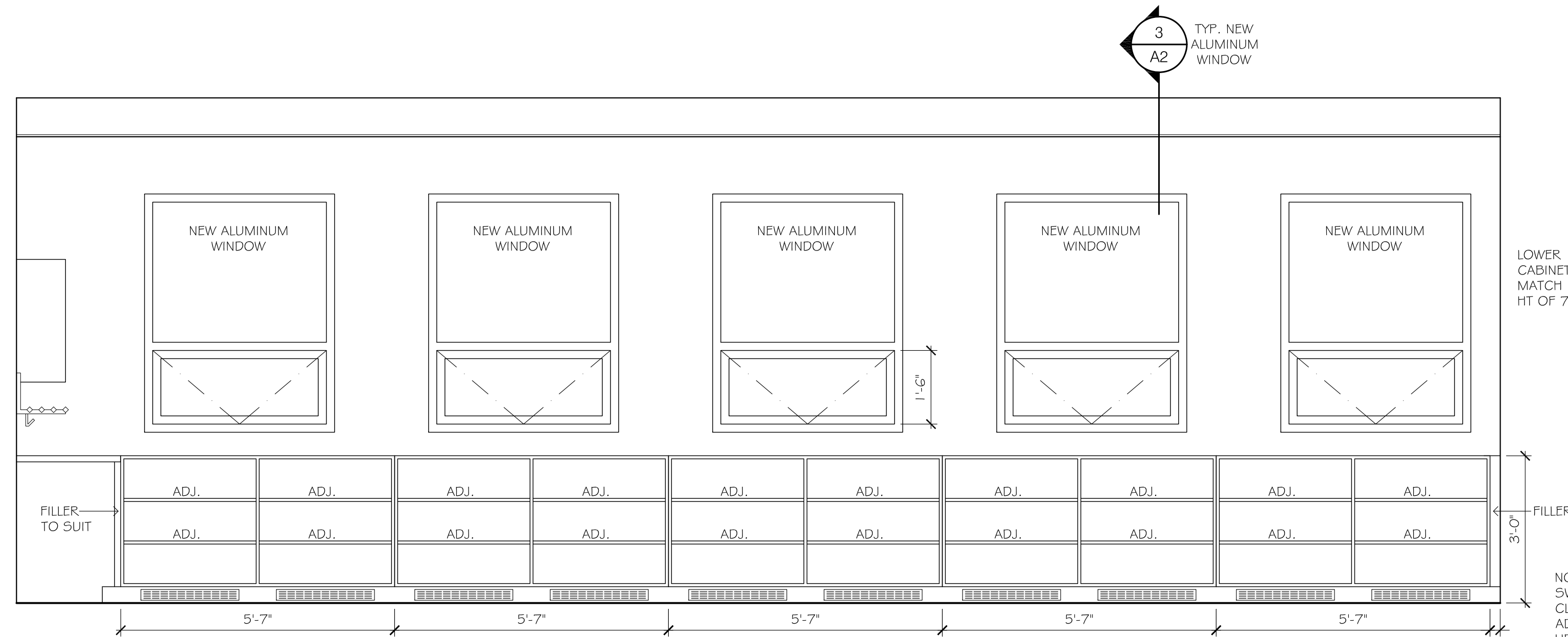
SCALE: A5 NOTED	DRAWING NUMBER:
DRAWN BY: SV	A3
CHECKED BY: GW	OF 6 22030



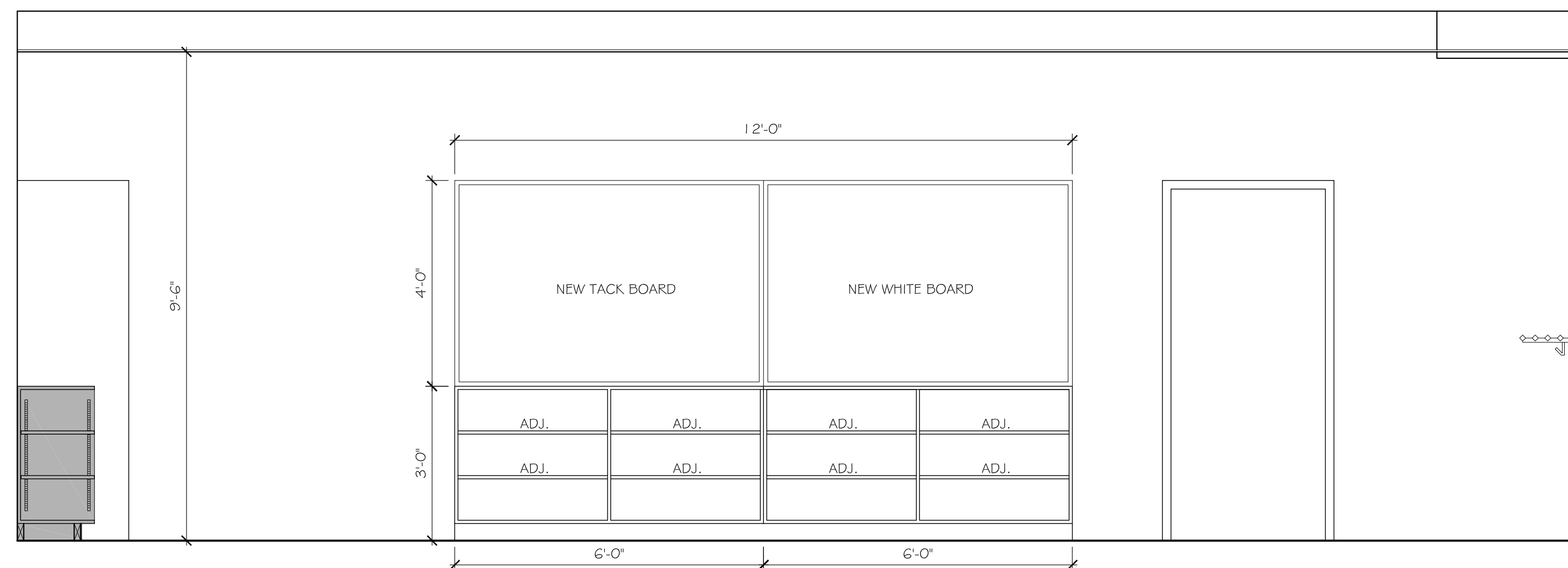
1 CLASSROOM 101 ELEV. - NEW WORK
SCALE: 1/2" = 1'-0"



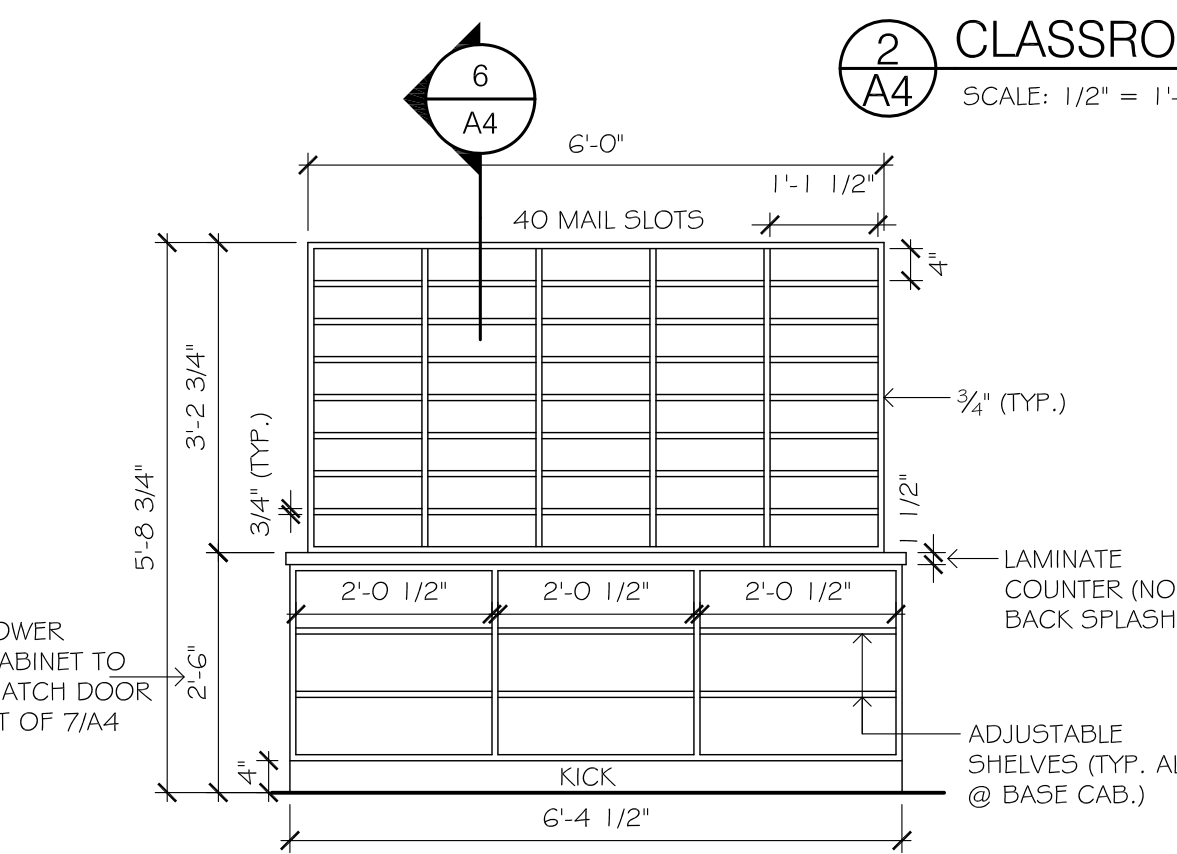
2 CLASSROOM 101 - NEW WORK
SCALE: 1/2" = 1'-0"



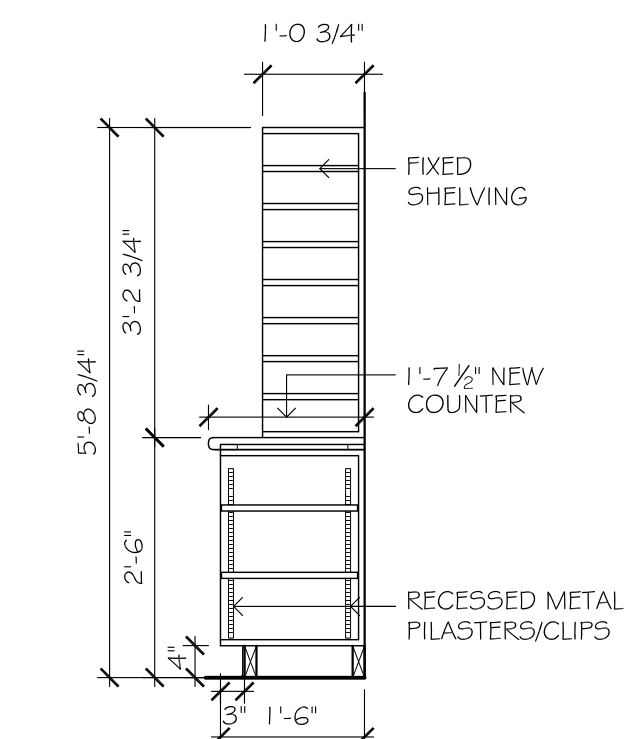
3 CLASSROOM 101 - NEW WORK
SCALE: 1/2" = 1'-0"



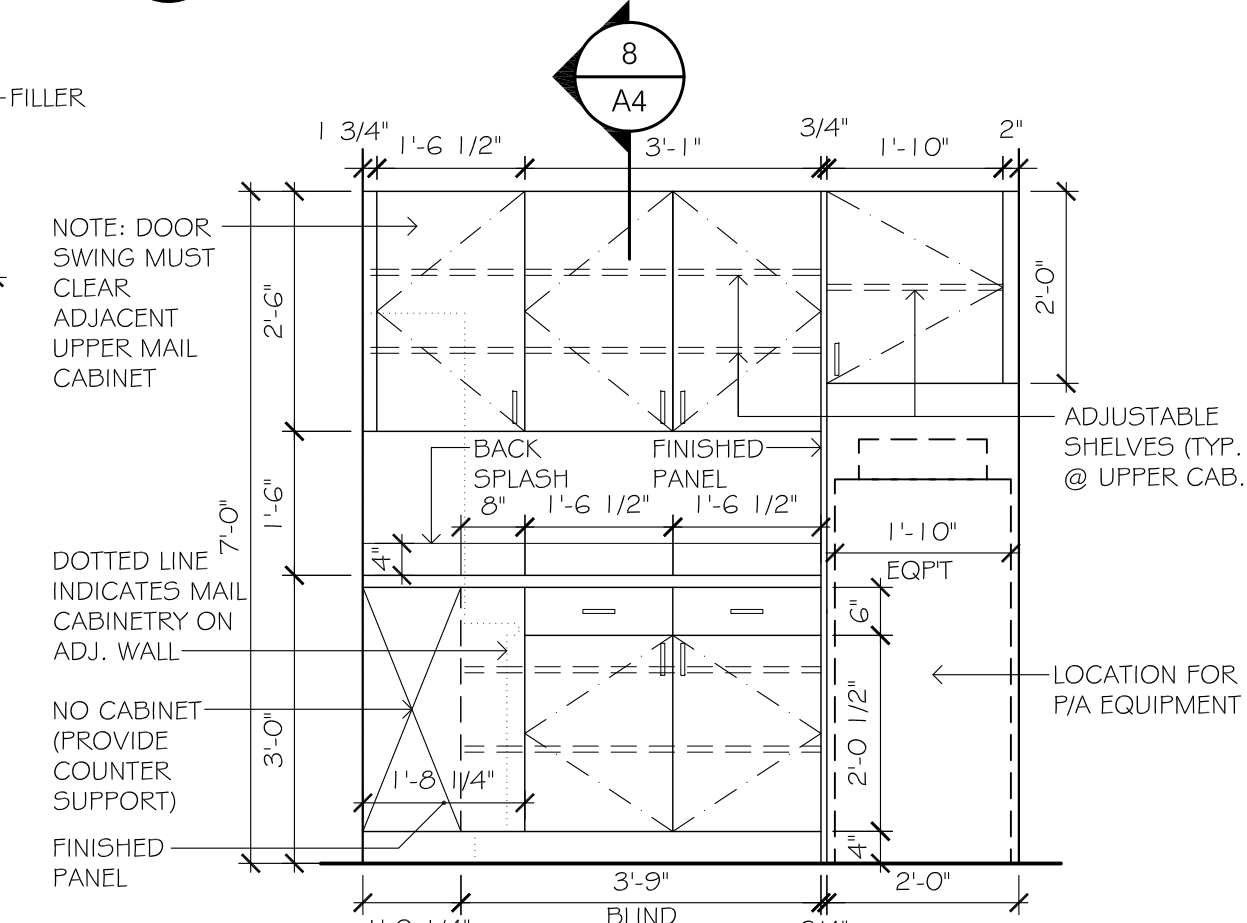
4 CLASSROOM 101 - NEW WORK
SCALE: 1/2" = 1'-0"



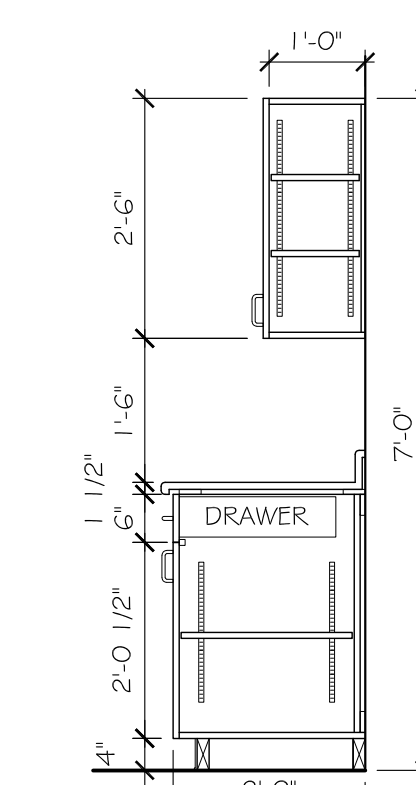
5 COPY ROOM - MAIL SLOT CABINETRY
ELEVATION
SCALE: 1/2" = 1'-0"



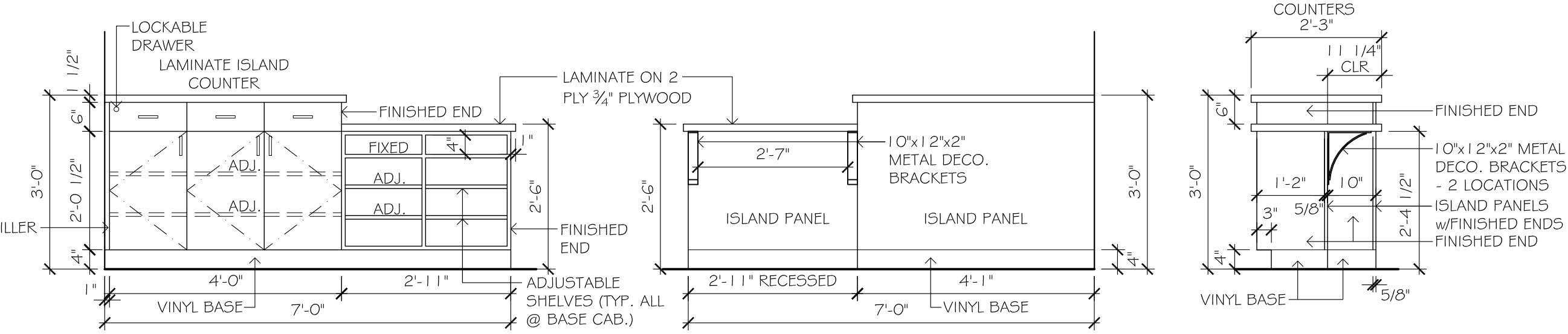
6 COPY ROOM MAIL SLOT CABINETRY
SECTION
SCALE: 1/2" = 1'-0"



7 COPY ROOM - COUNTER/CABINETRY
ELEVATION
SCALE: 1/2" = 1'-0"



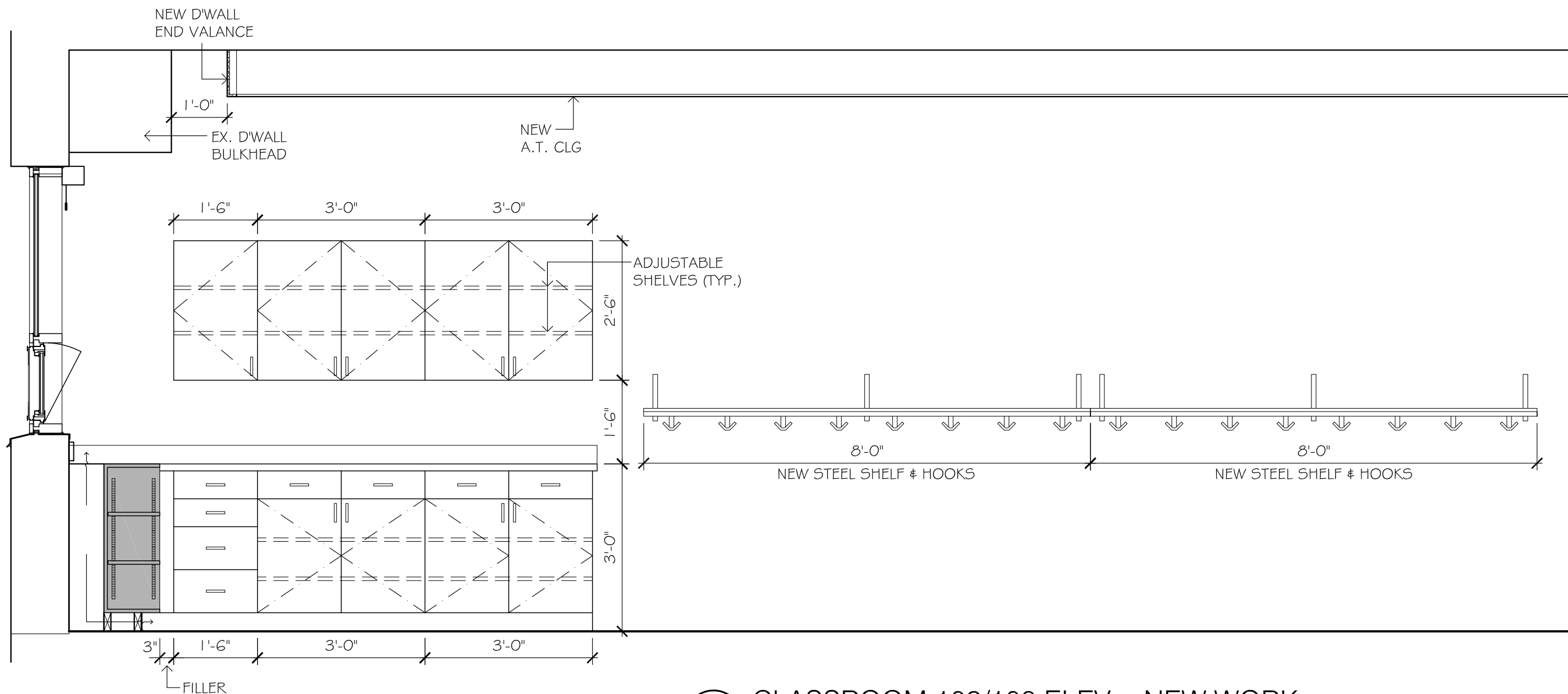
8 COPY ROOM COUNTER/CABINETRY
SECTION
SCALE: 1/2" = 1'-0"



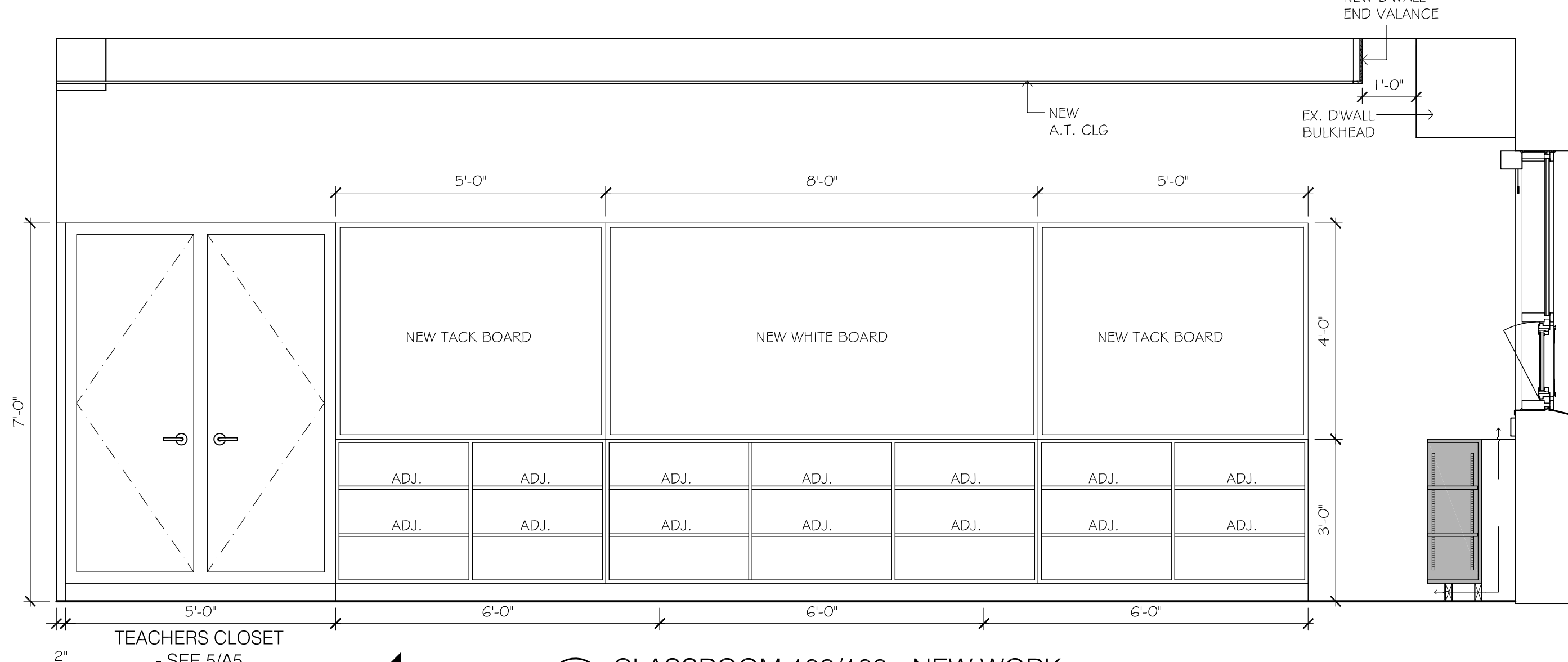
9 GENERAL OFFICE RECEPTION COUNTER
ELEVATION
SCALE: 1/2" = 1'-0"

10 GENERAL OFFICE RECEPTION COUNTER
ELEVATION
SCALE: 1/2" = 1'-0"

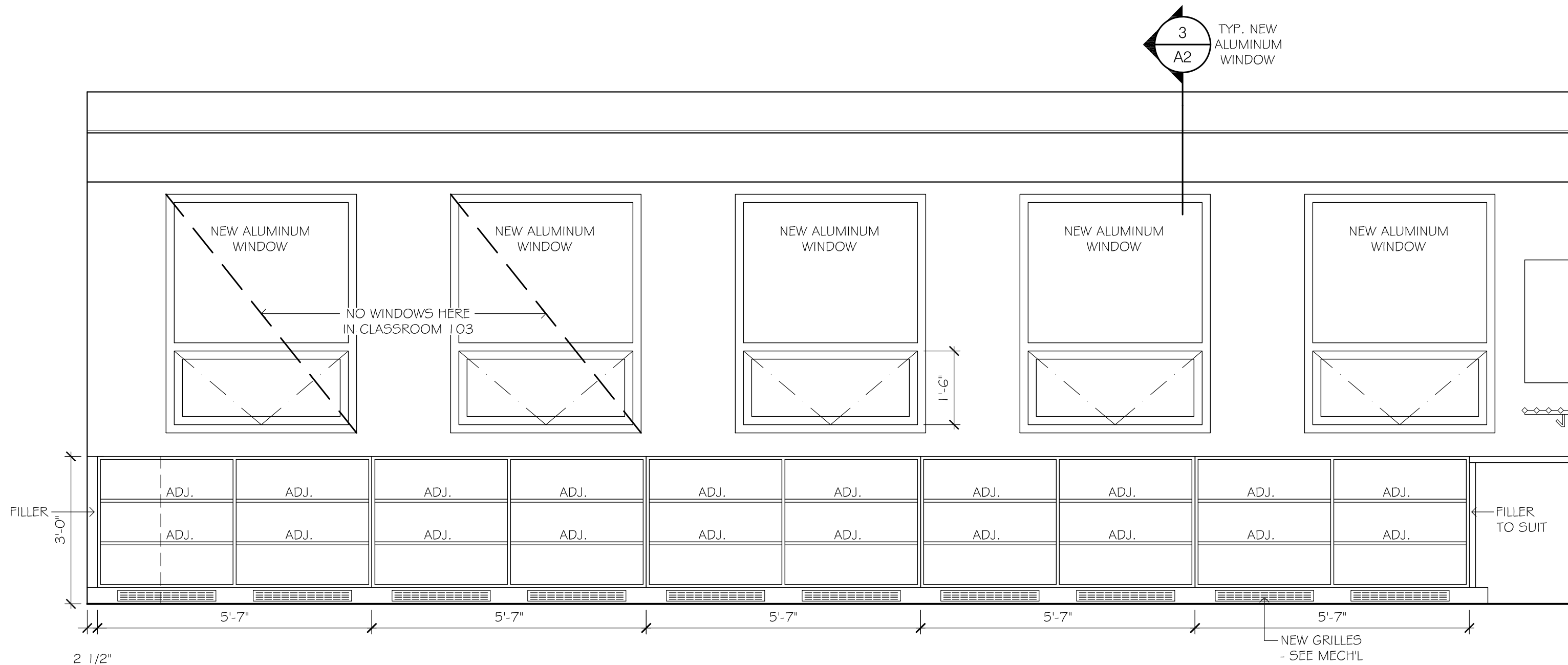
11 GENERAL OFFICE RECEPTION COUNTER
ELEVATION
SCALE: 1/2" = 1'-0"



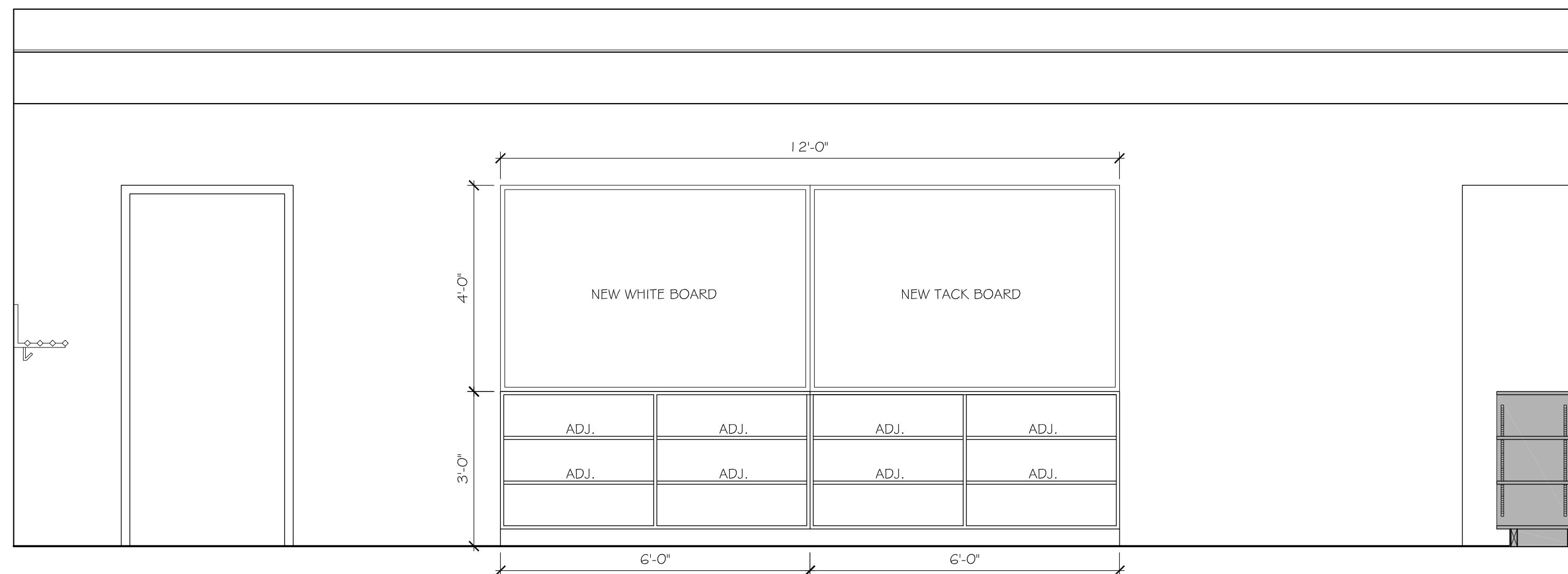
1 CLASSROOM 102/103 ELEV. - NEW WORK
SCALE: 1/2" = 1'-0"



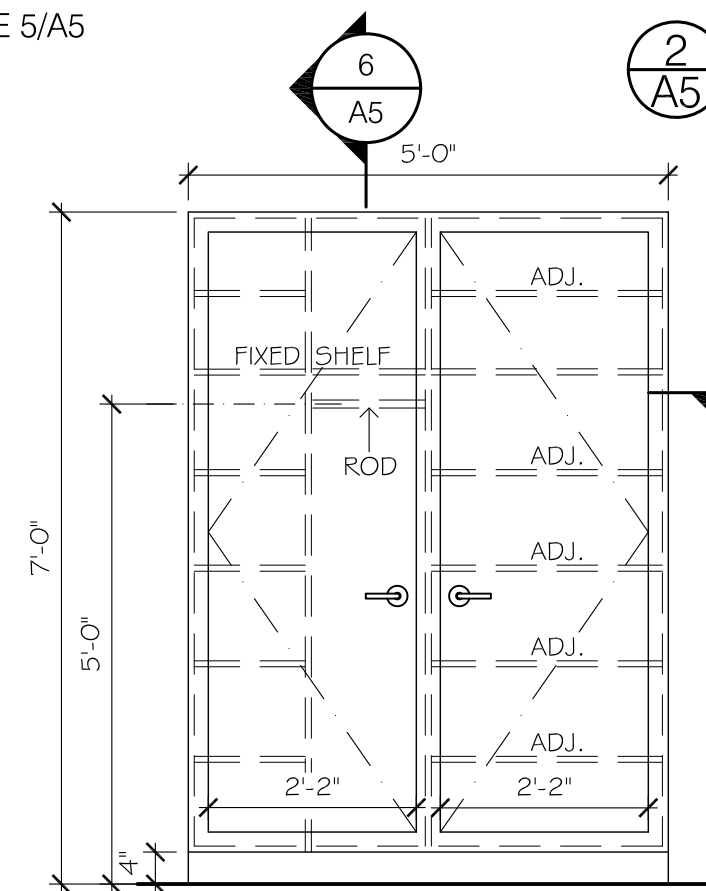
2 CLASSROOM 102/103 - NEW WORK
SCALE: 1/2" = 1'-0"



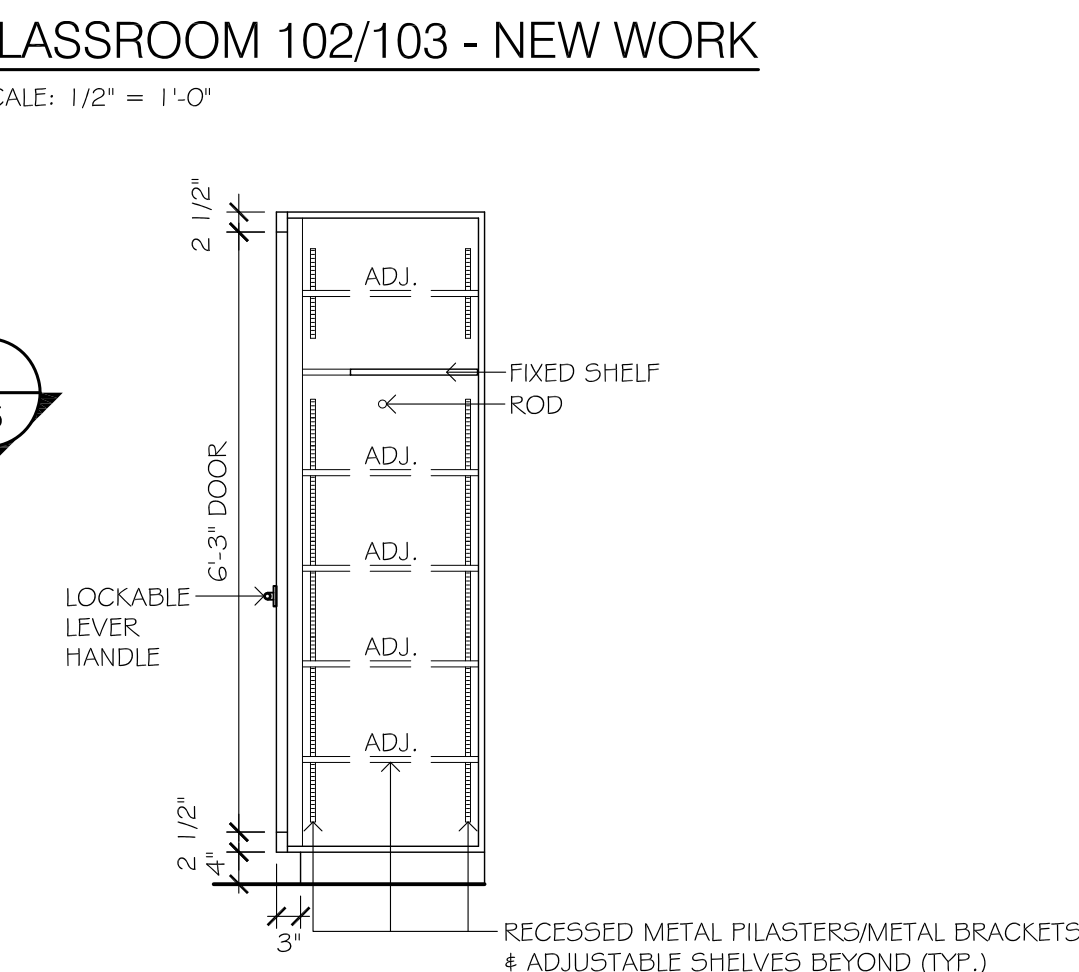
3 CLASSROOM 102/103 - NEW WORK
SCALE: 1/2" = 1'-0"



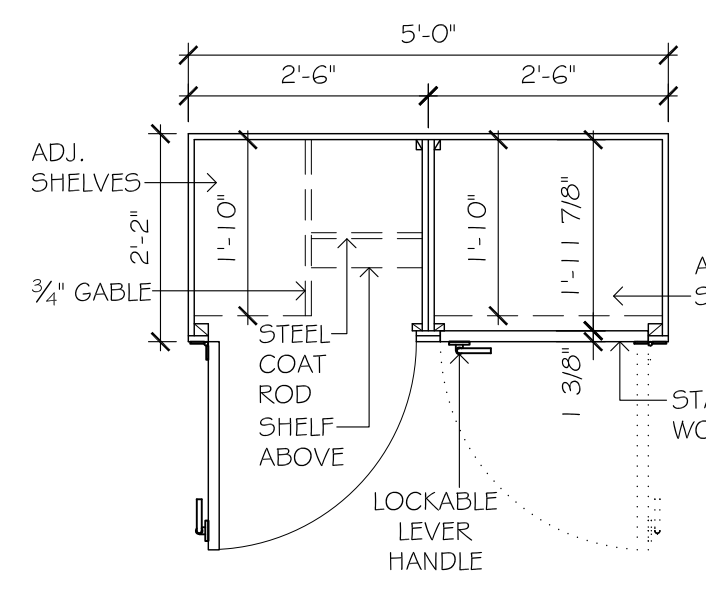
4 CLASSROOM 102/103 - NEW WORK
SCALE: 1/2" = 1'-0"



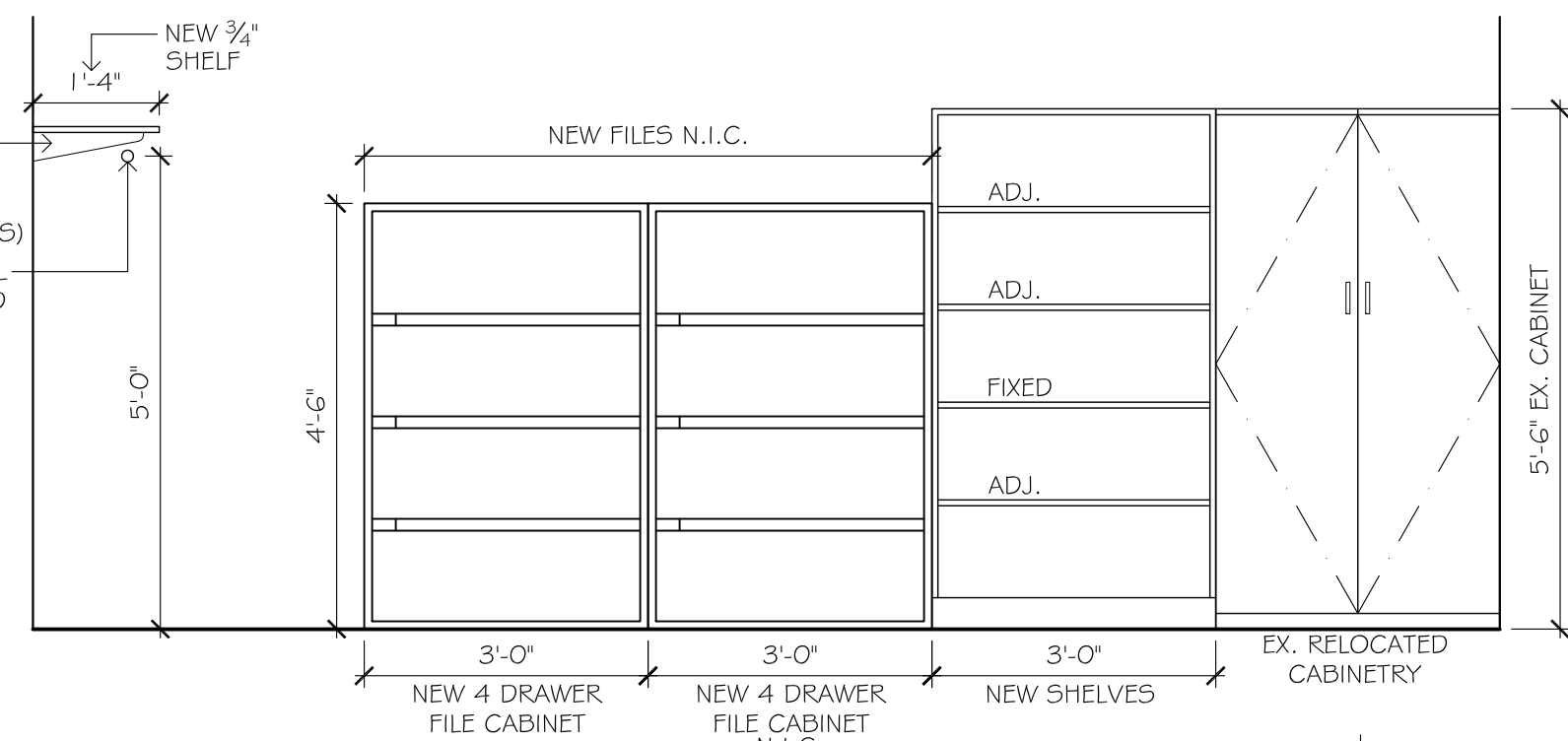
5 NEW TEACHERS CABINET
SCALE: 1/2" = 1'-0"



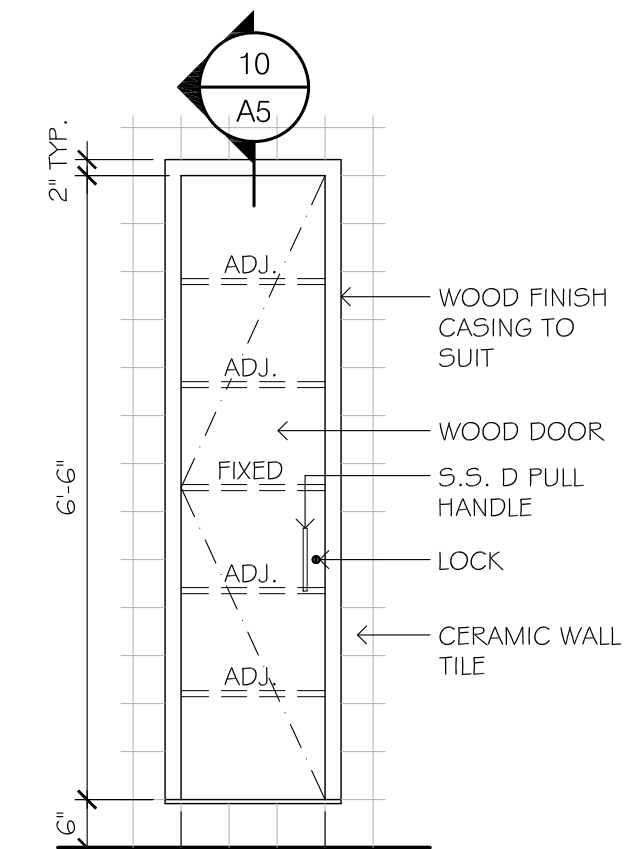
6 NEW TEACHERS CABINET
SCALE: 1/2" = 1'-0"



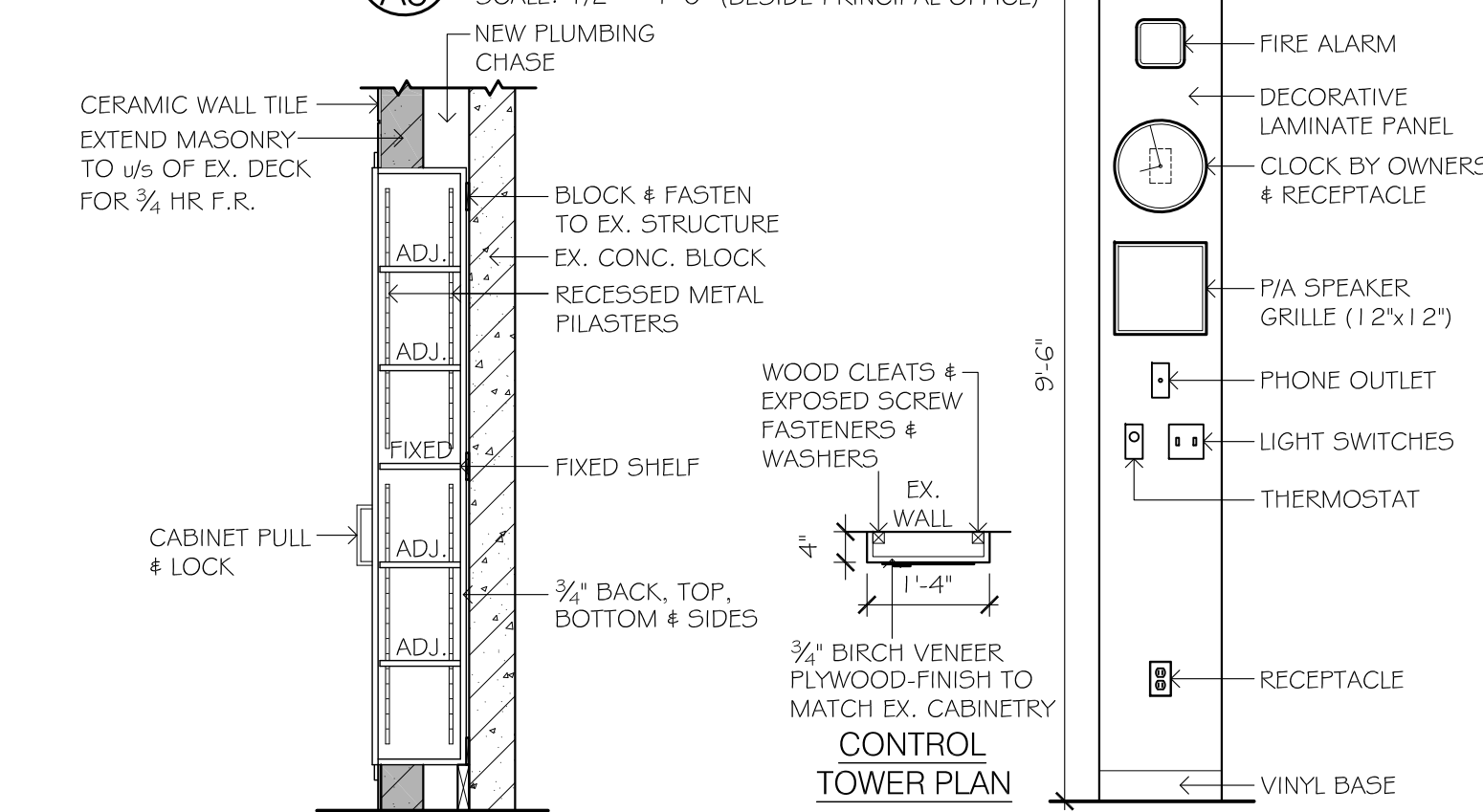
7 NEW TEACHERS CABINET
SCALE: 1/2" = 1'-0"



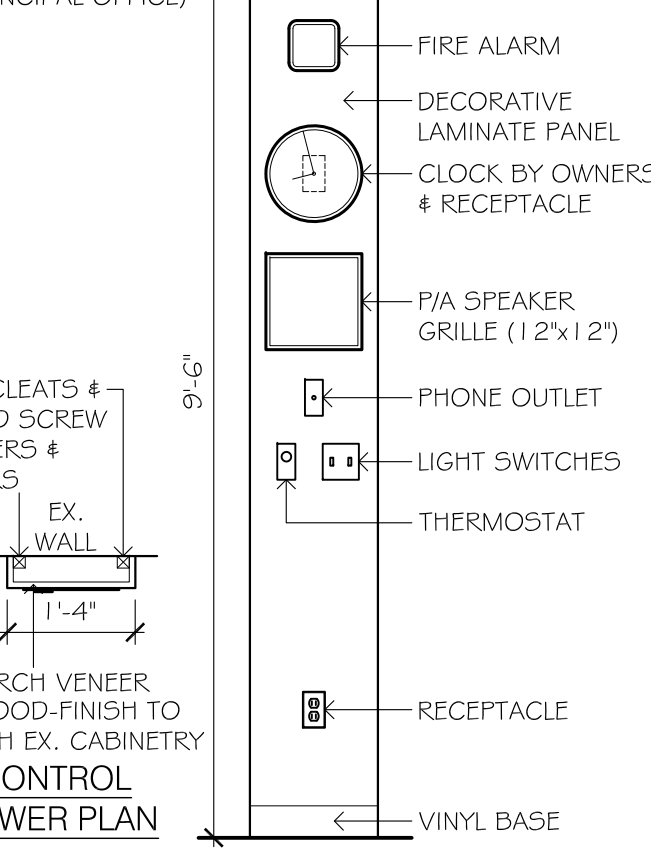
8 NEW STORAGE ROOM
SCALE: 1/2" = 1'-0" (BESIDE PRINCIPAL OFFICE)



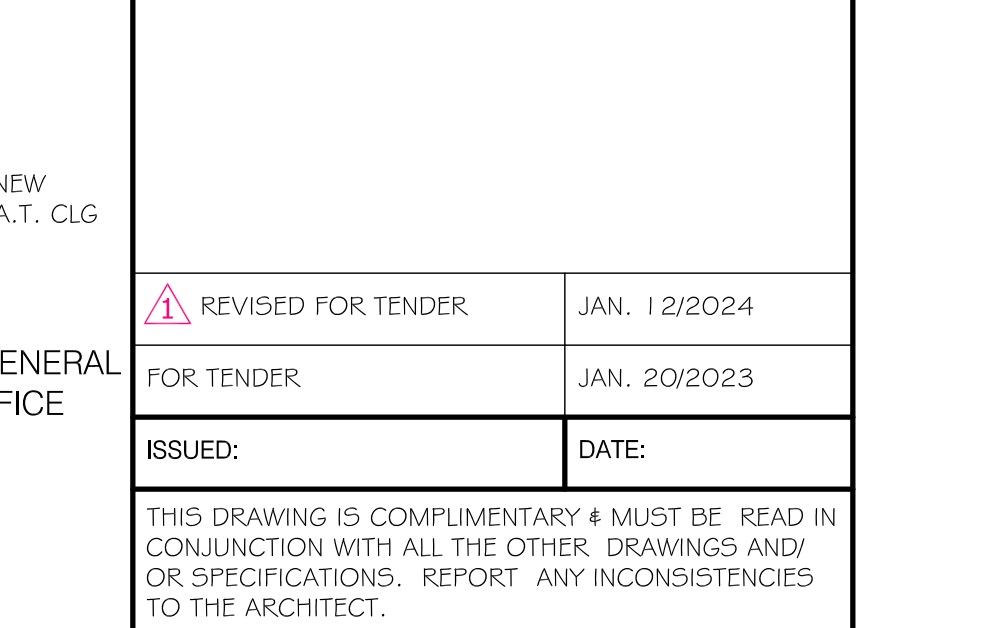
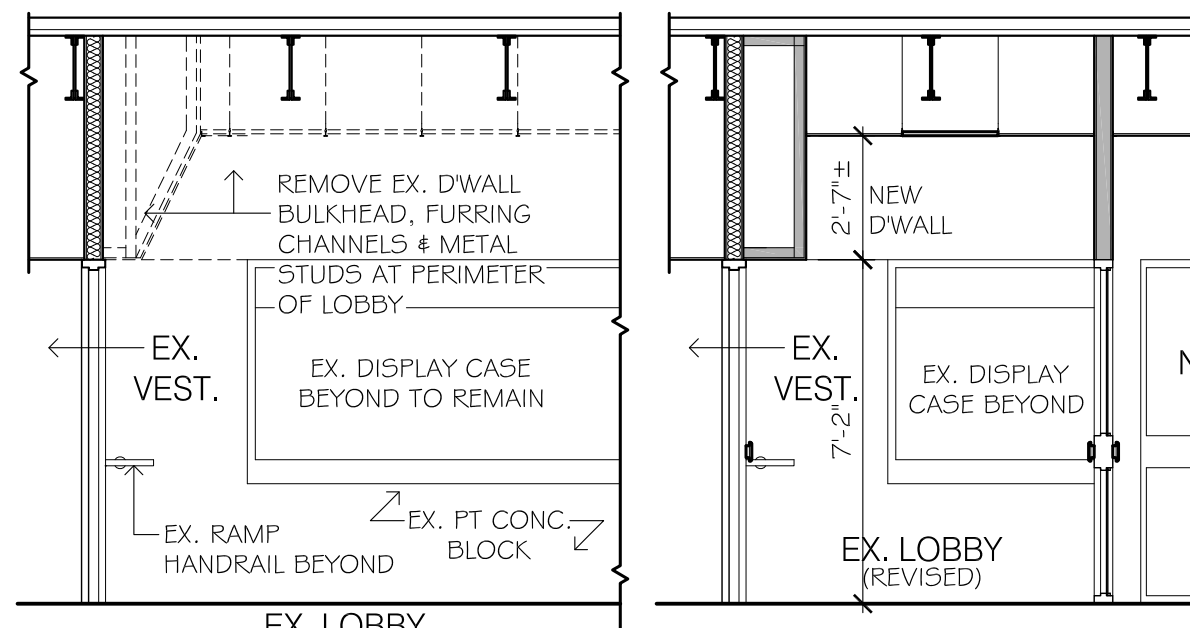
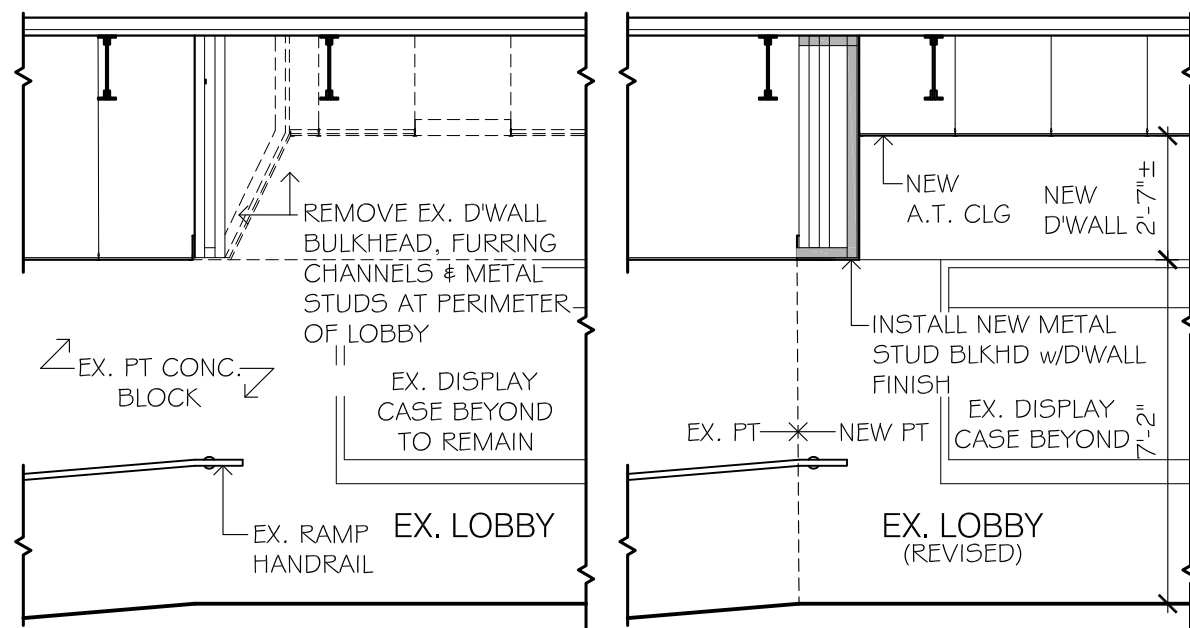
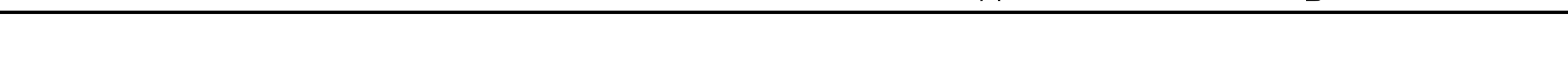
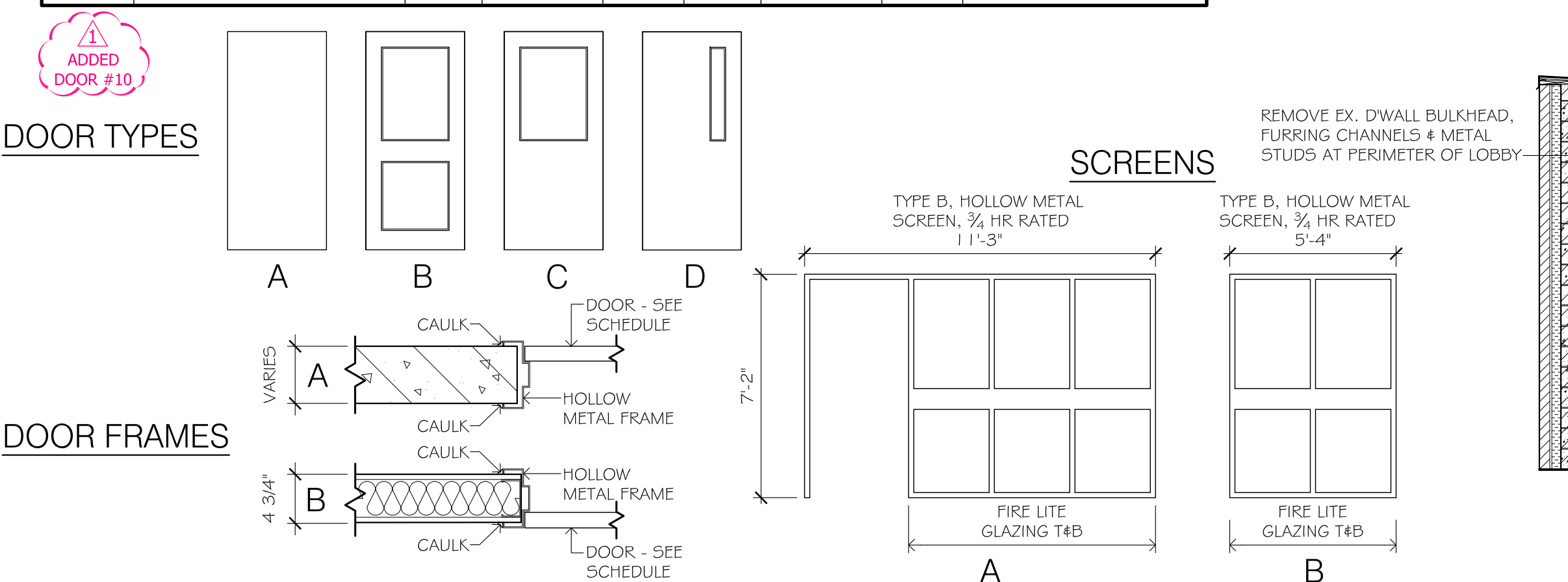
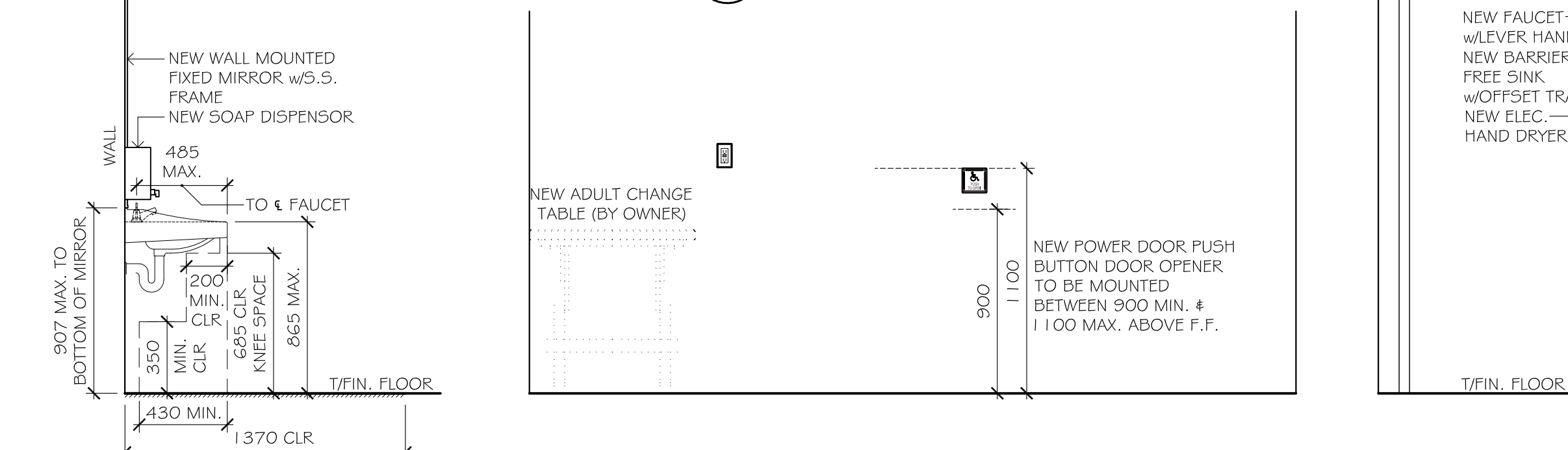
9 NEW RECESSED STORAGE CABINET
SCALE: 1/2" = 1'-0"

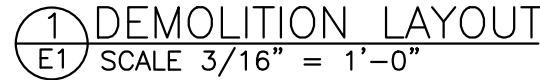
















10 UNIVERSAL W/C - NEW WORK
SCALE: 1/2" = 1'-0"



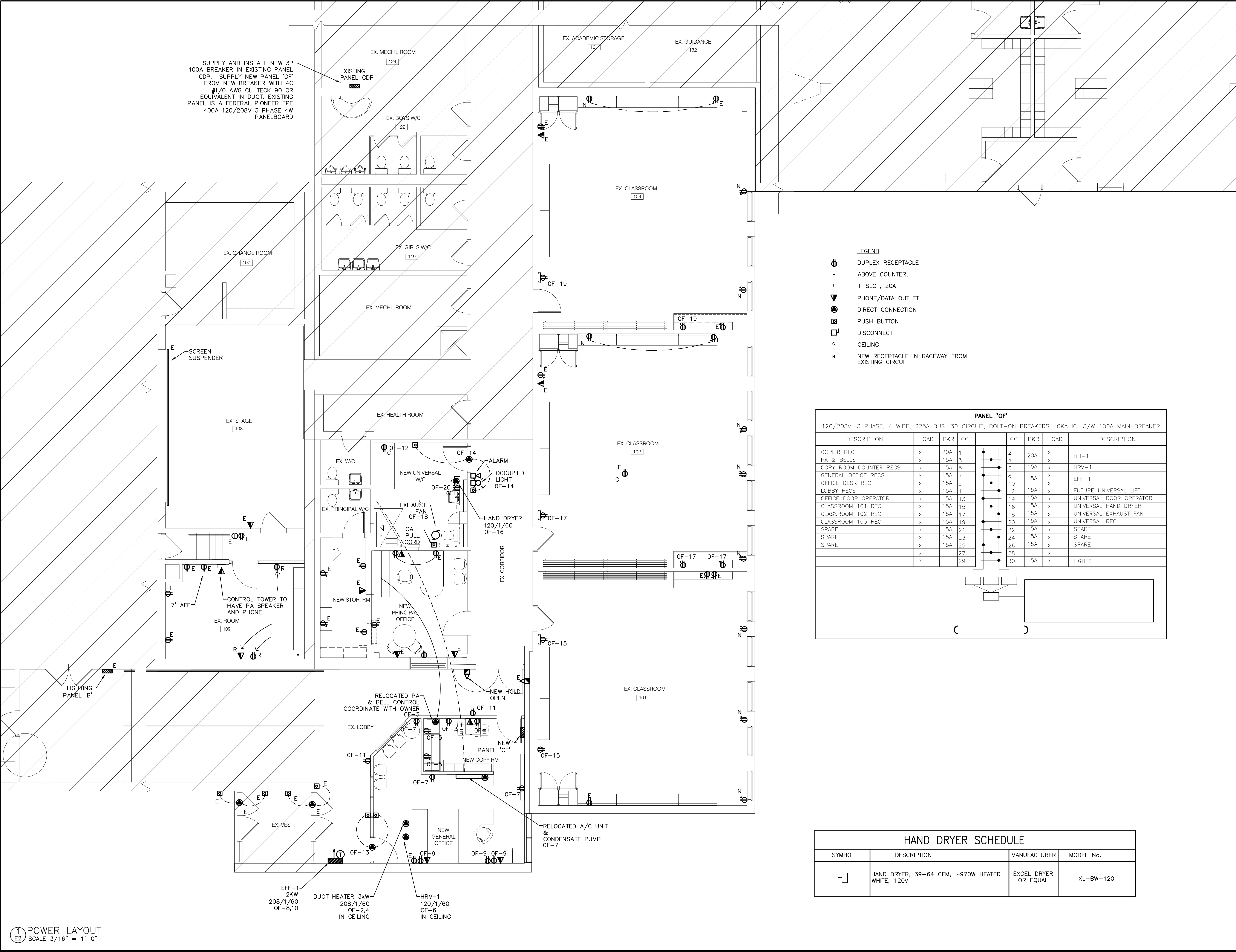
11 NEW CONTROL PANEL
SCALE: 1/2" = 1'-0"





- | LEGEND | |
|---|--------------------------------------|
|  | DUPLEX RECEPTACLE |
|  | ABOVE COUNTER |
|  | PHONE/DATA OUTLET |
|  | DIRECT CONNECTION |
|  | DISCONNECT |
|  | BASE BOARD HEATER |
|  | CABLE OUTLET |
|  | TOGGLE SWITCH |
|  | EXISTING LIGHT FIXTURES |
|  | EXIT SIGN |
|  | EXIT SIGN |
| E | EXISTING TO REMAIN |
| X | EXISTING TO REMOVE |
| R | EXISTING TO RELOCATE |
| N | REMOVE AND REPLACE EXISTING WITH NEW |
| C | MOUNTED ON CEILING |
| O/S | OCCUPANCY SENSOR |
| MD | MOTION DETECTOR (SECURITY) |
| SP | CLASSROOM A/V SPEAKER |
| CLK | CLOCK |
| PA | PUBLIC ADDRESS SYSTEM SPEAKER |
| WAP | WIRELESS ACCESS POINT |
|  | SMOKE DETECTOR |
|  | HEAT DETECTOR |
| FAAP | FIRE ALARM ANNUCIATOR PANEL |
|  | FIRE ALARM ANNUCIATOR PANEL |

DESIGN	DRM	SCALE AS NOTED
DRAWN	KCS	DWG NO.
CHECKED	DRM	E1
APPROVED	DRM	
PROJECT	7145	



SUPPLY AND INSTALL NEW 3P 100A BREAKER IN EXISTING PANEL CDP. SUPPLY NEW PANEL "OF" FROM NEW BREAKER WITH 4C #1/0 AWG CU TECK 90 OR EQUIVALENT IN DUCT. EXISTING PANEL IS A FEDERAL PIONEER FPE 400A 120/208V 3 PHASE 4W PANELBOARD

LEGEND

- ⊕ DUPLEX RECEPTACLE
- ABOVE COUNTER,
- T T-SLOT, 20A
- ▽ PHONE/DATA OUTLET
- DIRECT CONNECTION
- ⊞ PUSH BUTTON
- ⊞ DISCONNECT
- ⊞ CEILING
- N NEW RECEPTACLE IN RACEWAY FROM EXISTING CIRCUIT

PANEL 'OF'

120/208V, 3 PHASE, 4 WIRE, 225A BUS, 30 CIRCUIT, BOLT-ON BREAKERS 10KA IC, C/W 100A MAIN BREAKER									
DESCRIPTION	LOAD	BKR	CCT		CCT	BKR	LOAD	DESCRIPTION	
COPIER REC	x	20A	1	●	2	20A	x	DH-1	
PA & BELLS	x	15A	3	●	4	15A	x	HRV-1	
COPY ROOM COUNTER RECS	x	15A	5	●	6	15A	x		
GENERAL OFFICE RECS	x	15A	7	●	8	15A	x	EFF-1	
OFFICE DESK REC	x	15A	9	●	10	15A	x		
LOBBY RECS	x	15A	11	●	12	15A	x	FUTURE UNIVERSAL LIFT	
OFFICE DOOR OPERATOR	x	15A	13	●	14	15A	x	UNIVERSAL DOOR OPERATOR	
CLASSROOM 101 REC	x	15A	15	●	16	15A	x	UNIVERSAL HAND DRYER	
CLASSROOM 102 REC	x	15A	17	●	18	15A	x	UNIVERSAL EXHAUST FAN	
CLASSROOM 103 REC	x	15A	19	●	20	15A	x	UNIVERSAL REC	
SPARE	x	15A	21	●	22	15A	x	SPARE	
SPARE	x	15A	23	●	24	15A	x	SPARE	
SPARE	x	15A	25	●	26	15A	x	SPARE	
	x		27	●	28	x			
	x		29	●	30	15A	x	LIGHTS	

HAND DRYER SCHEDULE

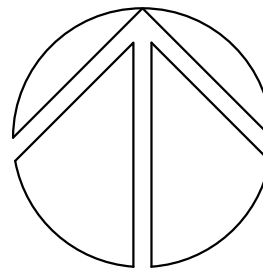
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL No.
⊞	HAND DRYER, 39-64 CFM, ~970W HEATER WHITE, 120V	EXCEL DRYER OR EQUAL	XL-BW-120

NOTES

1. INSTALL EMERGENCY CALL SYSTEM IN UNIVERSAL WASHROOM IN CONFORMANCE WITH OBC 3.8.3.12 FOR WASHROOM. ACTIVATION OF EMERGENCY BUTTON OR PULL CORD TO ACTIVATE AUDIBLE AND VISUAL ALERT SIGNAL OUTSIDE WASHROOM AND UNLOCK DOOR. COORDINATE LOCATION OF EMERGENCY BUTTON OR PULL CORD WITH BUILDING AND ARCHITECT. WASHROOM KIT SPECIFIED BY ARCHITECT AND SUPPLIED BY OTHERS.
2. USE EXISTING CIRCUITS WHERE PRACTICAL.
3. PROVIDE POWER IN CEILING FOR FUTURE LIFT DEVICE AS PER ARCHITECTURAL.
4. RELOCATED A/C UNIT TO BE RE SUPPLIED FORM EXISTING CONDENSING UNIT. COORDINATE WITH MECHANICAL.
5. PA AND PHONE TO BE REINSTALLED IN NEW CONTROL TOWER.
6. ANY SURFACE MOUNTED RECEPTACLES, ON EXISTING BLOCK WALLS TO BE RUN IN ALUMINUM RACEWAY. USE AL3300 SERIES OR ALDS4000 SERIES RACEWAY BY LEGRAD, USE DIVIDER WHEN COMMUNICATIONS CABLE IS NEEDED.
7. POWER AND COMMUNICATIONS FOR GENERAL OFFICE DESK TO RUN VERTICALLY DOWN WALL IN CORNER THEN HORIZONTALLY IN ALUMINUM RACEWAY ACROSS WALL. USE AL3300 SERIES OR ALDS4000 SERIES RACEWAY BY LEGRAD, USE DIVIDER WHEN COMMUNICATIONS CABLE IS NEEDED.
8. COORDINATE REINSTALLATION OF SMART BOARDS, WIRELESS ACCESS POINTS, SPEAKERS, A/V CONTROL PANELS AND TELEPHONES WITH OWNER. VERIFY WITH OWNER IF ANY WIRING IS TO REQUIRED. TO BE COVERED BY CASH ALLOWANCE, SEE ARCHITECT FOR DETAILS

REVISIONS

Kirkland Engineering Ltd BCIN: 28857



NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER.

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www.kirklandeng.com
KIRKLAND ENGINEERING LTD.

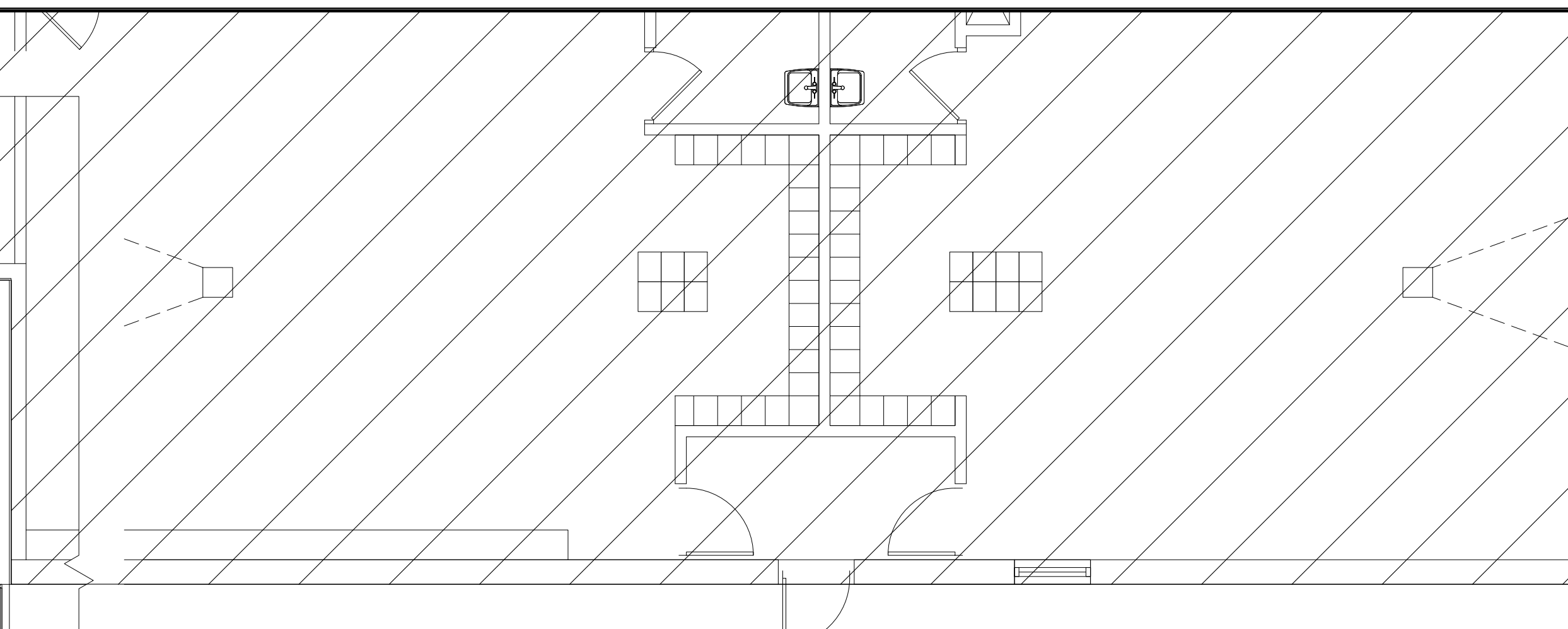
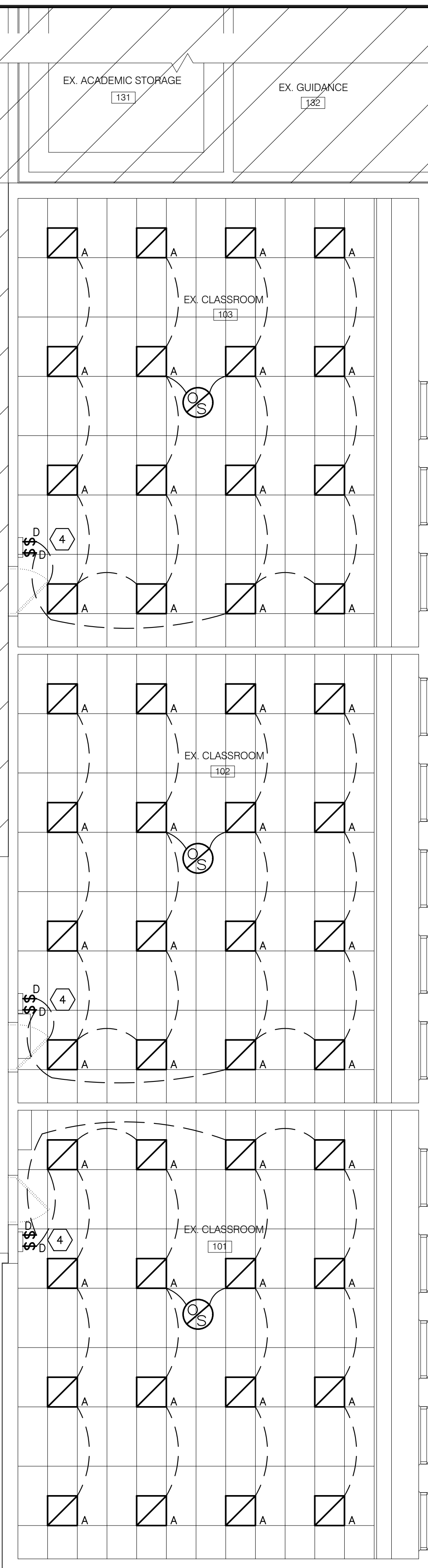
PROJECT
**ST. MARY C.E.S
RENOVATIONS**

103b Lyle St S
Grafton, Ontario

TITLE
POWER LAYOUT

DESIGN	DRM	SCALE AS NOTED
DRAWN	KCS	DWG NO.
CHECKED	DRM	
APPROVED	DRM	
PROJECT	7145	

CADD FILE NO. 7145E2



- | | | | |
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| | | | |
| 1 | ISSUED FOR TENDER | 2024/01/29 | DRM |
| 0 | ISSUED FOR PERMIT/TENDER | 2024/01/19 | DRM |
| NO. | DESCRIPTION | DATE | BY |

Kirkland Engineering Ltd BCIN: 28857

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TITLE
LIGHTING LAYOUT


E3





CADD FILE NO. 7145E3

(E3) LIGHTING LAYOUT
SCALE 3/16" = 1'-0"

\$	SWITCH
\$ _K	KEYED TOGGLE SWITCH
☉	SMOKE DETECTOR
☼	HEAT DETECTOR
R	RELOCATED
E	EXISTING

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL No.
 A	2'X2' LED PANEL TROFFER, 2000 LUMENS 80CRI, 35K, 0-10v DIMMING, 120V, 16W. WHITE	LITHONIA OR EQUAL	EPANL 2X2 2000LM 80CRI 35K MINI MVOLT
 B	2'X2' LED PANEL TROFFER, 3400 LUMENS 80CRI, 35K, 0-10v DIMMING, 120V, 27W.	LITHONIA OR EQUAL	EPANL 2X2 3400LM 80CRI 35K MINI MVOLT
 C	1'X4' LED PANEL TROFFER, 3000 LUMEN, 80 CRI, 35K, 0-10v DIMMING, 120V, 26W	LITHONIA OR EQUAL	EPANL 1X4 3000LM 80CRI 33K MINI MVOLT

LIGHTING CONTROL SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL No.
\$A	WALL MOUNTED OCCUPANCY SWITCH, AUTO ON/AUTO OFF	SENSORSWITCH OR APPROVED EQUAL	WSX PDT WH
\$B	DIMMABLE OCCUPANCY SENSOR WALL SWITCH, MANUAL ON/ AUTO OFF, 0-10V DIMMING, 120V, WHITE	SENSORSWITCH OR APPROVED EQUAL	WSX PDT D SA WH
\$D	0-10V DIMMING WALL SWITCH, WHITE	SENSORSWITCH OR APPROVED EQUAL	sPODM D SA WH
	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON/AUTO OFF, DUAL TECH 120V, WHITE WITH DAYLIGHT SENSOR	SENSORSWITCH OR APPROVED EQUAL	CMR PDT 9

EMERGENCY LIGHTING & EXIT SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL No.
	EMERGENCY LIGHTING UNIT, 72W, 12VDC, 10 YEAR BATTERY, C/W 2 MR16 LED 4W LAMPS.	LUMACELL OR APPROVED EQUAL	RG12C722LD4
	SINGLE REMOTE HEAD, 12VDC, 4W, LED, MICRO PAR 18	LUMACELL OR APPROVED EQUAL	MQM1LD7
	DUAL REMOTE HEAD, 12VDC, 4W, LED, MICRO PAR 18	LUMACELL OR APPROVED EQUAL	MQM2LD7
	SELF POWERED PICTOGRAM EXIT SIGN, SINGLE/DOUBLE FACE AS INDICATED, CEILING MOUNTED, ARROWS AS INDICATED, LED, SELF POWERED, 120V, CSA-C860-96 LISTED & CERTIFIED	LUMACELL OR APPROVED EQUAL	LA1WS OR LA2WS

SPECIFICATION

1. GENERAL CONDITIONS

1. DO ALL WORK IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE, CURRENT EDITION, BASED UPON THE CANADIAN ELECTRICAL CODE, PART I, CSA STANDARD C22.1, AND ALL BULLETINS TO DATE.

2. SCOPE OF WORK

2.1 PROVIDE ALL MATERIALS EQUIPMENT AND LABOUR TO PROVIDE A COMPLETE OPERATING INSTALLATION AS DESIGNATED IN THIS SPECIFICATION AND AS INDICATED ON THE DRAWINGS EXCEPT WHERE OTHERWISE NOTED.
2.2 THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, SUPPLY AND INSTALLATION OF THE FOLLOWING ITEMS:
2.2.1 POWER DISTRIBUTION.
2.2.2 LIGHTING
2.2.3 EMERGENCY LIGHTING AND EXIT SIGNAGE.
2.2.4 FEEDERS AND OVER CURRENT PROTECTION FOR MECHANICAL EQUIPMENT.
2.2.5 MAIN SERVICE BOARD C/W METERING SYSTEM.
2.2.6 MOTOR STARTERS FOR MECHANICAL EQUIPMENT.
2.2.7 EMPTY RACEWAY SYSTEM FOR TELEPHONE AND CABLE TV SYSTEMS
2.2.8 FIRE ALARM SYSTEM

3. GENERAL

3.1 ALL MATERIALS SHALL BE CSA APPROVED, NEW AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

4. IDENTIFICATION

4.1 WIRES TO BE COLOURED AS FOLLOWS: 120V AC NEUTRAL WHITE
12V DC BLUE.
120V AC SWITCHED, BLACK OR RED.
120V AC LINE, BLACK.
600V AC LINE, RED, BLACK, AND BLUE

4.2 PROVIDE LAMICOID LABELS FOR NEW OR REVISED BREAKER PANELS, SPLITTERS AND DISCONNECTS.

4.3 PROVIDE TYPED CIRCUIT LISTING FOR NEW OR REVISED BREAKER PANELS.

5. EXAMINATION OF SITE

5.1 PRIOR TO SUBMITTING TENDERS, THIS CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS.
5.2 ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF DIVISION 16 IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS.
5.3 NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.

6. INSURANCE

6.1 SUB-CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB-CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE AS NOTED WITHIN ARCHITECTURAL GENERAL CONDITIONS.

7. AS BUILT DRAWINGS

7.1 MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE ARCHITECT AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.

8. REVISIONS AND EXTRAS

8.1 ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ARCHITECT. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR , HOURLY RATES, ETC.

9. CLEAN UP

9.1 BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS.

10. CUTTING AND PATCHING

10.1 ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. NO CHASING BLOCK WORK WILL BE ALLOWED.
CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.

11. COORDINATION

11.1 BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, CONDUIT WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.

12. RESPONSIBILITY

12.1 BE RESPONSIBLE FOR ELECTRICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

13. WIRING MATERIALS AND METHODS

13.1 USE MATERIALS AND METHODS APPROVED BY ONTARIO ELECTRICAL CODE FOR USE IN NON-COMBUSTIBLE CONSTRUCTION.
13.2 ALL BUILDING WIRE SHALL BE COPPER TYPE RW90-XLPE WHERE APPROPRIATE EXCEPT WHERE OTHERWISE NOTED.
13.3 USE MINIMUM OF #12 AWG FOR BRANCH CIRCUIT WIRING.
13.4 ARMoured CABLE TYPE AC90 (BX) WITH INTERLOCKING ARMOUR FABRICATED FROM ALUMINUM STRIP C/W COPPER INSULATED CONDUCTORS, SIZE AS INDICATED, TO BE USED IN CONCEALED WALL AND CEILING CAVITIES.

14. SHOP DRAWINGS AND PRODUCT DATA

14.1 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK.
14.2 INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, NECESSARY FOR COMPLETION OF WORK.
14.3 ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE.
14.4 MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE.
14.5 SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR LIGHTING FIXTURES, EMERGENCY LIGHTING, EXIT SIGNS, MAIN SERVICE BOARD, MOTOR STARTERS, FIRE ALARM EQUIPMENT AND POWER DISTRIBUTION EQUIPMENT.
14.6 PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTION BY ESA, FIRE ALARM VERIFICATION REPORT, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.

15. SYSTEMS DEMONSTRATION

15.1 PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER.
15.2 INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.

16. PERMITS, FEES AND INSPECTION

16.1 SUBMIT TO ELECTRICAL SAFETY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
16.2 PAY ASSOCIATED FEES, INCLUDING EQUIPMENT APPROVAL INSPECTION FEE.
16.3 OWNER WILL PROVIDE DRAWINGS AND SPECIFICATIONS REQUIRED BY ELECTRICAL SAFETY AUTHORITY AT NO COST.
16.4 NOTIFY ENGINEER OF CHANGES REQUIRED BY ELECTRICAL SAFETY AUTHORITY PRIOR TO MAKING CHANGES.
16.5 FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL SAFETY AUTHORITY AND AUTHORITIES HAVING JURISDICTION OF COMPLETION OF WORK TO ENGINEER.

17. THIRD PARTY TESTING

17.1 THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THIRD PARTY TESTING OF THE LIGHTING SYSTEM IN ACCORDANCE WITH ASHRAE STANDARD 90.1-2010, SECTION 9.4.4 FUNCTIONAL TESTING. THE PARTY RESPONSIBLE FOR THE FUNCTIONAL TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND SHALL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.
17.2 LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
17.3 WHEN SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS OR PHOTOSENSORS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
17.2.1 CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE. LIGHTS TURN OFF ONLY AFTER SPACE IS VACATED. WHERE AN AUTO-ON MODE HAS BEEN SELECTED, LIGHTS DO NOT TURN ON UNLESS SPACE IS OCCUPIED.
17.2.2 CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED CORRECTLY TO TURN THE LIGHTS OFF.
17.2.3 WHERE DAYLIGHT HARVESTING CAPABILITY HAS BEEN INSTALLED, CONFIRM THAT PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT LEVELS BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.

18. WARRANTY

18.1 AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.

19. CONDUITS AND RACEWAYS

19.1 RIGID GALVANIZED STEEL CONDUIT TO BE USED WHERE SUBJECT TO MECHANICAL DAMAGE.
19.2 ELECTRICAL METALLIC TUBING (EMT) WITH COUPLINGS TO BE USED EXCEPT WHERE EMBEDDED IN CONCRETE OR SUBJECT TO UNDUE MOISTURE OR MECHANICAL DAMAGE.
19.3 RIGID PVC CONDUIT WHERE EMBEDDED IN CONCRETE OR BELOW GRADE.
19.4 FLEXIBLE ALUMINUM CONDUIT WITH WEATHERPROOF COVERING TO BE USED WHERE SUBJECT TO VIBRATION OR STRAIN RELIEF.
19.5 CONDUITS IN FINISHED AREA SHALL BE CONCEALED.
19.6 CONDUITS SHALL BE MINIMUM 1/2".

20. INSTALLATION OF OUTLETS

20.1 THE DRAWINGS SHOW APPROXIMATE LOCATION OF OUTLETS, EXACT LOCATION SHALL BE COORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL DRAWINGS, ETC. OUTLETS INACCURATELY LOCATED SHALL BE READJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE NOTED ON THE DRAWING LOCATE OUTLETS AS FOLLOWS:
20.1.1 RECEPTACLES, TELEPHONE AND DATA OUTLETS (15.7") 400mm ABOVE FINISHED FLOOR.
20.1.2 OUTLETS OVER COUNTER (45") 1143mm ABOVE FLOOR OR CO-ORDINATION.
20.1.3 OUTLETS IN MECHANICAL, ELECTRICAL AND TELEPHONE ROOMS (48") 1220mm ABOVE FLOOR.
20.1.4 LIGHT SWITCHES NOT LESS THAN (35.4") 900mm AND NOT MORE THAN (43") 1100mm ABOVE FLOOR.
20.2 RACEWAYS SHALL BE EMT UNLESS OTHERWISE NOTED.
20.3 SUPPORT OUTLET BOXES, JUNCTION BOXES, CONDUIT AND THE LIKE.

21. RECEPTACLES

21.1 WHITE DUPLEX RECEPTACLES CSA TYPE 5-15R, 125V OR CSA 5-20A 20A, T-SLOT, U GROUND. USE BLACK IN WAREHOUSE.
21.2 WHITE COVER PLATES. USE STEEL PLATES IN WAREHOUSE
21.4 IF RECEPTACLE IS SURFACE MOUNTED USE CAST BOX AND STAINLESS STEEL COVER PLATE.

22. EXCAVATION, BACKFILL AND CONCRETE WORK

22.1 WHERE REQUIRED FOR UNDERGROUND SERVICE (POWER OR TELEPHONE) THE EXCAVATION, BACKFILL AND CONCRETE WORK SHALL BE BY THE GENERAL CONTRACTOR. THE ELECTRICAL TRADE SHALL SUPERVISE THE PROCESSING OF CONCRETE AROUND DUCT BANK, TO ENSURE THEY ARE FREE FROM VOIDS SHALL ADVISE THE GENERAL CONTRACTOR OF THIS WORK FOR INCLUSION IN THE GENERAL CONTRACTOR'S TENDER PRICE.

23. MECHANICAL EQUIPMENT

23.1 PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN. ALL MOTORS, STARTERS AND CONTROL WIRING PROVIDED BY MECHANICAL DIVISION UNLESS OTHERWISE NOTED. INSTALL ALL STARTERS AND WIRE COMPLETE. ALL EXTERIOR DISCONNECTS TO BE WEATHERPROOF.
23.2 THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL MOTOR CONNECTION FOR PROPER PHASE ROTATION, WHERE APPLICABLE.

24. SWITCHES

24.1 20A, 120V, SINGLE POLE SWITCHES
24.2 WHITE TOGGLE
24.3 WHITE COVER PLATES., USE STEEL IN WAREHOUSE.
24.4 IF SWITCH IS SURFACE MOUNTED USE CAST BOX.

25. EQUIPMENT FOR EMERGENCY LIGHTING

25.1 SUPPLY VOLTAGE: 120V AC
25.2 OUTPUT VOLTAGE: 12V DC.
25.3 OPERATIONS TIME: 30 MINUTES MINIMUM
25.4 CABINET: SUITABLE FOR DIRECT OR SHELF MOUNTING TO WALL C/W KNOCKOUTS FOR CONDUIT, REMOVABLE OR HINGED FRONT PANEL FOR EASY ACCESS TO BATTERIES.

26. TELEPHONE CABLE T.V./COMPUTER RACEWAY SYSTEM. (ETC.)

26.1 PROVIDE EMPTY CONDUIT SYSTEMS FOR TELEPHONE AS SHOWN ON THE DRAWINGS.
26.2 WHERE CONDUITS NOT SHOWN ON DRAWINGS PROVIDE CONDUITS FROM OUTLET BOX TO ACCESSIBLE CEILING SPACE, OR BELL/NETWORK PANEL LOCATION
26.3 THIS CONTRACTOR SHALL PROVIDE AND/OR COORDINATE THE SIZE, TYPE AND LOCATION OF THE INCOMING TELEPHONE CONDUIT WITH THE TELEPHONE COMPANY OR THE BUILDING OWNER.
26.4 RACEWAYS (OTHER THAN INCOMING) SHALL BE EMT.
26.5 A MAXIMUM OF 2 LONG RADIUS 90 DEGREE BENDS SHALL BE PROVIDED BETWEEN PULL BOXES.
26.6 A WIRE SHALL BE PULLED AND LEFT IN EACH CONDUIT RUN TO FACILITATOR THE FUTURE PULLING OF WIRES.
26.7 PROVIDE NECESSARY BOXES AND ASSOCIATED COVER PLATES AS REQUIRED FOR THE ABOVE SYSTEMS.

28. FIRE ALARM

28.1 PROVIDE ALL MATERIAL EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE INSTALLATION OF THE FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN. MATCH EXISTING SYSTEM.
28.2 SHOP DRAWINGS FOR THE COMPLETE SYSTEM, INCLUDING LAYOUT OF EQUIPMENT, ZONING AND COMPLETE WIRING DIAGRAMS FOR CONNECTIONS AND DEVICES, AND METHODS OR OPERATION SHALL BE SUBMITTED.
28.3 ALL COMPONENTS OF THE SYSTEM, ITS INSTALLATION AND THE SYSTEM AS A WHOLE SHALL BE ULC LISTED AND LABELLED AND SHALL MEET THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION OF THE APPLICATION. THE ENTIRE INSTALLATION SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN. ULC S524 AND SHALL BE VERIFIED IN ACCORDANCE WITH CAN. ULC S537.
28.4 BREAKER FOR FIRE ALARM CONTROL PANEL AND BOOSTER PANELS TO BE LOCKABLE AND CLEARLY IDENTIFIED BY PAINTING IT RED.
28.5 PROVIDE SEPARATE CIRCUITS FROM CONTROL PANEL TO EACH ZONE OF INITIATING DEVICES.
28.6 SINGLE STAGE OPERATION.
28.7 ACTUATION OF ANY SINGLE OPERATION DEVICE TO INITIATE BUILDING EVACUATION ALARM DEVICES TO OPERATE IN TEMPORAL CODE. CONFIRM WITH LOCAL AUTHORITY.
28.8 ZONE OF ALARM DEVICE TO BE INDICATED ON CONTROL PANEL.
28.9 POWER SUPPLY IS 120VAC, 60Hz INPUT, 24VDC OUTPUT FROM RECTIFIER TO OPERATE ALARM AND SIGNAL CIRCUITS WITH STANDBY POWER GEL CELL BATTERIES. MINIMUM EXPECTED LIFE OF FOUR YEARS, SIZED IN ACCORDANCE WITH NBC.
28.10 PROVIDE FIRE ALARM SYSTEM RISER DIAGRAM IN CONTROL PANEL.
28.11 ARRANGE AND PAY FOR ON-SITE LECTURE AND DEMONSTRATION BY FIRE ALARM EQUIPMENT MANUFACTURER TO TRAIN OPERATIONAL PERSONNEL IN USE AND MAINTENANCE OF FIRE ALARM SYSTEM.
28.12 COORDINATE WITH MANUFACTURER TO PROVIDE STROBE LIGHT SYNCHRONIZATION MODULES AS REQUIRED.
28.13 PROVIDE SUFFICIENT OUTPUT MODULES IN FIRE ALARM CONTROL PANEL.
28.14 PROVIDE OUTPUT POWER BOOSTERS AS REQUIRED. COORDINATE WITH MANUFACTURER.
28.15 ALL FIRE ALARM JUNCTION BOXES SHALL BE PAINTED RED.
28.16 WHERE FIRE PROTECTION AND LIFE SAFETY SYSTEMS, AND SYSTEMS WITH FIRE PROTECTION AND LIFE SAFETY FUNCTIONS, ARE INTEGRATED WITH EACH OTHER, THE SYSTEMS SHALL BE TESTED AS A WHOLE IN ACCORDANCE WITH CAN/ULC-S1001, "INTEGRATED SYSTEMS TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS" TO VERIFY THAT THE SYSTEMS HAVE BEEN PROPERLY INTEGRATED. THE WORK SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO AND HOLDING A ULC CERTIFICATION FOR DOING THIS TYPE OF WORK.


1	ISSUED FOR TENDER	2024/01/29	DRM
0	ISSUED FOR PERMIT/TENDER	2024/01/19	DRM
NO.	DESCRIPTION	DATE	BY

REVISIONS			
Kirkland Engineering Ltd BCIN: 28857			

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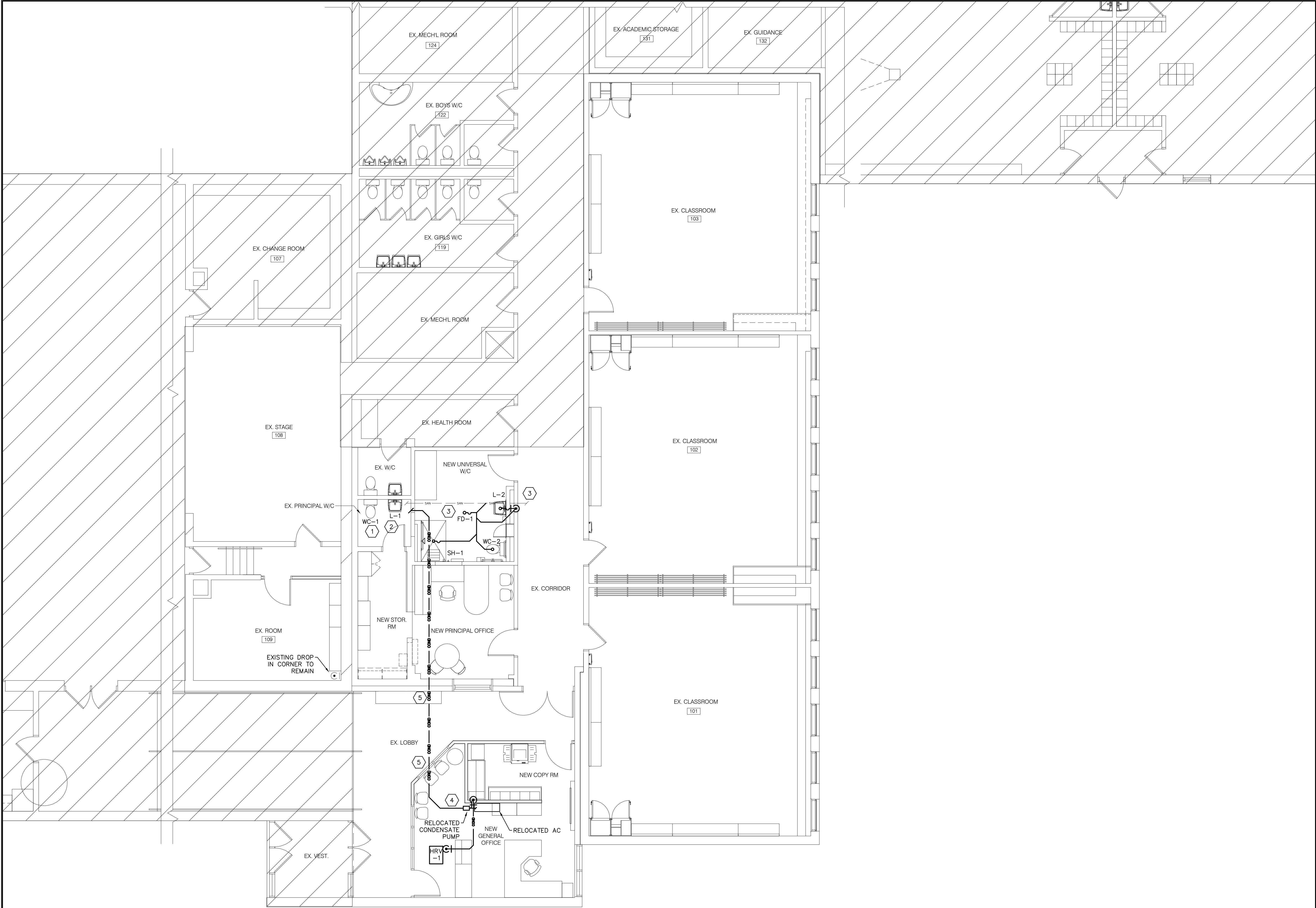


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KIRKLAND ENGINEERING LTD.

PROJECT
ST. MARY C.E.S RENOVATIONS
103b Lyle St S Grafton, Ontario

TITLE	
ELECTRICAL SPECIFICATIONS	
DESIGN	DRM
DRAWN	KCS
CHECKED	DRM
APPROVED	DRM
PROJECT	7145
SCALE AS NOTED	
DWG NO.	
E4	



1 SANITARY LAYOUT
M1 SCALE 3/16" = 1'-0"

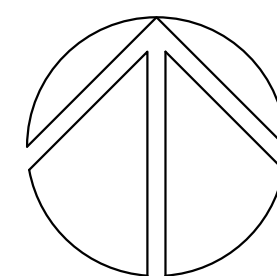
NOTES

- 1 CONNECT NEW WC TO EXISTING SANITARY FROM REMOVED WC.
- 2 CONNECT NEW LAV TO EXISTING SANITARY FROM REMOVED LAV.
- 3 APPROXIMATE LOCATION OF EXISTING SANITARY SHOWN. SANITARY FROM NEW FIXTURES TO BE CONNECTED TO EXISTING SANITARY. CONTRACTOR SHALL SITE VERIFY EXACT LOCATION OF EXISTING SANITARY AND MODIFY TO SUIT.
- 4 ROUTE CONDENSATE LINE FROM RELOCATED CONDENSATE PUMP OVER TO TIE IN WITH EXISTING CONDENSATE LINE AT ORIGINAL LOCATION OF PUMP.
- 5 PROVIDE FIRE STOPPING FOR PENETRATION THROUGH FIRE RATED ASSEMBLY.

1	ISSUED FOR TENDER	2024/01/29	CSM
0	ISSUED FOR PERMIT + TENDER	2024/01/19	CSM
NO.	DESCRIPTION	DATE	BY

REVISIONS

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PROJECT

**ST. MARY C.E.S
RENOVATIONS**

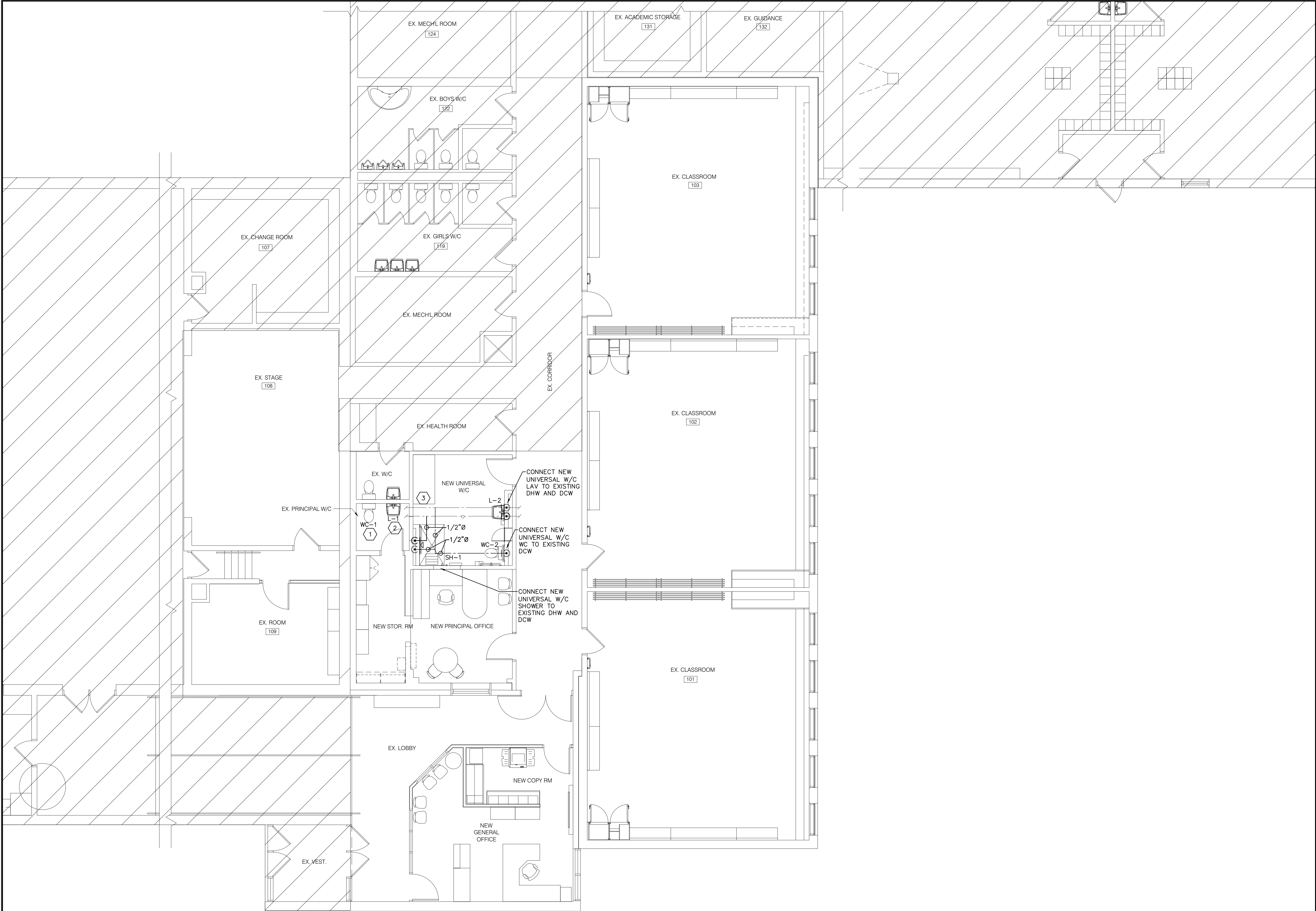
**103b Lyle St S
Grafton, Ontario**

TITLE

SANITARY LAYOUT

DESIGN	CSM	SCALE AS NOTED
DRAWN	KCS	DWG NO.
CHECKED	CSM	
APPROVED	CSM	
PROJECT	7145	

CADD FILE NO. 7145M1



1 DOMESTIC LAYOUT
M2 SCALE 3/16" = 1'-0"

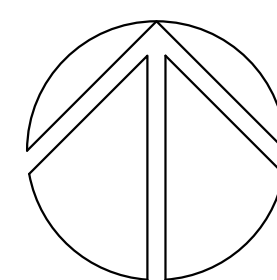
NOTES

- 1 CONNECT NEW WC TO EXISTING DCW FROM REMOVED WC.
- 2 CONNECT NEW LAV TO EXISTING DCW & DHW FROM REMOVED LAV.
- 3 PROVIDE NEW 1/2"Ø DCW + DHW BRANCHES FROM EXISTING WASHROOMS. APPROXIMATE LOCATION SHOWN. CONTRACTOR SHALL SITE VERIFY EXACT LOCATION OF EXISTING SERVICES AND MODIFY TO SUIT.

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR TENDER	2024/01/29	CSM
0	ISSUED FOR PERMIT + TENDER	2024/01/19	CSM

REVISIONS

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PROJECT
**ST. MARY C.E.S
RENOVATIONS**

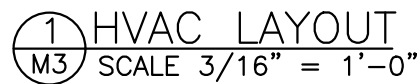
103b Lyle St S
Grafton, Ontario

TITLE
DOMESTIC LAYOUT

DESIGN	CSM	SCALE AS NOTED
DRAWN	KCS	DWG NO.
CHECKED	CSM	
APPROVED	CSM	
PROJECT	7145	

M2

CADD FILE NO. 7145M2



FAN FORCED HEATER SCHEDULE							
IDENT.	MANUFACTURER	TYPE	POWER	MODEL	FINISH	CONTROL	REMARKS
EFF-1	OUELLET	SURFACE MOUNTED COMMERCIAL WALL FAN HEATER	240/1/60 2000W	OACQZ000-T	BY ARCHITECT	BUILT-IN THERMOSTAT	SURFACE MOUNTED FAN FORCED HEATER. BUILT-IN CONTROL. KNOB THERMOSTAT, 24V RELAY, 160CFM. KIT-OAC-B-S1 SURFACE MOUNTING KIT, SUPPLIED BY MECHANICAL, INSTALLED BY ELECTRICAL.

- | | | |
|----------------------|------|----------------|
| TITLE
HVAC LAYOUT | | |
| SIGN | CSM | SCALE AS NOTED |
| DRAWN | KCS | DWG NO. |
| CHECKED | CSM | M3 |
| APPROVED | CSM | |
| PROJECT | 7145 | |

GENERAL MECHANICAL SPECIFICATIONS

1. THE MECHANICAL DRAWINGS DO NOT SHOW ALL THE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DETAILS. INFORMATION INVOLVING ACCURATE DIMENSIONING OF THE SITE CONDITIONS SHALL BE TAKEN FROM SITE BY CNTRACTOR. CONTRACTOR TO MAKE ANY NECESSARY MODIFICATIONS OR ADDITIONS, WITHOUT CHARGE, TO ACCOMMODATE THE SITE CONDITIONS.
2. EQUIPMENT TO BE AS SPECIFIED OR APPROVED EQUIVALENT. DESIGN BASED ON EQUIPMENT AS SPECIFIED IN EQUIPMENT SCHEDULE AND IS NOT INTENDED TO SHOW EQUIPMENT IN EXACT LOCATIONS. CONTRACTOR IS RESPONSIBLE TO VERIFY EQUIPMENT DIMENSIONS TO ENSURE THAT EQUIPMENT WILL FIT SITE CONDITIONS. ANY COST ASSOCIATED WITH USING EQUIPMENT OTHER THAN WHAT IS SPECIFIED IS THE FULL RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA WILL BE ALLOWED FOR THESE COSTS.
3. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, THE SPECIFICATION, AND ALL OTHER TENDER DOCUMENTS.
4. ALL PIPING AND DUCT WORK TO BE LABELED INCLUDING DIRECTION OF FLOW EVERY 8' AND EACH CHANGE IN DIRECTION.
5. CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EQUIPMENT AND MATERIALS CAN FIT INTO MECHANICAL ROOM OR ITS PLACE, THROUGH FINISHED OPENINGS, OR THAT MATERIAL IS PLACED IN MECHANICAL ROOM AT APPROPRIATE PHASE OF CONSTRUCTION.
6. PRIOR TO SUBMITTING TENDERS, THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS. ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF MECHANICAL DIVISION IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITY CONNECTIONS WHERE CONNECTIONS ARE REQUIRED. CONTRACTOR TO VERIFY LOCATION, DEPTH, ELEVATION, AND SIZE OF INVERT. NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.
7. SUB-CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB-CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE.
8. MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE OWNER AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.
9. ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE OWNER. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, HOURLY RATES, ETC.
10. BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS. CONSTRUCTION AREA TO BE ISOLATED BY MEANS OF TARPS AND/OR TEMPORARY PARTITIONS.
11. ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.
12. BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, DUCTING, PIPING, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.
13. BE RESPONSIBLE FOR MECHANICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.
14. SHOP DRAWINGS AND PRODUCT DATA. 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY THE CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK. INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE. NECESSARY FOR COMPLETION OF WORK. ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE. MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE. SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR ALL MECHANICAL EQUIPMENT. PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTIONS, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.
15. PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER. INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.
16. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.
17. THE MECHANICAL CONTRACTOR SHALL ENSURE THAT EVERY FIXTURE, PLUMBING APPLIANCE, INTERCEPTOR, CLEANOUT, VALVE, DEVICE OR PIECE OF EQUIPMENT SHALL BE LOCATED IN A MANNER THAT IT IS READILY ACCESSIBLE FOR USE, CLEANING, MAINTENANCE OR REPAIR. MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOORS LARGE ENOUGH TO PERMIT EASY ACCESS TO CONCEALED FIXTURES, PLUMBING APPLIANCES, FIRE DAMPERS, INTERCEPTORS, CLEANOUTS, VALVES, DEVICES OR PIECES OF EQUIPMENT.
18. CONTRACTOR SHALL CARRY THE SERVICES OF AN APPROVED FIRE STOPPING INSTALLER AND SHALL PROVIDE ALL FIRE STOPPING FOR ALL MECHANICAL AND ELECTRICAL PENETRATIONS. PROVIDE SHOP DRAWINGS FOR FIRE STOPPING MATERIALS USED.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF THEIR PROPERTY. THE OWNER BEARS NO RESPONSIBILITY FOR PROTECTION FROM THEFT, FIRE, OR ENVIRONMENTAL CONDITIONS.
20. ALL PIPING AND DUCTING SHOWN FOR SCHEMATIC AND SCOPE OF WORK PURPOSES IN GENERAL LOCATION OF USE. COORDINATE EXACT ROUTING ON SITE AND WITH BEST PRACTICES.

GENERAL PLUMBING SPECIFICATIONS

1. ALL HOT AND COLD WATER PIPING AFTER THE MAIN BUILDING CWS ISOLATION VALVE SHALL BE HARD COPPER TYPE L PIPING WHICH SHALL CONFORM TO ASTM B42 AND ASTM B88.
2. ALL DOMESTIC WATER PIPING TO BE INSULATED c/w VAPOUR BARRIER. PIPE INSULATION TO CONFORM O.B.C. TABLE 12.3.4.5.
3. ALL DRAINAGE, WASTE, AND VENT PIPE TO BE PVC DWV WITH FLAME SPREAD RATING < 25. PIPES TO BE XFR WHERE PENETRATING FIRE RATED WALLS.
4. WATER HAMMER ARRESTORS TO BE STAINLESS STEEL BELLOWS TYPE; WATTS SS-A OR APPROVED EQUIVALENT.
5. ROUTE ABOVE GROUND PIPING IN CEILING SPACE OF WALL INTERIORS FOR CONCEALMENT WHERE EVER POSSIBLE UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS. COORDINATE PIPE INSTALLATION IN WALLS WITH MASON AND OR DRYWALLER OR APPROPRIATE TRADE INVOLVED.
6. INSTALL ISOLATION VALVES IN EACH BRANCH LINE FROM COLD AND HOT WATER MAINS, AT BASE OF EACH RISER, AND BEFORE EACH FIXTURE OR EQUIPMENT CONNECTED TO COLD/HOT WATER SYSTEM. PROVIDE A FIRE RATED ACCESS DOOR AT EACH CONCEALED VALVE.
7. INSTALL FLANGES OR UNIONS TO PERMIT REMOVAL OF EQUIPMENT WITHOUT DISTURBING PIPING SYSTEMS.
8. PROVIDE COMPLETE DRAINAGE AND VENT SYSTEMS TO SERVE FIXTURES AND ITEMS SPECIFIED AND AS SHOWN ON PLANS.
9. WHERE EXPOSED PIPES PASSES THROUGH FINISHED FLOORS, WALLS, OR CEILINGS, PROVIDE CHROME PLATED ESCUTCHEON WITH SET SCREW.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY MATERIALS & LABOUR TO MAINTAIN ALL FIRE SEPARATIONS AFFECTED BY THE WORK PERFORMED.
11. GRADE HORIZONTAL SANITARY DRAINAGE AND VENT PIPING AT MINIMUM 1:50.
12. ALL FAUCET AND TOILET SUPPLY LINES SHALL BE STAINLESS BRAIDED HOSE.
13. ALL FLOOR DRAINS TO BE TRAPPED, PRIMED, AND VENTED WITH STRAINER INSTALLED FLUSH WITH FINISHED FLOOR. SUPPLY AND INSTALL PRIMER AND TUBING FROM CLOSEST COLD WATER BRANCH, C/W SPECIALTY BLEED VALVE (P.P.P. OR EQUAL), UNLESS OTHERWISE SPECIFIED IN DRAWINGS.
14. EXPOSED P-TRAPS SHALL BE CHROME PLATED BRASS.
15. SIZE OF DRAINAGE PIPE SERVING FIXTURES:

DISHWASHER	1-1/2" (38mm)	LAVATORY	1-1/2" (38mm)
SINK	1-1/2" (38mm)	SHOWER	1-1/2" (38mm)
SERVICE SINK	1-1/2" (38mm)	URINAL	2" (51mm)
WC	3" (76mm)	FLOOR DRAIN	2" (51mm)
16. SIZE OF EITHER CWS & HWS ISOLATION VALVES SERVING FIXTURES:

DISHWASHER	1/2" (13mm)	LAVATORY	1/2" (13mm)
SINK	1/2" (13mm)	SHOWER	1/2" (13mm)
SERVICE SINK	1/2" (13mm)	URINAL	3/4" (19mm)
WC	1/2" (13mm)	WF	1/2" (13mm)
17. ALL PIPING FITTINGS WITH TERMINAL EQUIPMENT SHALL BE LEAD FREE.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE INSULATION OF THE STORM PIPES INSIDE THE BUILDING.
19. ALL PIPING IS TO BE STRAIGHT, PARALLEL AND PERPENDICULAR TO THE BUILDING STRUCTURE. SLOPE ALL PIPING TO DRAIN POINTS.
20. WHEN PIPE LAYING NOT IN PROGRESS, CLOSE OFF OPEN ENDS OF PIPE WITH WATER TIGHT PLUG OR CAP.
21. INSTALL CLEANOUTS AS REQUIRED BY PLUMBING CODES. SIZE OF CLEANOUTS TO MATCH SIZE OF ASSOCIATED SANITARY PIPE. ENSURE CLEAN OUTS ARE MADE ACCESSIBLE.
22. CONNECT FIXTURES COMPLETE WITH SUPPLIES AND DRAINS, TRAPPED, SUPPORTED, SANITARY LEVEL AND SQUARE WITH HOT WATER FAUCETS ON THE LEFT.

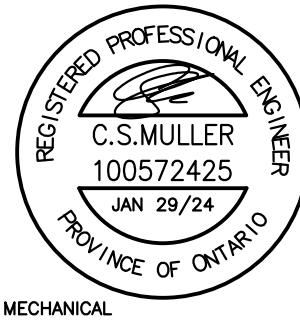

GENERAL HVAC SPECIFICATIONS

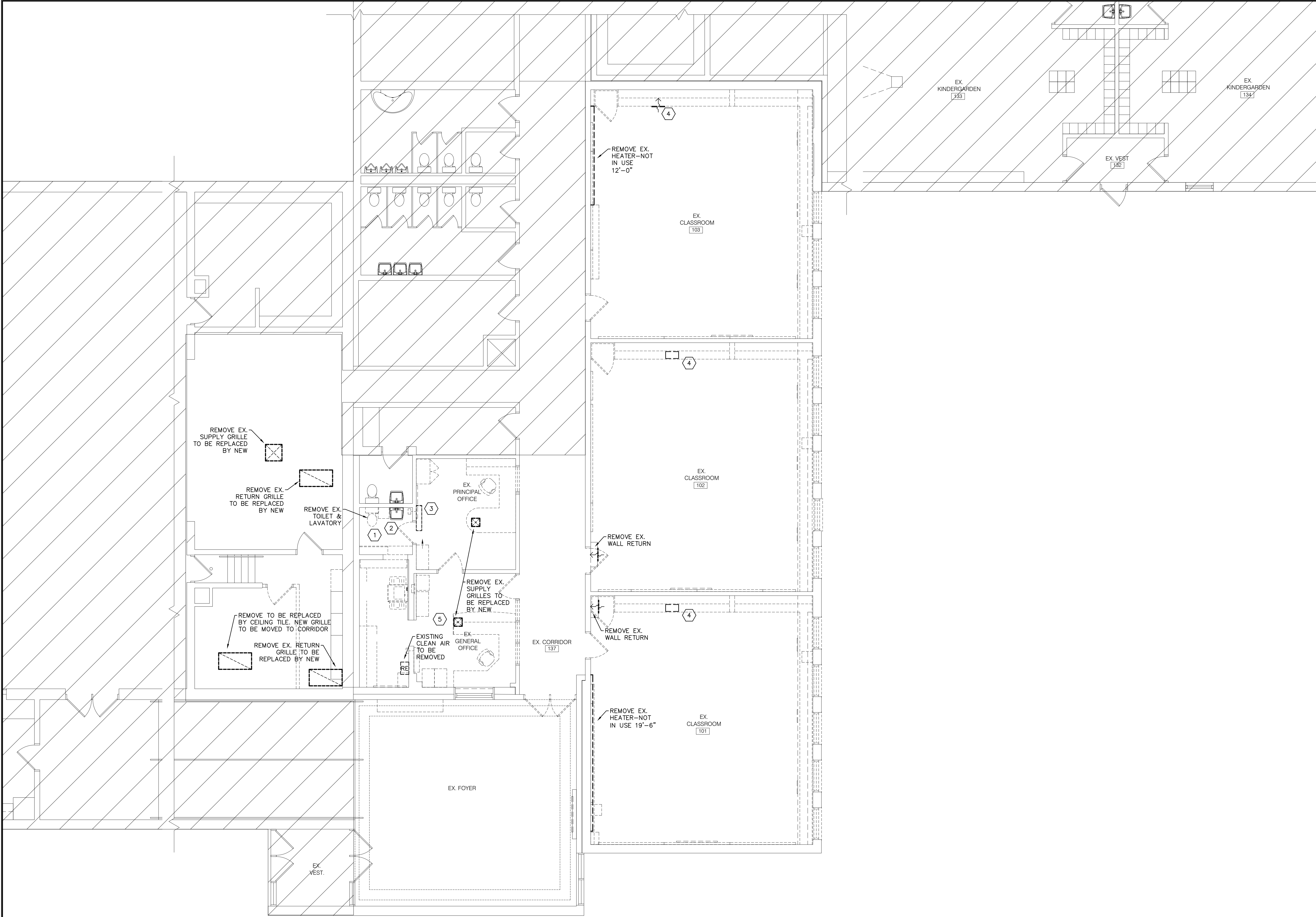
1. PROVIDE DUCTWORK IN ACCORDANCE WITH A.S.H.R.A.E. AND INTERNATIONAL MECHANICAL CODES CHAPTER 5 SECTION 506,, LATEST EDITION. ALL DUCTS SHALL BE FABRICATED FROM PRIME QUALITY GALVANIZED STEEL AS PER A.S.H.R.A.E. STANDARDS. DUCTS SHALL BE INSTALLED AS HIGH AS POSSIBLE. PROPER ANGLE IRON SUPPORTS, HANGERS, ETC., SHALL BE PROVIDED FOR ALL DUCTS. SEAL ALL JOINTS OF DUCTS WITH HIGH PRESSURE SEALER. APPLY SEALANT TO OUTSIDE OF JOINTS AS PER MANUFACTURERS RECOMMENDATIONS. CONSTRUCT DUCTS IN ACCORDANCE WITH THE FOLLOWING:

MAX DUCT DIMENSION	U.S. GAUGE
UP TO 12"	26
13" TO 30"	24
31" TO 54"	22

CONSTRUCT ROUND DUCTS IN ACCORDANCE WITH THE FOLLOWING:

4" TO 8" DIAMETER	- 26 GAUGE
9" TO 24" DIAMETER	- 24 GAUGE
2. EQUIVALENT DUCT SIZES MAY BE SUBSTITUTED IN LIEU OF THOSE SHOWN, IN ORDER TO AVOID INTERFERENCE WITH STRUCTURE AND OTHER MECHANICAL SERVICES. CONTRACTOR TO PROVIDE DRAWINGS OF ANY PROPOSED CHANGES TO ENGINEER FOR APPROVAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DESIGN AIR FLOW WITH DUCT INSTALLATION. ALL SUPPLY & RETURN BRANCHES SHALL BE AT 45° TAKE OFFS.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO FABRICATION AND INSTALLATION OF DUCTWORK. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ELBOWS, DUCT ACCESSORIES, ETC. TO COMPLETE THE INTENT OF THE MECHANICAL DRAWINGS.
4. HVAC EQUIPMENT MUST NOT BE USED DURING CONSTRUCTION. DUCT OPENINGS SHALL BE COVERED TO KEEP OUT DUST AND DEBRIS. COMMISSIONING MUST NOT BE PERFORMED UNTIL ALL INTERIOR FINISHES ARE COMPLETE.
5. INSULATE ALL DUCTS IN ACCORDANCE WITH ASHRAE 90.1, LATEST EDITION.
6. MECHANICAL EQUIPMENT TO BE ISOLATED FROM DUCT WORK USING 6" FLEXIBLE DUCT CONNECTORS ON BOTH THE SUPPLY AND RETURN DUCTS.
7. ALL MITERED ELBOWS TO BE COMPLETE WITH DOUBLE THICKNESS AIR VANES. ALL RADIUSD ELBOWS TO BE COMPLETE WITH SPLITTER VANES PER SMACNA DUCT CONSTRUCTION STANDARDS.
8. PROVIDE VOLUME DAMPERS AT ALL DUCT BRANCHES AND TAKE-OFFS.
9. PROVIDE AN INDEPENDENT FIRM CERTIFIED BY NEBB TO CONDUCT TESTING, ADJUSTING AND BALANCING OF ALL MECHANICAL SYSTEMS AND COMPONENTS, INCLUDING ALL DUCTS AND HYDRONIC PIPING. SUBMIT WRITTEN REPORT IN TRIPLICATE TO MECHANICAL ENGINEER UPON COMPLETION.
10. MAXIMUM LENGTH OF FLEX DUCT PERMITTED IS 10' PER DIFFUSER. NO FLEX DUCT IS PERMITTED ON EXPOSED DUCT WORK.
11. PROVIDE FIRE DAMPERS IN DUCTS AT FLOOR, WALL, CEILING, AND ROOF PENETRATIONS WHERE FIRE SEPARATIONS ARE CROSSED, AND WHERE REQUIRED BY LOCAL AUTHORITIES AND CODES. FIRE DAMPERS SHALL MAINTAIN 100% FREE AREA OF DUCTWORK (TYPE 'B' FIRE DAMPERS). RATE FIRE DAMPERS TO MATCH THE FIRE RATING OF SEPARATION CROSSED. PROVIDE ONLY ULC LABELED DAMPERS AND INSTALL AS SPECIFIED IN NFPA/CUA 90A.
12. SUPPLY AND RETURN DUCTS SHALL BE CONNECTED TO THE HVAC UNIT THROUGH A FLEXIBLE NON METALLIC DUCT.
13. 10' OF ACOUSTIC SOUND INSULATION SHALL BE PROVIDED TO THE DUCTS AT THE BEGINNING NEAR THE HVAC UNIT.
14. SMOKE DETECTORS AT SUPPLY DUCTS SHALL BE PROVIDED TO AUTOMATICALLY SHUT DOWN UNITS UPON DETECTION OF SMOKE.

1	ISSUED FOR TENDER	2024/01/29	CSM
0	ISSUED FOR PERMIT + TENDER	2024/01/19	CSM
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PROJECT ST. MARY C.E.S RENOVATIONS			
103b Lyle St S Grafton, Ontario			
TITLE MECHANICAL SPECIFICATIONS			
DESIGN	CSM	SCALE AS NOTED	
DRAWN	KCS	DWG NO.	
CHECKED	CSM	M4	
APPROVED	CSM		
PROJECT	7145		



NOTES

- EXISTING WC TO BE REPLACED. CAP DCW PIPING AND SANITARY PIPING UNTIL NEW WC IS INSTALLED.
- EXISTING LAV TO BE REPLACED. CAP DCW & DHW PIPING AND SANITARY PIPING UNTIL NEW LAV IS INSTALLED.
- REMOVE EXISTING WALL MOUNT AC HEAD AND CORRESPONDING CONDENSATE PUMP. SET ASIDE FOR RELOCATION TO NEW GENERAL OFFICE.
- BULKHEAD IS BEING REMOVED (BY ARCHITECTURAL). MECHANICAL CONTRACTOR TO REMOVE GRILLE AND ALL DUCTING WITHIN DEMOLISHED BULKHEAD AND CAP.
- DEMOLISHED SUPPLY GRILLES TO BE REPLACED WITH NEW. MAINTAIN DUCTING AND BALANCING DAMPER.

1	ISSUED FOR TENDER	2024/01/29	CSM		
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PROJECT ST. MARY C.E.S RENOVATIONS					
103b Lyle St S Grafton, Ontario					
TITLE MECHANICAL DEMOLITION LAYOUT					
DESIGN	CSM	SCALE AS NOTED			
DRAWN	KCS	DWG NO.			
CHECKED	CSM	M5			
APPROVED	CSM				
PROJECT	7145				

CADD FILE NO. 7145M5

① DEMOLITION LAYOUT
M5 SCALE 3/16" = 1'-0"