



Addendum #1

Bid Opportunity: 24-7536-RFT - Margaret Ave. Public School -HVAC Upgrades,

Closing Date: Monday, May 13, 2024 2:00 PM

The following issued by the Board shall form part of the Bid / Proposal Solicitation document. The revisions and additions noted herein along with any attachments shall be read in conjunction with all other related documents. This Addendum shall, take precedence over the previously issued documents where differences occur. Receipt of this addendum must be acknowledged in the Bidding System, bids&tenders.

If you have already submitted a Bid / Proposal, it will be automatically withdrawn as a result of this addendum. You must resubmit the Bid / Proposal acknowledging all addenda and revising your Bid / Proposal to comply with all addenda.

AMENDMENT NO.1 – REVISIONS TO ARCHITECTURAL SPECIFICATIONS

- 1. Section 09500 ACOUSTIC TREATMENT. Remove Section 09500 from the tender package and replace it with the attached updated Section 09500.**
- 2. Section 09680 Tile Carpeting. Remove 09680 Tile Carpeting from the tender package and replace it with the attached updated Section 09680.**

AMENDMENT NO.2 – REVISIONS TO ARCHITECTURAL DRAWINGS

1.
 - i. DELETE drawing **AD2.1 DEMOLITION DRAWING.**
 - ii. REPLACE with attached updated drawing **AD2.1 DEMOLITION DRAWING.**
2.
 - i. DELETE drawing **A2.1 PARTIAL FLOOR PLANS RENOVATIONS**
 - ii. REPLACE with attached updated drawing **A2.1 PARTIAL FLOOR PLANS RENOVATIONS.**
3.
 - i. DELETE drawing **A6.1 PARTIAL REFLECTED CEILING PLANS.**
 - ii. REPLACE with attached updated drawing **A6.1 PARTIAL REFLECTED CEILING PLANS.**

AMENDMENT NO.3– REVISIONS TO MECHANICAL DRAWINGS

Refer to the attached Mechanical Addendum

End of Addendum #1

PART 1 GENERAL

1. GENERAL REQUIREMENTS

1. Division One is a part of this Section and shall apply as if repeated here.

2. DESCRIPTION OF SYSTEMS

1. Lay-in Tile System: Exposed suspended tee-bar system accommodating 2'-0" x 4'-0" (610 mm x 1220 mm), acoustical panels in areas as indicated drawings and reflected ceiling plans as acoustical tile ceiling.
2. All tile and suspension systems shall comply to U.L.C. Design as indicated on drawings.

3. SAMPLES

1. Submit for approval, two samples (to match existing as closely as possible) of tile to be used in the project.

4. WORK INCLUDED

1. This contractor shall supply and install all acoustic tile and required accessories as indicated on the working drawings, room finish schedule, including the following:
 1. All non-combustible ceiling boards.
 2. All exposed "T" grid suspension systems.

5. MAINTENANCE MATERIALS

1. Deliver acoustical units in packages for maintenance use amounting to 3% of gross ceiling area for each lay-in panel type. Store where directed. Clearly identify packages.
2. Maintenance materials shall be of same production run as installed materials.

6. ENVIRONMENTAL CONDITIONS

1. Commence installation only after building has been enclosed and dust generating activities have been completed.
2. Permit wet work to dry completely before commencement of installation.
3. Ensure that a uniform minimum temperature of 15 deg. C. and humidity of 20-40% before, during, and after installation is maintained.

7. LETTER OF CERTIFICATION

1. The Contractor, together with manufacturer, shall submit a written confirmation, signed by manufacturer's registered professional engineer, stating that the suspended ceiling system will provide adequate support for electrical fixtures, as required by current bulletin of the ESA of Ontario Hydro. NOTE: all electrical fixtures to have independent supports in fire rated ceilings.

8. WARRANTY

1. Provide 10-year warranty on ceiling tiles for humidity and sag resistance.

PART 2 PRODUCTS

1. Lay-in Tile System:

1. Hangers: Min. No. 12 (2.5 mm) SWG galvanized mild steel hanger wire - 24" (600 mm) o.c. or galvanized steel wire of size capable of safety supporting anticipated ceiling system and loading.

2. Tees: Donn Suspension Systems by C.G.C. (Typical Lay In)

3. Tees: Armstrong Prelude XL 15/16" suspension Systems for square lay in tile system

1. Main Tees: .021" (.53 mm) thick cold rolled steel, double web, with rectangular bulb section at least 1 1/2" (38 mm) high. Fabricate with punched cross tee holes at not greater than 16" (400 mm) o.c. and hanger wire holes at 2" (50 mm) o.c. Exposed flange shall be 15/16" (23.8 mm) wide and not less than .009" (.23 mm) thick cold rolled steel.

2. Cross Tees: Double web design with rectangular bulb; web extending to form a positive interlock with main tees in same exposed flange width.

3. See lay-in panel types for width of Tees to be used with each tile type.

4. Accessories:

1. Miscellaneous approved clips, splicers, screws, nails and other standard types to suit applicable conditions. Provide special accessories as required. Accessories shall be galvanized after forming.

2. Standard edge moulding as manufactured by system manufacturer to suit applicable details. Moulding shall be formed of zinc coated steel.

3. Provide Armstrong Impact Clip System Item No. 414 system. Provide accessible type clips where access is required (coordinate with mechanical and electrical for locations)
5. Finish:
 1. Tees, edge mouldings, and exposed accessories shall be finished with baked, non-yellowing, low sheen colour to match colour of lay-in panels. Colour to be White.
6. Lay-in Panels:
 1. Install tile types where acoustic tile is indicated on the room finish schedule. Mineral tile types are as listed below:
 1. **ACT1:** Fine Fissured Square Lay-In #1732; 24" x 48" x 1" (610mm x 1220mm x 25mm), with square-cut lay-in edge as manufactured by Armstrong or equal by C.G.C. or Celotex.
 2. **ACT2:** Fine Fissured Square Lay-In #1732; 24" x 24" x 1" (610mm x 610mm x 25mm), square-cut lay-in edge as manufactured by Armstrong or equal by C.G.S. or Celotex.
 3. **ACT3 FIRE RATED AS PER ULC – S101:** 48" x 24" x 5/8" (610mm x 610mm x 16mm) or 24" x 48" x 5/8" (610mm x 1220mm x 16mm) with square lay-in edge detail as manufactured by Armstrong.
7. Tie Wire: 1.2 mm galvanized annealed steel wire.
8. Inserts and attachments to Structure for Hanger Connections: to suit conditions and loadings, galvanized after fabrication.

PART 3 EXECUTION

1. WORKMANSHIP
 1. Installation shall be by skilled mechanics and in strict accordance with system manufacturer's printed directions to produce a first class, flush finished surface in true plane and free from drooping, warped, uneven joints, damaged tile or panels. Butt joints tightly.
 2. Consult with mechanical and electrical trades to co-ordinate and arrange work to accommodate recessed fixtures, diffusers, grilles, and other similar items, where indicated on mechanical and electrical drawings. Recessed items shall replace or be centred in acoustical units.
 3. Frame around recessed fixtures, diffusers, grilles and openings and where normally required in good standard practice.
 4. Provide all furring required and construct drywall bulkhead, incorporated

as part of best standard practice to Architect's approval.

5. Provide and install protection panels and/or five-sided box enclosures at recessed lighting fixtures, speaker boxes, diffusers, duct openings, firestop flaps, etc. as specified in the applicable ULC assembly specification. Approval of enclosures and protection will be by Architect and/or Municipal Authorities.

2. ERECTION

1. Lay-in Tile System

1. Install ceiling suspension system to ASTM C636-76 and manufacturer's instructions, except where specified otherwise.
2. Supply hangers and inserts to support the grid in time to be installed in structural system if required.
3. Hangers for acoustic systems shall be spaced to comply to U.L.C. Design, approximately 4 ft. (1200 mm) centres both ways and where normally required in good standard practice.
4. Secure hangers firmly.
5. Erect carrying channels for suspended systems of required elevation and level to tolerance of 1/8" (3.2 mm) over 12 ft. (3650 mm). Frame around recessed fixtures, diffusers, grilles and openings and where normally required in good standard practice. Furr around ducts, beams, bulkheads or the like, as shown or required by U.L.C. Standard.
6. Ensure that the suspension system supports the completed assembly, including all superimposed loads, such as lighting fixtures, diffusers and grilles, with a maximum deflection of 1/360 of the span. Provide supplemental hangers within 6" (150 mm) of each corner and at maximum 2'-0" (610 mm) around perimeter of light fixtures.
7. Attach exposed tees at centres required in good standard practice.
8. Install expansion joints in all main beams as required by U.L.C.
9. Provide angle wall mouldings at junctions of ceilings and vertical surfaces.
10. Provide spring clips to ensure tight installation, in rooms having an area less than 20 sq. ft. (1800 mm²).
11. Provide lay-in tile and grid to meet fire rating at all fire rated ceilings.

12. Erect ceiling system at required elevation and level to tolerance of 1/8" (3 mm) in 12'-0" (3660 mm).
13. Cut reveal edges to match factory detail at all reveal edge lay-in ceiling that needs cutting to fit grid size.
3. FIXTURE SUSPENSION
 1. Make provisions for carrying flush mounted and recessed fixtures on suspended ceilings, using 4 hangers per fixture. Consult and coordinate with Electrical and Mechanical Trades.
 2. The suspended ceiling system must comply with the current bulletin from the Electrical Inspection Department of Ontario Hydro regarding "Lighting Fixtures in Suspended Ceilings".
 3. It is the responsibility of this contractor to supply the Architect with a letter stating that the suspension system is capable of holding the electrical fixtures as shown on the electrical drawings and as required by the above bulletin of the Electrical Inspection Department of Ontario Hydro.
4. MITRED JOINTS
 1. "T" bar ceiling grid to be mitred at the outside corners.
5. ACOUSTICAL UNITS
 1. Install acoustical units parallel to building lines to produce uniform borders and with edge units not less than 50% of unit width.
 2. Accurately scribe and cut acoustical units to fit recessed items and adjacent work. Butt joints tight; terminate edges with moulding.
6. SPECIAL CLEANING
 1. Keep acoustical panel installation and all components clean.
 2. Remove and replace damaged or improperly installed units.
7. MECHANICAL EQUIPMENT ACCESS
 1. Install "T" bar system to allow it to be removed easily at areas where mechanical units occur to allow units to be easily removed. NOTE: Stop main "T" on each side of equipment access.
8. IMPACT CLIPS
 1. Install Impact Clip System at all acoustic tile ceiling areas.
9. CERTIFICATION
 1. Provide at completion of work a written certification that all ceiling

conforms to the requirements of the ULC design criteria for fire rated assemblies and that the suspended ceiling will provide adequate support electrical fixtures as per current bulletin of the ESA of Ontario Hydro.

END OF SECTION

PART 1 - GENERAL

1. GENERAL REQUIREMENTS

1. The General Conditions of the Contract, Supplementary Conditions, and the General Requirements of Division 1, form part of this section, and must be read in conjunction with the requirements of this section and all related sections.
2. The work of this section, and related work specified in other sections shall comply with all requirements of Division 1 – General Requirements.

2. ENVIRONMENTAL REQUIREMENTS

1. Provide materials in this specification section based on but not limited to the following criteria:
 - .1 Option: Materials of this section may conform to performance standards for recycled material content (7.5% post-consumer + ½ post industrial) and distance to the job site (500 km).
 - .2 Requirement: Materials of this section and accessory materials such as adhesives used in their installation must conform to performance standards for low VOC content.
 - .3 Requirement: carpet products must meet or exceed the requirements of the Carpet and Rug Institute's Green Label Indoor Air Quality Test Program.
2. Contractor shall reference applicable standards specified in Section 01 61 11 and shall require suppliers to provide documentation to verify conformance to these standards and goals, as required to support the Environmental Plan.

3. SECTION INCLUDES

1. Provision of all labour, materials, equipment and incidental services necessary to provide carpet floor finish, including primers, mastics and leveling fillers, adhesives, carpet material, underlay, carpet base, accessories, and protection.

4. REFERENCES

1. CAN/CGSB-4.2- 92, Textile Test Methods.
2. CAN/CGSB-4.129- 93, Carpets for Commercial Use.

3. CAN/CGSB-25.20- 95, Surface Sealer Floors.
 4. CAN/ULC-S102- M88, Surface Burning Characteristics of Building Materials and Assemblies.
 5. CAN/ULC-S102.2- M88, Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies.
 6. Carpet and Rug Institute (CRI) - Contract Carpet Manual, No.001.
 7. Carpet and Rug Institute (CRI) - IAQ Carpet Testing Program.
 8. ASTM D 1055- 90, Specification for Flexible Cellular Materials - Latex Foam.
 9. ASTM E 84- 95, Test Method for Surface Burning Characteristics of Building Materials.
5. QUALITY ASSURANCE
1. Installer shall have a minimum of five (5) years documented experience in the installation of commercial carpet and be certified by the Manufacturer. Documentation shall be submitted to the Construction manager.
6. SUBMITTALS
1. Submit control submittals in accordance with Section 01300 Submittals.
 2. Submit certificate to demonstrate compliance with CAN/ULC S102 and CAN/ULC S102.2.
 3. Submit proof that carpet has been tested and passed the Indoor Air Quality (IAQ) Carpet Testing Program requirements of the Carpet and Rug Institute.
 4. Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence, cleaning procedures.
 5. Product Data
 - .1 Submit product data in accordance with Section 01300 – Submittals.
 - .2 Submit product data sheet for each carpet tile, adhesive, carpet protection and subfloor filler.

- .3 Submit WHMIS MSDS - Material Safety Data Sheets acceptable to Labour Canada and Health and Welfare Canada for carpet adhesive and seam adhesive. Indicate VOC content.

6. Samples

- .1 Submit samples in accordance with Section 01300 Submittals.
- .2 Submit duplicate full size pieces of each type carpet tile, duplicate pieces for each selected colour.

7. Closeout Submittals

- .1 Submit operation and maintenance data for incorporation into manual specified in Section 01700 Project Close-Out.
- .2 Include information on recycling of carpet including manufacturer's reprocessing program. Indicate which portions of materials are recyclable.

8. Extra Materials

- .1 Provide extra materials of carpet tile and adhesives in accordance with Section 01700 Project Close-Out.
- .2 Provide minimum 2% of each colour, pattern and type of carpet tile. Provide in one continuous full width roll or from same dye lot.
- .3 Extra materials to be from same production run as installed materials.
- .4 Identify each package of carpet and each container of adhesive.
- .5 Deliver and store where directed by Owner.

7. REGULATORY REQUIREMENTS

- 1. Prequalification: tested to CAN/ULC-S102.2.
- 2. Indoor Air Quality: compliance with CRI Indoor Air Quality Program, CRI - IAQ requirements for maximum total volatile chemicals released into air. Label each carpet product with CRI -IAQ label.

8. DELIVERY, STORAGE AND HANDLING

- 1. Label packaged materials. For tile products indicate nominal dimensions of tile.

2. Store packaged materials in original containers or wrapping with manufacturer's seals and labels intact.
3. Store carpeting and accessories in location as directed by Owner.
4. Prevent damage to materials during handling and storage. Keep materials under cover and free from dampness.
5. Maintain temperature of store room at a minimum of 20C, for at least 24 hours immediately before the installation.

9. WASTE MANAGEMENT AND DISPOSAL

1. Separate and recycle waste materials in accordance with Section 01560 Environmental Protection.

10. PROJECT/SITE ENVIRONMENTAL REQUIREMENT

1. Moisture: ensure substrate is within moisture limits prescribed by manufacturer.
2. Temperature: Maintain ambient temperature of not less than 18°C from 72 hours before installation to at least 72 hours after completion of work.
3. Relative humidity: Maintain relative humidity between 10 and 65% RH for 48 hours before, during and 48 hours after installation.
4. Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.

11. VENTILATION

1. Ventilate area of work as directed by Construction manager by use of approved portable supply and exhaust fans.
2. Ventilate enclosed spaces in accordance with Section 01560 Environmental Protection.
3. Provide continuous ventilation during and after carpet application. Run ventilation system 24 hours per day during installation; provide continuous ventilation for 7 days after completion of carpet installation.

12. EXTENDED WARRANTIES

1. System Warranty

- .1 Provide manufacturer's certificate warranting the specified carpet products against defects in materials and manufacture including deterioration of backing, delamination, stretching, wrinkling, fading, or other conditions detrimental to appearance or performance, for a minimum period of 10 years from the date of the Certificate of Substantial Performance. Warranty shall cover complete replacement of affected area including carpet, adhesives, and removal/installation costs.

2. Installation Warranty

- .1 Provide a written warranty stating that carpet installation is guaranteed against defects for two (2) years from the date of the Certificate of Substantial Performance.

PART 2 - PRODUCTS

1. CARPET TILE

1. 100% nylon loop with bonded monolithic glass backing, carpet squares, anti-microbial and soil/stain resistance treated; CRI certified;
 - .1 Powerbond Hybrid by Tarket. Colour to be selected by the owner, to match the library colour. 106004 Metal, 250mm x 1000 plank tiles. Installation is to be confirmed on-site.
 - .2 Rubber Base: 1/8" (3mm) thick by 4" ht. "tight-lock" rubber base by Johnsonite or equal by Mannington, Roppe or Amtico; use rubber base supplied in roll form not 1220mm (48") lengths.

2. ACCESSORIES

- .1 Adhesive: Acrylic release type: recommended by carpet tile manufacturer; Low VOC content in accordance with CRI requirements.
- .2 Carpet protection: non-staining heavy duty kraft paper, or cardboard.
- .3 Concrete Floor Sealer/Moisture Barrier: Planiseal™ MRB, by Mapei or approved equal product.
- .4 Sub-floor Filler and Leveller:

- .1 Sub-floor Filler and Leveller: Ardex SD-F Feather Finished Portland Cement based filler by Ardex Engineered Cements and distributed by Centura.

PART 3 - EXECUTION

1. EXAMINATION

1. Examine substrates for defects and determine level of preparation required prior to commencement of installation.
2. Report any major defects such as cracks greater than 1.5mm in width, and variations in elevation greater than 6mm in 3m in any direction or excessive moisture content in concrete slabs.
3. Ensure concrete floors are dry by using test methods recommended by flooring manufacturer, and exhibit negative alkalinity, carbonization or dusting.
4. Moisture test results shall meet or exceed the flooring manufacturer's warranty requirements but in no instance shall exceed 0.4kg/100m²/24 hours. Alkali readings shall be 5 to 9.

2. PREPARATION

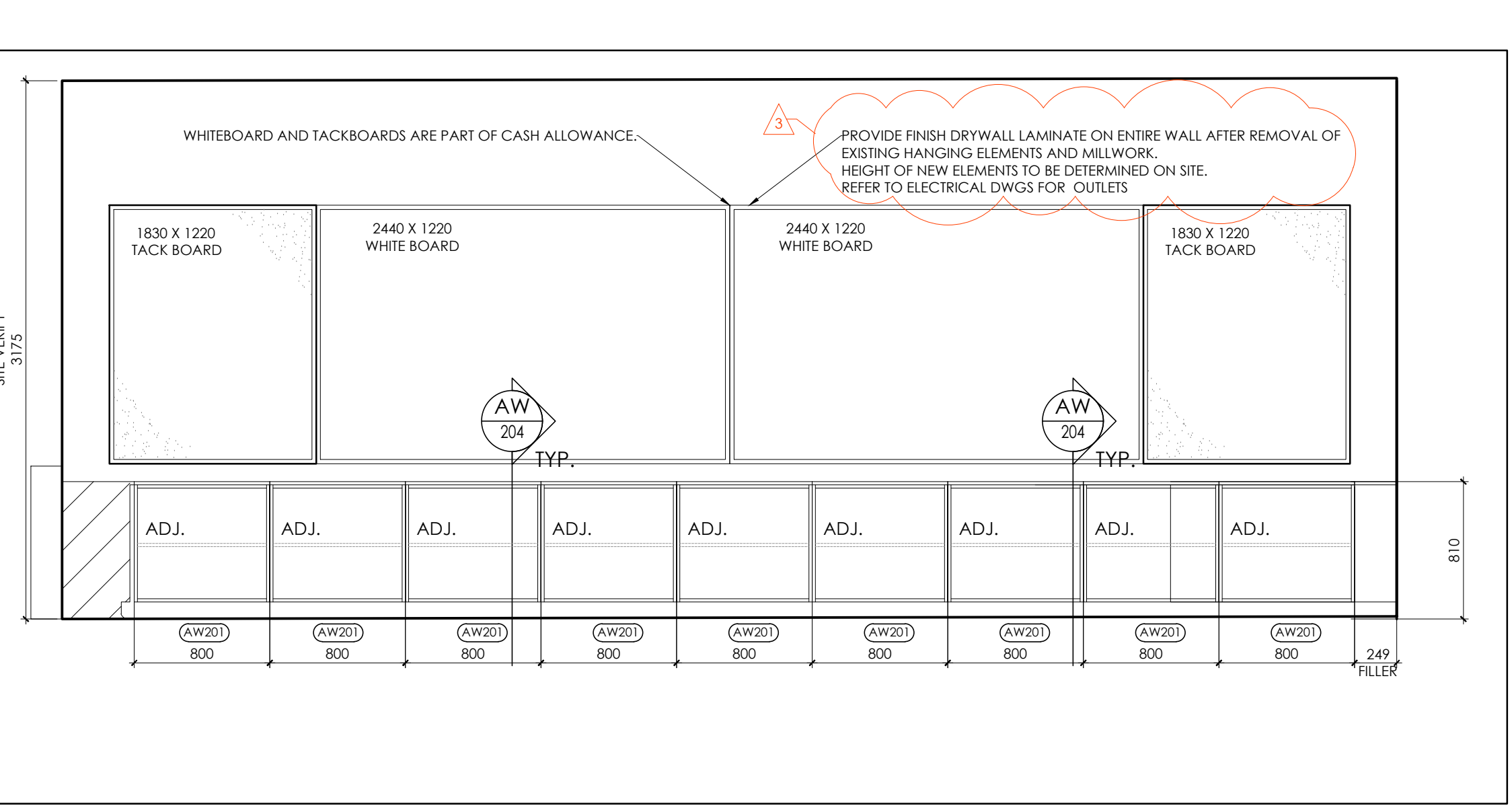
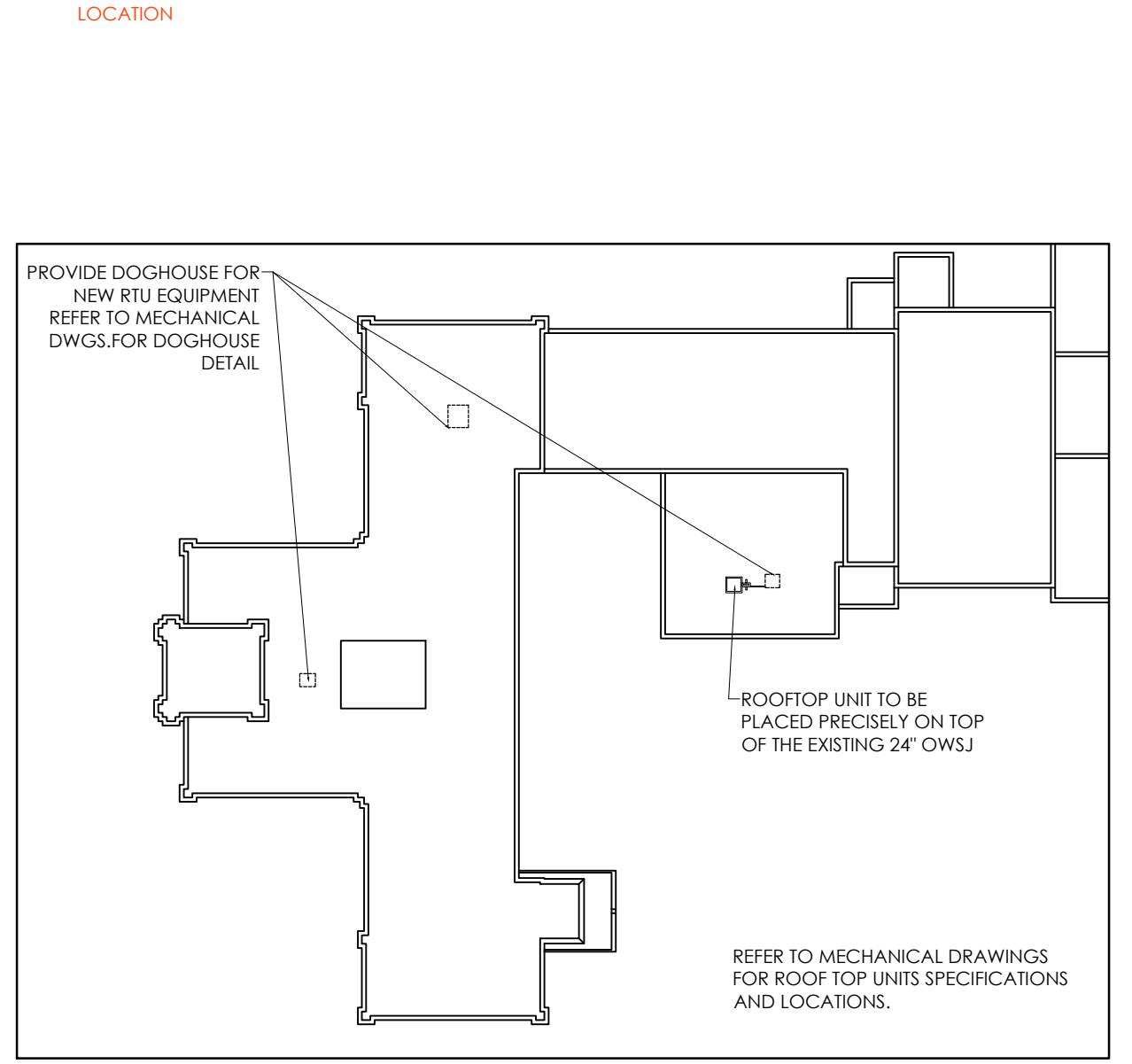
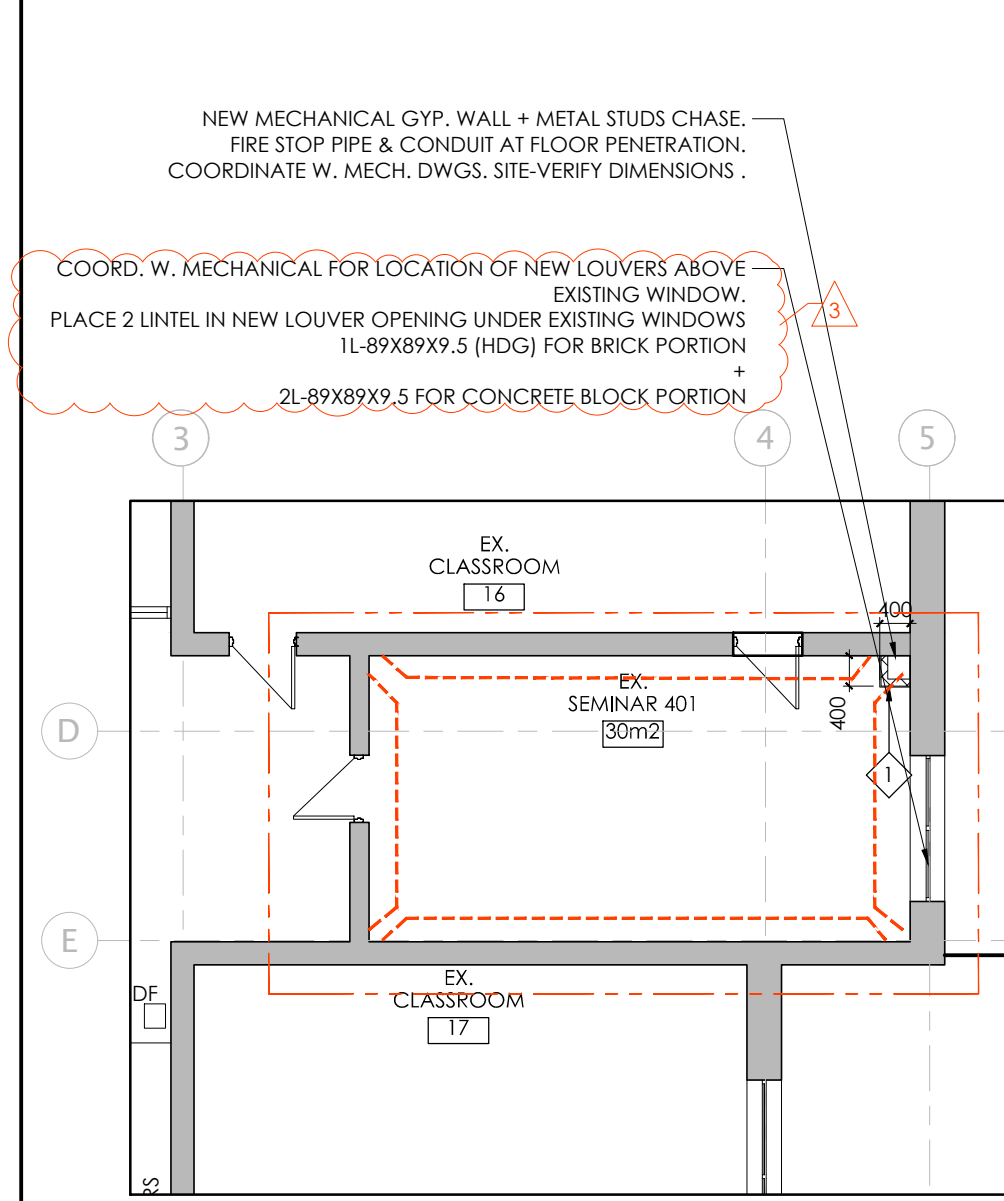
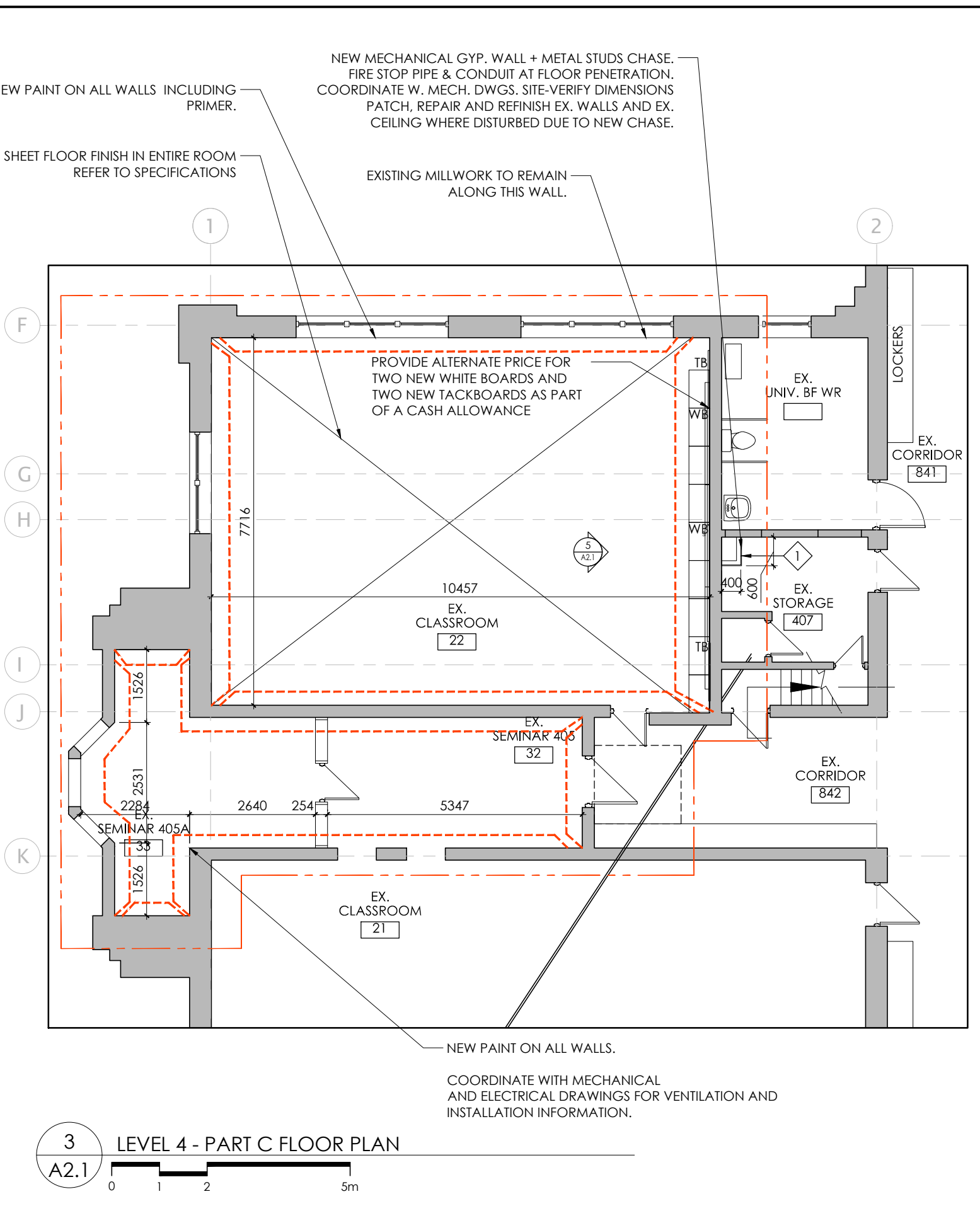
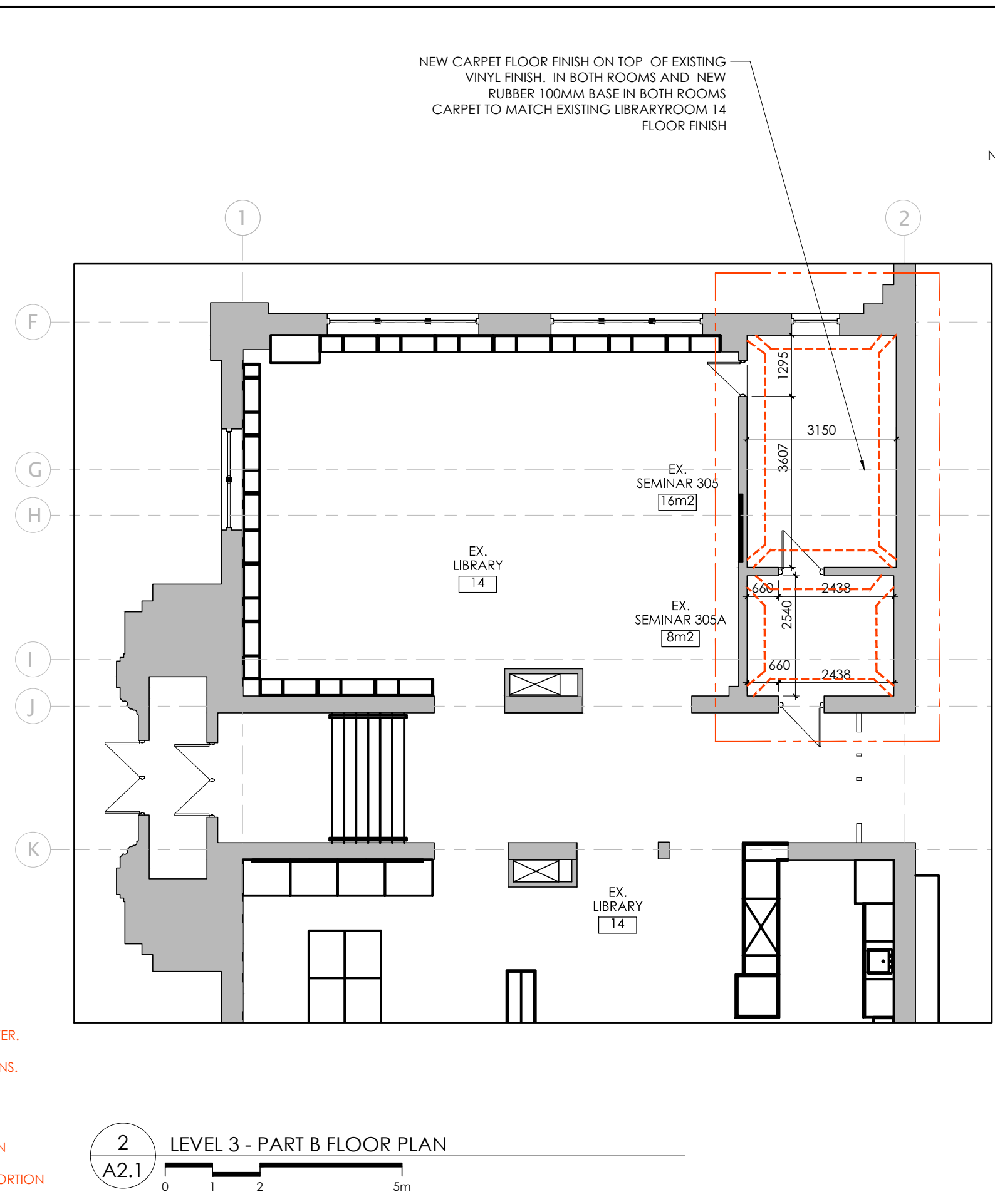
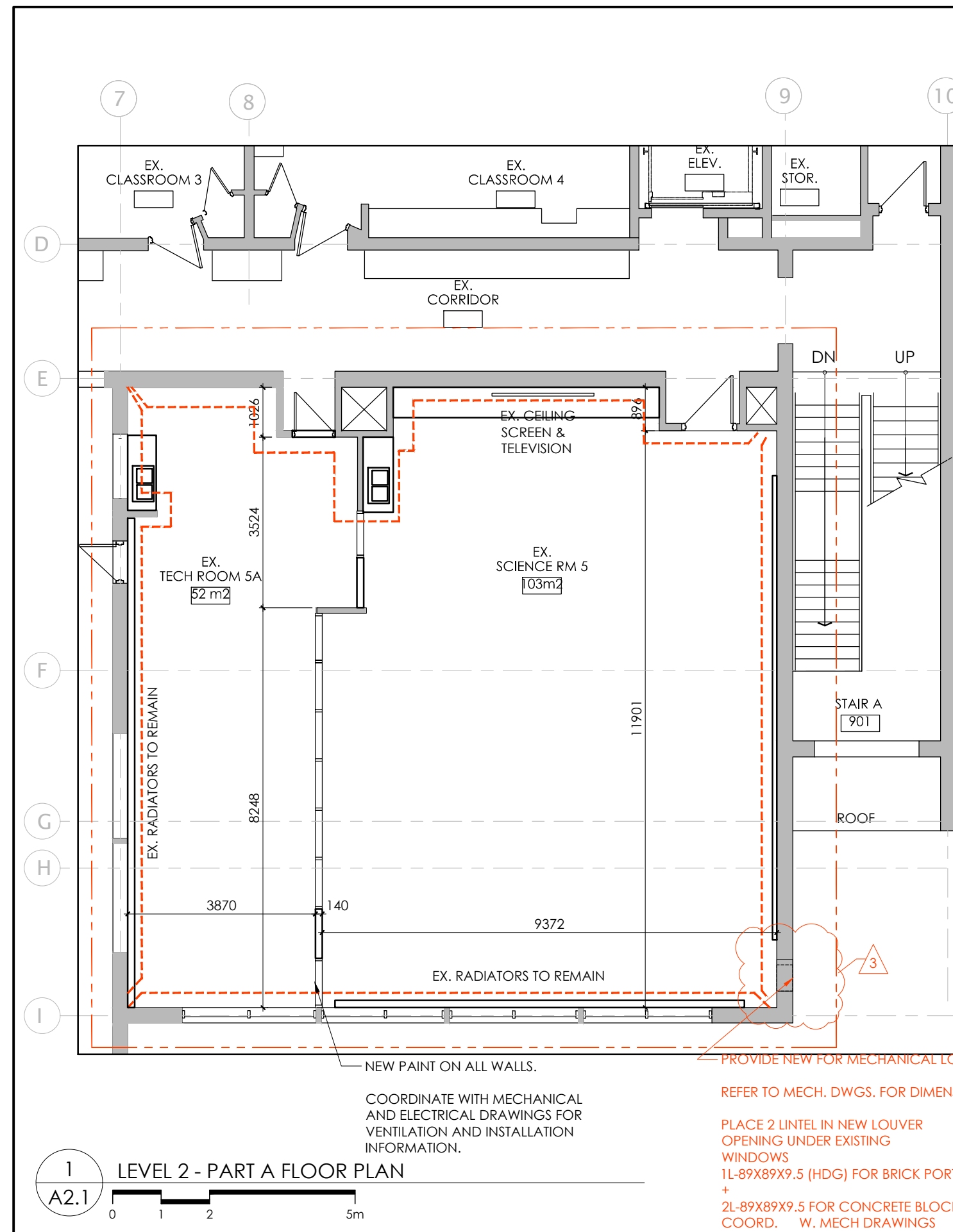
1. Remove ridges and bumps.
2. Apply sub-floor filler/patch to low spots and cracks to achieve floor level to a tolerance of 1:500. Allow to cure.
3. Where moisture tests result in values higher than those specified above, apply floor sealer/moisture barrier to concrete floor surface prior to installation. Re-test moisture levels.
4. Prepare floor surfaces in accordance with Contract Carpet Manual, Standard for Installation of Textile Floorcovering Materials No.001.
5. Pre-condition carpeting following manufacturer's printed instructions.
6. Install resilient base before proceeding with carpeting.

3. INSTALLATION

1. Install in accordance with manufacturer's printed instructions and in accordance with Contract Carpet Manual, Standard for Installation of Textile Floorcovering Materials No.001.

2. Install carpeting after finishing work is completed but before Moveable Wall office partitions and telephone and electrical pedestal outlets are installed. Continue carpet installation throughout area where Moveable Walls are to be installed; carpet to be below Moveable Walls.
3. Finish installation to present smooth wearing surface free from conspicuous seams, burring and other faults.
4. Use material from same dye lot. Ensure colour, pattern and texture match within any one visual area.
5. Cut and fit neatly around architectural, mechanical, electrical and telephone outlets, and furniture fitments, around perimeter of rooms into recesses, and around projections.
6. Carpet Tile:
 - .1 Apply acrylic release type adhesive and install carpet tile in accordance with manufacturer's written instructions.
 - .2 Lay tiles with butt seams; 1/3 offset in horizontal ashlar pattern.
4. PROTECTION OF FINISHED WORK
 1. Vacuum carpet clean immediately after completion of installation. Protect traffic areas.
 2. Prohibit traffic on carpet until adhesive is cured.
 3. Install carpet protection to satisfaction of Architect.

END OF SECTION



ROOM FINISH SCHEDULE											
ROOM NAME	WALLS				FLOOR FINISH	BASE	CEILING	HT.	RATED	REMARKS (SEE NOTES)	CAR - CARPET SF - SHEET FLOORING ACT - ACUSTIC TILE CB - CONCRETE BLOCK PC - PRECAST CONCRETE DW - DRYWALL PT - PAINTED PT - PORCELAIN TILE RB - RUBBER SC - SPECIAL COATING VCT - VINYL COMP. TILE T - TILE EX - EXISTING GB - GYPSUM BOARD
	NORTH	SOUTH	EAST	WEST							
SCIENCE ROOM 5	FIN.	P	P	P	EX.	RB	ACT	VARIES	1HR.	MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE ALTERNATE PRICE FOR ACT CEILING. CEILING HEIGHT TO BE COORD. ON SITE. ACT TO BE 1 HR FIRE RATED.	
TECH ROOM 5A	FIN.	P	P	P	EX.	RB	ACT	VARIES	1HR.	MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE ALTERNATE PRICE FOR ACT CEILING. CEILING HEIGHT TO BE COORD. ON SITE. ACT TO BE 1 HR FIRE RATED.	
LIBRARY SEMINAR 305	FIN.	P	P	P	CAR	RB	ACT	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	
LIBRARY SEMINAR 305A	FIN.	P	P	P	CAR	RB	ACT	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	
SEMINAR 405	FIN.	P	P	P	EX.	RB	GB	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	
SEMINAR 405A	FIN.	P	P	P	EX.	RB	ACT	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	
SEMINAR 401	FIN.	P	P	P	EX.	RB	ACT	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	
CLASSROOM 22	FIN.	P	P	P	SF	RB	ACT	VARIES		MAKE GOOD ALL EX. CONDITIONS PRIOR TO REFINISHING. PAINT EX. DOOR FRAMES PROVIDE CARPET FLOOR FINISH. PROVIDE 2 TYPE X DRYWALL BELOW EXISTING STRUCTURE TO MAINTAIN FIRE RATING.	

GENERAL NOTES ROOF PLAN NOTES

- CONTRACTOR TO PATCH & REPAIR EX. ROOF DECK AS REQ'D TO PREP EX. SURFACE TO RECEIVE NEW ROOFING. PROVIDE TEMPORARY WATERPROOFING AS REQUIRED UNTIL THE NEW ROOFING MATERIALS ARE APPLIED.
- CONTRACTOR TO RAISE ROOF TOP UNITS AS REQUIRED TO ACHIEVE THE NEW CURB HEIGHT.
- CONTRACTOR TO ENSURE ANY ELECTRICAL/CONTROL CONNECTIONS ARE RE-CONNECTED & OR RE-CONFIGURED TO SUITE NEW ROOF TOP UNIT CURB HEIGHTS AS REQUIRED.
- CONTRACTOR TO DISCONNECT & RECONNECT ANY EXISTING DUCT LINES ATTACHED TO THE EXISTING ROOF TOP UNITS TO ALLOW FOR NEW ROOF INSTALLATION. THIS INCLUDES ANY NEW DUCT CONNECTIONS/EXTENSIONS THAT ARE REQUIRED TO ENSURE PROPER CONNECTION TO THE EXISTING ROOF TOP UNITS & DUCTS.
- CONTRACTOR TO ENSURE ANY GAS LINES CONNECTIONS ARE RE-CONFIGURED TO SUITE NEW ROOF TOP UNITS & CURB HEIGHTS AS WELL AS TO PROVIDE TEMPORARY SUPPORT FOR GAS LINES DURING THE ROOF INSTALLATION. PROVIDE NEW GAS LINE BLOCKING.
- CONTRACTOR TO ENSURE TO PROVIDE PROPER SUPPORT OF EXISTING GAS LINES DURING CONSTRUCTION & PROVIDE NEW GAS LINE SUPPORTS.
- ITEM LOCATIONS SUCH AS PLUMBING VENT STACKS, ELECTRICAL PENETRATIONS, ETC. ARE NOT SHOWN IN DRAWINGS. CONTRACTOR TO ENSURE ALL PIPING/ELEC. & MECH. PENETRATIONS ARE INCLUDED IN SCOPE OF WORK & RE-WORKED.

- CONTRACTOR TO ENSURE ALL TRADES ARE COORDINATED AS REQUIRED TO PERFORM THE REQUIRED WORK.
- CONTRACTOR TO ENSURE NO DAMAGE OF ANY KIND TAKES PLACE TO THE EXISTING BUILDING. ANY DAMAGE WILL BE REPAIRED BY THE CONTRACTOR. AT NO COST TO THE OWNER. TO MAKE GOOD WHERE DISTURBED & PROVIDE CLEAN TRANSITIONS TYPICAL.
- CONTRACTOR TO REVIEW EXISTING SITE CONDITIONS & ENSURE THEY ARE FAMILIAR WITH THE PROJECT PRIOR TO PLACING A BID IF POSSIBLE. CONTRACTOR TO TAKE NOTE OF EXISTING MECHANICAL SYSTEMS THAT ARE TO REMAIN & BE MODIFIED AS REQUIRED TO INSTALL THE NEW ROOF.
- CONTRACTOR TO ENSURE TO NOTIFY THE OWNER OF ANY SHUT DOWNS OF THE EXISTING ROOF TOP UNIT A MINIMUM OF 3 DAYS PRIOR TO STARTING THE SCHEDULED WORK SO NOT TO DISRUPT THE DAILY OPERATIONS OF THE FACILITY.
- CONTRACTOR TO COORDINATE WITH OWNER FOR ANY PROPOSED EARLY MORNINGS OR AFTER HOURS WORK.
- CONTRACTOR TO MAINTAIN WATERTIGHT ROOF THROUGHOUT ALL PHASES OF CONSTRUCTION.

HATCH IDENTIFICATION MARKER LEGEND

INDICATES AREA TO BE UPDATED. REFER TO CHART FOR SPECIFIC INTERVENTION FINISHES CEILING AND WALL WHERE DISTURBED DUE TO CONSTRUCTION.

NEW PAINT FINISH. COLOUR TO BE APPROVED BY OWNER.

GENERAL NOTES

- ALL ITEMS ARE TO BE SECURED TO STRUCTURE ABOVE. IN CASE OF INTERFERENCE WITH DUCTWORK ABOVE PROVIDE SUPPORT USING UNISTRUT FRAMING OR EQUAL.
- FINAL LOCATION OF ANY EXHAUST FANS NOT SHOWN IN ARCH. DWGS TO BE COORDINATED WITH MECH & ELEC DRAWINGS.
- ALL DUCT SHAFT ENCLOSURES TO SUIT DUCT SIZES REQUIRED. COORD WITH MECHANICAL DRAWINGS.
- UNLESS OTHERWISE NOTED, ALL WALLS ARE TO GO UP TO THE U/S OF DECK ABOVE & BE SEALED TIGHT.

TYPICAL FOR ALL AREAS THAT ARE AFFECTED DURING CONSTRUCTION:

- EXISTING CEILING, FLOORS & WALLS FINISHES & MATERIALS TO REMAIN. PATCH, REPAIR AND MAKE GOOD EXISTING CEILING, FLOORS & WALLS FINISHES MATERIALS WHERE DISTURBED OR DAMAGED TO MATCH & BLEND IN WITH EXISTING MATERIALS & FINISHES TO REMAIN. (TYPICAL)
- PAINTING OF SURFACES INCLUDES DOORS & FRAMES ON BOTH SIDES
- REMOVE EXISTING FINISHES WHERE NEW FINISHES ARE NOTED. MAKE GOOD EXISTING WHERE DISTURBED AND BLEND IN WITH NEW FINISHES AS REQUIRED.
- INSTALL NEW TRADITIONAL 4" JOHNSONITE BLACK RUBBER WALL BASE IN ALL AFFECTED ROOMS.
- PROVIDE ALUMINIUM TRANSITION STRIPS AT ALL DOORWAYS.

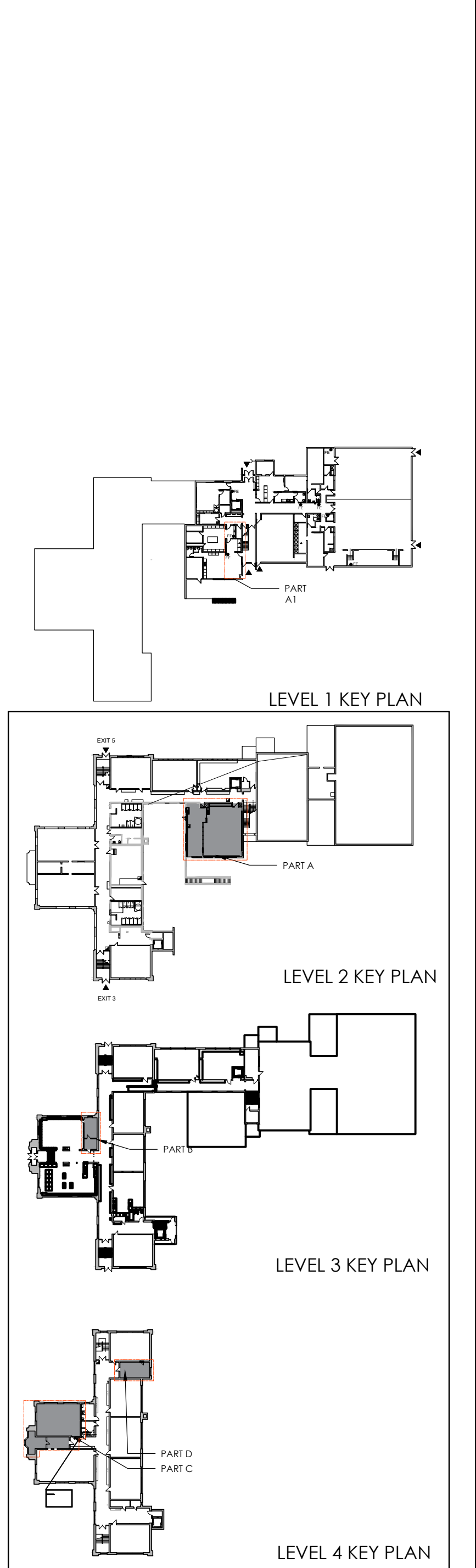
LEGEND:

EX. WALL SYSTEM TO REMAIN
NEW STUD WALL

NOTE:

AT LOCATIONS WHERE EXISTING MILLWORK IS REMOVED:

- PATCH AND REPAIR ENTIRE LENGTH OF WALLS
- PAINT WALLS



REVISIONS

NO.	DATE	PARTICULAR
1	2024.04.19	ISSUED FOR TENDER
2	2024.04.22	ISSUED FOR PERMIT
3	2024.04.26	ISSUED FOR ADDENDUM No. 1
4		

NOTES:

CLIENT: WATERLOO REGION DISTRICT SCHOOL BOARD
51 ARDELT AVENUE
KITCHENER, ONTARIO
N2C 2R5

PROJECT: 22368
MARGARET AVENUE PUBLIC SCHOOL RENOV.

325 Louisa Street,
KITCHENER, ON
N2H 5K9

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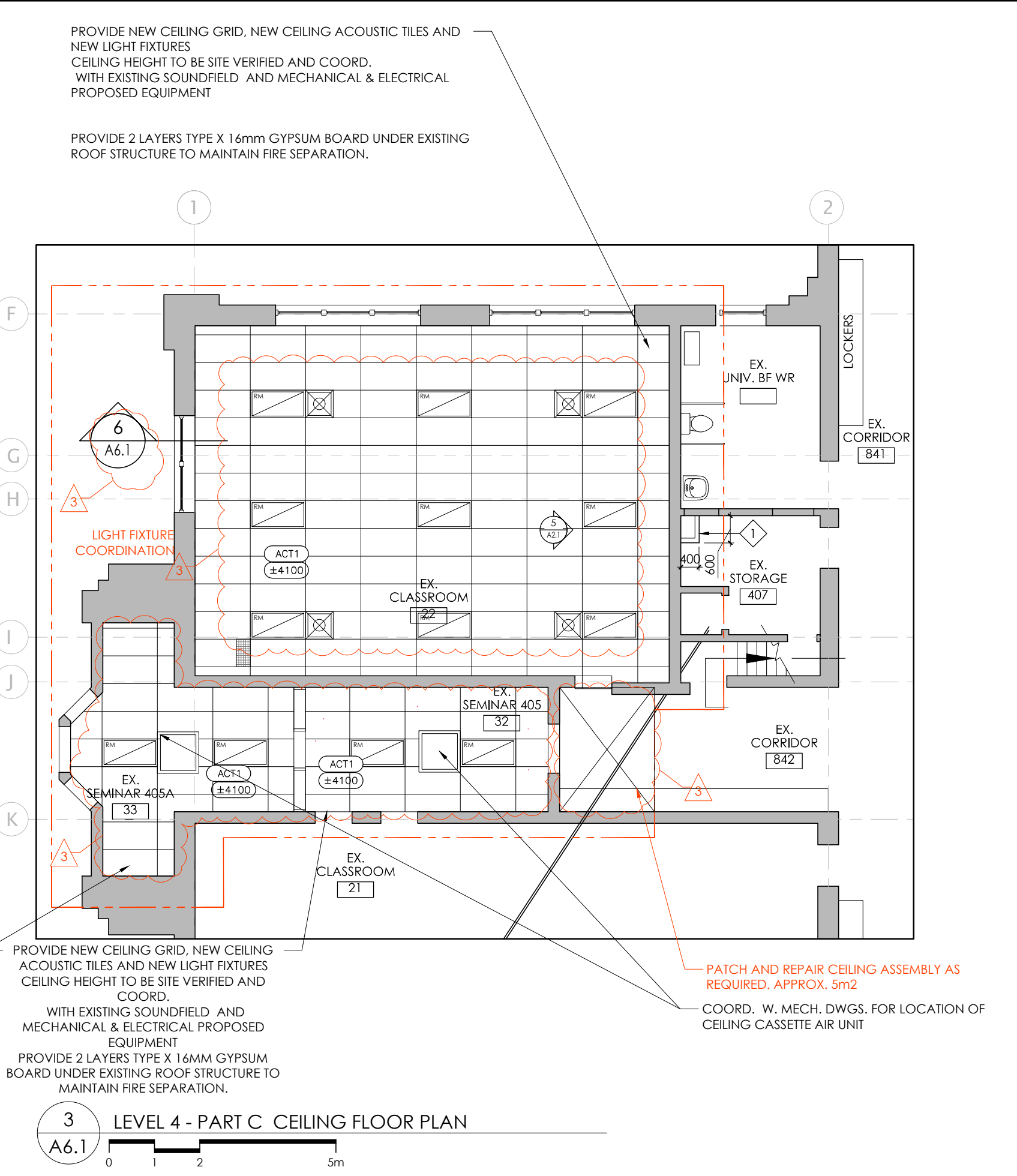
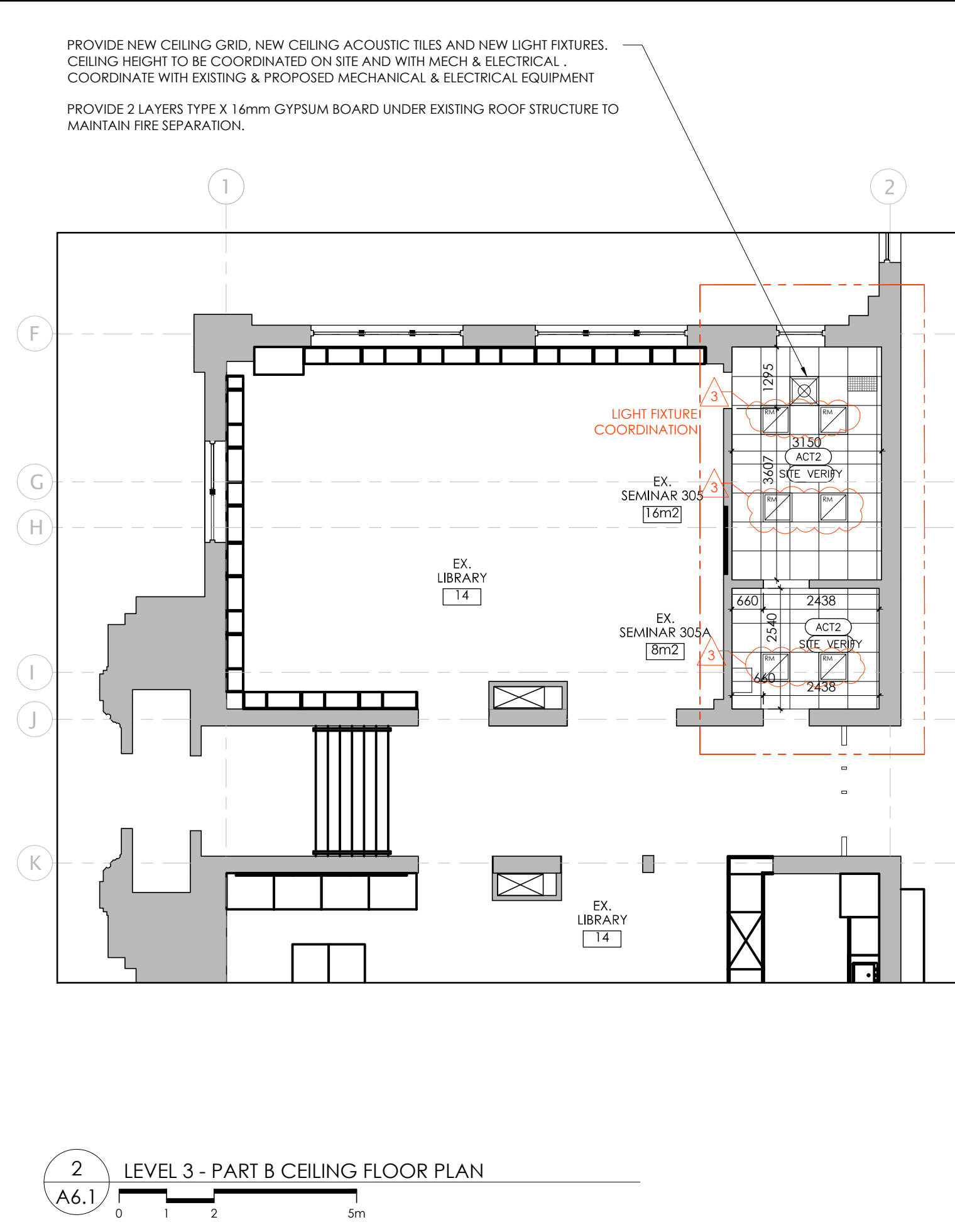
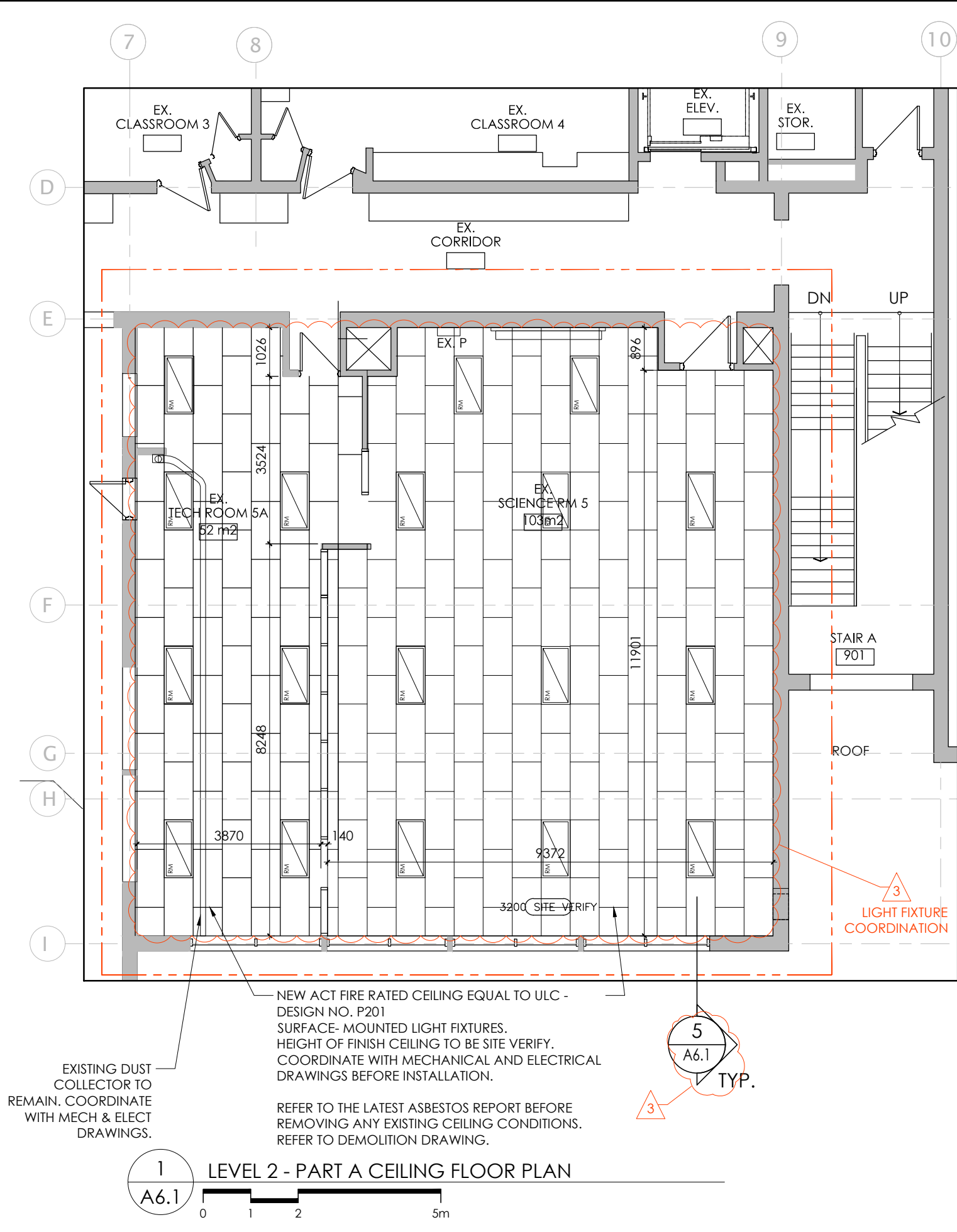
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Plot Date: Apr 29, 2024 - 10:05am By: amontisano

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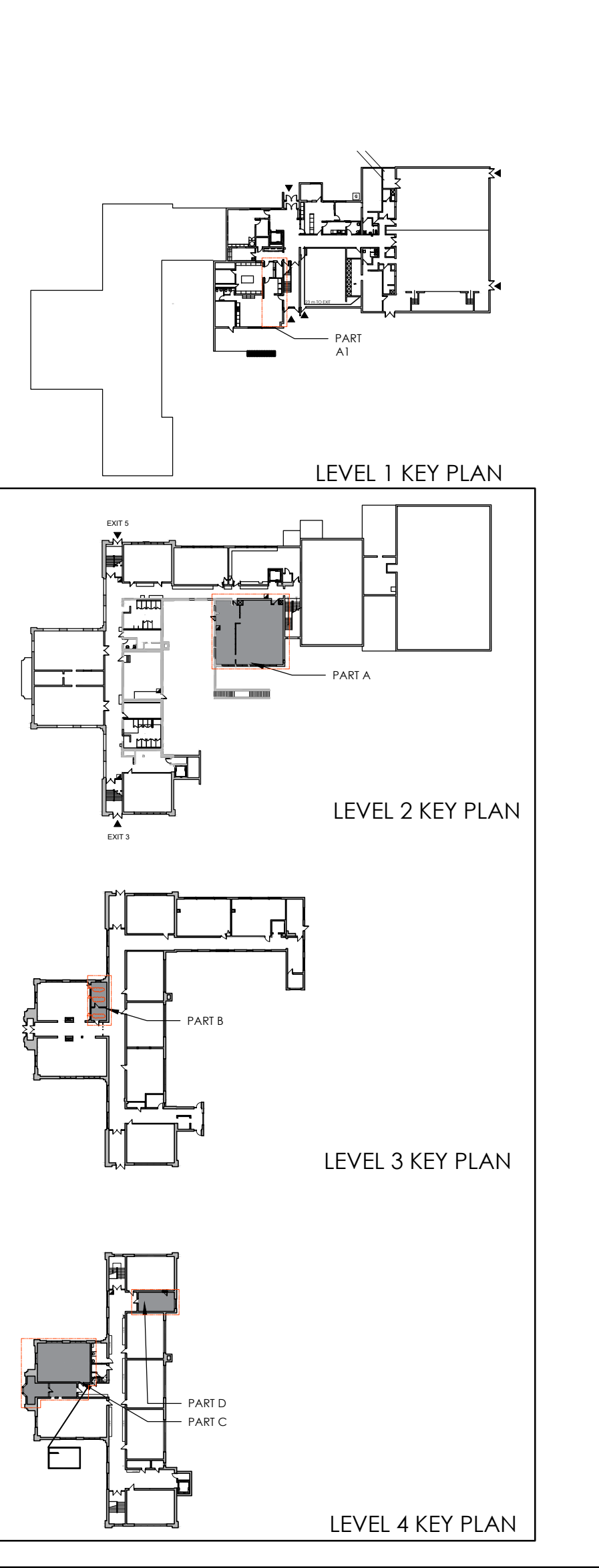
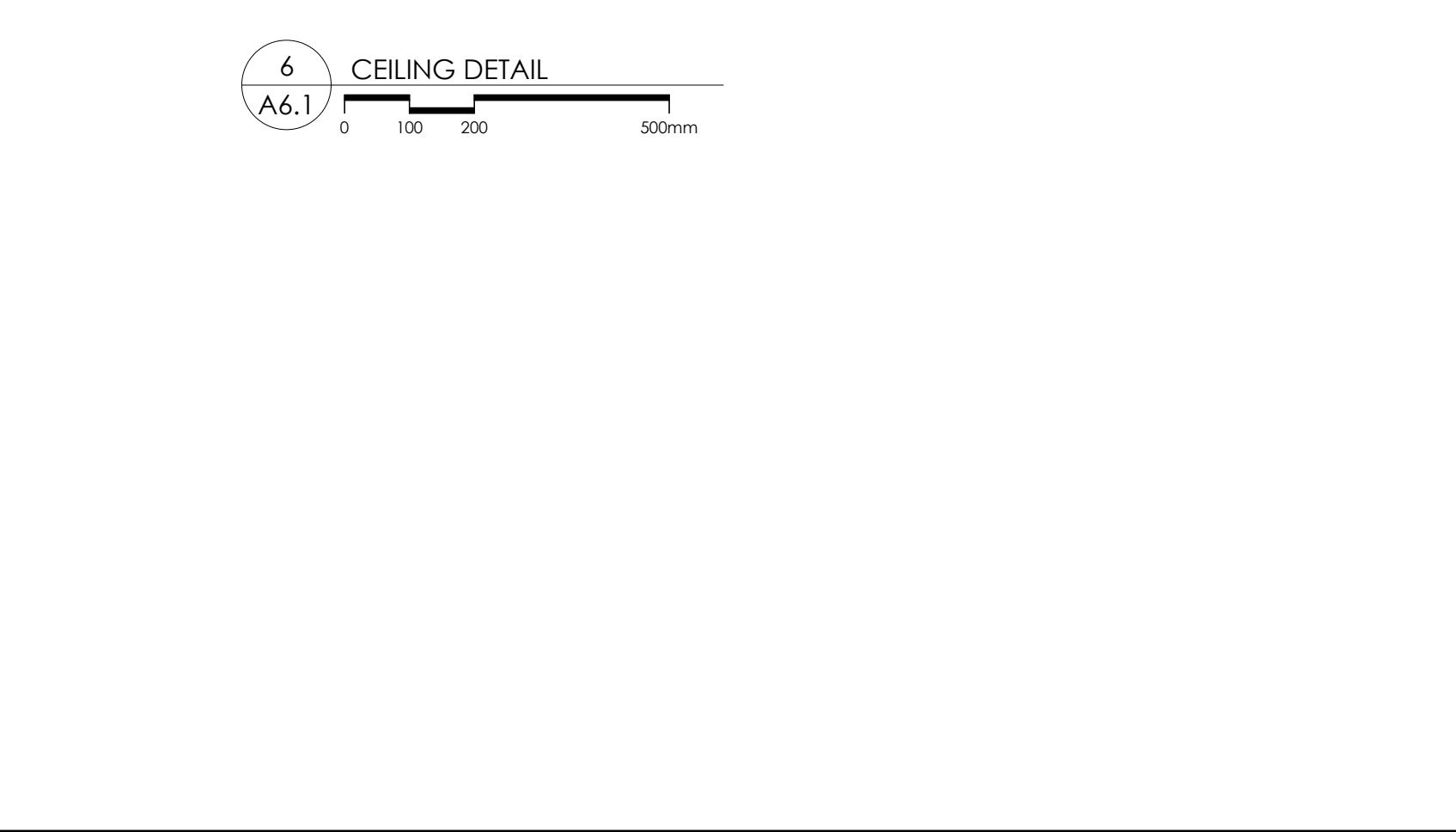
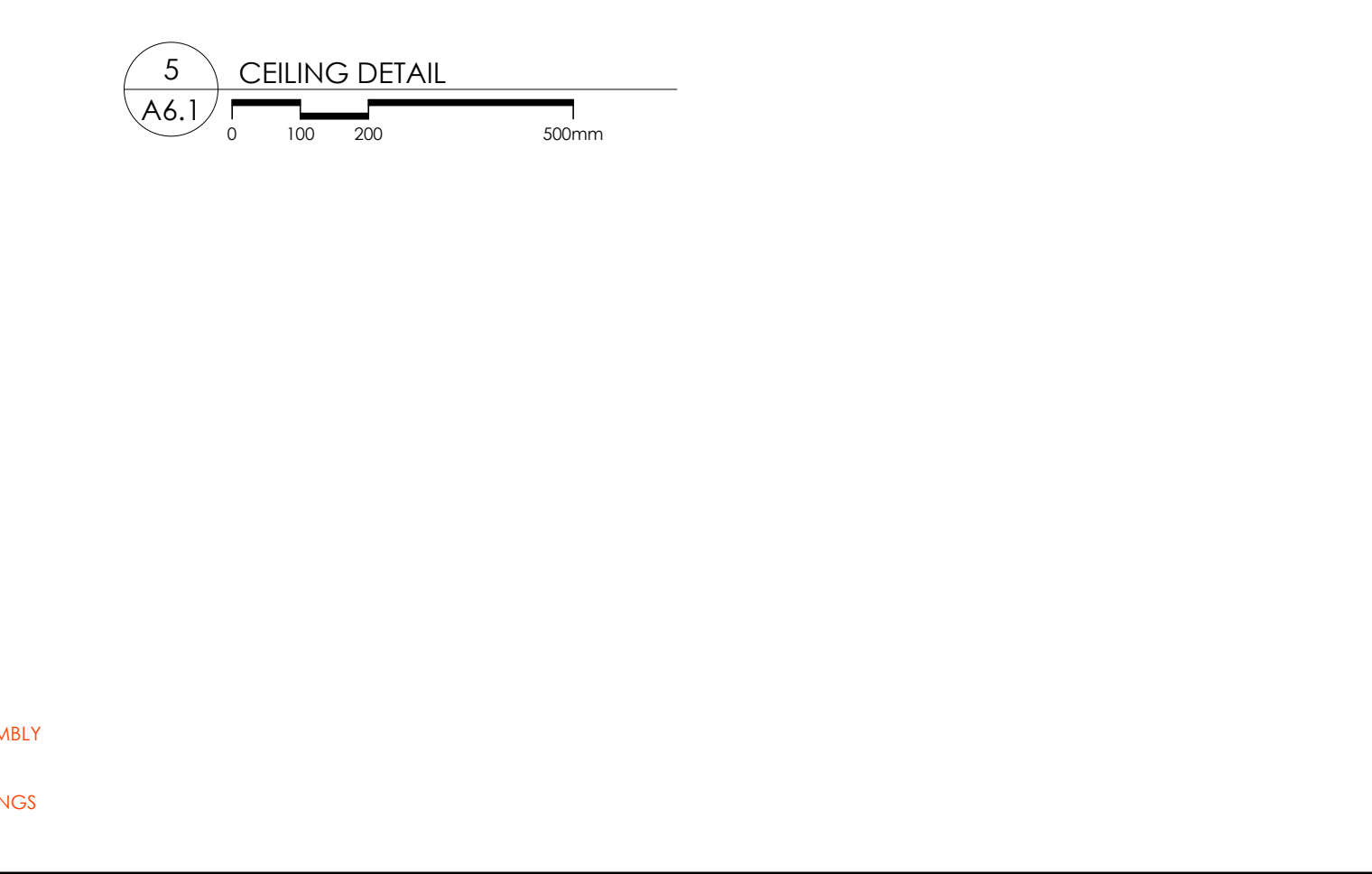
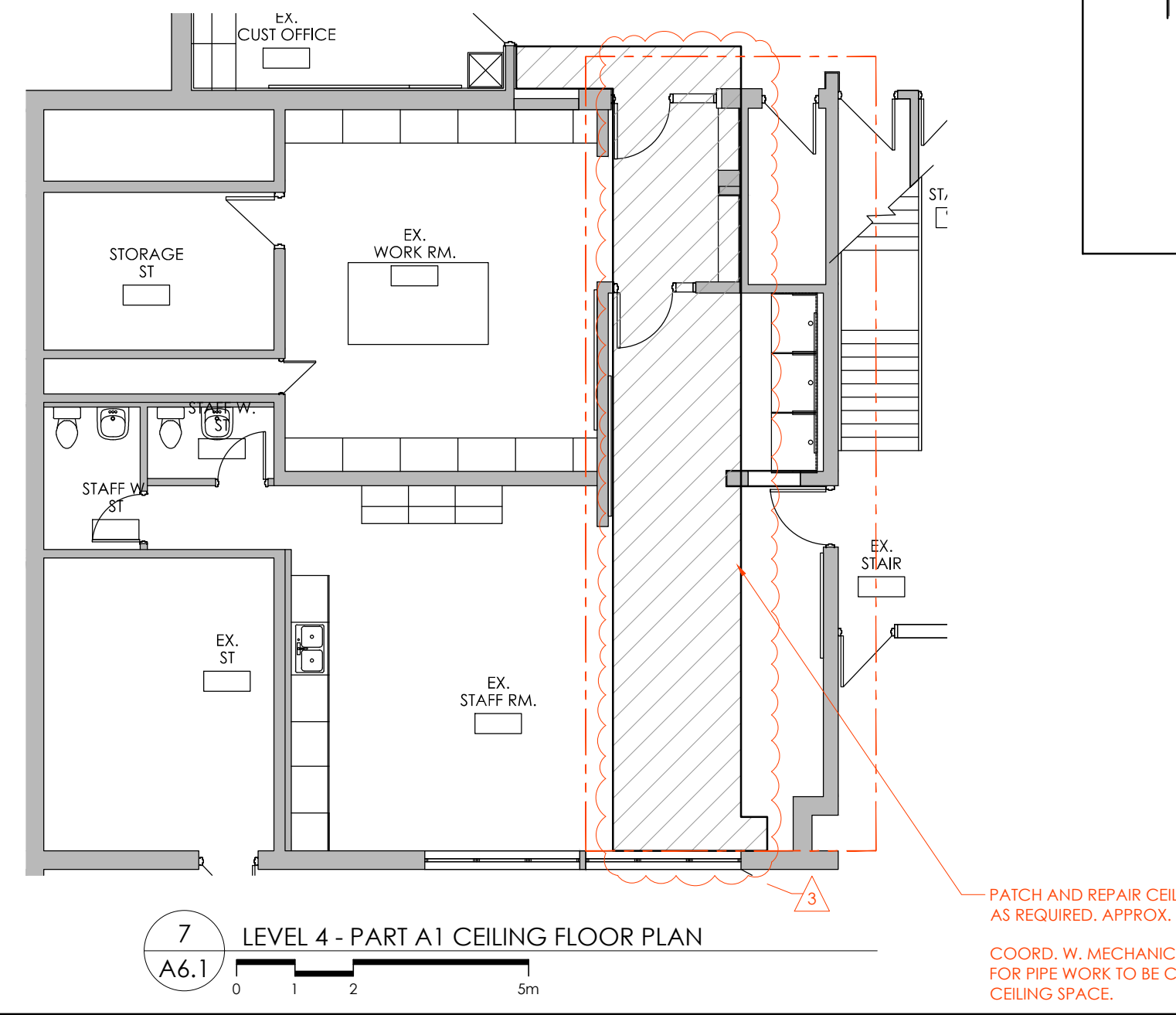
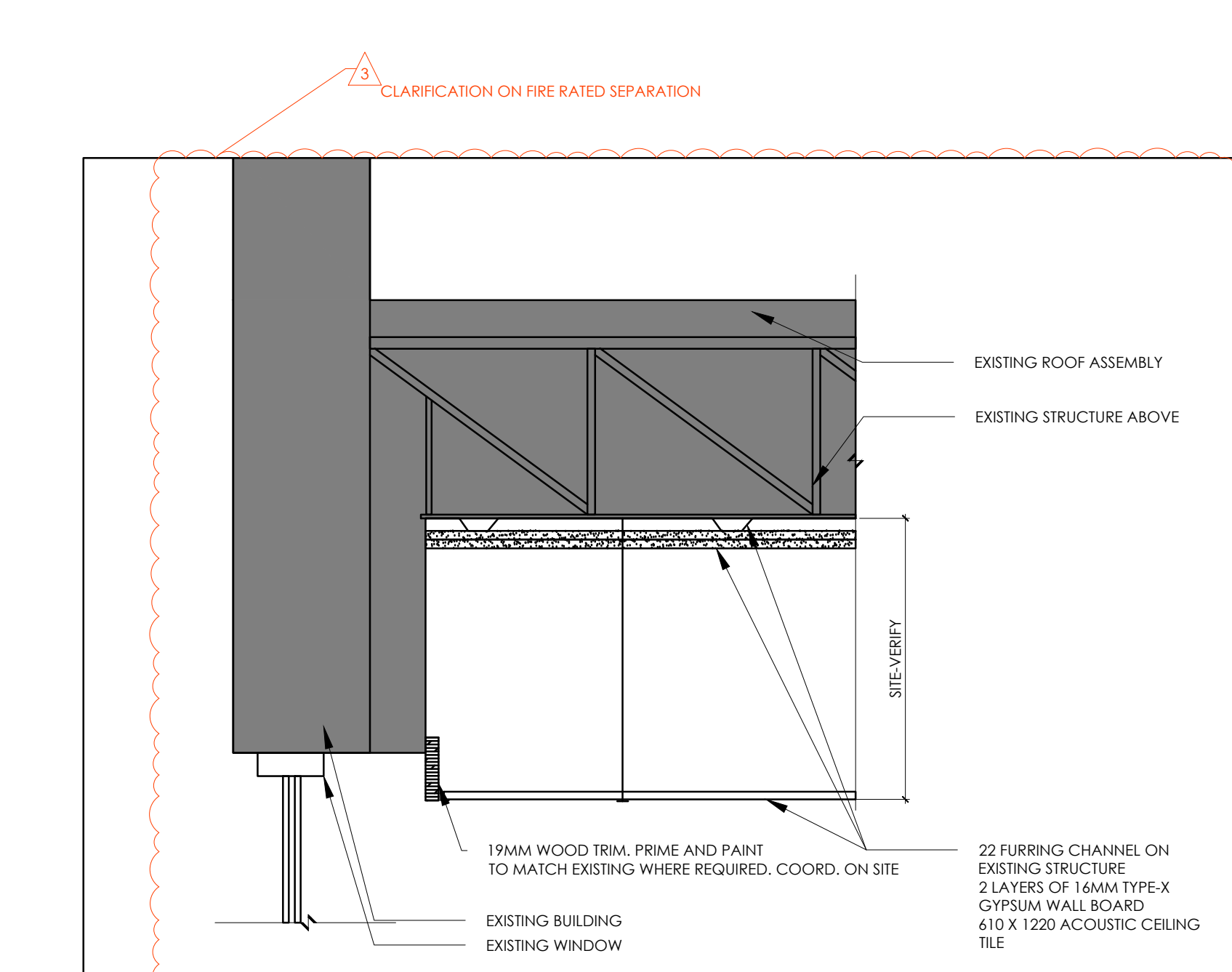
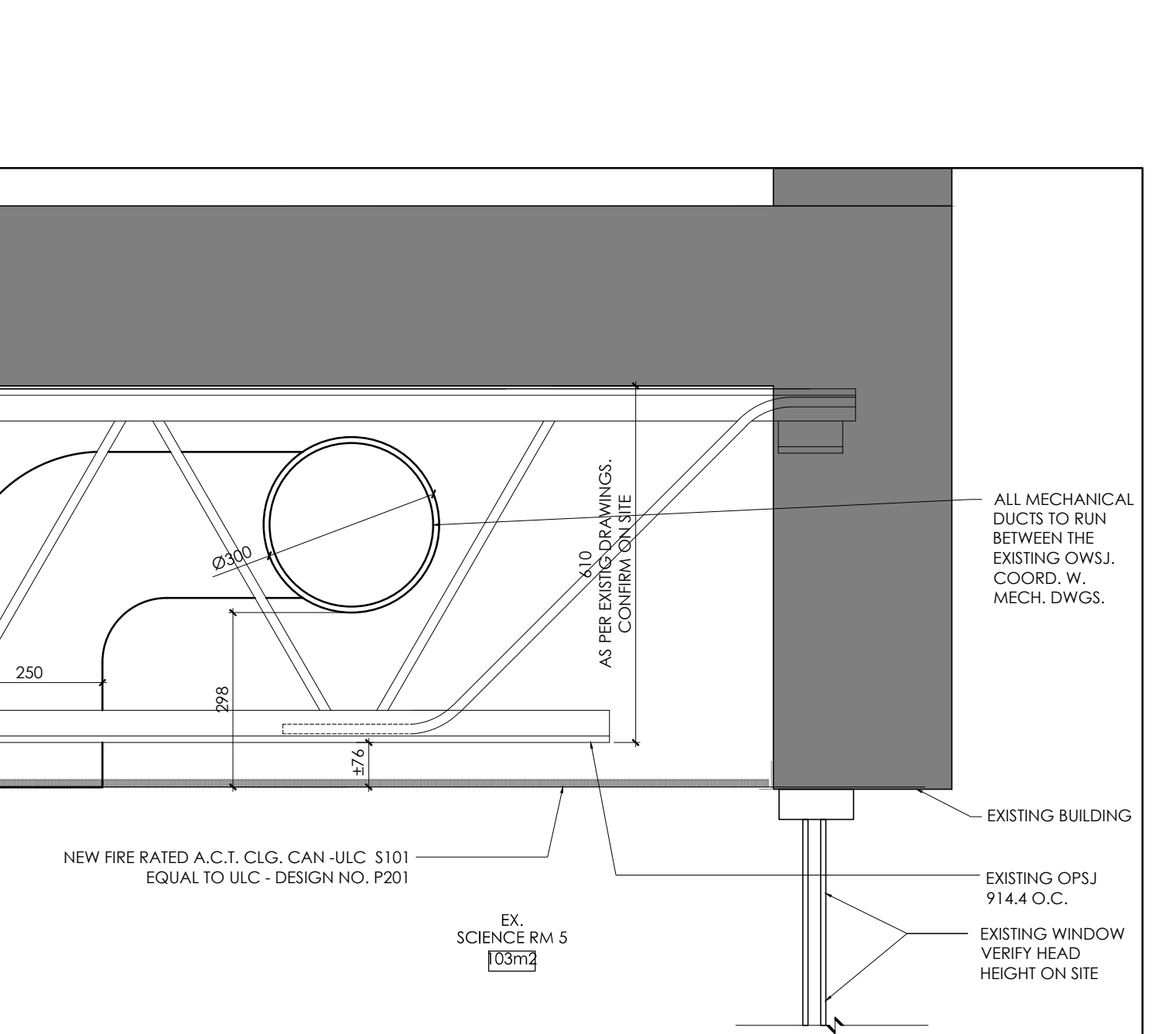
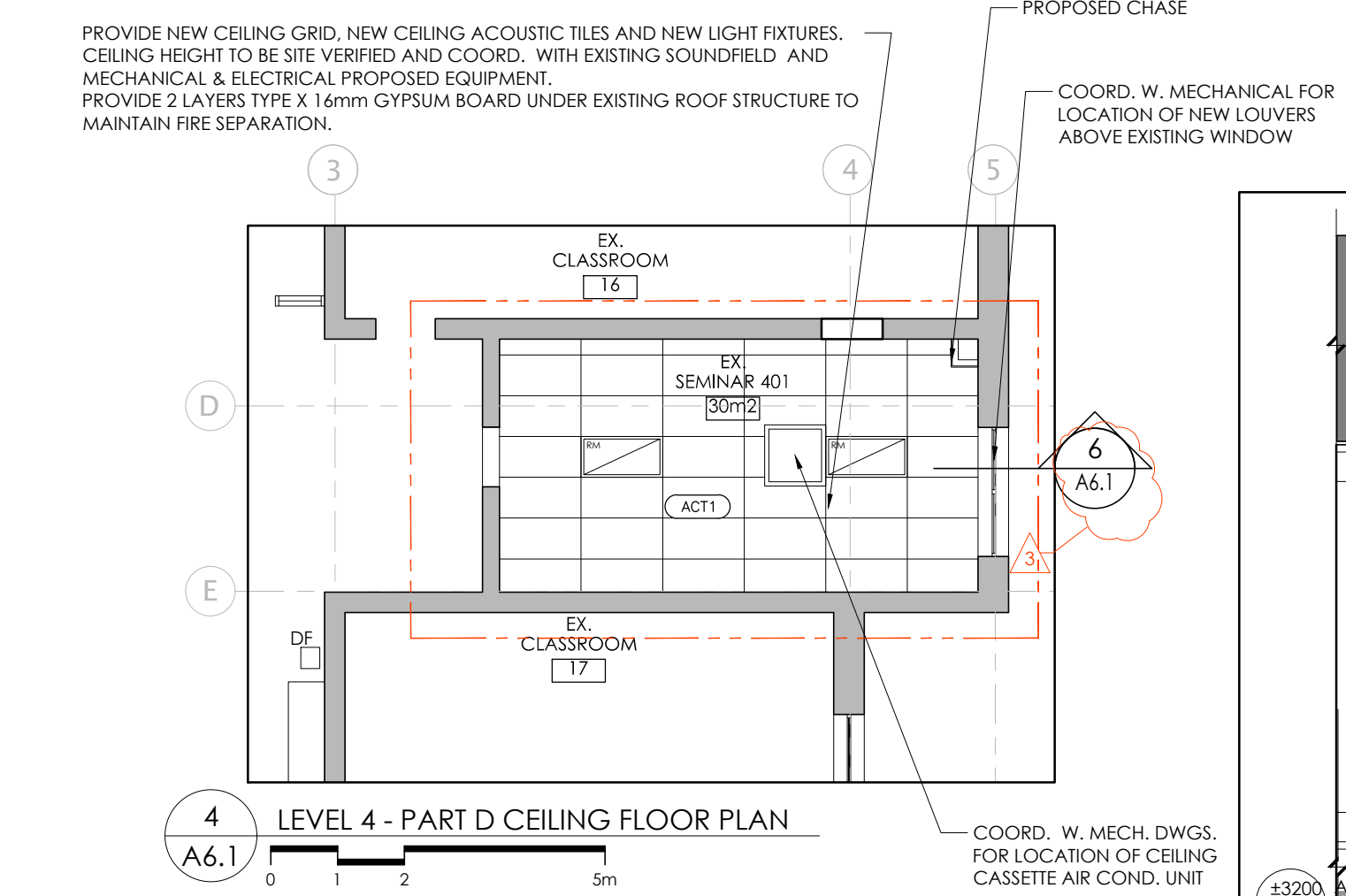
DRAWN BY: AM CHECKED BY: TF/KC

PARTIAL FLOOR PLANS RENOVATION

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- ### SYMBOLS & ABBREVS LEGEND
- #### IDENTIFICATION MARKER LEGEND
- CEILING TILES 610x1220 TYPE A.1.1
 - CEILING TILES 610x610 TYPE A.2
 - TRACK LIGHTING
 - CEILING MOUNTED LIGHT FIXTURE (RECESSED OR SUSPENDED FLUORESCENT) (COORD. W/ ELEC. DWG.S)
 - CEILING HEIGHT (MEASURED FROM A/F/F IN SPECIFIC SPACE NOTED)
 - NEW SUPPLY GRILLE (COORD. W/ MECH. DWG.S)
 - RETURN GRILLE / EXHAUST VENT (COORD. W/ MECH. DWG.S)
- #### GENERAL NOTES
- COORD. W/ MECH. & ELEC. DWG.S FOR RESPECTIVE CEILING MTD. OR RECESSED ITEMS
 - FINAL LOCATION OF ALL MECH. & ELEC. FIXTURES TO BE CONFIRMED PRIOR TO INSTALL. COORD. ALL MECH. & ELEC. ITEMS W/ ARCH. DWGS. & REPORT ANY DISCREPANCIES PRIOR TO ANY WORK
 - ALL CEILING HEIGHTS TO BE COORDINATED ON SITE
 - UNLESS DIMENSIONED OTHERWISE, CEILING TILES TO BE STARTED AS SHOWN FROM THE CENTER POINT OF ROOMS TYP.
 - STEEL BEAMS & POSTS WHERE EXPOSED TO BE PAINTED C/W INTUMESCENT COATING
 - FOR LIGHTING IN EXPOSED CEILING AREAS REFER TO ELECTRICAL DRAWINGS
 - COORDINATE ON SITE WITH EXISTING MECHANICAL, ELECTRICAL AND SERVICE SYSTEMS BEFORE INSTALLING CEILING GRID.
 - NOT ALL MECHANICAL AND ELECTRICAL EQUIPMENT ARE SHOWN. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
 - ALL MECHANICAL AND ELECTRICAL FIXTURES TO BE REMOVED AND REINSTALL HAS TO BE COORDINATED AND VERIFY ON SITE AND COORDINATED WITH MECHANICAL AND ELECTRICAL DWGS.
 - SHOP DWG.S TO BE IN DIMENSION UNITS AS ILLUSTRATED ON THIS DWG. OR THEY WILL BE REJECTED (IMPERIAL & METRIC BOTH SHOWN IS ACCEPTABLE); ALSO AIR GRILLES ARE TO REFERENCE THE RM. # THEY ARE INSTALLED (& ANY OTHER ITEMS TYP.)
 - ALL GYP BD. CEILINGS ARE TO RECEIVE 16mm RESILIENT CHANNELS @400MM O/C MAX. & ANY ASSOCIATED BLOCKING TO ACHIEVE A UNIFORM / FLAT CEILING SURFACE
 - ALL ITEMS ARE TO BE SECURED TO STRUCTURE ABOVE. IN CASE OF INTERFERENCE WITH DUCTWORK ABOVE PROVIDE SUPPORT USING UNISTRUT FRAMING OR EQUAL



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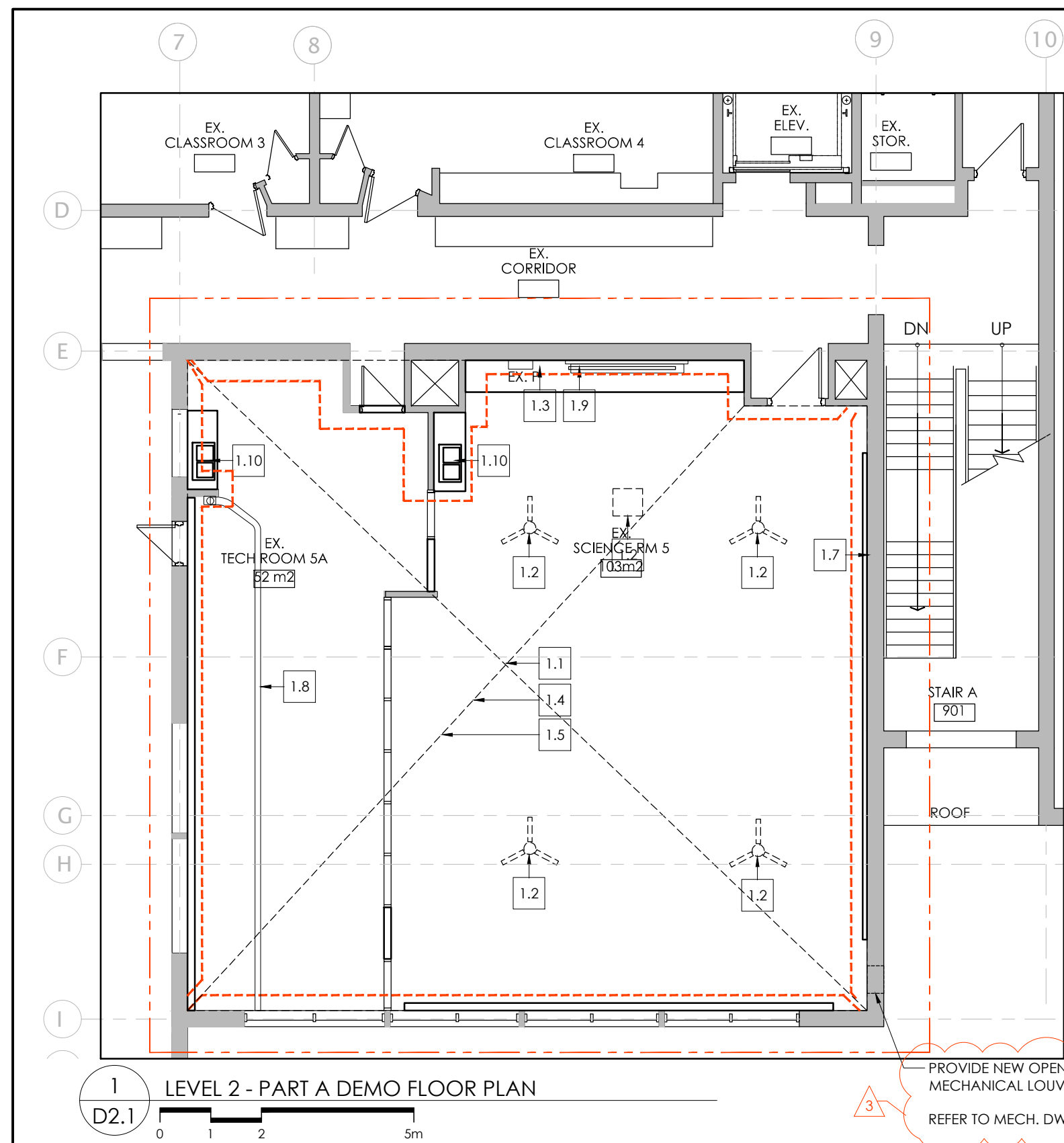
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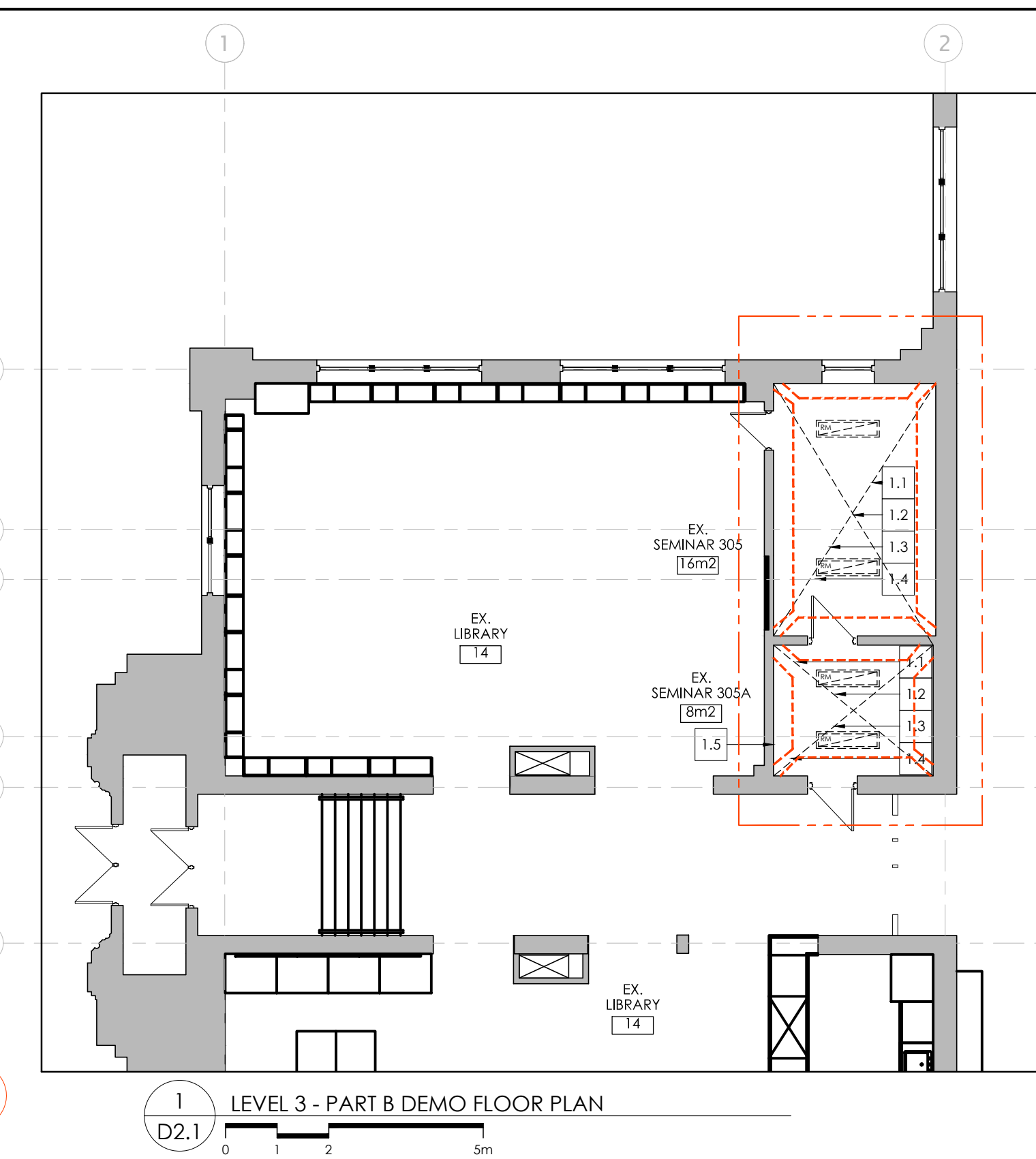
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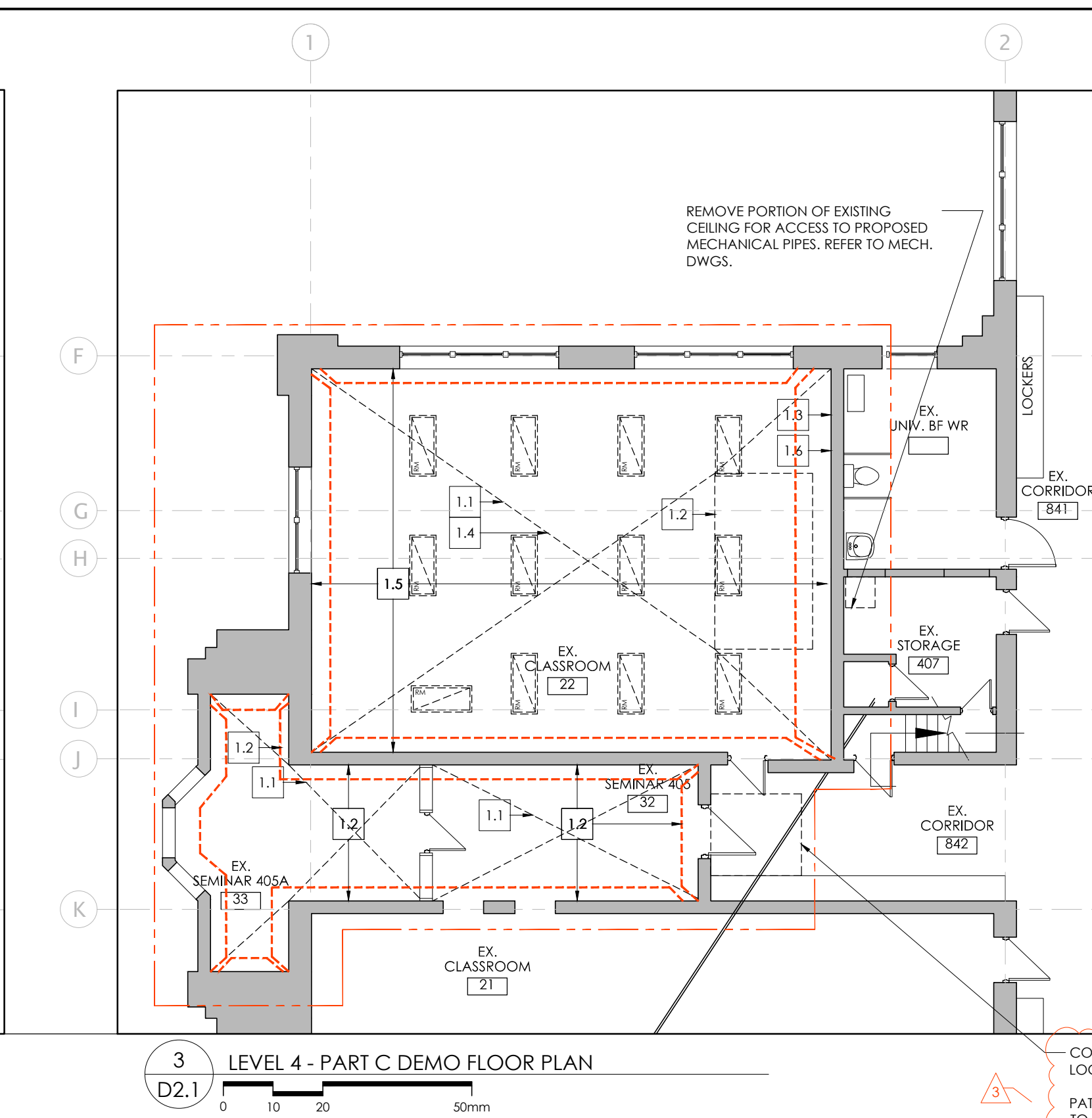
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Checked by: TKC



PROVIDE NEW OPENING FOR MECHANICAL LOUVER. REFER TO MECH. DWGS.



PROVIDE NEW OPENING FOR MECHANICAL LOUVER. REFER TO MECH. DWGS.



COORDINATE WITH MECHANICAL DWGS. FOR LOCATION OF PIPING THROUGH ROOF. PATH AND REPAIR ANY DISTURBED CEILINGS IN AREA TO ACCESS ROOFTOP PIPE OPENING.

CEILING DEMOLITION NOTES

REMOVE EXISTING CEILINGS INCLUDING BUT NOT LIMITED TO ACT / T BAR GRID, BULKHEADS, MSC, FRAMING & ASSOCIATED MECHANICAL / ELECTRICAL (COORD. W/ MECH. & ELEC. DWGS.) EXISTING GYPSUM BOARD / SHEETROCK SECONDARY / UPPER CEILINGS REQUIRED FOR FIRE RATED PROTECTION TO REMAIN WHERE IT EXISTS TYPICAL.

NOTE: REMOVE EX. CEILINGS AS REQ. D TO INSTALL ANY NEW WORK FOR ANY TRADE ABOVE AS REQ. D. RE-INSTALL EX. CEILING WHERE ABLE. INSTALL CEILING & PAINT TO MATCH ADJ. WHERE REQ. D. PROVIDE CLEAN TRANSITIONS. MAKE GOOD WHERE DAMAGED / DISTURBED TYP.

COORD. W. ELECTRICAL AND MECHANICAL DRAWINGS FOR ANY ADDITIONAL AREAS WHERE CEILING IS TO BE REMOVED NOT INDICATED IN THE ARCHITECTURAL DRAWINGS AS PART OF THE SCOPE OF THIS PROJECT AND CONTRACT.

HATCH IDENTIFICATION MARKER LEGEND

ALL ITEMS INDICATED W/ A DASHED LINE (DARKER LINE WEIGHT) ARE CONSIDERED TO BE REMOVED BY THIS CONTRACT. ITEMS INDICATED DO NOT NECESSARILY ENTAIL ALL ITEMS TO BE REMOVED - COORD. W/ ALL CONST. DOCUMENTS & CONSULTANT DWGS. FOR NEW WORK THAT REQUIRES DEMO OF ANY EXIST

- - - EX. TO BE DEMOLISHED / REMOVED
- - - - - EXTEND OF WALL TO BE RENOVATED REMOVE PAINTING FROM WALL AND PREP FOR NEW FINISH
- - - - - INDICATES AREA TO BE UPDATED. REFER TO ROOM FINISH SCHEDULE REFINISH CEILINGS AND WALL WHERE DISTURBED DURING CONSTRUCTION

SPECIFIC DEMOLITION NOTES 1/D2.1

- 1.1 REMOVE AND DISPOSE OF EXISTING CEILING SYSTEM AND ALL OF ITS MECHANICAL AND ELECTRICAL COMPONENTS. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE WITH THE WATERLOO DISTRICT SCHOOL BOARD FOR STORAGE AND TRANSPORTATION OF EQUIPMENT TO BE RELOCATED/REINSTALL
- 1.2 REMOVE AND SAFELY STORE EXISTING CEILING FANS A PROJECTOR FOR REUSE.
- 1.3 REMOVE EXISTING WHITE BOARDS AND TACKBOARD. STORE AND COORDINATE WITH THE SCHOOL BOARD FOR RELOCATION, TRANSPORTATION AND STORAGE AS PART OF THE SCOPE OF WORK.
- 1.4 REMOVE AND DISPOSE OF EXISTING SHEET FLOOR FINISH IN ENTIRE ROOM. PREP AND LEVEL AS REQUIRED TO RECEIVE NEW FLOOR FINISH.
- 1.5 MAKE ALL WALLS AND FLOOR GOOD TO RECEIVE NEW WALL FINISH.
- 1.6 REMOVE AND DISPOSE OF EXISTING PEG BOARDS IN LAB. COORD. W. THE BOARD. PROVIDE 3 NEW PEGBOARDS. 1220 X 1800mm. COORD. HEIGHT MOUNTING ON SITE
- 1.7 REMOVE AND DISPOSE OF EXISTING WHITE BOARDS IN LAB. PROVIDE 4 NEW WHITEBOARDS 1200X1800mm. COORDINATE LOCATION ON SITE.
- 1.8 EXISTING DUST COLLECTOR DUCTWORK TO BE EXPOSED BELOW NEW CEILING COORDINATE WITH ELECTRICAL AND MECHANICAL FOR LOCATION OF FIXTURES.
- 1.9 SAFELY REMOVE AND STORE TELEVISION AND PROJECTOR SCREEN. TO BE REINSTALLED AS PART OF THE BASE BID.
- 1.10 EX. SINK AND MILLWORK TO REMAIN

MECH. / ELEC. NOTES
REMOVE EX. ELEC. LIGHT FIXTURES (WIRING BACK TO POINT OF ORIGIN / MAIN PANEL). (COORD. W/ ELEC. DWG.S)
REMOVE EX. MECH. (DUCTWORK, AIR HANDLING UNITS, FANS, SUPPLYS, DIFFUSERS, ELEC. WIRING, IT CONDUIT, DATA, ALARMS, PLUMBING FIXTURES ETC. (COORD. W/ MECH. DWGS.)
COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION OF ALL ELECTRICAL AND MECHANICAL EQUIPMENT.

MILLWORK EXISTING MILLWORK/SHELVES TO REMAIN

SPECIFIC DEMOLITION NOTES 2/D2.1

- 1.1 REMOVE AND DISPOSE OF EXISTING CEILING SYSTEM AND ALL OF ITS MECHANICAL AND ELECTRICAL COMPONENTS. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE WITH THE WATERLOO DISTRICT SCHOOL BOARD FOR STORAGE AND TRANSPORTATION OF EQUIPMENT TO BE RELOCATED/REINSTALL
- 1.2 REMOVE AND DISPOSE OF EXISTING FLOOR FINISH IN ROOMS 305 AND 305A. PREP AND LEVEL AS REQUIRED TO RECEIVE NEW FLOOR FINISH.
- 1.3 REMOVE EXISTING FIXED MILLWORK.
- 1.4 PATCH AND REPAIR WALLS. PREP TO RECEIVE NEW WALL PAINTING.
- 1.5 EXISTING DATA CENTER COORDINATE WITH ELECTRICAL DWGS.

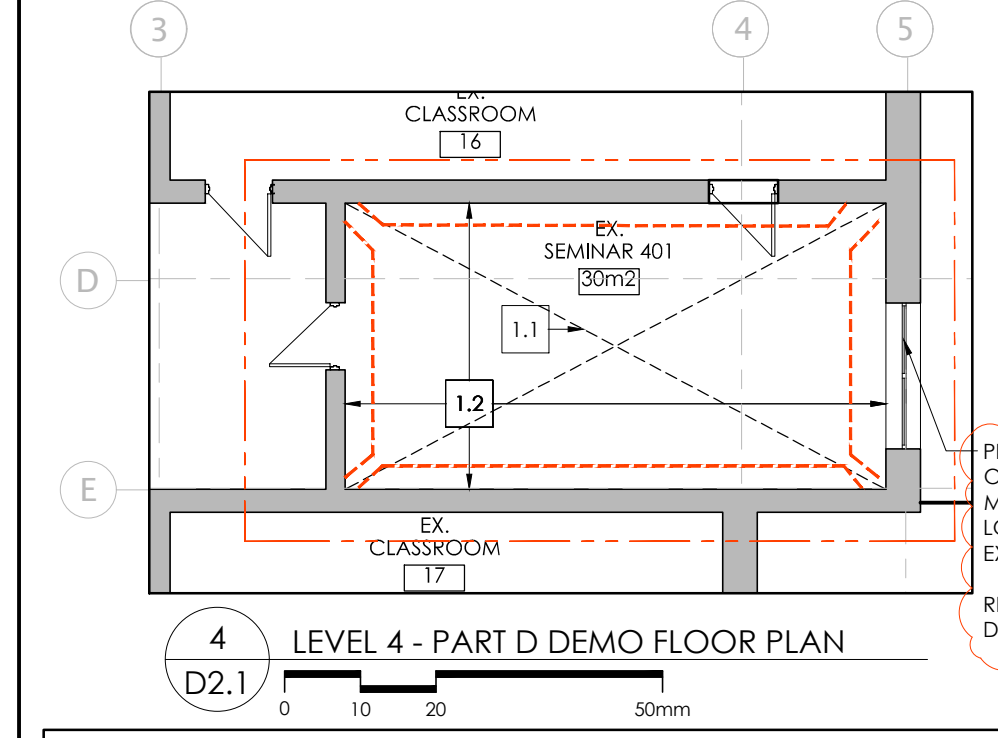
MECH. / ELEC. NOTES
REMOVE EX. ELEC. LIGHT FIXTURES (WIRING BACK TO POINT OF ORIGIN / MAIN PANEL). (COORD. W/ ELEC. DWG.S)
REMOVE EX. MECH. (DUCTWORK, AIR HANDLING UNITS, FANS, SUPPLYS, DIFFUSERS, ELEC. WIRING, IT CONDUIT, DATA, ALARMS, PLUMBING FIXTURES ETC. (COORD. W/ MECH. DWGS.)

MILLWORK EXISTING MILLWORK/SHELVES TO REMAIN

SPECIFIC DEMOLITION NOTES 3/D2.1

- 1.1 REMOVE AND DISPOSE OF EXISTING CEILING SYSTEM AND ALL OF ITS MECHANICAL AND ELECTRICAL COMPONENTS. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE WITH THE WATERLOO DISTRICT SCHOOL BOARD FOR STORAGE AND TRANSPORTATION OF EQUIPMENT TO BE RELOCATED/REINSTALL
- 1.2 REMOVE AND DISPOSE OF EXISTING PODIUM AND EXISTING PLUMBING CONNECTIONS AND ALL SERVICE INSTALLATION. CAP AND SEAL PIPES AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DWGS.
- 1.3 REMOVE EX. CHALK BD'S, SMART BD'S, TACK BD'S, WHITE BD'S TO BE TURNED OVER TO OWNER UNLESS BEING RE-USED. COORDINATE WITH THE SCHOOL BOARD FOR RELOCATION, TRANSPORTATION AND STORAGE AS PART OF BASE BID TENDER PRICE.
- 1.4 REMOVE EX. FIN. FLRNG., INCLUDING BUT NOT LIMITED TO FIN. FLRNG., UNDERLAYMENTS, ADHESIVES, BASE, FASTENERS, TO CONC. SUBFLR. MAKE ALL DISTURBED SURFACES LEVEL AND SMOOTH TO ACCEPT NEW FINISH. ENSURE ALL NEW & EX. VARIATIONS IN FLR. HEIGHT WITHIN THE SCOPE OF WORK. HOWEVER MINOR ARE FEATHERED & LEVELED TO PROVIDE A SLOPE OF NOT MORE THAN 10MM/3000MM.
- 1.5 REMOVE ALL ELEMENTS HANGING FROM WALL. PATCH AND REPAIR WALLS. PREP TO RECEIVE NEW WALL PAINTING.
- 1.6 REMOVE EXISTING MILLWORK AGAINST THIS WALL. PATCH AND REPAIR WALL TO RECEIVE NEW FINISH AND MILLWORK

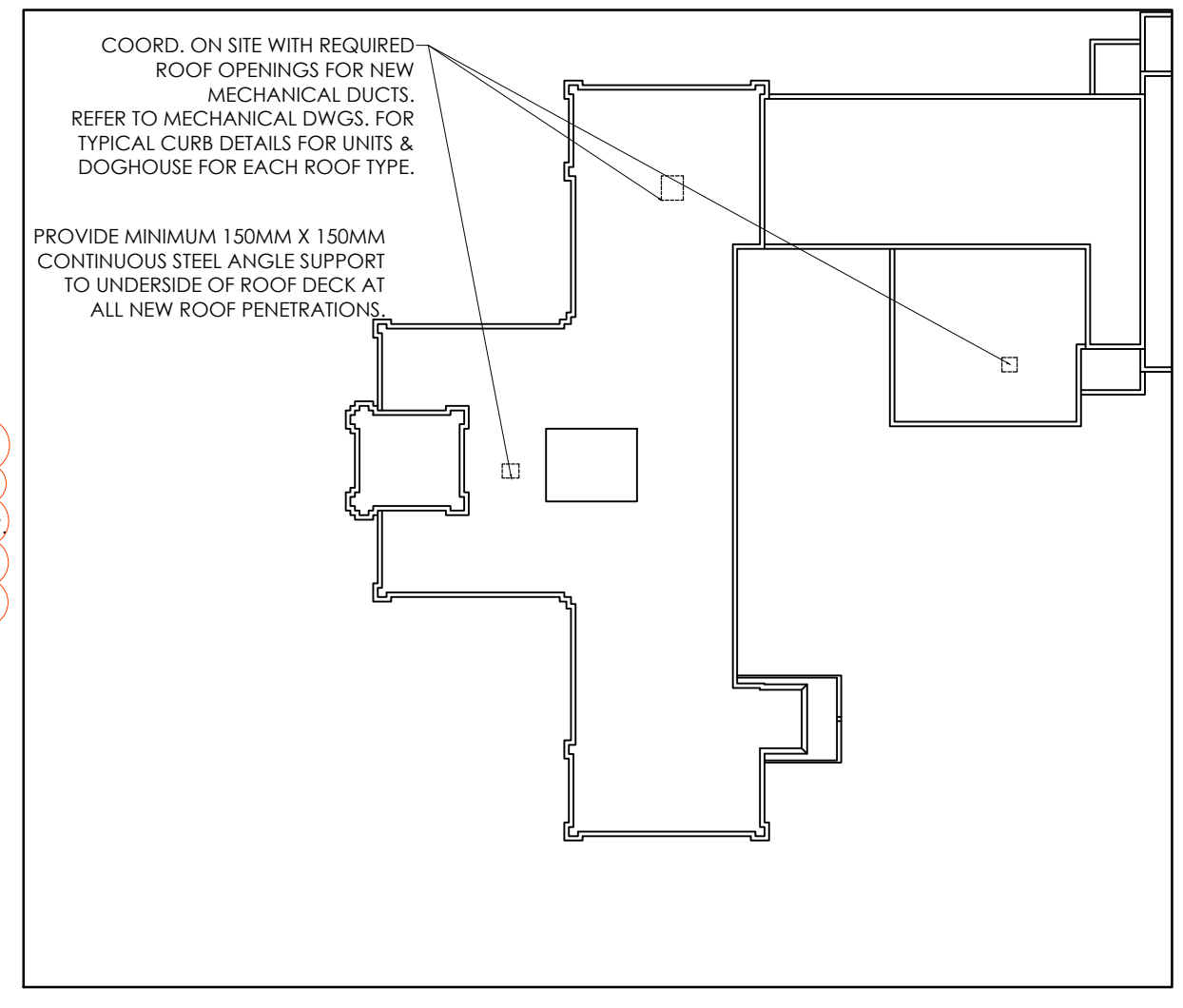
MECH. / ELEC. NOTES
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REMOVE EX. MECH. (DUCTWORK, AIR HANDLING UNITS, FANS, SUPPLYS, DIFFUSERS, ELEC. WIRING, IT CONDUIT, DATA, ALARMS, PLUMBING FIXTURES ETC. (COORD. W/ MECH. DWGS.)



PROVIDE NEW OPENING FOR MECHANICAL LOUVER ABOVE EXISTING WINDOW. REFER TO MECH. DWGS. FOR SIZE.

SPECIFIC DEMOLITION NOTES 4/D2.1

- 1.1 REMOVE AND DISPOSE OF EXISTING CEILING SYSTEM AND ALL OF ITS MECHANICAL AND ELECTRICAL COMPONENTS. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE WITH THE WATERLOO DISTRICT SCHOOL BOARD FOR STORAGE AND TRANSPORTATION OF EQUIPMENT TO BE RELOCATED/REINSTALL
 - 1.2 PATCH AND REPAIR WALLS. PREP TO RECEIVE NEW WALL PAINTING.
- MECH. / ELEC. NOTES**
REMOVE EX. ELEC. LIGHT FIXTURES (WIRING BACK TO POINT OF ORIGIN / MAIN PANEL). (COORD. W/ ELEC. DWG.S)
REMOVE EX. MECH. (DUCTWORK, AIR HANDLING UNITS, FANS, SUPPLYS, DIFFUSERS, ELEC. WIRING, IT CONDUIT, DATA, ALARMS, PLUMBING FIXTURES ETC. (COORD. W/ MECH. DWGS.)



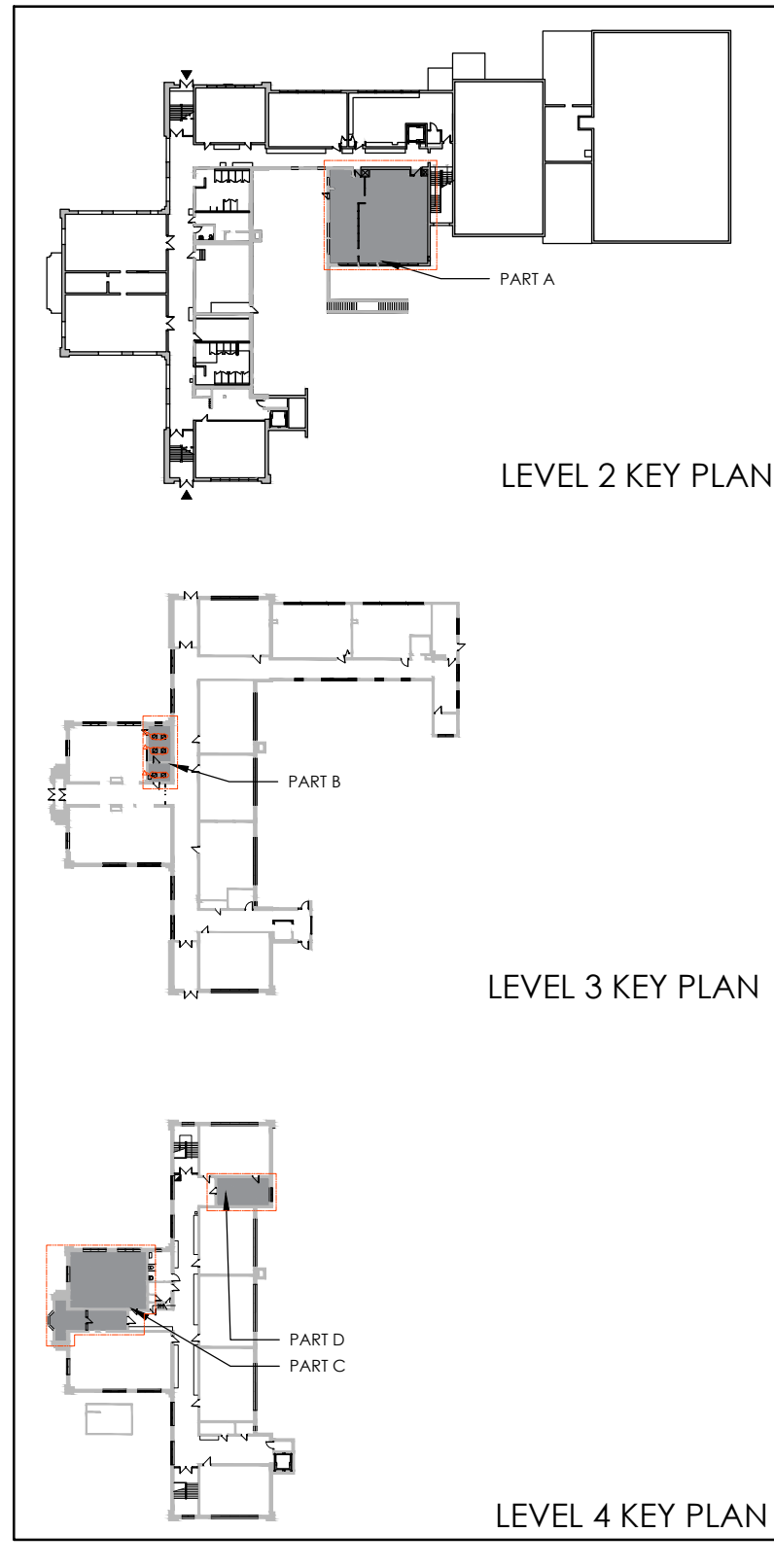
5 AD2.1 ROOF DEMO PLAN

GENERAL DEMOLITION NOTES

- CONTRACTOR TO VERIFY ALL CONDITIONS ON SITE TO DETERMINE COMPLETE SCOPE OF WORK (COORD. W/ EX. ALL OTHER DWG.S)
- CONTRACTOR TO SECURE THE WORK SITE DURING DEMO & CONST. & HOARD OFF THE WORK AREA TO PREVENT ACCESS FROM ANYONE NOT ENGAGED IN THE WORK OF THIS DEMOLITION / CONST. SCOPE
- CONTRACTOR TO PROTECT ALL EXPOSED PORTIONS OF THE EX. BLDG. TO REMAIN / REPLACE & TO REPAIR ANY DAMAGE CAUSED BY INSUFFICIENT PROTECTION
- CONTRACTOR TO HOARD OFF DEMO. AREA TO PREVENT ACCESS FROM ANYONE NOT ENGAGED IN THE WORK OF THIS DEMOLITION SCOPE
- CONTRACTOR TO HOARD OFF ALL EXPOSED DOORWAYS AND CORRIDOR OPENINGS INTO THE REMAINING AREAS OF THE EXISTING BUILDING. HOARDING TO PROVIDE WEATHER-TIGHT CLOSURE TO PREVENT RAIN, SNOW OR ANY OTHER SOURCE OF MOISTURE INTO THE EXISTING BUILDING. CONTRACTOR TO REPLACE AND/OR REPAIR ANY DAMAGE CAUSED BY INSUFFICIENT PROTECTION
- CONTRACTOR TO PROTECT ALL EXPOSED PORTIONS OF THE EXISTING BUILDING WHICH WERE NOT PREVIOUSLY EXPOSED TO WEATHER FROM WEATHER AND MOISTURE. CONTRACTOR TO REPLACE AND/OR REPAIR ANY DAMAGE CAUSED BY INSUFFICIENT PROTECTION
- MAKE GOOD ALL DISTURBED SURFACES & ADJACENT SYSTEMS THAT ARE DAMAGED AND THAT ARE TO REMAIN. PROVIDE CLEAN TRANSITIONS TYPICAL.
- MAINTAIN SAFE PUBLIC ACCESS TO THE BLDG. DURING OPERATING HOURS & MAINTAIN FULL EMERGENCY ACCESS & EXITING @ ALL TIMES TO & FROM THE BLDG. & PROVIDE PROTECTION TO THE PUBLIC FROM FALLING DEBRIS & CONST. TRAFFIC & POST SIGNAGE AS REQ. D.
- CONTRACTOR TO OBTAIN LOCATES FOR ALL UNDERGROUND & O/H SERVICES ON BOTH EXT. & INT. OF PROPERTY / BOUNDARY / SCOPE OF WORK LINES PRIOR TO ANY DIGGING / EXCAVATION / WORK (COORD. W/ SITE SERVICE & EX. SITE SURVEY DWG.S)
- CONTRACTOR TO INCLUDE REMOVAL AND TERMINATION OF ANY EX. SERVICES CONNECTED TO THE EXISTING BUILDING / LOCATED IN SCOPE OF WORK TO BE DEMOLISHED / OR RELOCATED INCLUDING ANY NECESSARY PERMITS OR UTILITY FEES.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL & DISPOSAL OF ALL MATERIALS THAT ARE DEMOLISHED & THAT ARE NOT INDICATED FOR RE-USE / RECLAIMING / SALVAGING OR AS OTHERWISE INDICATED BY THE OWNER. ALL COSTS ARE PART OF BASE BID SUBMISSION IN ACCORDANCE W/ BEST CONSTRUCTION PRACTICE, OBC, MUNICIPAL & PROVINCIAL LEGISLATURE REGARDING DEMOLITION & DISPOSAL METHODS (RECYCLE ALL MATERIALS WHERE ABLE) & ANY LEED REQUIREMENTS ALSO SPECIFIED UNDER THIS DOCUMENT.

ALL DEMOLITION WORK REFER TO MARGARET AVENUE PUBLIC SCHOOL 2021 ASBESTOS AUDIT UPDATE REPORT PREPARED BY MTE CONSULTANTS. REVISIONS: DECEMBER 13, 2021 - JULY 16, 2021
MTE FILE NO.: C34632-921

SALVAGING ALL SALVAGED / REUSED MATERIALS ARE TO BE REMOVED W/ GREAT CARE. KEPT IN DRY PLACE. PLACED ON SKIDS, COVERED & PROTECTED FROM DAMAGE FOR FUTURE USE & IMPLEMENTATION. TAG / NOTE WHERE MATERIALS ARE ORIGINAL FROM IN THE BUILDING. LOCATION TO BE DETERMINED ON SITE W/ OWNER, TYP.



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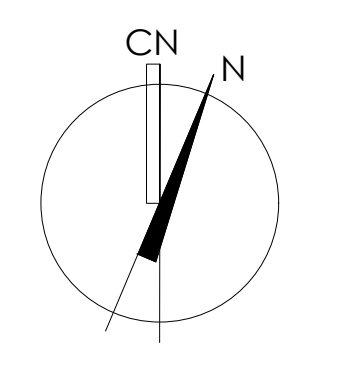
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VG ARCHITECTS
THE VENTIN GROUP LTD



D2.1

April 29, 2024

Client: +VG The Ventin Group Architects Ltd.
50 Dalhousie Street
Brantford, ON N3T 2H8

RE: Margaret Ave. Public School Renovations
Kitchener, ON

Job #: 23282

Attn: Ariosto Montisano

ADDENDUM 01

MECHANICAL

Item 1

- 1.0 Reference to Drawing M1.1
- .1 In unit ventilator schedule, revise remark "250mm insulated rear pipe chase color-matched top extension for the cabinet" to "250mm insulated rear and side pipe chase color-matched top extension for the cabinet".

Item 2

- 2.0 Reference Drawing M2.1 and Attached sketch AD01-M01
- .1 In second floor ductwork renovation part plan, revise ductwork as indicated on attached sketch AD01-M01.
 - .2 Provide fire flaps on diffusers and grilles as indicated on attached sketch AD01-M01.

Item 3

- 3.0 Reference Drawing M2.5
- .1 In fourth floor ductwork renovation plan, revise note in seminar room from "provide new 400 x 200 thin line intake louver in blank window panel" to "provide new 400 x 200 thin line intake louver".

Item 4

- 4.0 Reference Drawing M5.1 and Attached Sketch AD01-M02
- .1 On drawing M5.1, add details indicated on attached sketch AD01-M02.

Item 5

- 5.0 Reference Specification Section 25 40 11 'Building Control System'
- .1 Replace BAS schematic with the attached.

ELECTRICAL

Item 1

- 1.0 No electrical content.

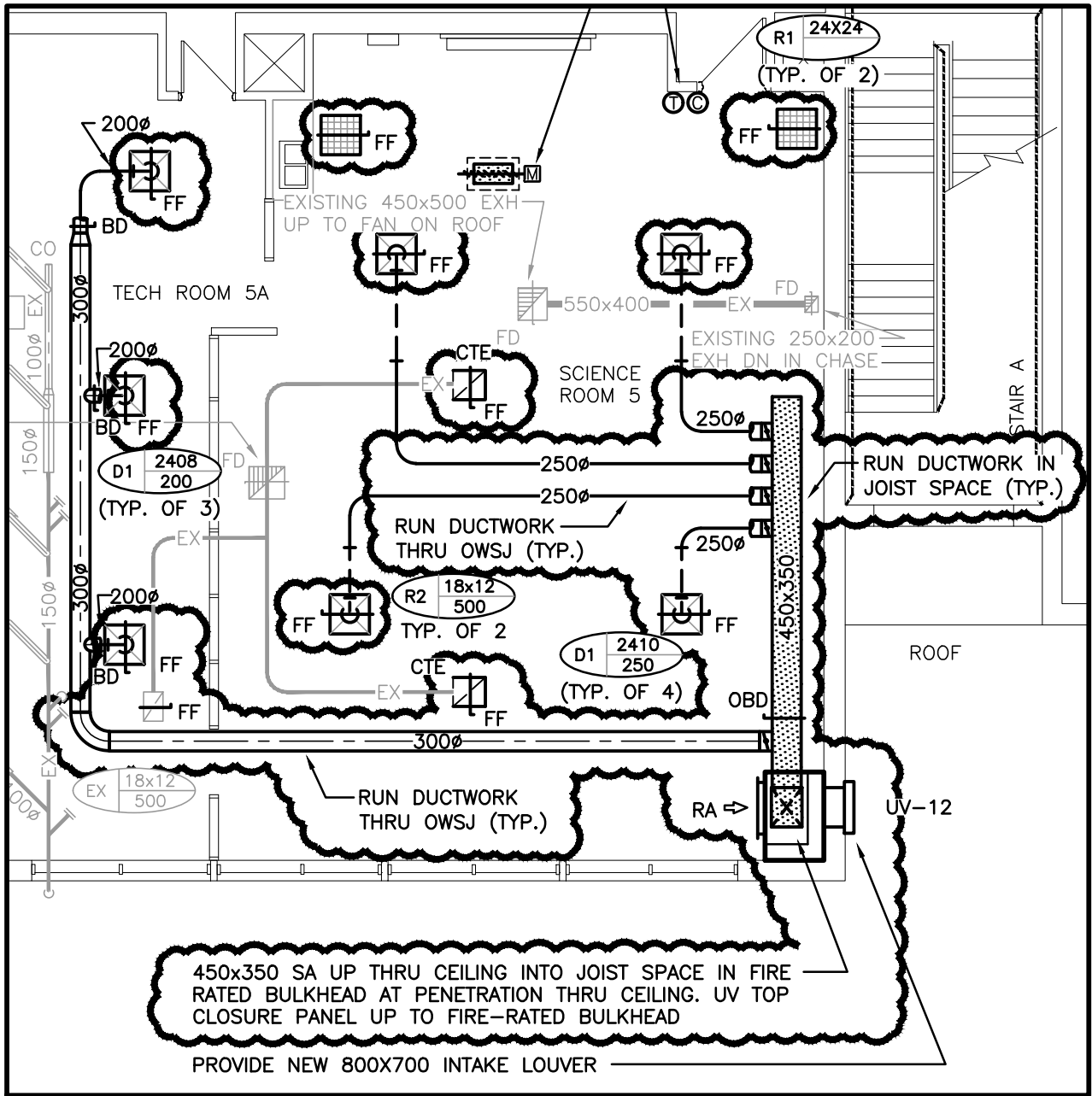
Niccole Tudose

Niccole Tudose (she/her)

Senior Mechanical Designer

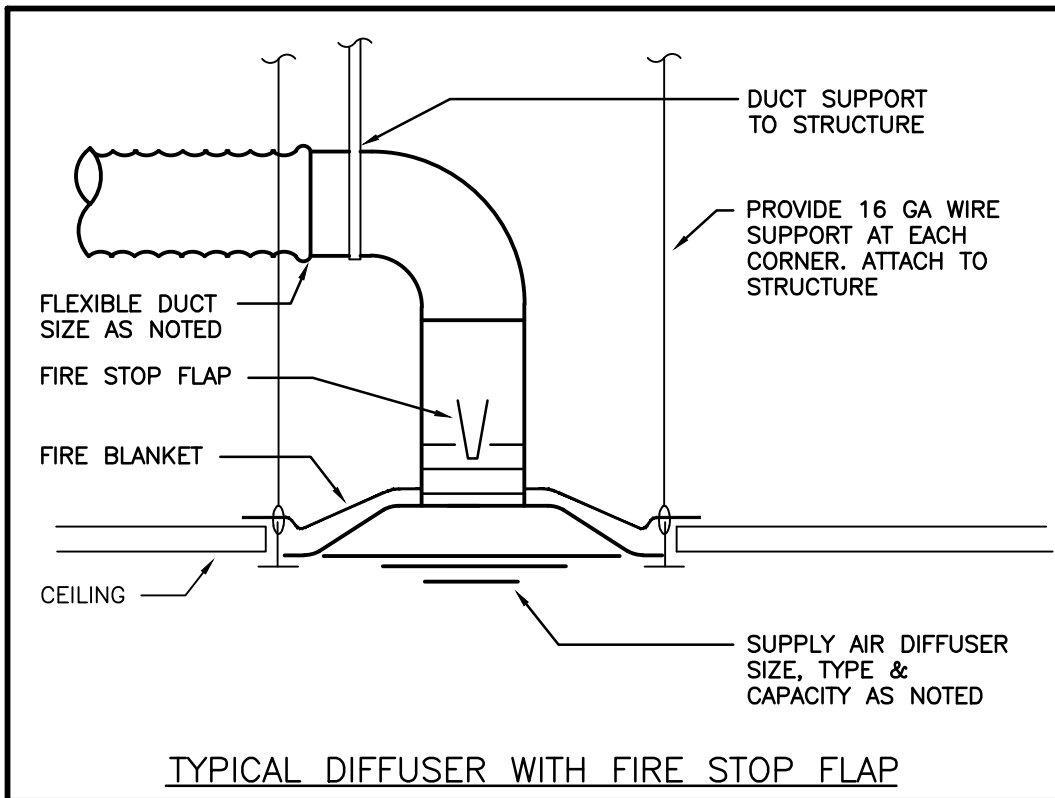
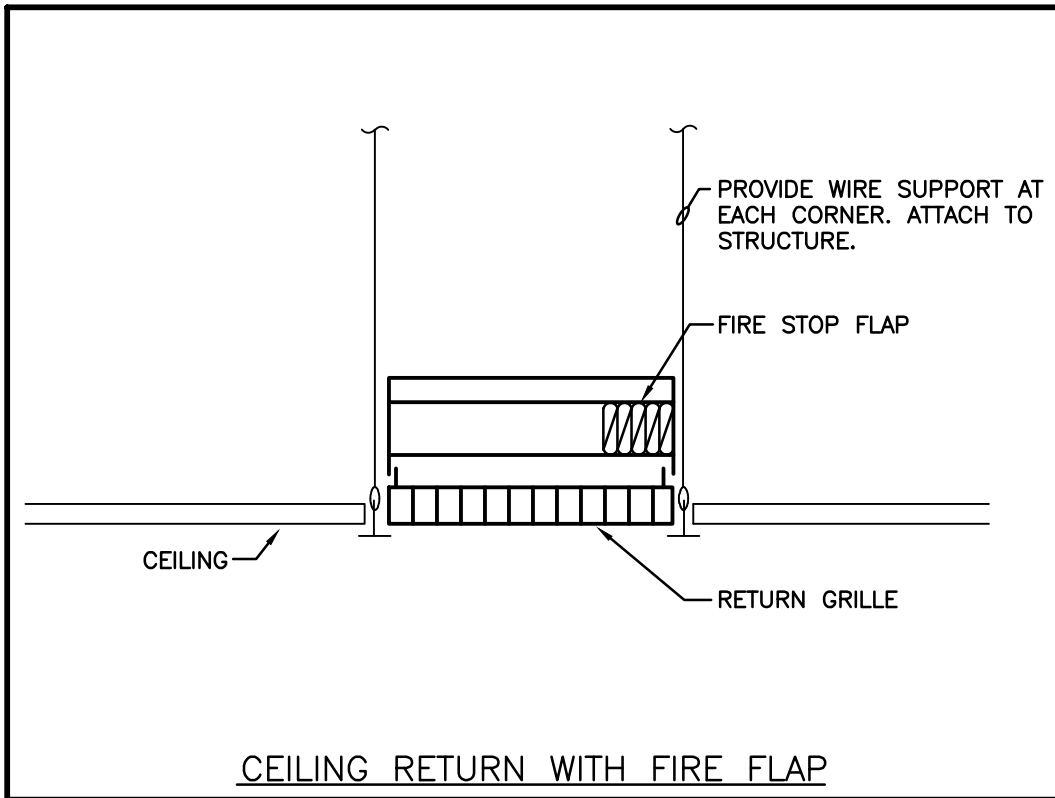
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nt/ma





SECOND FLOOR PART PLAN – RENOVATION– DUCTWORK

SCALE: 1:100



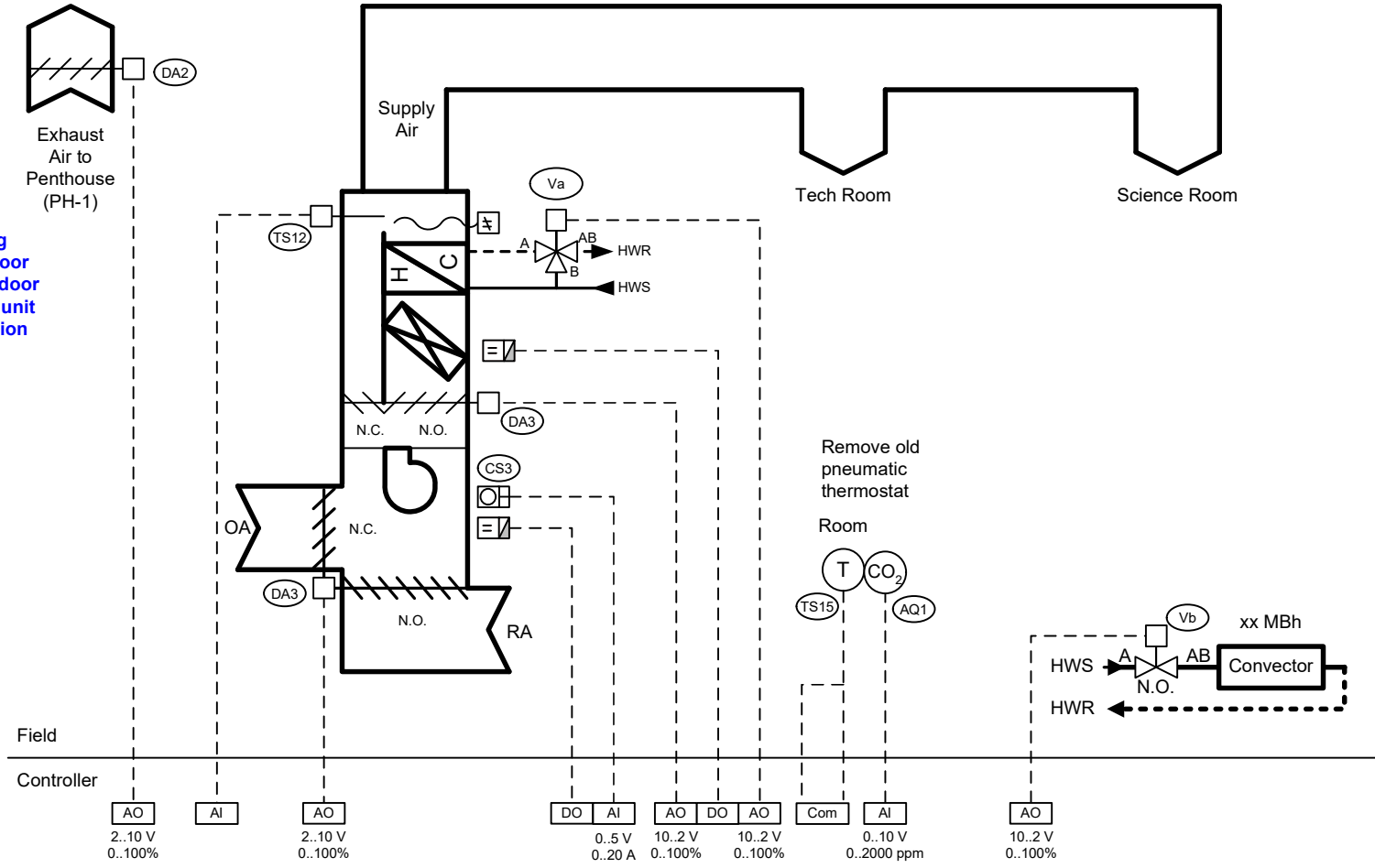
Notes:

1) FZ1: Freezestat is factory wired to shut down fan and close outside air damper.

UNIT VENT

Engineered Air RUV-1600

Note: Wiring between indoor unit and outdoor condensing unit by refrigeration contractor.



1 System As Shown

Unit	Serves	SA (cfm)	Mounting	Heating (gpm)	Htg Vlv (Va)	Rad (MBh)	Rad Vlv (Vb)	Notes
UV-12	Science Room 5	1600	Floor	6.6	V1		V2	
	Tech Room 5A						V3	

Job #:	Owner:	Drawn By:	Title: UV-12 Control Schematic	1
	Job Name: Margaret Ave Public School 2024 Renovation			

SEQUENCE OF OPERATION

Unoccupied Mode

The fan is off, the heating valve is open, the face & bypass damper is in the bypass position. The DX cooling is off, the mixing dampers are in the 0% outside air position and the exhaust damper is closed. The fan cycles with full heating to maintain the unoccupied heating setpoint (initially 17.5°C). If the pushbutton on the room sensor is pressed, the system will revert to occupied mode for a period of 2 hours.

Occupied Mode

An optimized start routine for heating advances the system start time when morning warm-up is required. The room temperature sensor modulates the mixing dampers in sequence with DX cooling to maintain the cooling setpoint, and modulates the heating valve, face & bypass dampers and perimeter heating valve in sequence to maintain the heating setpoint. The setpoint can be adjusted +/-2°C at the room sensor. Fan status is monitored by a current sensor.

Exhaust Damper Operation

The exhaust dampers will be modulated based on the outdoor air position of the unit vent.

<u>OA Position</u>	<u>EA Position</u>
30% OA	0% EA
100% OA	100% EA

Limits and Safeties

- 1) If the outside air temperature exceeds the free cooling setpoint based on outdoor temperature and humidity, the mixing dampers return to minimum position.
- 2) Mixed air damper minimum position control is provided during occupied periods (initially 10% OA).
- 3) Air quality sensor AQ1 increases the amount of minimum outside air as the space CO₂ reading increases from 1000 ppm to 1200 ppm.
- 4) The fan must be running before the mixing dampers and DX cooling will operate.
- 5) The supply air temperature sensor acts as a low limit to ensure temperature does not fall below setpoint (initially 16°C, reset to 13°C on a call for free cooling).
- 6) A software freezestat on the supply air temperature shuts the fan down and closes the outdoor air damper when the supply air temperature is below 3°C for 30 seconds (resets at 6°C with 5 minute delay before restart).
- 7) The heating valve opens as the outside air temperature drops from 3°C to -3°C.
- 8) If the hard-wired freezestat trips, the fan shuts down, outside air damper closes and heating valve opens.
- 9) DX cooling is disabled when the outside air temperature falls below the global mechanical cooling disable setpoint (initially 14°C).
- 10) DX cooling has a minimum off time of 5 minutes.
- 11) DX cooling has a supply air temperature low limit (6/12°C).
- 12) The face & bypass damper is in the face position when DX cooling is operating.

Alarms

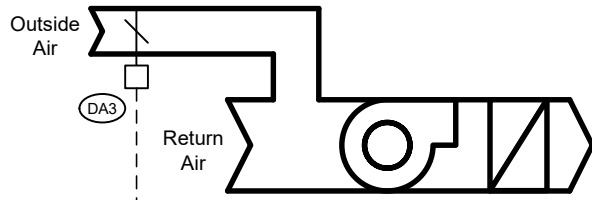
An alarm is indicated at the operator's terminal if any of the following occur:

- 1) Fan status does not match fan start/stop signal.
- 2) Room temperature too high (38/36°C) or too low (14/15°C).
- 3) Supply air temperature too high (65/60°C) or too low (5/7°C).
- 4) Room CO₂ level too high (1700/1600 ppm) or too low (250/300 ppm).
- 5) Software freezestat tripped.
- 6) Fan runtime exceeded weekly runtime setpoint.

	Job #: Job Name: Margaret Ave Public School 2024 Renovation	Owner: Waterloo Region District School Board	Drawn By: Revision Date: April 23, 2024	Title: UV-12 Control Sequence	2
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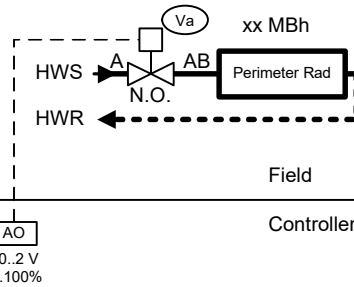
DUCTLESS SPLIT HEAT PUMP UNIT

LG - ARNU123TNA4



Note: Wiring between indoor unit and outdoor condensing unit by refrigeration contractor.

BACnet gateways to be provided by the mechanical contractor.



5 Systems as Shown					
Room	Unit	DX (tons)	Rad (MBh)	Rad (Va)	Notes
Library Sem. Rm. A	DS-2	1	-	-	
Library Sem. Rm. B	DS-3	1	-	-	
Rm. 21/22 Sem. Rm. A	DS-4	1	13.1	V4	
Rm. 21/22 Sem. Rm. B	DS-5	1	18.8	V5	
Rm. 16 Sem Rm	DS-6	1	-	-	

SEQUENCE OF OPERATION

Unoccupied Mode

The fan, heating and DX cooling is off and the outdoor air dampers are closed. The fan will cycle to maintain the unoccupied heating setpoint. If the pushbutton on the room sensor is pressed, the system will switch to the occupied mode for a period of 2 hours (adjustable).

Occupied Mode

The fan runs continuously. Minimum outside air is enabled according to the global ventilation time schedule. The room temperature sensor modulates the rad valve and and ductless split in sequence to maintain the heating setpoint. When cooling is enabled, the ductless split is cycled on in cooling mode to maintain the cooling setpoint which is a minimum of 2°C higher than the heating setpoint and is 23.5°C or higher. Cooling is disabled when the outside air temperature is below the global mechanical cooling disable setpoint (initially 12/14°C).

Limits & Safeties

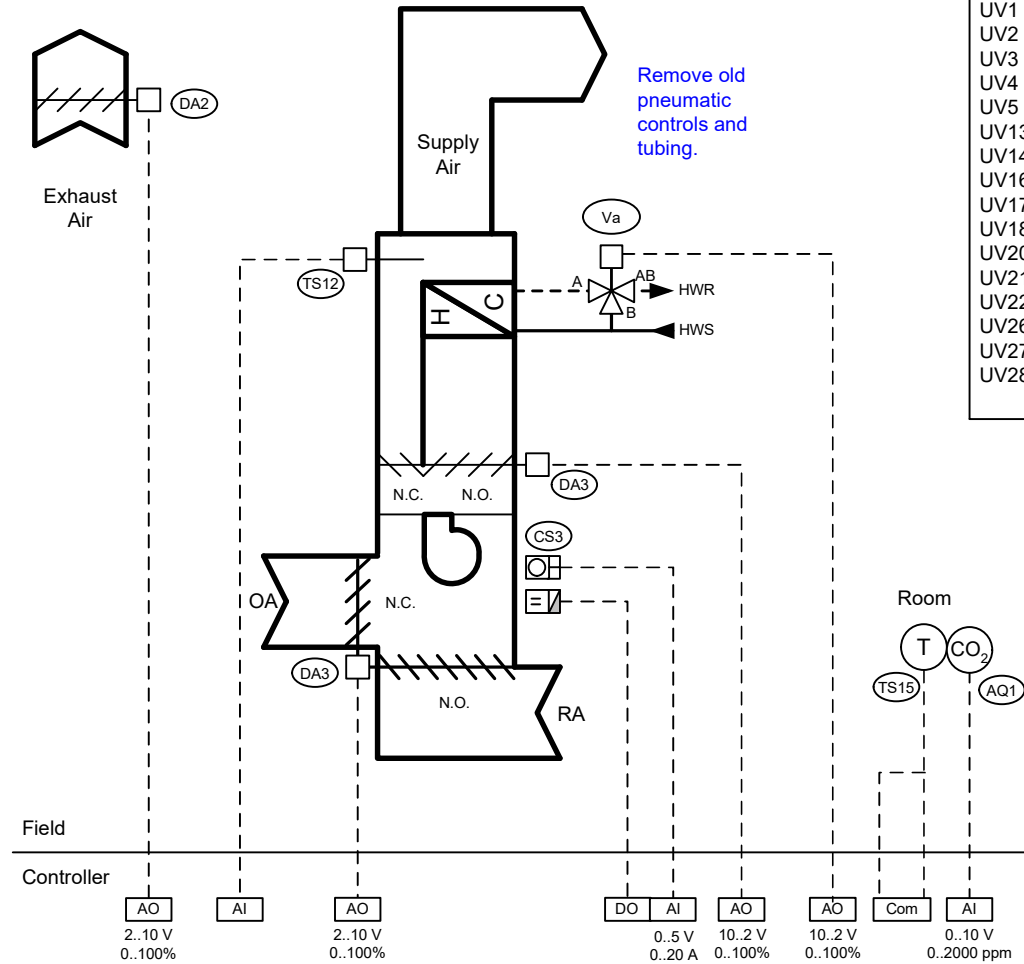
1) DX cooling has a minimum off-time of 5 minutes.

Alarms

An alarm is generated at the BAS if the room temperature is too high (36/34°C) or too low (14/15°C).

	Job #:	Owner:	Drawn By:	Title: DS2 - DS6 Sequence	3
	Job Name: Margaret Ave Public School 2024 Renovation	Waterloo Region District School Board	Revision Date: April 23, 2024		

EXISTING PNEUMATIC UNIT VENTS



Typical of 16 Units	
Unit	Room
UV1	Classroom 2
UV2	Classroom 3
UV3	Lunchroom A
UV4	Lunchroom B
UV5	Classroom 6
UV13	Classroom 7
UV14	Classroom 8
UV16	Classroom 10
UV17	Classroom 11
UV18	Classroom 12
UV20	Classroom 22
UV21	Classroom 16
UV22	Classroom 17
UV26	Classroom 18
UV27	Classroom 19
UV28	Classroom 20

Job #:	Owner:	Drawn By:	Title: Unit Vents 1-5, 13, 14, 16-18, 20-22, 26-28 Control Schematic	4
	Job Name: Margaret Ave Public School 2024 Renovation			

SEQUENCE OF OPERATION

Unoccupied Mode

The fan is off, the heating valve is open, the face & bypass damper is in the bypass position. The mixing dampers are in the 0% outside air position and the exhaust damper is closed. The fan cycles with full heating to maintain the unoccupied heating setpoint (initially 17.5°C). If the pushbutton on the room sensor is pressed, the system will revert to occupied mode for a period of 2 hours.

Occupied Mode

An optimized start routine for heating advances the system start time when morning warm-up is required. The room temperature sensor modulates the mixing dampers for free cooling and modulates the heating valve and face & bypass dampers in sequence to maintain the heating setpoint. The setpoint can be adjusted +/-2°C at the room sensor. Fan status is monitored by a current sensor.

Exhaust Damper Operation

The exhaust dampers will be modulated based on the outdoor air position of the unit vent.

<u>OA Position</u>	<u>EA Position</u>
30% OA	0% EA
100% OA	100% EA

Limits and Safeties

- 1) If the outside air temperature exceeds the free cooling setpoint based on outdoor temperature and humidity, the mixing dampers return to minimum position.
- 2) Mixed air damper minimum position control is provided during occupied periods (initially 10% OA).
- 3) Air quality sensor AQ1 increases the amount of minimum outside air as the space CO₂ reading increases from 1000 ppm to 1200 ppm.
- 4) The fan must be running before the mixing dampers will operate.
- 5) The supply air temperature sensor acts as a low limit to ensure temperature does not fall below setpoint (initially 16°C, reset to 13°C on a call for free cooling).
- 6) A software freezestat on the supply air temperature shuts the fan down and closes the outdoor air damper when the supply air temperature is below 3°C for 30 seconds (resets at 6°C with 5 minute delay before restart).
- 7) The heating valve opens as the outside air temperature drops from 3°C to -3°C.

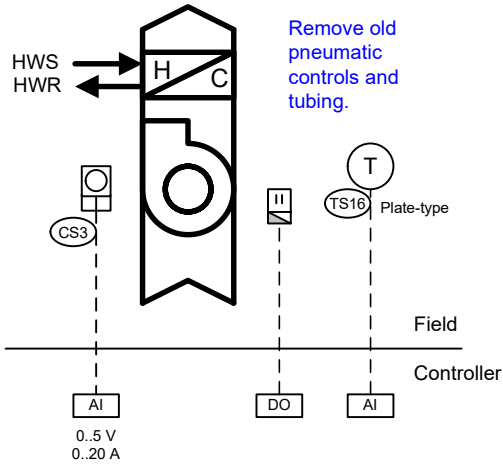
Alarms

An alarm is indicated at the operator's terminal if any of the following occur:

- 1) Fan status does not match fan start/stop signal.
- 2) Room temperature too high (38/36°C) or too low (14/15°C).
- 3) Supply air temperature too high (65/60°C) or too low (5/7°C).
- 4) Room CO₂ level too high (1700/1600 ppm) or too low (250/300 ppm).
- 5) Software freezestat tripped.
- 6) Fan runtime exceeded weekly runtime setpoint.

	Job #:	Owner: Waterloo Region District School Board	Drawn By:	Title: Unit Vents 1-5, 13, 14, 16-18, 20-22, 26-28 Sequence	5
	Job Name: Margaret Ave PS 2024 Renovations		Revision Date: April 26, 2024		

FAN FORCED HEATERS



4 Systems as Shown

Room	Controller	Notes
Stairwell A 901	TBD	
Storage 114	TBD	
Stairwell B	TBD	
Stairwell C	TBD	

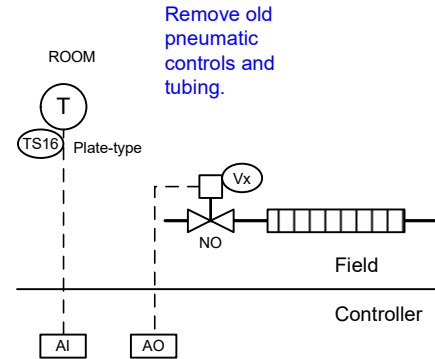
SEQUENCE OF OPERATION

The room temperature sensor cycles the fan to maintain the heating setpoint, which is reduced during unoccupied hours.

Heat is disabled if the outdoor air temperature exceeds the heating enable setpoint for the school.

An alarm is generated at the BAS if the room temperature is too cold (14/16°C) or too hot (38/36°C) or if the fan status is incorrect.

RAD VALVES



10 Systems as Shown

Room	MBh	Vx	Controller	Notes
Stage 113	TBD	TBD	TBD	
Cor. Near Rm. 6	TBD	TBD	TBD	
Cor. Near Rm. 10	TBD	TBD	TBD	
Cor. Near Rm. 12	TBD	TBD	TBD	
Cor. Near Rm. 8	TBD	TBD	TBD	
Fan Room	TBD	TBD	TBD	
Stairwell B	TBD	TBD	TBD	
Cor. Near Rm. 17	TBD	TBD	TBD	
Cor. Near Rm. 19	TBD	TBD	TBD	
Stairwell C	TBD	TBD	TBD	

SEQUENCE OF OPERATION

The room temperature sensor modulates the heating valve to maintain the heating setpoint, which is reduced during unoccupied hours.

Heat is disabled if the outdoor air temperature exceeds the heating enable setpoint for the school.

An alarm is generated at the BAS if the room temperature is too cold (14/16°C) or too hot (38/36°C).

Job #:

Job Name: Margaret Ave PS
2024 Renovations

Owner:
Waterloo Region
District School Board

Drawn By:

Revision Date:
April 26, 2024

Title: **Miscellaneous Heating**