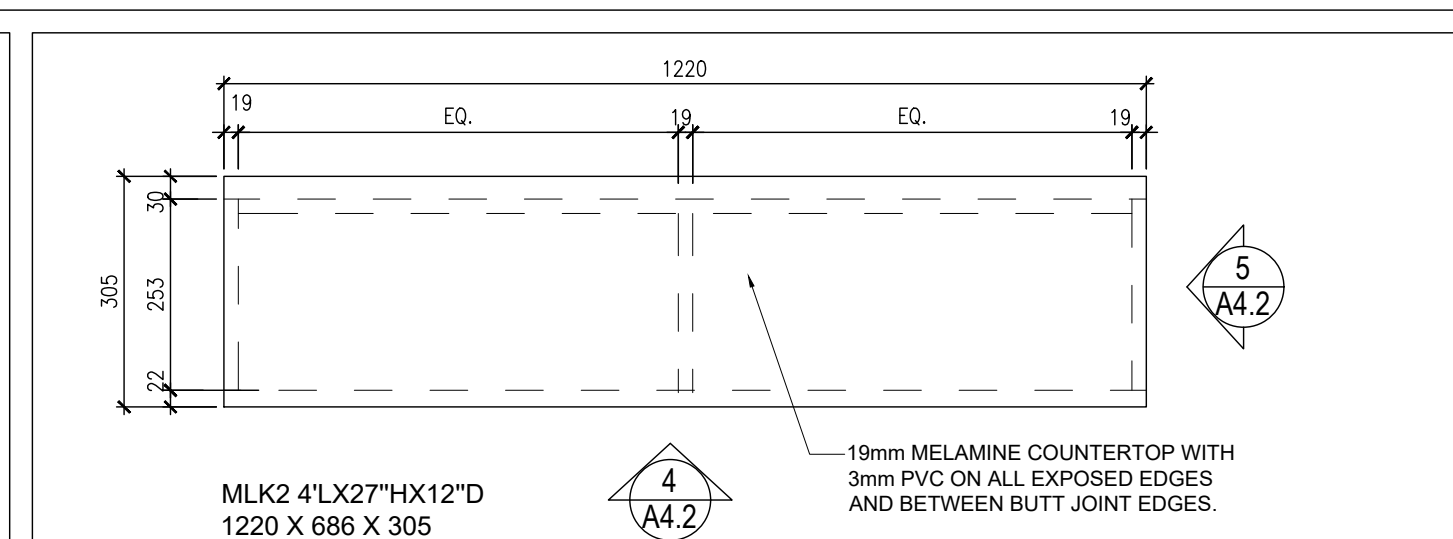
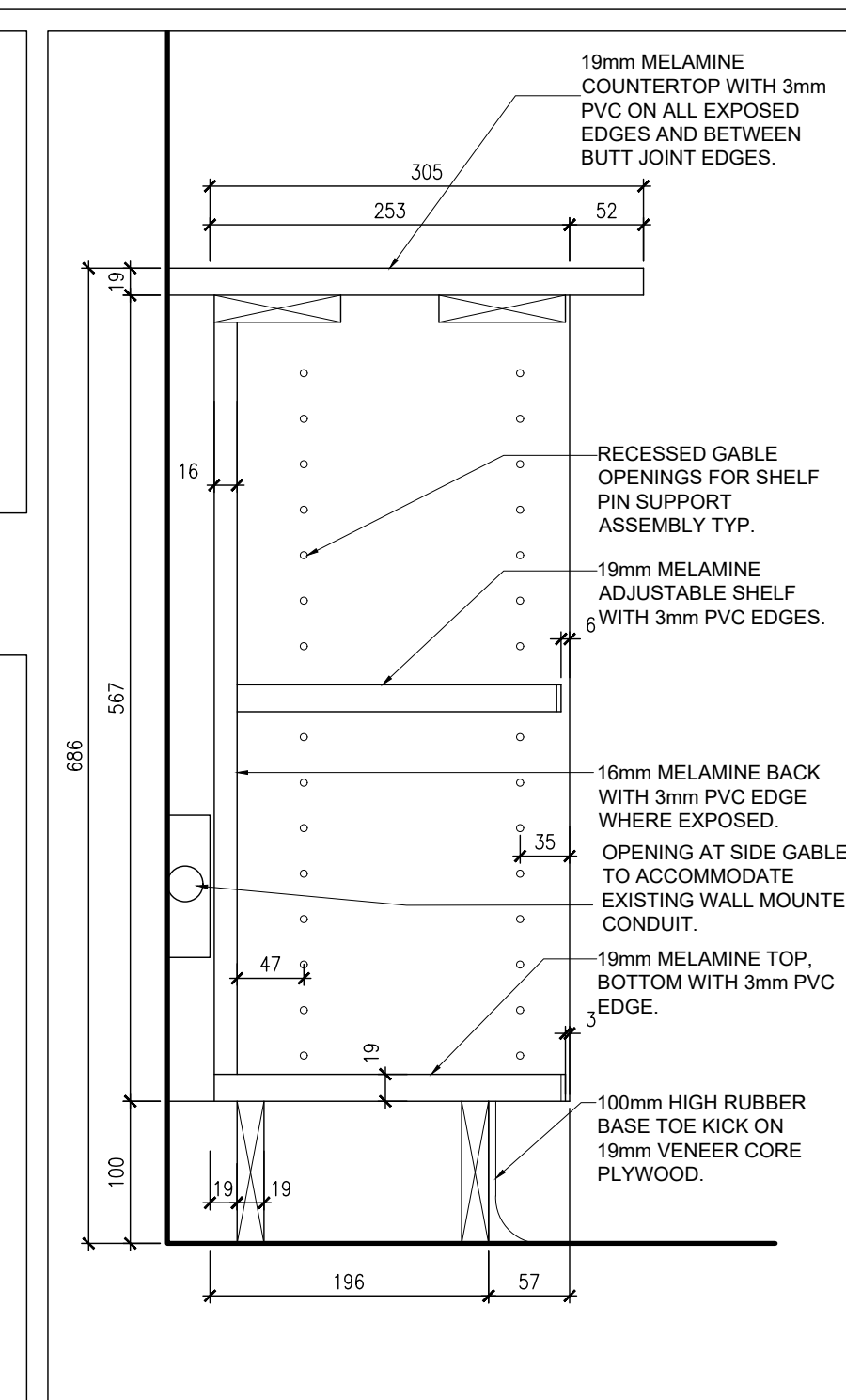


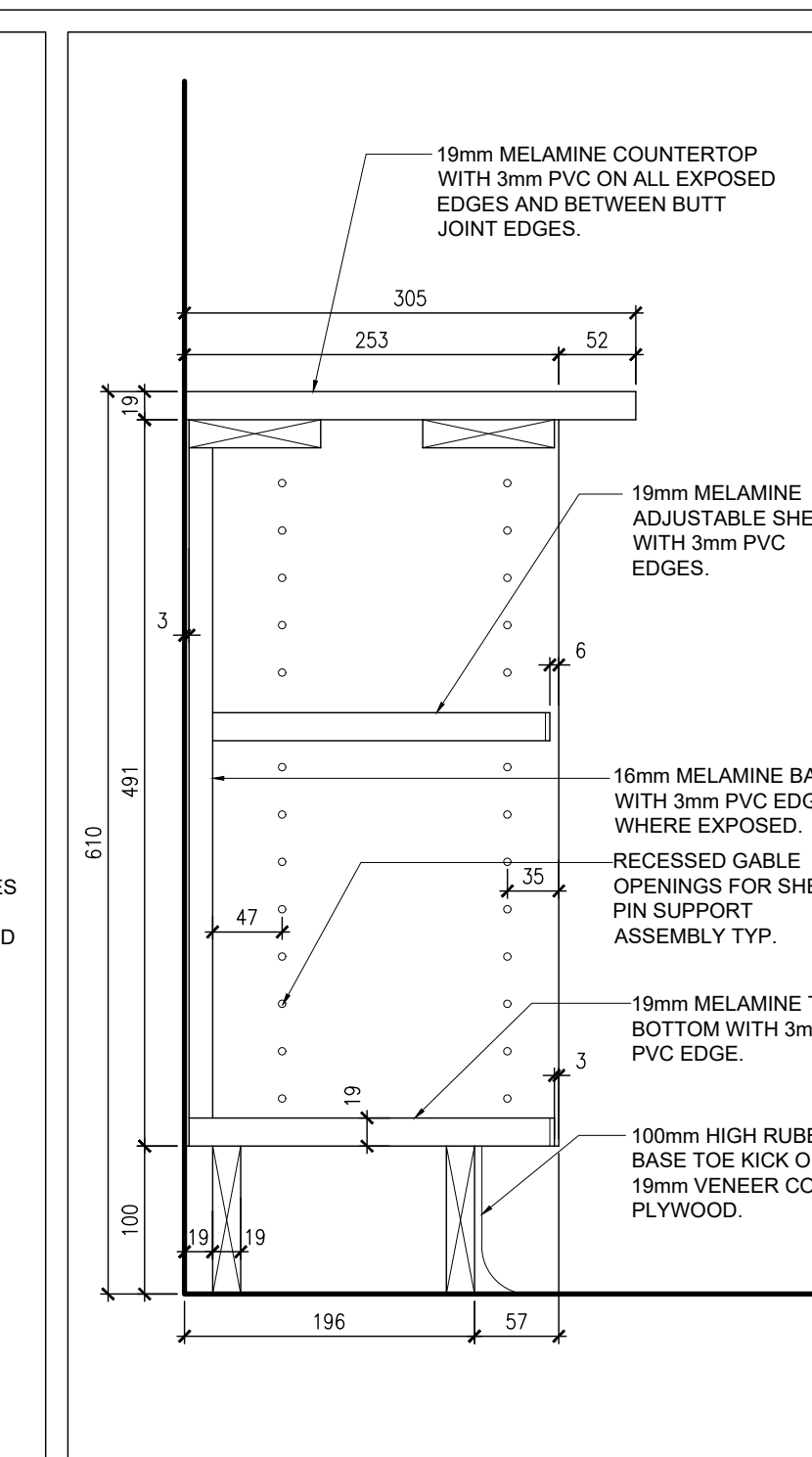
1 MILLWORK PLAN - LOW SHELF MLK1
A4.2 1:10



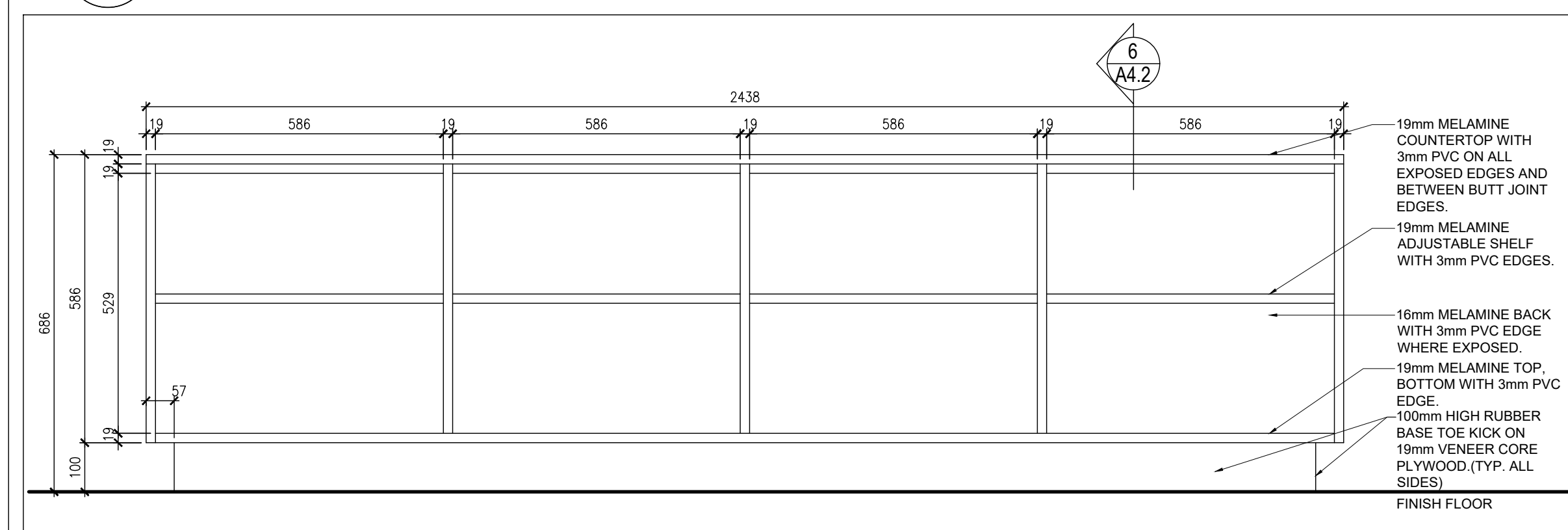
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A4.2 1:10



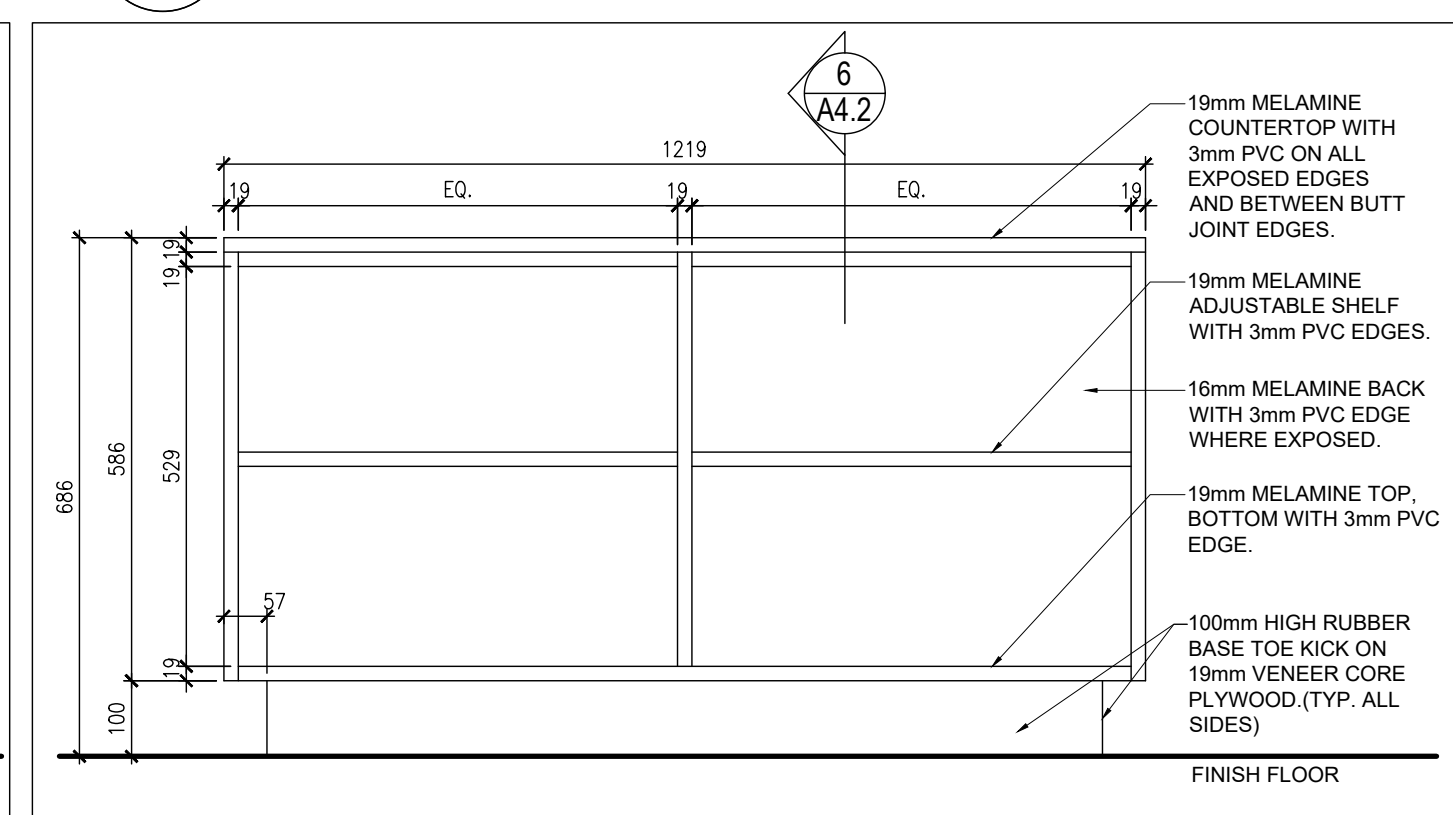
6 SECTION DETAIL @ MLK1, MLK2
A4.2 1:5



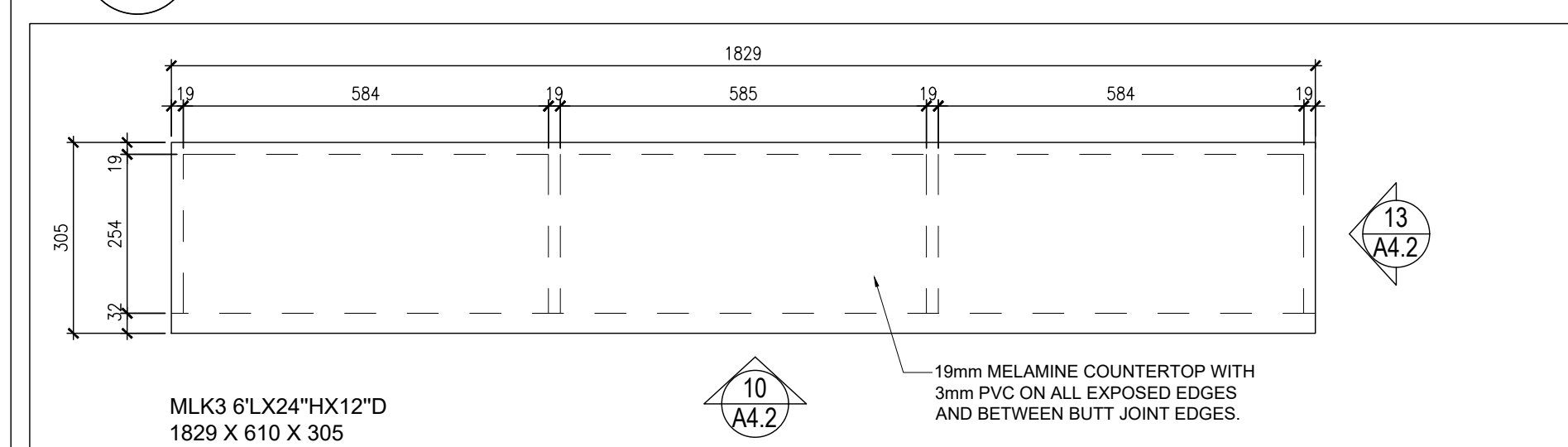
14 SECTION DETAIL @ MLK3, MLK4, MLK5
A4.2 1:5



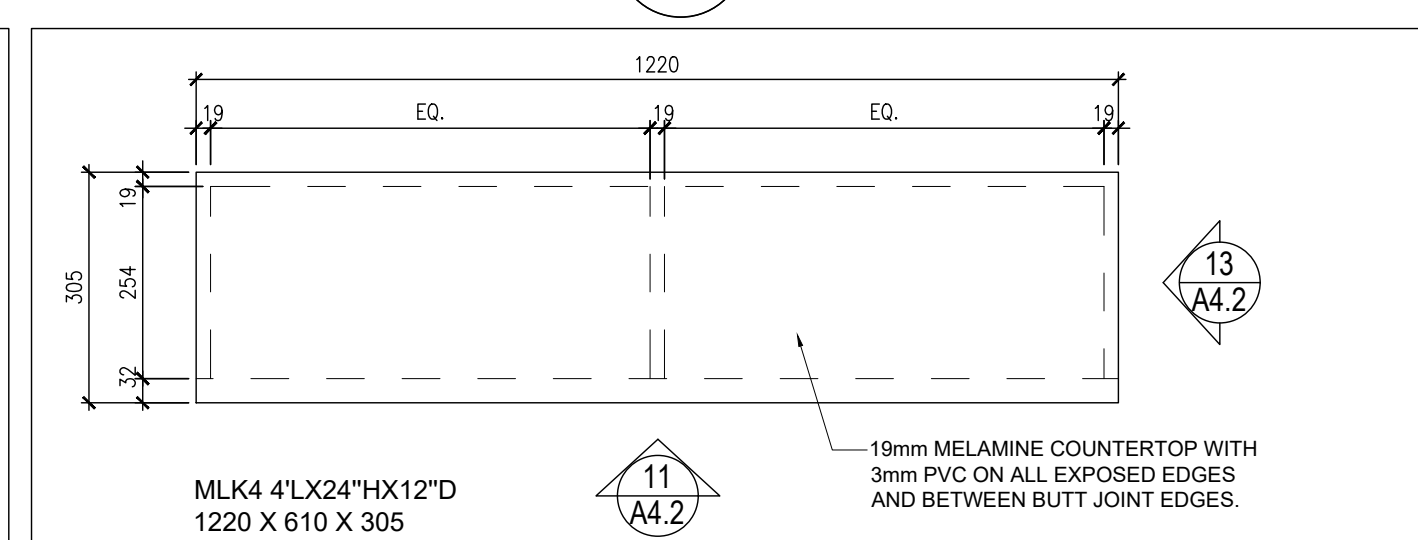
3 MILLWORK ELEVATION MLK1
A4.2 1:10



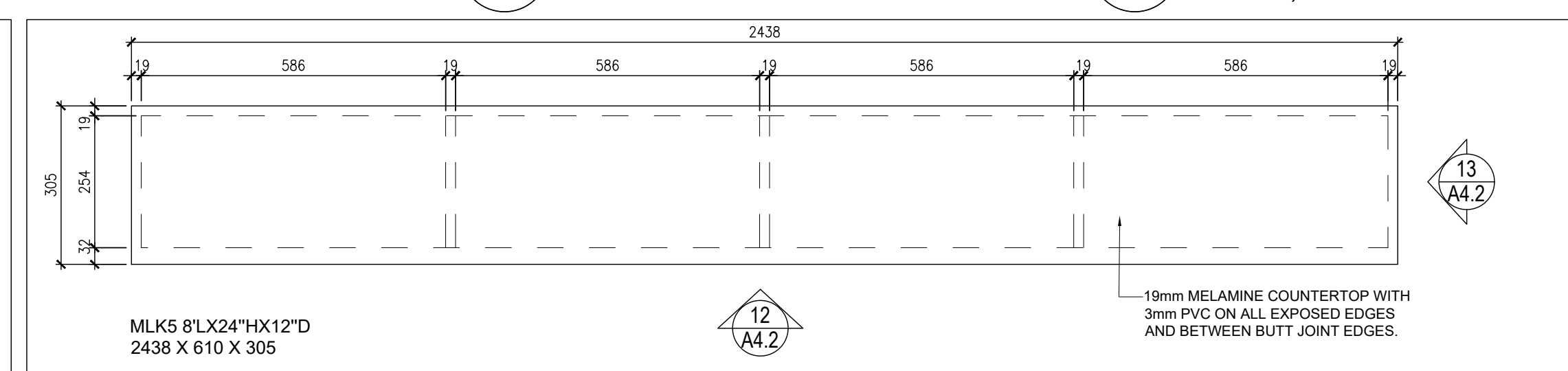
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A4.2 1:10



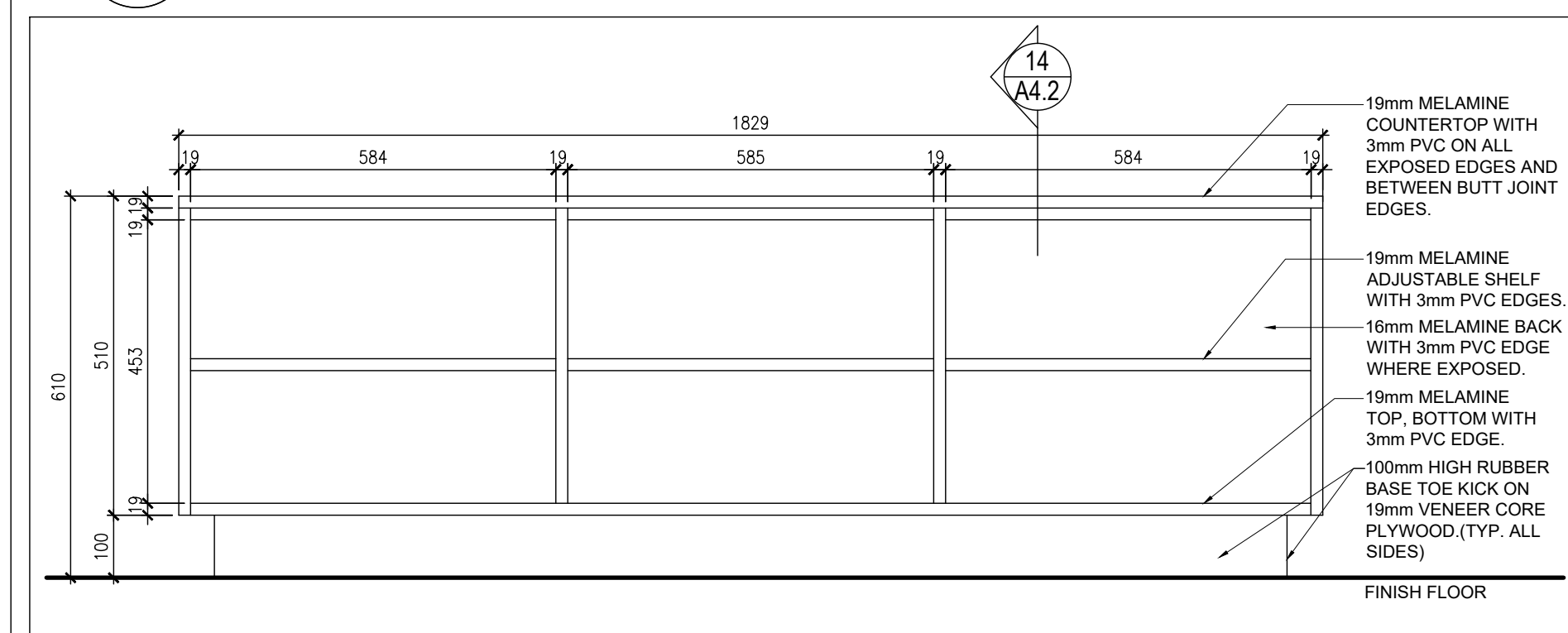
7 MILLWORK PLAN - LOW SHELF MLK3
A4.2 1:10



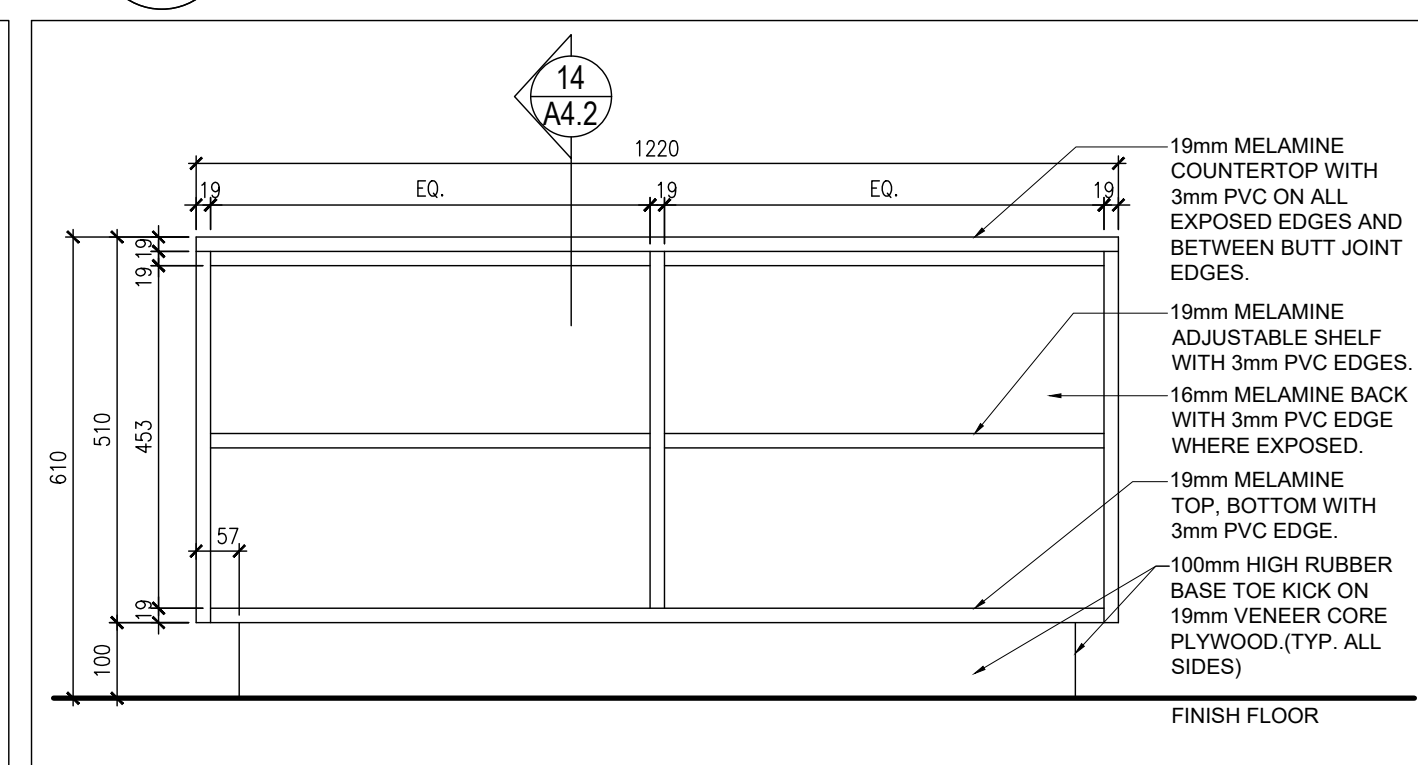
8 MILLWORK PLAN MLK4
A4.2 1:10



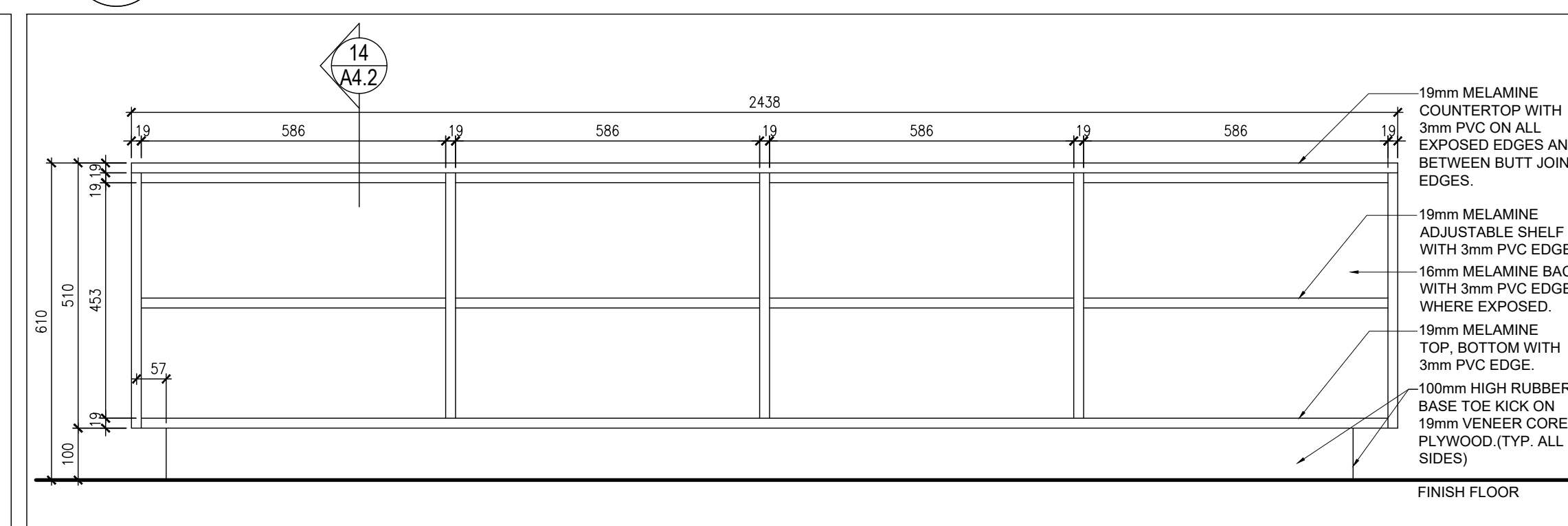
9 MILLWORK PLAN MLK5
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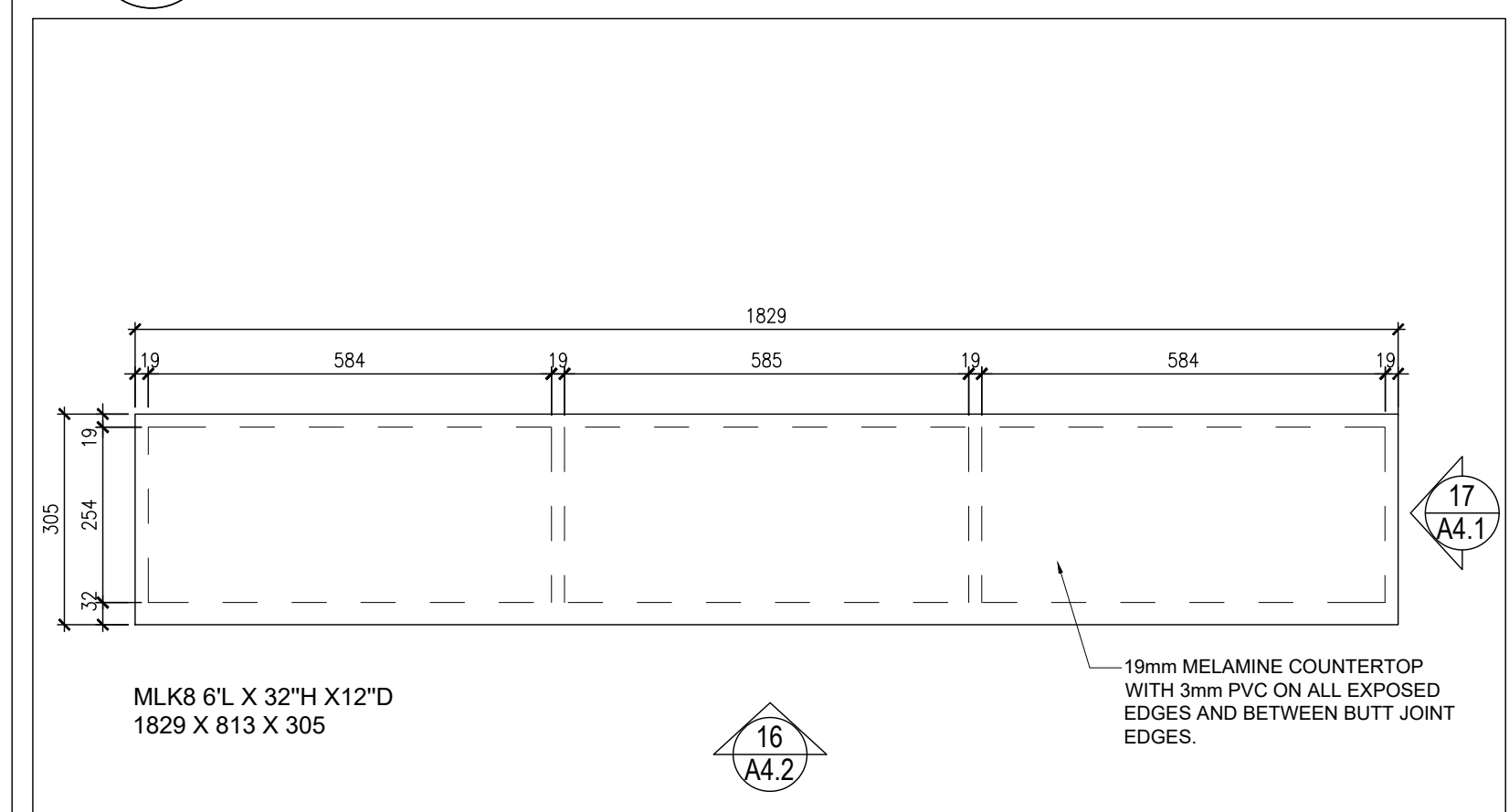
10 MILLWORK ELEVATION MLK3
A4.2 1:10



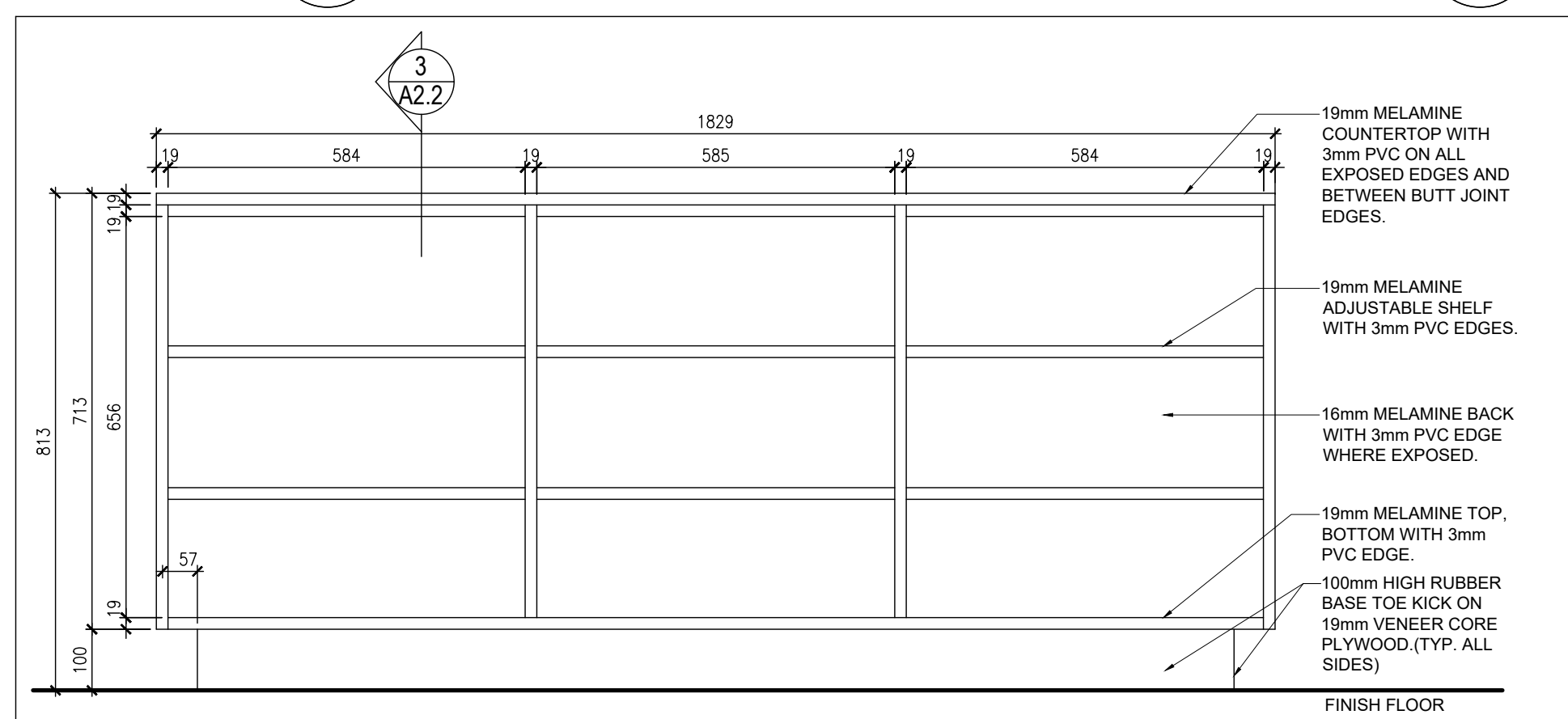
11 MILLWORK ELEVATION MLK4
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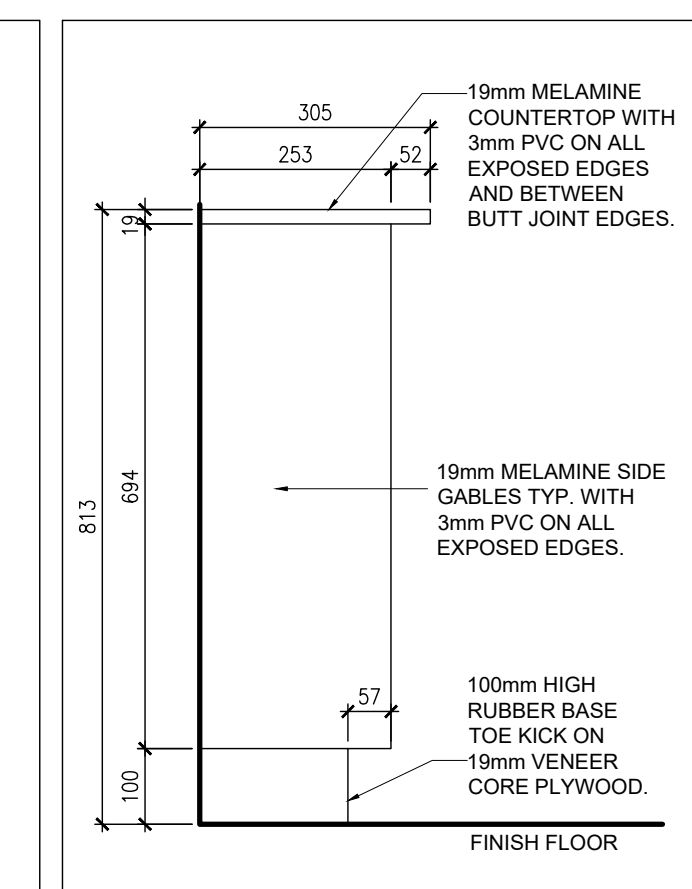
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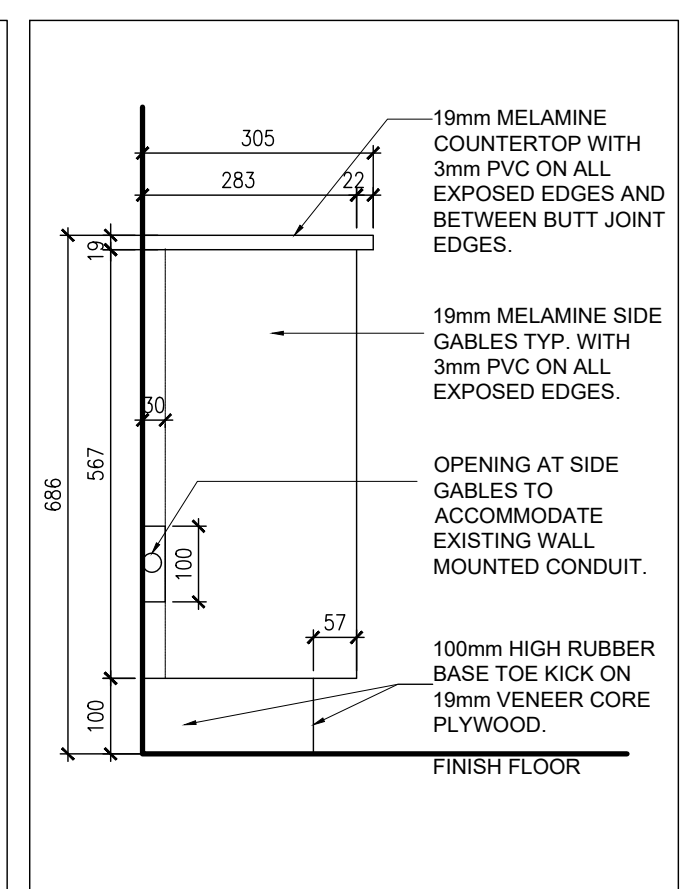
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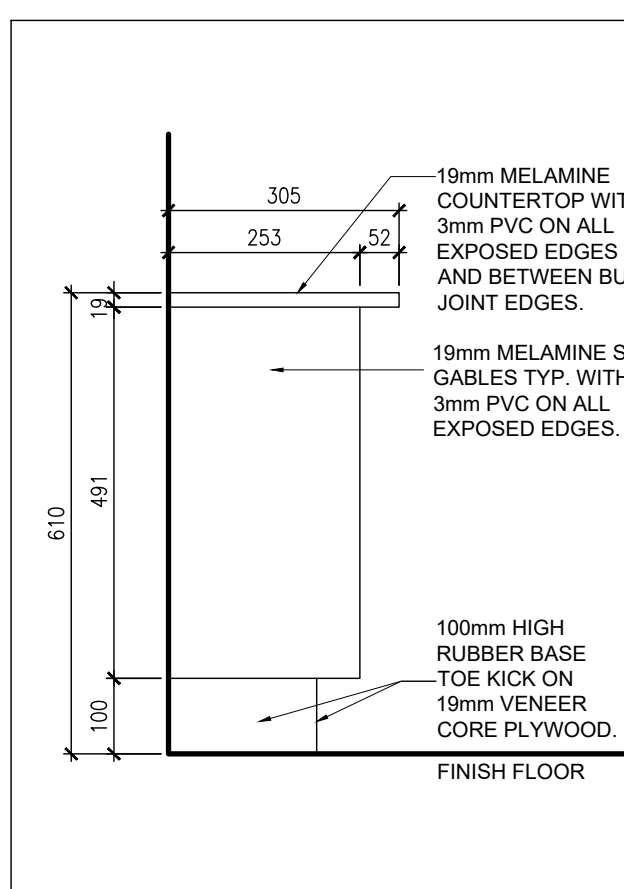
16 MILLWORK PLAN MLK6
A4.2 1:10



17 MLK6 SIDE ELEVATION
A4.2 1:10



5 MLK1, MLK2 SIDE ELEVATION
A4.2 1:10



13 MLK3, MLK4, MLK5 SIDE ELEVATION
A4.2 1:10

NOTE: THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF ALL SITE DIMENSIONS AND FOR NOTIFYING THE ARCHITECT OF ANY SITE CONDITIONS AND SITE MEASUREMENTS THAT ARE NOT CONSISTENT WITH THE DRAWINGS.

no.	revision	date

no.	issue	date
1	Issued for Schematic Design Report	Dec. 21, 2023
2	Issued for Permit/Tender	April 3, 2024

project
TAIT STREET PUBLIC SCHOOL
CLASSROOM CEILINGS AND WASHROOM RENOVATIONS
TENDER #24-7550-RFT
WATERLOO REGION DISTRICT SCHOOL BOARD
184 TAIT ST., CAMBRIDGE, ON N1S 3G3
drawing
SHELVING PLANS, ELEVATIONS AND SECTION DETAILS
drawing scale

AS NOTED
ward99 project number
23013 - WRDSB TAIT ST CEILINGS

ward99 architects drawing no. **A4.2**

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MECHANICAL SPECIFICATION

PART A GENERAL NOTES

- 1. PROVIDE LABOUR, MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO OWNER AND CONSULTANT.
2. OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES, AND OTHER COSTS INCURRED WITH THIS WORK...
3. VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE...
4. COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH ALL OTHER TRADES...
5. CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRED TO INSTALL THE SERVICE.
6. THE DRAWINGS ARE DIAGRAMMATIC. THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
7. PROVIDE TWO MARKED COPIES OF "AS-BUILT DRAWINGS" SHOWING THE SYSTEM AS INSTALLED.
8. THE MECHANICAL SYSTEMS OF THIS BUILDING MUST ACHIEVE THE ENERGY EFFICIENCY LEVELS BY CONFORMING TO ANSI/ASHRAE/IESNA 90.1 "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS" AND CHAPTER 2 OF DIVISION 3 OF SB-10 PRESCRIPTIVE METHOD FROM THE ONTARIO BUILDING CODE.
9. ALL EQUIPMENT AND MATERIAL SHALL BE NEW. REPLACE ALL DAMAGED EQUIPMENT.
10. MATERIAL AND EQUIPMENT ARE NAMED IN THE SPECIFICATION TO ESTABLISH AN ACCEPTABLE STANDARD OF MATERIALS AND THE QUALITY OF WORKMANSHIP BY WHICH TO ADHERE.
11. SUBMIT SHOP DRAWINGS ELECTRONICALLY FOR ALL EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY. SUBMIT ONE COMPLETE SUBMISSION INDEXED AND LABELED FOR THIS PROJECT.
12. PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN PIPES, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
13. MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKERS COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
14. EXCAVATION AND BACK FILLING SHALL BE BY THE TRADE INSTALLING THE SERVICE. PROVIDE COMPACTED 'A' GRAVEL FOR BEDDING AND BACKFILLING AS INDICATED. REMOVE SURPLUS MATERIAL FROM SITE.
15. PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING ROADS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
16. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
17. SUBMIT THREE (3) COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A 3 RING BINDER LABELED FOR THE PROJECT.
18. REMOVE ALL PROTECTIVE COVERINGS, CLEAN AND POLISH ALL EQUIPMENT, FREE ALL OBSTRUCTIONS, CLEAN AND REPLACE ALL FILTERS WITH NEW, AND LEAVE ALL KEYS AND WRENCHES WITH THE OWNER.
19. ALL SURPLUS AND WASTE MATERIALS SHALL BE PROMPTLY REMOVED FROM THE PREMISES.
20. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS NOTED OTHERWISE.
21. THE OWNER WILL DECIDE WHICH ITEMS OR EQUIPMENT SLATED FOR REMOVAL THAT THEY WISH TO RETAIN AS THEIR PROPERTY AND THIS CONTRACTOR SHALL REMOVE ALL OTHER MATERIALS FROM THE PREMISES.
22. PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
23. ALL ELECTRICAL LINE AND LOW VOLTAGE WIRING WHICH IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AS SPECIFIED ELSEWHERE HEREIN SHALL BE RUN IN EMT CONDUIT TO STANDARDS OF THE ELECTRICAL DIVISION.
24. WARRANTY ALL MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF SYSTEM.
25. VIDEO RECORDING OF NEW & EXISTING UNDERGROUND SERVICES PRIOR TO FINAL ACCEPTANCE OF THE NEW UNDERGROUND PUMPING SYSTEM AND PRIOR TO POURING THE FLOOR THIS CONTRACTOR SHALL RETAIN A QUALIFIED CONTRACTOR TO VIDEO TAPE THE NEW, EXISTING AND REVISED SANITARY AND STORM DRAINAGE PIPING AND BRANCH PIPING. TRANSFER ALL VIDEOTAPE INFORMATION TO DVD. THIS CONTRACTOR SHALL FLUSH THE NEW AND EXISTING STORM AND SANITARY SYSTEM TO REMOVE ALL DEBRIS PRIOR TO FINAL VIDEO TAPING OF SYSTEMS. PROVIDE 3 COPIES OF DIGITAL RECORDING ON MEMORY STICK. IDENTIFY VIDEO ROUTING ON RECORD DRAWINGS.

- 26. LOCATION OF EXISTING UNDERGROUND SERVICES THIS CONTRACTOR SHALL LOCATE EXISTING SERVICES PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA. THIS CONTRACTOR SHALL USE A VIDEO CAMERA FOR THE EXISTING STORM AND/OR SANITARY DRAINAGE AT THE INDICATED CONNECTION POINT TO CONFIRM LOCATION, SIZE AND INVERT OF THE EXISTING PIPING.
27. EXISTING CONCRETE SLAB X-RAY/SCANNING THIS CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED COMPANY TO PROVIDE AND X-RAY AND/OR SCAN OF THE EXISTING BURIED SERVICES IN WALL AND/OR FLOORS PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA. FAILURE TO LOCATE EXISTING PIPING, CONDUIT REBAR ETC., SHALL NOT RELIEVE THIS CONTRACTOR OF REPAIR OF SAME PRIOR TO INSTALLING HIS SERVICE. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF EXISTING SERVICES CAUSED BY CUTTING THE EXISTING CONCRETE SLABS AND/OR WALLS.
28. EXCAVATING AND BACKFILLING PROVIDE ALL EXCAVATING AND BACKFILLING INSIDE AND OUTSIDE THE BUILDING FOR PLUMBING PIPES, DRAINS AND EQUIPMENT. ALL BACKFILLING SHALL BE NEW CLEAN GRANULAR 'A' FILL BROUGHT IN SPECIFICALLY FOR THE PURPOSE OF BACKFILLING TO THE UNDERSIDE OF FLOOR SLAB. ALL BACKFILLING SHALL BE COMPACTED AT INTERVALS NOT MORE THAN 150 MM (6") LAYER TO THE SATISFACTION OF THE CONSULTANT. PROVIDE EXCAVATING AND BACKFILLING OUTSIDE THE BUILDING WITH GRANULAR A BROUGHT IN SPECIFICALLY FOR BACKFILLING TO A MINIMUM OF 450 MM (18") OVER THE PIPE. BACKFILLING OUTSIDE BUILDING OVER AND ABOVE THE 450 MM (18") BACKFILL AS PREVIOUSLY SPECIFIED HEREIN SHALL BE BY THE MECHANICAL CONTRACTOR AS SPECIFIED UNDER DIVISION 2. WHERE BACKFILLING OUTSIDE THE BUILDING IS NOT SPECIFIED UNDER DIVISION 2 THE MECHANICAL CONTRACTOR SHALL PROVIDE NEW CLEAN GRANULAR 'A' FILL TO GRADE LEVEL. BOTTOMS OF TRENCHES SHALL BE EXCAVATED SO THAT THE PIPE WILL BE SUPPORTED ON A 150 MM (6") COMPACTED BED OF CLEAN GRANULAR 'A' FILL. PROVIDE ALL NECESSARY PUMPING TO MAINTAIN EXCAVATION FREE OF WATER. SHOULD WATER BE ENCOUNTERED DURING EXCAVATION, THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL LABOUR AND MATERIAL, INCLUDING ALL EQUIPMENT REQUIRED FOR DEWATERING THE EXCAVATION. AFTER THE WATER HAS BEEN REMOVED, THIS CONTRACTOR SHALL INSTALL A 300 MM (12") BASE OF COMPACTED 50 MM (2") CLEAR STONE COVERED WITH FILTER CLOTH BEFORE INSTALLING BACKFILL AS DETAILED AND/OR AS SPECIFIED. BE RESPONSIBLE FOR ALL WEATHER PROTECTION REQUIRED TO INSTALL PIPING AND/OR EQUIPMENT TO THE SATISFACTION OF THE CONSULTANT. BE RESPONSIBLE FOR PROVIDING ALL CLEAR STONE OR GRANULAR 'A' MATERIAL SUITABLE FOR APPLICATION TO REPLACE EXISTING SOIL NOT SUITABLE FOR BACKFILLING ABOVE THE 450 MM (18") BEDDING MATERIAL.
29. PIPE SLEEVES PROVIDE SCHEDULE 40 STEEL PIPE SLEEVES AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES AND AS INDICATED. GROUT SLEEVES IN PLACE. MINIMUM 6 MM (1/4") CLEARANCE ALL AROUND, BETWEEN SLEEVE AND UNINSULATED PIPE OR BETWEEN SLEEVE AND INSULATION. CAULK BETWEEN SLEEVE AND PIPE IN FOUNDATION WALLS AND BELOW GRADE FLOORS WITH WATERPROOF FIRE RETARDANT NON-HARDENING MASTIC. WHERE SLEEVES PASS THROUGH WALLS OR FLOORS, PROVIDE SPACE FOR FIRESTOPPING. WHERE PIPES PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY. ENSURE NO CONTACT BETWEEN COPPER TUBE OR PIPE AND FERROUS SLEEVE. FILL FUTURE-USE SLEEVES WITH LIME PLASTER OR OTHER EASILY REMOVABLE FILLER. COAT EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT TO CGSB 1-GP-181M+AMDT-MAR-78.
30. DUCT SLEEVES PROVIDE MINIMUM 20 GAUGE DUCT SLEEVES WHERE DUCTS PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES. MAINTAIN MINIMUM 25 MM CLEARANCE ALL AROUND OR TO THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. SEAL AT WALL AS INDICATED. WHERE DUCTS PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY.

PART B DEMOLITION NOTES

- 1. THIS PROJECT IS ONE OF A RETROFIT NATURE IN PART, AND WHICH WILL REQUIRE SOME DEMOLITION. ALLOW FOR ALL REMEDIAL WORK IN AREAS INDICATED ON THE DRAWINGS AND AS GENERALLY DEFINED IN THE RELEVANT SECTIONS OF THE SPECIFICATIONS.
2. THE SCOPE OF WORK IS ESSENTIALLY THE SELECTED DISCONNECTION AND/OR REMOVAL OF SERVICES AND/OR EQUIPMENT, PIPING, DUCTWORK ETC. AS INDICATED OR REQUIRED TO COMPLETE THE WORK.
3. THIS DIVISION IS TO LIAISE WITH THE OWNERS OR CONSULTANT FOR EQUIPMENT BEING REMOVED THAT MAY BE SUITABLE FOR REUSE TO THAT SPECIFIED OR HANDED OVER TO THE OWNER.
4. THIS DIVISION TO TAKE FULL RESPONSIBILITY FOR ANY SPECIAL TOOLS OR EQUIPMENT REQUIRED TO DISASSEMBLE OR REMOVE MATERIAL FROM BUILDING.
5. THE GENERAL EXECUTION OF THE DEMOLITION IS TO BE CARRIED OUT IN A CLEAN AND EFFICIENT MANNER.
6. DEMOLITION OF EXISTING CEILING, WALLS ETC., TO FACILITATE REMOVAL OF EXISTING SERVICES OR EQUIPMENT OR INSTALLATION OF NEW TO BE KEPT TO A MINIMUM AND THEN RESTORED TO MATCH EXISTING.
7. ALL OPENINGS OR HOLES CREATED BY REMOVAL OF EXISTING MECHANICAL SYSTEMS WHICH ARE NOT BEING REUSED ARE TO BE PATCHED WITH THE SAME MATERIAL SURROUNDING SURFACES.
8. PROTECT ALL EXISTING FURNISHINGS MATERIALS AND EQUIPMENT, ANY DAMAGE OCCURRING AS A RESULT OF THE WORK OF THIS DIVISION SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THIS DIVISION.
9. WHERE WORK INVOLVES BREAKING INTO OR CONNECTING TO EXISTING SERVICES, CARRY OUT WORK AT TIMES DIRECTED BY THE OWNERS IN AN EXPEDITED MANNER WITH MINIMUM DISRUPTION TO THE FACILITY AND SYSTEMS DOWNTIME.
10. WHERE UNKNOWN SERVICES ARE ENCOUNTERED, IMMEDIATELY ADVISE CONSULTANT AND CONFIRM FINDINGS IN WRITING.

- 11. WHERE THE LOCATION OF ANY SERVICES HAS BEEN SHOWN ON THE PLANS, SUCH INFORMATION IS NOT GUARANTEED. IT IS THIS DIVISION'S RESPONSIBILITY TO VERIFY LOCATIONS, INVERT ELEVATIONS, ETC., IMMEDIATELY AFTER MOVING ON SITE. SHOULD FOR ANY REASON THE INFORMATION OBTAINED NECESSITATES CHANGES IN PROCEDURE OR DESIGN, ADVISE THE CONSULTANT AT ONCE. IF VERIFICATION OF EXISTING CONDITIONS IS NOT DONE AT THE OUTSET AND ANY PROBLEMS ARISE, THE RESPONSIBILITY FOR SAME IS ENTIRELY THIS DIVISION'S.
12. DISCONNECT AND/OR REMOVE EQUIPMENT PIPING, DUCTWORK, ETC. AS INDICATED.
13. CAP AND CONCEAL ALL REDUNDANT AND OBSOLETE CONNECTIONS.
14. PROVIDE A LIST OF EQUIPMENT TO BE REMOVED TO THE OWNER, FOR HIS ACCEPTANCE OF SAME. REMOVE ALL EQUIPMENT FROM SITE WHICH THE OWNER DOES NOT RETAIN.
15. MAINTAIN EQUIPMENT TO BE RETAINED BY OWNER ON SITE WHERE DIRECTED BY CONSULTANT.
16. DEMOLITION OF ALL PARTS OF THE WORK MUST BE COMPLETED WITHIN THE CONFINES OF THE WORK AREA AND IN SUCH A WAY AS THE DUST PRODUCTION AND RISK TO INJURY OF WILL NOT ADVERSELY AFFECT THE BUILDING USERS.
17. DEMOLISHED AREAS OF THE EXISTING BUILDING WILL REMAIN IN THEIR CURRENT USE IN SOME CASES. DEMOLITION IN THESE AREAS MUST BE KEPT TO THE MINIMUM REQUIRED TO COMPLETE THE WORK.
18. DEMOLITION SHALL TAKE PLACE WITHIN AREAS ISOLATED FROM ALL OTHER AREAS WITH APPROPRIATE HOARDING, SCAFFOLDING, NETTING, FENCING OR OTHER MEANS OF SECURITY BETWEEN BUILDING USERS AND THE WORK.
19. CO-ORDINATE MAKING SAFE ELECTRICAL DEVICES, CAPPING PLUMBING AND REMOVAL OF FIXTURES PRIOR TO COMMENCEMENT OF DEMOLITION.
20. ALL PIPING AND EQUIPMENT TO BE REMOVED AND/OR ABANDONED SHALL BE DRAINED PRIOR TO CAPPING AND/OR ABANDONING. DISPOSAL OF ALL LIQUIDS SHALL BE TO THE APPROVAL OF AUTHORITY OF HAVING JURISDICTION AND/OR PROVINCIAL REGULATIONS.
21. DRAIN ALL EXISTING PIPING AND DRAINAGE SYSTEMS INCLUDING ALL RELATED EQUIPMENT AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS.
22. DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL REGULATIONS.

PART C PLUMBING NOTES

- 1. CONTRACTOR TO PROVIDE POTABLE WATER CERTIFICATE FOR E. COLI AND COLIFORM FROM A RECOGNIZED TESTING LABORATORY UPON COMPLETION OF THE PROJECT. WATER IS TO BE TAKEN FROM A NEW FIXTURE TO TEST THE NEW PIPING INSTALLED.
2. SERVICES
3. CODES AND REGULATIONS SANITARY, SOIL WASTE, VENT, AND ALL WATER PIPING SHALL CONFORM AND BE INSTALLED TO THE ONTARIO PLUMBING CODE AND THE CANADIAN PLUMBING CODE, LATEST EDITION.
4. TESTING SANITARY PIPING: ALL SANITARY PIPING SHALL BE TESTED WITH WATER UNDER THE GUIDANCE OF THE LOCAL PLUMBING INSPECTOR. SMOKE TESTS OR ANY OTHER TEST REQUIRED BY THE PLUMBING INSPECTOR SHALL ALSO BE MADE. WATER PIPING: ALL WATER PIPING SHALL BE TESTED TO 150 PSI. PRESSURE FOR NOT LESS THAN FOUR HOURS WITHOUT A LOSS IN PRESSURE.
FLUSHING AND DISINFECTING MAINTAIN TESTABLE AIR BACKFLOW PREVENTOR BETWEEN MUNICIPAL WATER AND NEW PLUMBING SYSTEM. ENSURE A MINIMUM OF 90% OF PLUMBING FIXTURES ARE INSTALLED. FLUSH WATER MAINS THROUGH AVAILABLE OUTLETS WITH A SUFFICIENT FLOW OF POTABLE WATER TO PRODUCE A VELOCITY OF 1.5 M/S, WITHIN PIPE 10 MIN, OR UNTIL FOREIGN MATERIALS HAVE BEEN REMOVED AND FLUSHED WATER IS CLEAR WITH BACKFLOW PROTECTION. PROVIDE CONNECTIONS AND PUMPS FOR FLUSHING AS REQUIRED. OPEN AND CLOSE VALVES, AND OPERATE FIXTURES TO ENSURE THOROUGH FLUSHING. TAKE WATER SAMPLES AT REMOTE FIXTURES AND SERVICE CONNECTIONS.
5. PIPE AND FITTINGS SANITARY AND VENT DRAINS: (ABOVE GRADE), MEDIUM WEIGHT CAST IRON WITH MECHANICAL RUBBER JOINTS OR TYPE DWV COPPER PIPE. SANITARY AND VENT PIPING: (BELOW GRADE) PVC DRAINAGE PIPE TO SDR 35 WITH SOLVENT WELDED JOINTS. ABS DRAINAGE PIPE WITH SOLVENT WELDED JOINTS. WATER PIPING: TYPE L COPPER WITH LEAD FREE SOLDER JOINTS.
6. VALVES ISOLATION VALVES: HOT AND COLD WATER BRONZE BODY, CLASS 150, STAINLESS STEEL BALL, FULL PORT, PTFE SEAT AND PACKING. STEEL LEVER HANDLE. MILWAUKEE BA-455, CRANE, TOYO CHECK VALVES: HOT AND COLD WATER SIZES 1/2" DIAMETER TO 2" DIAMETER CRANE FIG. 1342, OR EQUAL JENKINS, BRONZE SWING CHECK, SOLDER ENDS. CRANE FIG. 29 OR EQUAL JENKINS VERTICAL LIFT CHECK VALVE, SCREWED ENDS ON VERTICAL PIPING.
7. CLEAN OUTS CLEAN OUTS: PROVIDE AND SET CLEAN OUT PLUGS IN ALL DRAINS AND SOIL PIPE LINES WHERE OBSTRUCTIONS MAY BE FOUND, AT CHANGES OF DIRECTION, AT THE BASE OF ALL SANITARY STACKS AND AT INTERVALS. LENGTHS TO THE ONTARIO PLUMBING CODE. CLEAN OUTS SHALL BE FULL SIZES OF PIPES UP TO 4" DIAMETER AND NOT LESS THAN 4" DIAMETER FOR LARGER PIPES. ANCON CO-100-R OR EQUAL.
8. TRAP PRIMERS TRAP PRIMERS: ALL TRAPS WHERE REQUIRED BY THE CODE TO BE PRIMED OR WHERE SHOWN ON THE DRAWINGS SHALL HAVE MIFAB-MR-ENC-AG OR EQUAL PRESSURE DROP ACTIVATED TRAP SEAL PRIMER INSTALLED IN THE NEAREST COLD WATER LINE TO THE TRAP. TRAP PRIMER SHALL BE CONCEALED, PROVIDED WITH ENCLOSURE FOR INSTALLTION IN WALL AND HAVE INTEGRAL AIR GAP FOR BACKFLOW PREVENTION, PROVIDE ACCESS DOOR.
9. DRAIN VALVES DRIP COCKS: SUPPLY AND INSTALL 1/2" DIAMETER MUELLER OR EQUAL DRAIN VALVES AT ALL LOW POINTS IN THE WATER SYSTEMS TO COMPLETELY DRAIN THE SYSTEMS. ALL DRIP COCKS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
10. PLUMBING FIXTURES FIXTURES AS LISTED ON THE DRAWINGS. ALL FIXTURES MUST BE NEW AND CLEAN WHEN THE WORK IS TAKEN OVER BY THE OWNER. ALL PLUMBING FIXTURES SHALL BE EQUIPPED WITH SUPPLY VALVES, FAUCETS, TRAPS, SUPPORTS, WATER CONNECTIONS, ESCUTCHEONS, HANGERS, BOLTS, ETC. FIXTURES SHALL BE CRANE OR EQUAL AMERICAN STANDARD, KOHLER. TRAPS: 2" DIAMETER AND SMALLER, SHALL BE CAST BRASS AND CHROME PLATED IN EXPOSED AREAS. ALL SINK TRAPS SHALL BE TWO PIECE CONSTRUCTION. ALL TRIM MUST BE CAMBRIDGE BRASS OR EQUAL. ON COMPLETION ALL FIXTURES, ACCESSORIES AND EXPOSED PIPING SHALL BE THOROUGHLY CLEANED AND LEFT READY FOR USE. AFTER FINAL INSPECTION BY THE PLUMBING INSPECTOR CAULK AROUND BASE OF ALL FIXTURES TO THE WALL OR FLOOR WITH SILICONE CAULKING.
11. EXPANSION COMPENSATION PIPING SUBJECTED TO THERMAL EXPANSION SHALL BE INSTALLED USING PIPE LOOPS AND/OR EXPANSION COMPENSATORS TO PERMIT FREE EXPANSION AND CONTRACTION WITHOUT CAUSING DAMAGE TO OR STRESSES AT JOINTS AND HANGER AND TO REDUCE STRAIN ON CONNECTED EQUIPMENT TO A MINIMUM.
12. PIPE INSULATION INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING AND STORM PIPING ABOVE GRADE, WITH 1" (FOR PIPING UNDER 1 1/2" DIAMETER) OR 1 1/2" (FOR PIPING 1 1/2" DIAMETER AND HIGHER) FIBERGLASS INSULATION WITH VAPOUR BARRIER, INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH 6 OZ. CANVAS JACKET AND TWO COATS LAGGING ADHESIVE.

PART E SPRINKLER NOTES

- 1. SERVICES CONNECT TO EXISTING SERVICES WHERE SHOWN ON DRAWINGS.
2. CODES AND REGULATIONS ALL SPRINKLER PIPING, SPACING AND EQUIPMENT SHALL CONFORM TO THE ONTARIO BUILDING CODE, NFPA-13 AND THE AUTHORITIES HAVING JURISDICTION.
3. TESTING PIPING SHALL BE TESTED TO NFPA-13 REQUIREMENTS.
4. PRODUCTS PIPE AND FITTINGS: 50 MM (2") AND SMALLER: SCHEDULE 40 STEEL PIPE WITH SCREWED FITTINGS. 65 MM (2 1/2") AND LARGER: SCHEDULE 10 STEEL PIPE WITH VICTALUCE FITTINGS. PIPE HANGERS: ULC LISTED FOR FIRE PROTECTION SERVICES.
5. SPRINKLER HEADS: GENERAL: TO NFPA-13 AND ULC LISTED FOR FIRE SERVICES. SPRINKLER HEADS SHALL BE FULLY CONCEALED WITH WHITE COVER. VIKING MODEL B-1 OR EQUAL. COORDINATE LOCATION WITH REFLECTED CEILING PLANS. RELOCATE EXISTING SPRINKLER HEADS AS INDICATED. INSTALL IN EXISTING CEILING.
6. ENGINEERING DESIGN CRITERIA DESIGN SYSTEM IN ACCORDANCE WITH ONTARIO FIRE MARSHALL, LOCAL AUTHORITY HAVING JURISDICTION, OWNERS, UNDERWRITERS AS REQUIRED, AND NFPA 13, USING FOLLOWING PARAMETERS: HAZARD TO SUIT OCCUPANCY. PIPE SIZE AND LAYOUT: HYDRAULIC DESIGN OR PIPE SCHEDULE SIZING DESIGN. SPRINKLER HEAD LAYOUT: TO NFPA 13 OR AS DIRECTED BY AUTHORITIES HAVING JURISDICTION, AND/OR AS INDICATED.
7. ZONING: SYSTEM ZONING AS INDICATED IN ACCORDANCE WITH NFPA 13.
8. PROVIDE COMPLETE DRAWINGS AND CALCULATIONS STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO.
9. PROFESSIONAL ENGINEER SHALL PROVIDE ON SITE REVIEW AND CERTIFICATION FOR LOCAL BUILDING CODE REVIEW.
10. INSTALLATION: INSTALL, INSPECT AND TEST TO ACCEPTANCE IN ACCORDANCE WITH ANSI/NFPA-13. TESTING TO BE WITNESSED BY AUTHORITY HAVING JURISDICTION. SPACE HANGERS AND SUPPORT OF SPRINKLER PIPING IN ACCORDANCE WITH NFPA REGULATIONS. PROTECT EXPOSED WORK. DO NOT COVER OR CONCEAL PIPING ACCESSORIES OR WORK PRIOR TO INSPECTION AND APPROVAL BY AUTHORITIES HAVING JURISDICTION. ADJUST EQUIPMENT TO SATISFACTION OF AUTHORITY HAVING JURISDICTION AND CONSULTANT. PROTECT

EQUIPMENT DURING PAINTING. REPLACE DAMAGED AND PAINTED COMPONENTS. COORDINATE THE SPRINKLER PIPING AND EQUIPMENT WITH THAT OF OTHER TRADES ON THE JOB. MAINS AND BRANCHES SHALL BE RUN SO AS NOT TO INTERFERE WITH BUILDING'S STRUCTURE, MECHANICAL OR ELECTRICAL INSTALLATIONS. GUARANTEE THAT THE SYSTEMS AND EQUIPMENT BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND PROVINCIAL BY-LAWS AND THE RULES AND REGULATIONS OF THE INSURANCE UNDERWRITERS AND THE BUILDING CODE OF ONTARIO.

PART F HYDRONIC HEATING

- 1. HEATING WATER PIPING: SCHEDULE 40 STEEL PIPE TO ASTM 53, GRADE B PIPING NPS 2 AND UNDER SHALL BE MALLEABLE IRON 150 LB SCREWED FITTINGS WITH PULVERIZED LEAD PASTE. PIPING NPS 2 1/2 AND OVER SHALL BE WELDED FITTINGS AND STEEL FLANGES TO ANSI/ASME B16.5.
2. PIPE INSULATION: INSULATE ALL HEATING WATER PIPING WITH 1 1/2" FIBERGLASS INSULATION WITH VAPOUR BARRIER. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH PVC JACKET.
3. FILLING OF SYSTEM REFILL SYSTEM WITH CLEAN WATER ADDING WATER TREATMENT AS SPECIFIED. THIS CONTRACTOR SHALL CONTACT WATER TREATMENT SUPPLIER AND CO-ORDINATE WATER TREATMENT OF NEW SYSTEM.
4. EXISTING SYSTEM DRAINAGE DRAIN EXISTING HOT HYDRONIC SYSTEM AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS. DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL REGULATIONS.
5. FLUSHING AND CLEANING PROCEDURE: FLUSHING AND CLEANING SHOULD ONLY TAKE PLACE AFTER SUCCESSFUL PIPING PRESSURE TESTING. TERMINAL DEVICE (REHEAT COILS, HEAT PUMPS, PERIMETER RADIATION, ETC.), AIR HANDLING UNIT COILS AND THEIR ASSOCIATED CONTROL AND BALANCING VALVES SHOULD BE BYPASSED DURING THE PRELIMINARY FLUSHING AND CLEANING PROCESS. INSTRUMENTS SUCH AS FLOW METERS, FLOW METERING VALVES AND ORIFICE PLATES SHOULD ONLY BE INSTALLED AFTER FLUSHING AND CLEANING.
6. TIMING: THE OVERALL CONSTRUCTION SCHEDULE IDENTIFIES PIPING FLUSHING AND CLEANING WITH REALISTIC TIME ALLOTMENTS. THE MECHANICAL CONTRACTOR IS REQUIRED TO PROVIDE A DETAILED REPORT OUTLINING THE PROCESSES AND PROCEDURES FOR FLUSHING AND CLEANING PER PIPING SYSTEM AT LEAST 4 TO 6 WEEKS IN ADVANCE OF WORK. AS A MINIMUM, AT LEAST ONE PIPING FLUSHING AND CLEANING PROCEDURE SHALL BE WITNESSED, BY THE CONSULTANT AND/OR COMMISSIONING AGENT. THE MECHANICAL CONTRACTOR SHALL TO UTILIZE A QUALIFIED WATER TREATMENT SPECIALIST TO SUPERVISE THE FLUSHING AND CLEANING PROCESS AND PROVIDE THE CERTIFIED WATER ANALYSIS REPORT CERTIFYING THAT THE PIPING SYSTEMS ARE CLEAN, COORDINATE FLUSHING AND CLEANING OF MECHANICAL SYSTEMS WITH HVAC WATER TREATMENT CONTRACTOR AND HVAC SYSTEMS COMMISSIONING CONTRACTOR. FLUSH AND CLEAN NEW PIPING SYSTEM IN PRESENCE OF CONSULTANT. FLUSH AFTER PRESSURE TEST FOR A MINIMUM OF 4 HRS. FILL SYSTEM WITH SOLUTION OF WATER AND NON-FOAMING, PHOSPHATE-FREE DETERGENT 3% SOLUTION BY WEIGHT. CIRCULATE FOR MINIMUM OF 8 HRS. THOROUGHLY FLUSH ALL NEW MECHANICAL SYSTEMS AND EQUIPMENT WITH APPROVED CLEANING CHEMICALS DESIGNED TO REMOVE DEPOSITION FROM CONSTRUCTION SUCH AS PIPE DOPE, OILS, LOOSE MILL SCALE AND OTHER EXTRANEOUS MATERIALS. CHEMICALS TO INHIBIT CORROSION OF VARIOUS SYSTEM MATERIALS AND BE SAFE TO HANDLE AND USE. DURING CIRCULATION OF CLEANING SOLUTION, PERIODICALLY EXAMINE AND CLEAN FILTERS AND SCREENS AND MONITOR CHANGES IN PRESSURE DROD ACROSS EQUIPMENT. REFILL SYSTEM WITH CLEAN WATER. CIRCULATE FOR AT LEAST 2 HOURS. CLEAN OUT STRAINER SCREENS/BASKETS REGULARLY. THEN DRAIN. DRAINAGE TO INCLUDE DRAIN VALVES, DIRT POCKETS, STRAINERS, EVERY LOW POINT IN SYSTEM. DRAIN AND FLUSH SYSTEMS UNTIL ALKALINITY OF RINSE WATER IS EQUAL TO MAKE-UP WATER. REFILL WITH CLEAN WATER TREATED TO PREVENT SCALE AND CORROSION DURING SYSTEM OPERATION. RE-INSTALL STRAINER SCREENS/BASKETS ONLY AFTER OBTAINING CONSULTANT'S APPROVAL AND APPROVAL FROM HVAC WATER TREATMENT CONTRACTOR. REPEAT SYSTEM DRAIN AND FLUSH AS OFTEN AS NECESSARY TO HAVE A CLEAN SYSTEM. DISPOSAL OF CLEANING SOLUTIONS TO BE APPROVED BY AUTHORITY HAVING JURISDICTION. ISOLATE NEW PIPING SYSTEM FROM EXISTING SYSTEM AS REQUIRED FOR SYSTEM CLEANING. AFTER HYDRONIC SYSTEM IS CLEANED, REFILL WITH CLEAN WATER AND CHEMICAL AS PER CHEMICAL SUPPLIER TREATMENT.

PART G HEATING, AIR CONDITIONING, AND VENTILATION NOTES

- 1. DUCTWORK TO BE CONSTRUCTED TO SMACNA STANDARDS, MEDIUM STATIC PRESSURE WITH LEAKAGE RATE OF 5% MAXIMUM. FABRICATED IN ACCORDANCE WITH RECOMMENDATIONS OF SMACNA AND ASHRAE. SEAL ALL TRANSVERSE AND LONGITUDINAL JOINTS WITH DUCT SEALER.
2. ROUND AND OVAL DUCTS: FACTORY FABRICATED, SPIRAL WOUND, WITH MATCHING FITTINGS AND SPECIALS TO SMACNA. TRANSVERSE JOINTS UP TO 900 MM (36"): SLIP TYPE WITH TAPE AND SEALANTS.
3. SQUARE AND RECTANGULAR DUCTS: TO SMACNA. TRANSVERSE JOINTS, LONGEST SIDE UP TO AND INCLUDING 750 MM (30"): SMACNA PROPRIETARY DUCT JOINTS.
4. DAMPERS ALL DAMPERS TO TO SMACNA RECOMMENDATIONS AS MINIMUM ACCEPTABLE STANDARD. SPLITTER DAMPERS OF SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER WITH APPROPRIATE STIFFENING, CUT AIRFOIL SHAPE. PLANO HINGE PIVOT, WITH CONTROL ROD WITH LOCKING DEVICE AND POSITION INDICATOR ON EXTERIOR OF DUCT. SINGLE BLADE BALANCING ROUND AND RECTANGULAR, MAXIMUM 100MM (4") HIGH, OR SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER (MINIMUM 16 GAUGE), V-GROOVE STIFFENED WITH LOCKING QUADRANT. MULTI-LEAF OPPOSED BLADE DAMPERS DESIGNED TO SMACNA DETAILS, SELF-LUBRICATING NYLON BEARINGS. SHAFT EXTENSION TO ACCOMMODATE INSULATION THICKNESS, WITH LOCKING QUADRANT. MANUFACTURED ADJUSTABLE EXTRACTORS TO BE WITH ADJUSTMENT ROD. ACCEPTABLE PRODUCTS: TITUS, NAILOR OR EQUAL.
5. FIRE DAMPERS UL OR ULC AND SHALL MEET REQUIREMENTS OF NFPA 90A-1978. FACTORY FABRICATED FOR FIRE RATING REQUIREMENTS TO MAINTAIN INTEGRITY OF MEMBRANE BEING INSTALLED. MILD STEEL, FIRE RAIL ACTUATED TOP ROUND OR SQUARE GULLOTINE TYPE, WEIGHTED TO CLOSE AND LOCK IN CLOSED POSITION WHEN RELEASED. ROLL DOOR TYPE IN HORIZONTAL POSITION WITH VERTICAL AIRFLOW. SIZED TO MAINTAIN FULL FLOW CROSS SECTION OF DUCT (TYPE B).
6. GRILLES, REGISTERS AND DIFFUSERS GRILLES, REGISTERS AND DIFFUSERS SHALL BE THE SAME MANUFACTURER, TYPE AS SHOWN ON THE DRAWING. ACCEPTABLE MATERIALS: E.H. PRICE, TITUS, NAILOR, KRUEGER, TUTTLE & BAILY, METALAIR.
7. DUCTWORK INSULATION ON THE LAST 5'-0" OF ALL EXHAUST DUCTS, INCLUDING PLENUM AND ALL AIR INTAKE DUCTWORK. FIBERGLASS FOIL FACED RIGID DUCT INSULATION 1" THICK TYPE PF-335-3/4 LB. DENSITY WITH RFRK FACING. GLUE AND PIN AS PER MANUFACTURERS RECOMMENDATIONS. ON ALL OUTDOOR AIR DUCTWORK, FIBERGLASS FOIL FORCED RIGID DUCT INSULATION 3" THICK TYPE PF-335-3/4 LB DENSITY WITH RFRK FACING, GLUE AND PIN. RECOVER ALL EXTERIOR DUCTWORK WITH TWO COATS OF MASTIC SEALER AND 28 GAUGE PREFINISHED METAL FLASHING WITH CROSSBREAKS AND STANDING SEAMS AND BUTTIONHOOK JOINTS. COLOUR TO MATCH BUILDING FLASHINGS.
8. CONTROL NOTES PROVIDE A DDC CONTROL SYSTEM AS AN EXPANSION OF THE EXISTING BUILDING AUTOMATION CONTROLS. THE EXISTING CONTROLS ARE DISTECH BEING PROVIDED BY ENERGY CONTROLS. CABINET UNIT HEATER CONTROL: MODULATE THE HEATING VALVE TO MAINTAIN ROOM TEMPERATURE. EXHAUST FAN CONTROL: FANS TO RUN ON TIME OF DAY SCHEDULE. REFER TO GRAPHICAL SEQUENCES ON M502.
9. SYSTEM BALANCING BALANCE AIR AND WATER SYSTEMS USING NEBB OR ABC CERTIFIED FIRM AND AS PER NEBB REQUIREMENTS TO WITHIN 5% OF TOTAL SYSTEM CAPACITY. PROVIDE 3 COPIES OF BALANCING REPORTS C/W SYSTEM SCHEMATICS.



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The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow us closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2024 DEI Consulting Engineers Inc.

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project: WRDSB TAIT STREET PUBLIC SCHOOL CEILINGS RENOVATIONS

WATERLOO REGION DISTRICT SCHOOL BOARD
184 TAIT STREET, CAMBRIDGE ON N3S 3G3

drawing: MECHANICAL SPECIFICATION
drawing scale: AS NOTED
ward99 project number: 23013 - WRDSB TAIT ST CEILINGS

ward99 architects logo and M501 drawing number.

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ELECTRICAL SPECIFICATION

GENERAL NOTES

- 1 PROVIDE LABOUR MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT.
2 OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.
3 COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.
4 VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
5 CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.
6 THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
7 SUBMIT COPIES OF SHOP DRAWINGS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.
8 PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
9 MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
10 PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
11 INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
12 WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF TWO (2) YEARS AFTER FINAL ACCEPTANCE OF SYSTEM.
13 COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.
14 PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
15 MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE NOTED):
- SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
- WALL RECEPTACLES:
- GENERAL: 400mm (16")
- ABOVE TOP OF COUNTERS: 100mm (4")
- IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH).
- FIRE ALARM STROBES: 2250mm (7'-6")
16 ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.
17 ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.
18 SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH ITEMIZED SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS. A PDF FILE OF THE ENTIRE MANUAL IS TO BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING BOTH THE APPROVED MANUALS AND RECORD DRAWINGS.
19 CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS. MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 3mm (1/8") HIGH AS FOLLOWS: - "RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISD TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR)(DATE)". SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED, SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH OPERATING AND MAINTENANCE MANUALS.
20 THE CONTRACTOR WILL INCLUDE REDLINES FOR EACH AND EVERY ELECTRICAL DRAWING FOR DEI & ASSOCIATES INC. TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.

BASIC MATERIALS

- 1 JUNCTION, OUTLET AND PULL BOXES MUST BE APPROVED TO SUIT INSTALLATION METHODS AND ENVIRONMENT.
2 CONDUIT MUST BE CONCEALED UNLESS INSTALLED IN SERVICE OR STORAGE ROOMS.
3 CONDUIT MUST BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING LINES IN A NEAT AND WORKMANLIKE MANNER.
4 ALL FEEDER AND BRANCH CIRCUIT WIRING MUST BE COPPER, T90 RATING/STYLE RUN IN EMT CONDUIT WITH INTERNAL INSULATED GREEN GROUND WIRE UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AND MINIMUM CONDUIT SIZE SHALL BE 3/4" (19mm).
5 AC90 CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN STEEL STUD WALLS AND "DROPS" IN T-BAR CEILING AREAS TO LIGHT FIXTURES AND FIRE ALARM DEVICES. LENGTH OF DROP MUST BE LIMITED TO 8'-0" (2400mm).
6 WHERE DEVICES ARE TO BE INSTALLED ON EXISTING WALLS IN FINISHED AREA, WHICH CANNOT BE FISHED, INSTALL FEEDS IN A SURFACE METAL RACEWAY EQUAL TO WIREMOLD V700 SERIES.
7 COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES.
8 CODE WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT OR CABLE ENTERS WALL, CEILING, OR FLOOR, AND AT 15m(45") INTERVALS.
9 COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS.
SYSTEM COLOUR
UP TO 208V YELLOW
FIRE ALARM RED
10 THIS CONTRACTOR MUST PAINT ALL SYSTEM JUNCTION BOXES AND COVERS IN CONFORMANCE WITH THE ABOVE SCHEDULE.

DRAW BREAKDOWN

- 1 THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT, WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS, WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.
2 BREAKDOWN SHALL BE AS FOLLOWS:
.1 PERMITS AND FEES
.2 MOBILIZATION (MAXIMUM 1%)
.3 DEMOLITION
.4 BRANCH CONDUITS
.5 BRANCH WIRING
.6 LIGHTING FIXTURES
.7 WIRING FOR MECHANICAL EQUIPMENT
.8 CONTRACT CLOSEOUT (MINIMUM 3% BUT NO LESS THAN \$1,000.00)
3 THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW.
4 BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.
5 BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.
6 MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

SHOP DRAWINGS AND PRODUCT DATA

- 1 FURNISH COMPLETE CATALOG DATA FOR MANUFACTURED ITEMS OF EQUIPMENT TO BE USED IN THE WORK TO CONSULTANT FOR REVIEW WITHIN 30 DAYS AFTER AWARD OF CONTRACT.
2 IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT.
3 ADDITIONAL SHOP DRAWINGS REQUIRED BY THE CONTRACTOR FOR MAINTENANCE MANUALS, SITE COPIES ETC., SHALL BE PHOTOCOPIES OF THE 'REVIEWED' SHOP DRAWINGS. ALL COSTS TO PROVIDE ADDITIONAL COPIES OF SHOP DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.
4 PARTIAL SUBMITTALS WILL NOT BE ACCEPTED.
5 CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER SHALL NOT SUPERSEDE CONTRACT DOCUMENTS.
6 REVIEW COMMENTS OF CONSULTANT SHALL NOT RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR DEVIATIONS FROM CONTRACT DOCUMENTS UNLESS CONSULTANT'S ATTENTION HAS BEEN CALLED TO SUCH DEVIATIONS IN WRITING AT TIME OF SUBMISSION, NOR SHALL THEY RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR ERRORS IN ITEMS SUBMITTED.
7 CHECK WORK DESCRIBED BY CATALOG DATA WITH CONTRACT DOCUMENTS FOR DEVIATIONS AND ERRORS.
8 SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
.1 MOUNTING ARRANGEMENTS.
.2 OPERATING AND MAINTENANCE CLEARANCES. E.G. ACCESS DOOR SWING SPACES.
9 SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY:
.1 DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.
.2 MANUFACTURER TEST DATA WHERE REQUESTED.
.3 MANUFACTURER TO CERTIFY AS TO CURRENT MODEL PRODUCTION.
.4 CERTIFICATION OF COMPLIANCE TO APPLICABLE CODES.
10 STATE SIZES, CAPACITIES, BRAND NAMES, MOTOR HP, ACCESSORIES, MATERIALS, GAUGES, DIMENSIONS, AND OTHER PERTINENT INFORMATION. LIST ON CATALOG COVERS PAGE NUMBERS OF SUBMITTED ITEMS. UNDERLINE APPLICABLE DATA.
11 ONCE THESE SHOP DRAWINGS ARE RETURNED 'REVIEWED' OR 'REVIEWED AS NOTED' FABRICATION, PRODUCTION, AND INSTALLATION MAY COMMENCE. NOTE: IF A SHOP DRAWING IS RETURNED 'REVIEWED' AS NOTED THIS CONTRACTOR MUST PROVIDE WRITTEN INDICATION THAT THE COMMENTS HAVE BEEN COMPLIED WITH.
12 A PARTIAL LIST OF SHOP DRAWINGS INCLUDES:
.1 LUMINAIRES
.2 FIRESTOPPING MATERIALS
.3 HAND DRYERS
WIRING DEVICES
1 GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).
2 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.
3 INSTALL SWITCHES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION.
4 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).
5 DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U GROUND, WITH THE FOLLOWING FEATURES:
.1 UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT.
.2 SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.
.3 BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
.4 EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS.
.5 TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.
6 ACCEPTABLE MATERIALS:
.1 TAMPER RESISTANT RECEPTACLE: HUBBELL CAT. #BR15TR
.2 TAMPER RESISTANT T-SLOT RECEPTACLE: HUBBELL CAT. #BR20TR
.3 TAMPER RESISTANT GROUND FAULT PROTECTED RECEPTACLE: HUBBELL CAT. #GFTR15
.4 TAMPER RESISTANT GROUND FAULT PROTECTED T-SLOT RECEPTACLE: HUBBELL CAT. #GFTR20
7 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.
8 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE:
PASS & SEYMOUR
LEVITON
9 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
10 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
11 STAINLESS STEEL, VERTICALLY BRUSHED COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET BOXES.
12 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES.
13 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
14 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

EQUIPMENT

- 1 HAND DRYERS
.1 HAND DRYERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION WITH THE FOLLOWING FEATURES:
.1 SURFACE MOUNTING.
.2 FIXED NOZZLE.
.3 WHITE FINISH WITH AUTOMATIC ACTIVATION.
.4 RATING OF 1800W (20A) AT 120V.
.5 NOVA 5
.6 APPROVED ALTERNATE: WORLD DRYER CAT. #XA5-2-974.

LIGHTING SYSTEMS

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

- 1 LED
.1 FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD.
.2 LED'S MUST BE SELECTED USING A BINNING ALGORITHM TO ENSURE COLOUR AND LUMEN OUTPUT OF A GIVEN FIXTURE ARE CONSISTENT, AS WELL AS MEET OR SURPASS ANSI C78.377 SPECIFICATION FOR THE RATED LIFETIME OF THE FIXTURE. COLOUR ACCURACY BETWEEN PRODUCTS MUST BE WITHIN A 2-STEP MACADAM ELLIPSE.
.3 LUMINAIRES MUST BE TESTED TO IESNA LM79 BY AN INDEPENDENT APPROVED LABORATORY.
.4 LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING.
.5 LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA.
.6 FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST RESULTS UPON REQUEST.
.7 LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS 'ABSOLUTE' OR 'DELIVERED' VALUES.
.8 OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE 750 MA.
2 FIXTURE INSTALLATION
.1 LOCATE AND INSTALL LUMINAIRES AS INDICATED.
2 FIXTURE SURFACE MOUNTED TO SUSPENDED CEILINGS MUST BE SECURED THROUGH CEILING ASSEMBLY TO CROSS MEMBER SUPPORTS. THESE SUPPORTS ARE TO BE STEEL CHANNELS OR ANGLES INDEPENDENTLY SECURED TO STRUCTURE USING #12 "JACK" CHAIN. EACH CHAIN MUST BE SECURED SO NO FIXTURE WEIGHT IS ADDED TO THE CEILING ASSEMBLY.
3 PLASTER FRAMES/FLANGE KITS MUST BE PROVIDED BY THIS DIVISION FOR FIXTURES RECESSED IN PLASTER AND/OR DRYWALL CEILINGS.
4 WHERE SPECIFIED, FIXTURES TO BE CHAIN HUNG SHALL BE HUNG USING "JACK" CHAIN WITH A CAPACITY TO SUIT THE FIXTURE WEIGHT. BRANCH CIRCUIT WIRING FEEDING THESE FIXTURES SHALL BE AC90 CABLE "TY-WRAPPED" AT 36" (900mm) INTERVALS ALONG LENGTH OF DROP. FINAL APPEARANCE MUST BE NEAT AND PROFESSIONAL.
5 INSTALL EXIT LIGHTING UNITS AS INDICATED WITH ILLUMINATED FACES AND CHEVRONS/ARROWS INDICATING PATH(S) OF EXIT.
6 INSTALL EMERGENCY LIGHTING UNITS AND ASSOCIATED REMOTE MOUNTED FIXTURES AS INDICATED.
7 DIRECT "HEADS" ON UNITS AND REMOTE MOUNTED FIXTURES TO ILLUMINATE PATH(S) OF EXIT.
8 INSTALL EMERGENCY LIGHTING UNITS AND REMOTE FIXTURES AT 8' (2400mm) ABOVE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
9 PROVIDE A 15A 120V DUPLEX RECEPTACLE (CONNECT TO CIRCUIT INDICATED) ADJACENT TO UNIT.
10 CONNECT LUMINAIRES TO LIGHTING CIRCUITS AS INDICATED.
11 CONNECT EXIT FIXTURES TO EXIT LIGHTING CIRCUITS AND UNIT EQUIPMENT (IF APPLICABLE).
12 CONNECT UNIT EQUIPMENT TO CIRCUITS AS INDICATED.
13 ALL WIRING OF REMOTE EMERGENCY FIXTURES SHALL BE MINIMUM #10 T90 FOR EACH CIRCUIT AND RUN IN CONDUIT. WIRING MUST BE SIZED IN CONFORMANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR DISTANCE REQUIRED.
14 ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.
15 ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.
16 ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.
3 GUARANTEE
.1 ALL LED FIXTURES AND DRIVERS ARE TO BE COMPLETE WITH A 5 YEAR GUARANTEE.
.2 THE LABOUR REQUIRED TO REPLACE THESE DRIVERS MUST BE INCLUDED IN THE ABOVE GUARANTEE
4 TESTING/CERTIFICATION
.1 AT THE COMPLETION OF THE PROJECT AND IN THE PRESENCE OF THE CONSULTANT, TEST ALL EXIT AND EMERGENCY FIXTURES. ON COMPANY LETTERHEAD, THE CONTRACTOR IS TO PREPARE A CHART INDICATING:
- PROJECT
- DATE
- EQUIPMENT TYPE
- CERTIFICATION OF CORRECT CONNECTION
- CERTIFICATION OF CORRECT OPERATION
- DURATION OF TEST IN MINUTES (MINIMUM 30)
- ACTUAL PERIOD OF TESTING (TIME OF DAY)

FIRESTOPPING

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

NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.



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Phone: 549-725-3555
Website: deiassociates.ca
Project Number: 23305

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2024 DEI Consulting Engineers Inc.

NOTE: THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF ALL SITE DIMENSIONS AND FOR NOTIFYING THE ARCHITECT OF ANY SITE CONDITIONS AND SITE MEASUREMENTS THAT ARE NOT CONSISTENT WITH THE DRAWINGS.

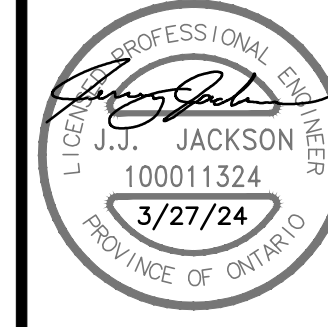


Table with 3 columns: No., Revision, Date. Contains one entry: 1, Issued for Permit/Tender, April 2, 2024.

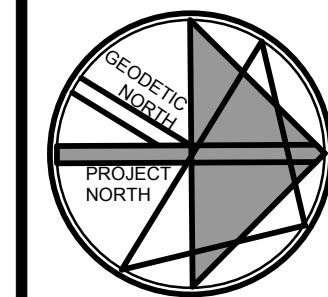


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project
WRDSB TAIT STREET PUBLIC SCHOOL CEILINGS RENOVATIONS

WATERLOO REGION DISTRICT SCHOOL BOARD
184 TAIT STREET, CAMBRIDGE ON N1S 3G3

SPECIFICATIONS

drawing scale
AS NOTED

ward99 project number
23013 - WRDSB TAIT ST CEILINGS

ward99 architects logo and drawing no. E201. Includes contact information for ward99 architects inc. at 7500 Highway 27, Unit 27B, Vaughan ON L4H 0J2.