



GRAPHIC DESCRIPTION	INTERIOR PARTITIONS
DESIGNATION	
TYPE	RATED INTERIOR WALL
FIRE RESISTANCE RATING (F.R.R) REQUIRED/PROVIDED	1-HOUR / 1-HOUR (ULC W412)
SOUND TRANSMISSION COEFFICIENT (S.T.C)	
CONSTRUCTION	-92 METAL STUDS @ 406 o.c. w/ 89 SOUND BATT INSULATION BTWN STUDS -13 ABUSE RESISTANT GYPSUM BOARD EACH SIDE

**Material Specifications:**

**HM Doors & Frames:**

**Frames:** Flush, galvanized, 16-gauge H.M. welded frames, equal to Fleming F-16 frames, narrow face profile where noted, paint finish.

**Doors:** Flush, galvanized, 1.75" (45mm), 18-gauge H.M. doors to receive a paint finish, equal to Fleming D series.

**Hollow Metal Doors:** 16 gauge lockseam doors constructed of galvanized steel sheet. Internally reinforced with vertical steel channels separated by semi-rigid fiberglass insulation. Interior doors and screens to have 1/2" tempered glazing except where Georgian wired glass is required for fire-rating.

**Hollow Metal Frames:** 1.5mm thick, cold-rolled commercial quality steel, galvanized finish. Blank, reinforce, drill and tap frames for mortised hardware. Reinforce frames for surface mounted hardware. Hardware reinforcing to be minimum 3 mm for hinges panic devices, 2.7mm for surface mounted hardware, 1.5mm for other devices. All glazing in Doors and Screens to be 1/2" Tempered glass.

**Washroom Accessories:**

Soap Dispenser (SD): Clear Vu 46oz Soap Dispenser - Impact - 9347.  
Paper Towel Dispenser (PTD): Tork-83TR Paper Towel Dispenser with Lever

**Ceramic Wall Tiles CT-A:**

Acceptable Materials: Size 73mm x300mm; "ShadeBric Series" by Olympia Tile, matte finish. Allow for two (2) field colours from manufacturer's full line. Install with coloured epoxy grout to match.

**Acoustic Ceiling Panels:**

TECTUM Direct Attach Ceiling panels  
1" thick cementitious wood fiber panels c/w factory-applied latex paint with Silicate surface coating for abuse resistance. Fasteners to be selected and spaced as per Manufacturer Installation Guide.  
Colour to be selected from Manufacturer's standard colour range.

Long Edges Beveled, Short Edges Square  
Panel sizes - Refer to drawings.

Fire Performance - Class A per IBC. Flame spread Index 25 or less and Smoke Developed

Index 50 or less when tested in accordance with ASTM E84.

CANULC S102 surface burning characteristics. Flame spread Index 25 or less and Smoke Developed Index 50 or less (painted face only)

ASTM E1264 Classification - Type IV, Form 2, Pattern E, Fire Class A By Armstrong Ceiling & Wall Solutions.

**Luxury Vinyl Tile Flooring LV1:**

Expona commercial line from Polyflor. Colour selected by Consultant from manufacturer's full colour range.

**Tile Edge Trim:**

Provide metal edge trim at all exposed tile edges. Equal to Schluter Jolly, anodized aluminum.

**Tile Grout & Adhesive:**

Manufacturers of grout and adhesive having Product considered acceptable for use: Flexile, Laticrete, Mapei, Proma Adhesives, Inc., TEC. Grout colour selected by Consultant from manufacturer's full colour range.

**Milwork:**

Fabricate and install casework to AWMAC NAAWS 4.0, Custom Grade.

**Materials:**

Hardwood Lumber: White Birch, NHLA Select and Better Grade, with vertical grain capable of receiving a high quality transparent finish.

**Medium Density Fiberboard (MDF):**

To ANSI A208.2, Grade MD, minimum 740 kg/m<sup>3</sup> density and moisture content between 4.5 - 8.0 percent; with clear Natural finish; thicknesses as indicated on Drawings.

**Melamine Panels:**

Melamine resin impregnated decorative paper, thermally fused to both sides of a premium grade medium density fiberboard (MDF). Performance to meet or exceed NEMA LD3-2005-VGS minimum requirements. Colours to be selected from full manufacturer's standard colour range.

**Decorative Laminate:**

High pressure decorative laminate to ANSI/NEMA LD3, as follows:  
1 General Purpose Type: Grade HGS, 1.2 mm thick.  
2 Postforming Type: Grade HGP, 1.0 mm thick.  
3 Backer Type: Grade BKM, 1.0 mm thick.  
4 Manufacturers: Arcoelite, Formica, Nevamar or Wilsonart.

**Cabinets:**

All countertops: Postformed plastic laminate with 180 degree wrapped bullnose edge. If wall finish around countertop is tiled, no integral backsplash is required. At junction of counter/counter backsplash & adjacent wall finish, apply small bead of sealant.

**Cabinet/Drawer Fronts/Doors & Cabinet Interiors:**

Melamine or plastic laminate on plywood, on all exposed surfaces. All cabinet interiors to be off-white colour (gray or beige) melamine or plastic laminate.

**Bodies, Shelves, Aprons, Skirts:**

19mm thick.  
6mm thick.

**Whiteboards:**

Whiteboard: Sandwich panel construction, as follows:  
1 Face Panel: 22 ga. porcelain enameled sheet steel; writable and washable surface, acid-resistant and magnetic; White colour.  
2 Core: 7/16" thick fibreboard.  
3 Back-up Balancing Sheet: 26 ga. sheet steel.

Aluminum Trim: 1/16" thick extruded aluminum profiles; eg. Series 9300 by ASI Visual Display Products, Inc., comprised of:  
1 Perimeter and divider trim,  
2 Concealed mechanical joining system, including 1" wide integrally slotted PVC inserts laminated into ends of panels, and 3/32" thick galvanized steel splines,  
3 Marker tray, with contour fitting end castings; flat type.

**Rubber Floor Base:** To ASTM F1861, Type TP, Group 1, Style B - Cove, 3.17mm thick thermoplastic rubber, 152mm high; top set; complete with pre-moulded end stops and external corners. Charcoal color; as manufactured by Armstrong World Industries, Flexco, Roppe Corporation or Tarkett/Johnsontite.

**Transition Strip:** Thermoset vulcanized rubber, smooth, purpose made to accommodate wheeled traffic and prevent tripping; tapered designs to suit nature of transition; colours as selected by Consultant; as manufactured by Armstrong World Industries, Flexco, Roppe Corporation or Tarkett/Johnsontite.

**Firestopping & Smoke Seals:** Firestop Sealant: To CANULC-S115; ULC labelled, non-sagging type for vertical applications; types as listed in tested assemblies.

Firestop Insulation: To CANULC-S702.1, Type 2; manufactured from rock or slag fibers, as listed in tested assemblies.

Firestop Accessories: Firestop foams, boards, blocks, collars, wraps, putty and plugs; to CANULC-S115; ULC labelled; types as listed in tested assemblies.

Manufacturers: 3M Canada Inc. or Hill Canada Corporation or A/D Fire Protection or Tremco.

Inspect penetration firestop systems to ASTM E2174 and fire-resistant joint systems to ASTM E2335.

General Purpose, Acoustical Sealant: To CAN/CGSB-19.17-M; one-part, siliconized acrylic latex, mildew-resistant, accommodating joint movement of plus or minus 12-1/2 percent; colours as selected by Consultant. Tremflex 834 by Tremco or similar by Dow, General Electric or Master Builders Solutions Canada, Inc.

Mildew-Resistant Sealant: To ASTM C920, Type S, Grade NS, Class 25, Use NT, G, A, and Q; one-part, acetoxy silicone sealant, complete with integral fungicide; colours as selected by Consultant; Tremal 200 by Tremco or similar by Dow, General Electric or Master Builders Solutions Canada, Inc.

Install joint sealants to ASTM C1193.

Exterior Weatherseal Sealant: To ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A and Q; one-part, moisture curing, low modulus polyurethane sealant; accommodating joint movement of plus or minus 35 percent, with a 30- to 90-minute skin time; eg. Dymonic FC by Tremco.

Colour: To be selected from full standard range by consultants.

Acceptable manufacturers: Tremco, GE, Dow, or 3M.

Glazing Sealant: To CAN/CGSB-19.13-M, Type MG-2-25-A-L; one-part, moisture curing, acetoxy silicone sealant, eg. Proglazie by Tremco, Clear colour.

**Paint:**

Conform to MPI Architectural Painting Specification Manual, using only Products from the following manufacturers as listed in MPI Approved Products List for each scheduled paint system. Provide primers and undercoats produced by same manufacturer as finish coats.

Manufacturers: Benjamin Moore & Co. Ltd., ICI (Dulux) Paints, MF Paints Inc. (Innovation Plus), Para Paints Canada Inc., PPG Canada Inc. (Pittsburgh Paints), Pratt & Lambert Co., Sherwin-Williams Canada, and Sico Coatings, Inc.

Conform to MPI Maintenance Repainting Manual for refinishing existing previously finished surfaces.

**Paint System Schedule**

1. Concrete - Opaque Painted Finish: INT. 3.1M - Institutional low odor/voc,  
Premium Grade; Gloss Level G5 - Semi-Gloss.

2. Concrete Masonry Units - Opaque Painted Finish: INT. 4.2E - Institutional low odor/voc (over latex block filler), Premium Grade; Gloss Level G5 - Semi-gloss. Provide block filler primer on all new concrete block masonry before applying paint.

3. Brick - Opaque Painted Finish: INT. 4.1M - Institutional low odor/voc (over latex primer/sealer), Premium Grade; Gloss Level G4 - Satin.

4. Gypsum Board Walls - Opaque Painted Finish: INT. 9.2M - Institutional low odor/voc (over latex primer/sealer), Premium Grade; Gloss Level G1 - Flat.

5. Gypsum Board Ceilings - Opaque Painted Finish: INT. 9.2M - Institutional low odor/voc (over latex primer/sealer), Premium Grade; Gloss Level G1 - Flat.

6. Galvanized and Galvalume Metal - INT. 5.3N - Institutional low odor/voc (over w.b.galvanized primer), Premium Grade; Gloss Level G5.

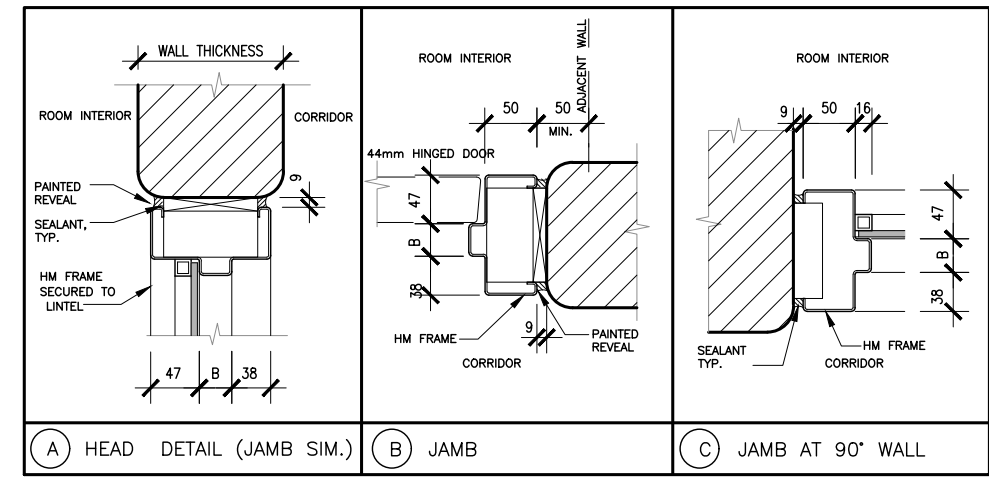
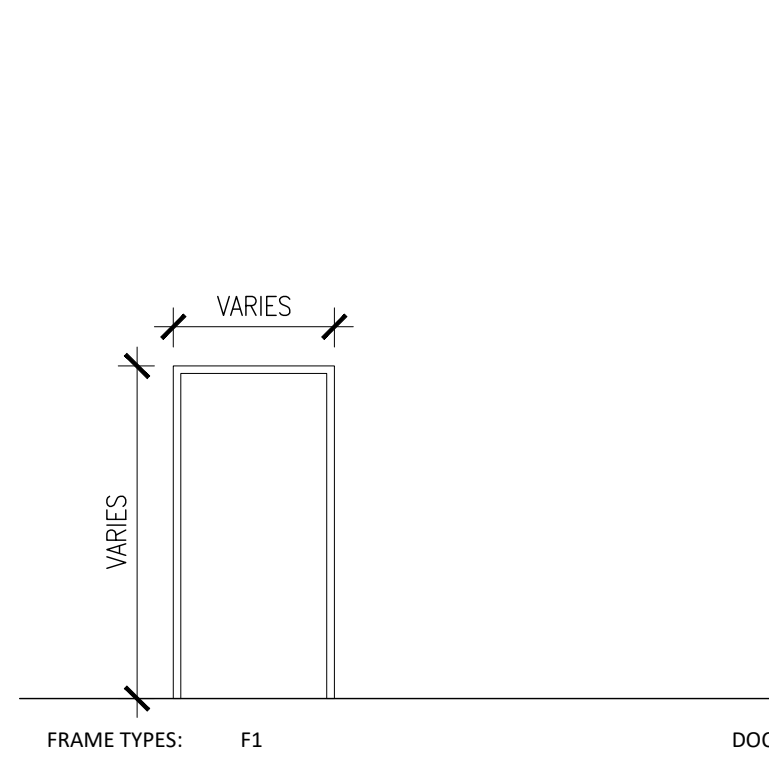
Colours: Up to 4 colours as selected by Consultant.

NOTE: All exterior metal to be hot-dipped galvanized.

**Extra Stock Material:**

Provide 3% additional extra stock materials for all wall and floor finishing materials. Contractor to provide new, unopened cartons of finish materials to Owner c/w intact original labels. Deliver to and store extra stock materials at location directed by Owner at Place of the Work.

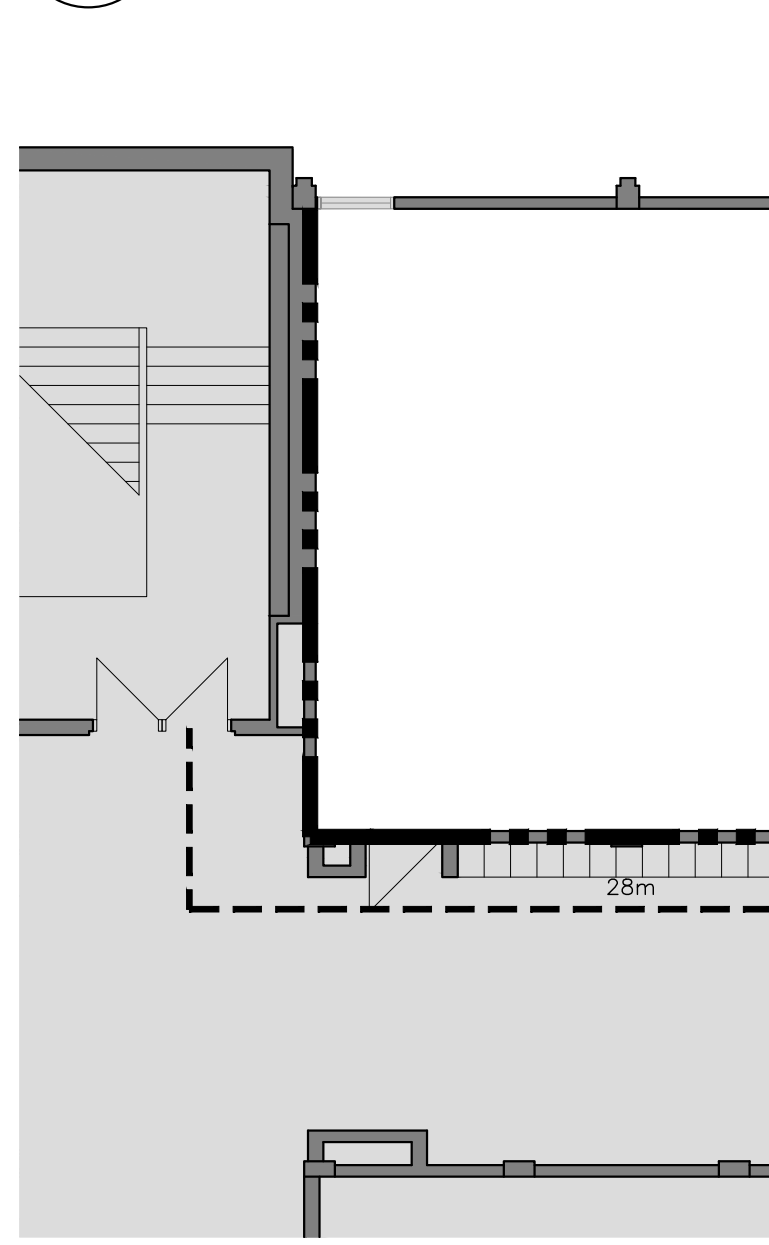
**7 DETAILS A0.2 NTS**



**5 DOOR AND FRAME TYPE A0.2 1:50**

ROOM NAME	DOOR	FRAME	FIRE RATINGS	REMARKS							
	NUMBER	QUANTITY (PANELS)	SIZE	TYPE	MATL.	GLASS	TYPE	MATL.	FINISH		
HOME ECONOMICS [A324]	D324	1	EX	EX	EX	-	EX	EX	EX	EX	Existing door, replace hinges to swing clear hinges. Automatic door operator.
HOME ECONOMICS [A324]	D324A	1	915 x 2135	NL	HM	G1	F1	HM	PT	45 MIN	Classroom latch set, closer.

**4 DOOR SCHEDULE A0.2 NTS**



**3 THIRD FLOOR LIFE SAFETY PLAN A0.2 1:100**

**6 DETAILS A0.2 NTS**

LEGEND

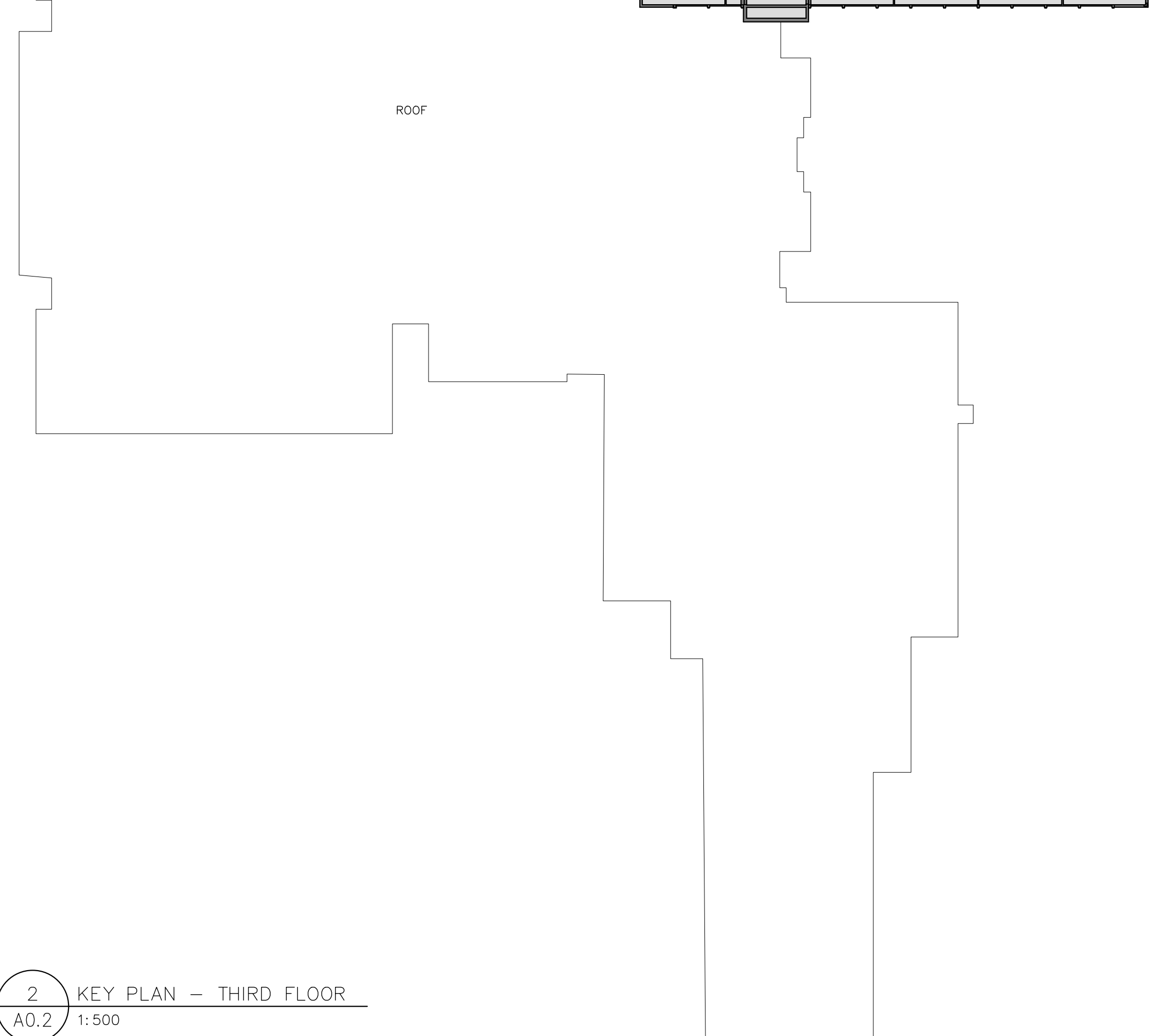
EXIT & EGRESS  
TRAVEL DISTANCE 28m

FIRE SEPARATIONS  
60 MIN

LIFE SAFETY LEGEND

- FIRE ALARM HORN
- HEAT DETECTOR

**2 KEY PLAN - THIRD FLOOR A0.2 1:500**



2024 Ontario Building Code Data Matrix Part-II Renovation		Building Code Reference (1)
O.Reg. 163/24		Last Amendment O.Reg. 447/24
11.00	Building Code Version:	
11.01	Project Type:	[A] 1.3.3.3B.
11.02	Major Occupancy Classification:	3.1.2.1.(1), 2.1.4.1.(1), & 11.2.1.
11.03	Superimposed Major Occupancies:	11.2., 3.2.2.5. to 3.2.2.8., & 2.2.1.
11.04	Building Area (m <sup>2</sup> ):	[A] 1.4.1.2., 11.2., & 11.3.
11.05	Building Height:	[A] 1.4.1.2., 3.2.1.1., 2.2.2.2., & 11.3.
11.06	Number of Streets/ Firefighter access:	3.2.2.10., 3.2.5., 2.2.4.1., & 11.3.
11.07	Building Size:	11.2.1.1., T. 11.2.1.1.B-N
11.08	Existing Building Classification:	10.1.1.2., 11.2.1.1., T. 11.2.1.1.A, T. 11.2.1.1.B to N
11.09	Renovation Type:	11.3.3.1. & 11.3.3.2.
11.10	Occupant Load:	3.1.17., 2.1.2.2., & 11.4.2.2.
11.11a	Plumbing Fixture Requirements:	3.7.4., 11.3.4., 11.3.5., 11.4.2.2., & 11.4.2.5.
11.11b	Plumbing Fixture Requirements Continued:	Tables 3.8.2.3.A & 3.8.2.3.B
11.12	Barrier free Design:	11.3.1.2., 11.3.2., 11.3.3.2.
11.13	Reduction in Performance Level:	11.4.2.1., 11.4.2.2., 11.4.2.3., 11.4.2.4., 11.4.2.5., 11.4.2.6.
3.21	Required Fire Resistance Rating:	3.2.2.20., 93, 3.2.1.2., 3.2.1.4., 3.2.2.15., 3.3.2.1.

**1 OBC MATRIX A0.2 NTS**

GACESA SLOTE ARCHITECTS  
118 JAMES ST. NORTH, SUITE 300  
HAMILTON, ONTARIO L8R 2K7  
TEL: 905-297-0863

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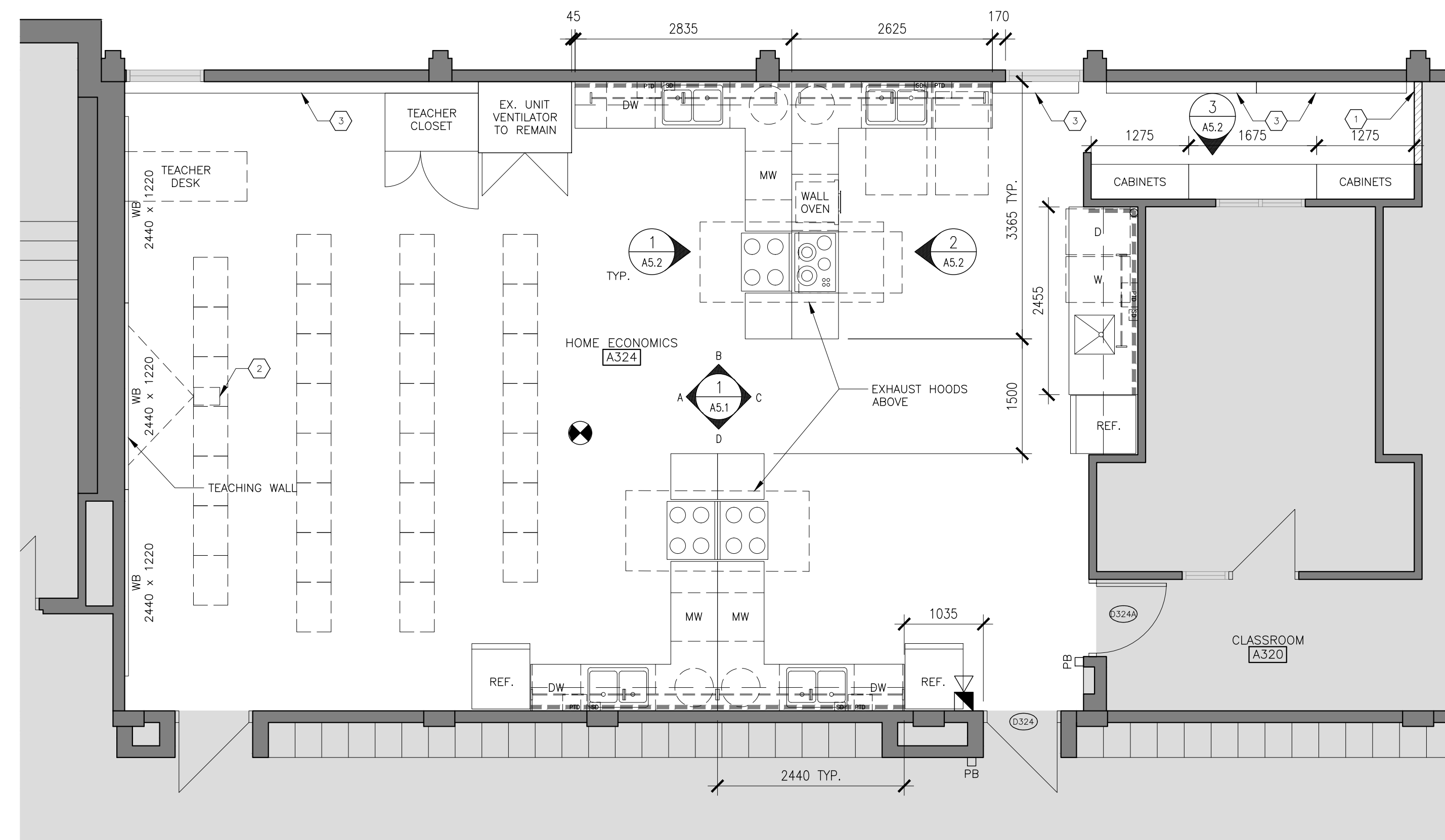
No.	Date	Remarks
02	2026-05-06	Issued for Tender
01	2026-04-20	Issued for Building Permit

Interior Renovations to  
**HDSB White Oaks Family Studies Classroom**  
1330 Montclair Dr, Oakville, ON

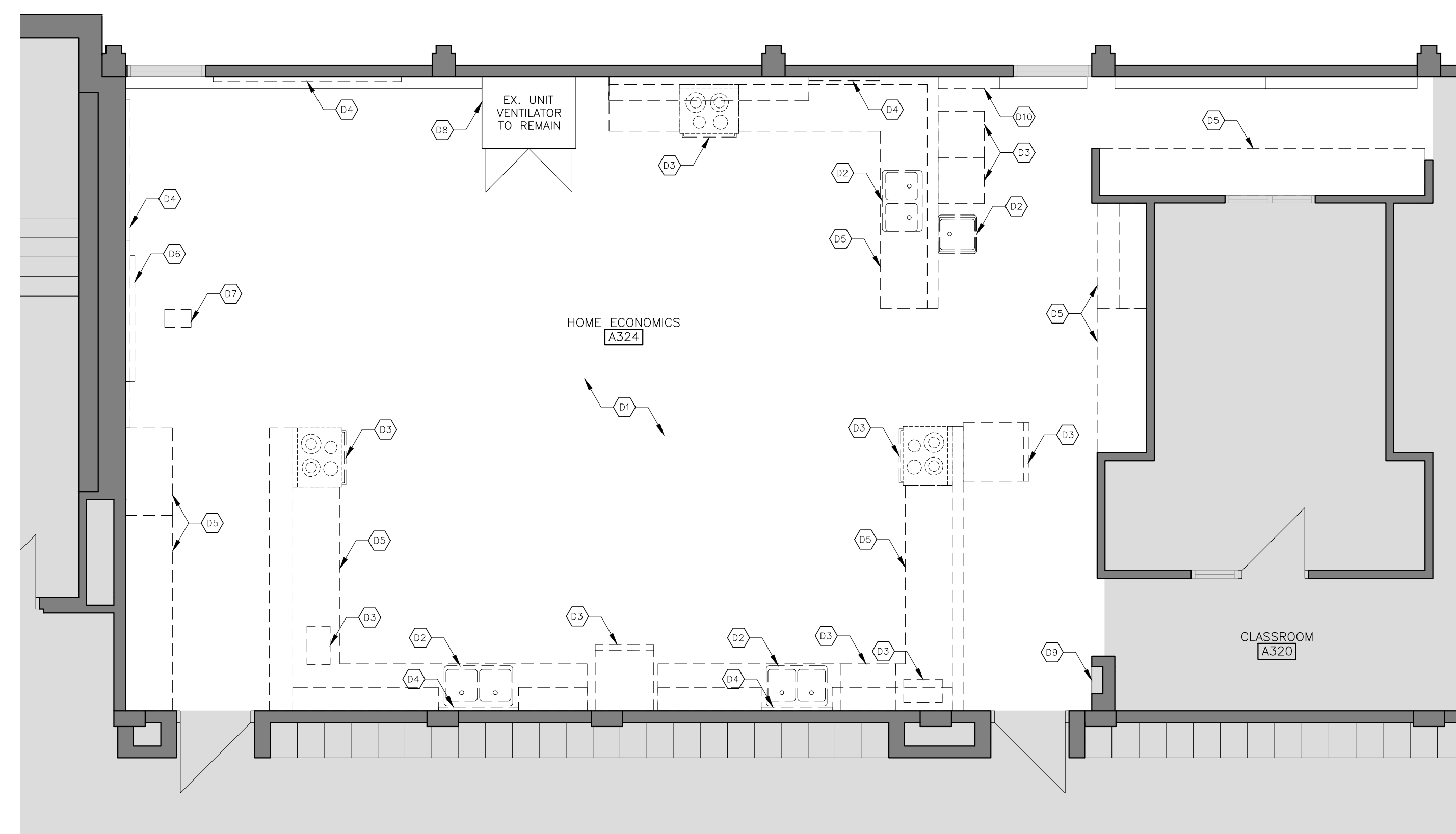
Dwg. Title:  
**OBC & Life Safety Plan, Assembly & Door Schedule**

Drwn: Chkd: SG  
Proj. No.: 25028  
Scale: As noted  
Date: 01/07/26

Drawing No.:  
**A0.2**



2 PARTIAL PROPOSED FLOOR PLAN  
A2.1 1:50



1 PARTIAL DEMOLITION PLAN  
A2.1 1:50

DEMOLITION KEYNOTES

- NOTE: ALL KEYNOTES MAY NOT BE USED
- D1 REMOVE ALL EXISTING FLOOR FINISHES & MAKE GOOD FOR NEW FINISHES
  - D2 REMOVE EXISTING SINKS. PATCH AND MAKE ALL SURFACES GOOD.
  - D3 REMOVE EXISTING APPLIANCES AND RETURN TO OWNER. PATCH AND MAKE GOOD ALL DISTURBED SURFACES.
  - D4 REMOVE EXISTING WALL MOUNTED TACK BOARDS, BLACKBOARDS, FRAMES AND DISPLAY ITEMS. PATCH AND MAKE GOOD ALL DISTURBED SURFACES.
  - D5 REMOVE EXISTING MILLWORK. PATCH AND MAKE GOOD ALL DISTURBED SURFACES.
  - D6 REMOVE EXISTING SMART BOARD AND RETURN TO OWNER. PATCH AND MAKE GOOD ALL DISTURBED SURFACES.
  - D7 SALVAGE EXISTING SHORT THROW PROJECTOR AND ALL ASSOCIATED ITEMS FOR FUTURE USE. COORDINATE WITH ELECTRICAL.
  - D8 EXISTING MECHANICAL UNIT TO REMAIN TO BE PROTECTED THROUGH OUT CONSTRUCTION.
  - D9 EXISTING ELECTRICAL PANEL TO REMAIN TO BE PROTECTED THROUGH OUT CONSTRUCTION.
  - D10 CUT BACK EXISTING RADIATOR COVER.
  - D11 EXISTING ACT TO REMAIN
  - D12 REMOVE EXISTING ACOUSTIC CEILING PANELS
  - D13 OPENINGS NEED TO BE CUT CAREFULLY SO THAT NO DAMAGE IS DONE TO THE WEBS OF THE DOUBLE TEES.

DEMOLITION NOTES

1. REMOVE EXISTING LIGHTING FIXTURES AND DISPOSE. COORDINATE WITH ELECTRICAL.
2. REMOVE EXISTING MECHANICAL DUCTS. COORDINATE WITH MECHANICAL.
3. PATCH AND MAKE GOOD AT ALL JUNCTION OF NEW AND EXISTING WORK.

PLAN KEYNOTES

- NOTE: ALL KEYNOTES MAY NOT BE USED
- 1 INFILL OPENING WITH P1 TYPE WALL. FLUSH TO MATCH EXISTING ADJACENT WALLS.
  - 2 RE-INSTALL SHORT THROW PROJECTOR. COORDINATE WITH ELECTRICAL.
  - 3 EXISTING RADIATOR TO REMAIN
  - 4 MUA ON ROOF ABOVE
  - 5 FRONT OF BULKHEAD TO ALIGN W/ CL OF WEB

PLAN NOTES

1. ALL PARTITIONS ARE  $\diamond$  UNLESS NOTED OTHERWISE.
2. LOCATE DOOR FRAMES 50mm FROM ADJACENT WALL UNLESS NOTED OTHERWISE.

PLAN LEGEND

- OUT OF SCOPE
- EXISTING TO REMAIN
- DEMOLITION
- NEW WALL
- EXISTING DOOR TO REMAIN
- NEW DOOR
- WHITE BOARD
- PTD - PAPER TOWEL DISPENSER (SUPPLIED BY OWNER)
- SD - SOAP DISPENSER (SUPPLIED BY OWNER)
- EXTENT OF WALL TILE
- VALANCE LIGHT

REFLECTED CEILING PLAN LEGEND

- GYPSUM BOARD CEILING
- 16"x8" ACOUSTIC CEILING PANELS
- ELEVATION TAG
- 305X1220 SUSPENDED LIGHT FIXTURE
- 305X1220 RECESSED LIGHT FIXTURE



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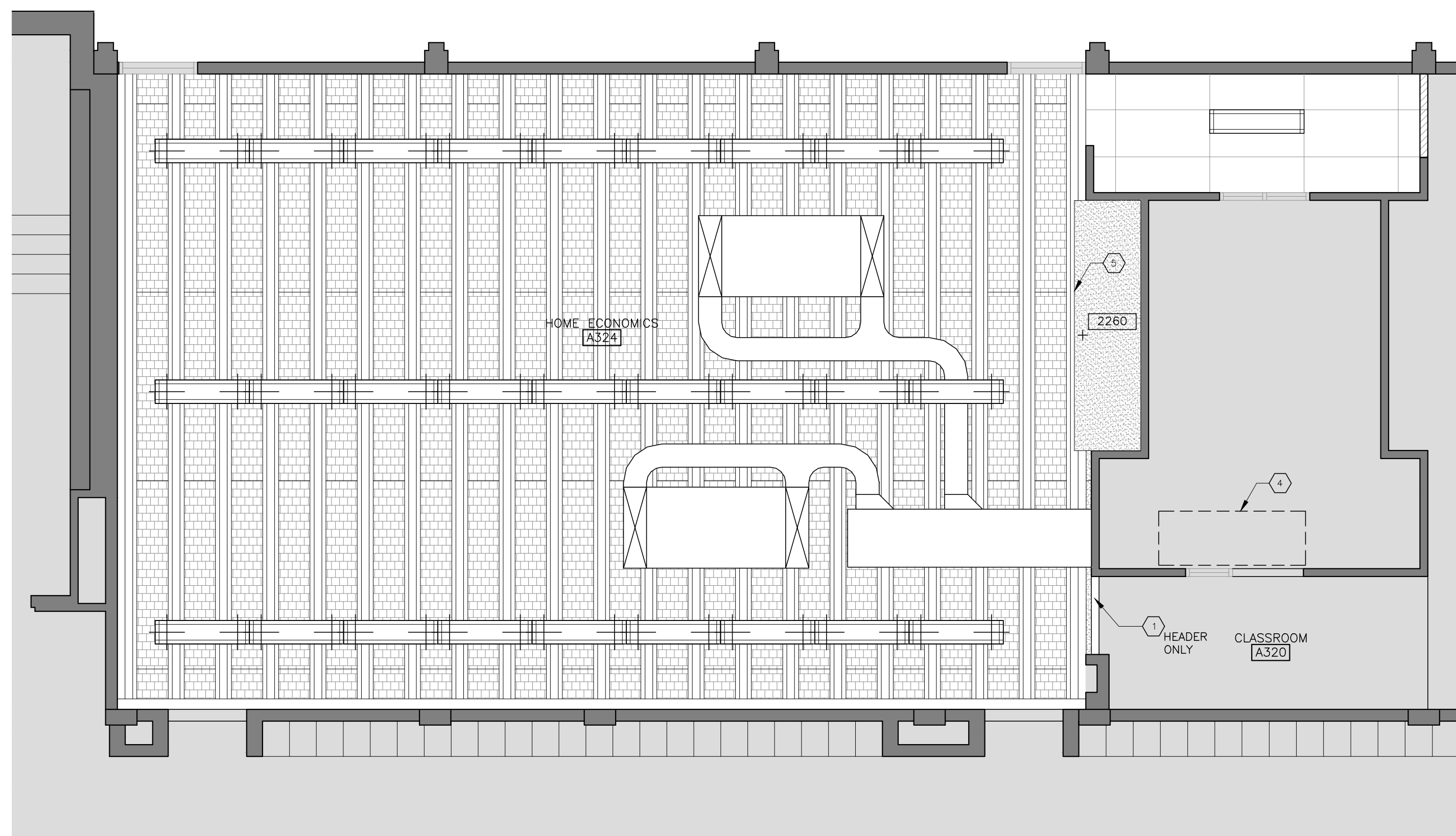
Interior Renovations to  
**HDSB White Oaks**  
Family Studies Classroom  
1330 Montclair Dr, Oakville, ON

Dwg. Title:  
**Partial Third Floor Plan**

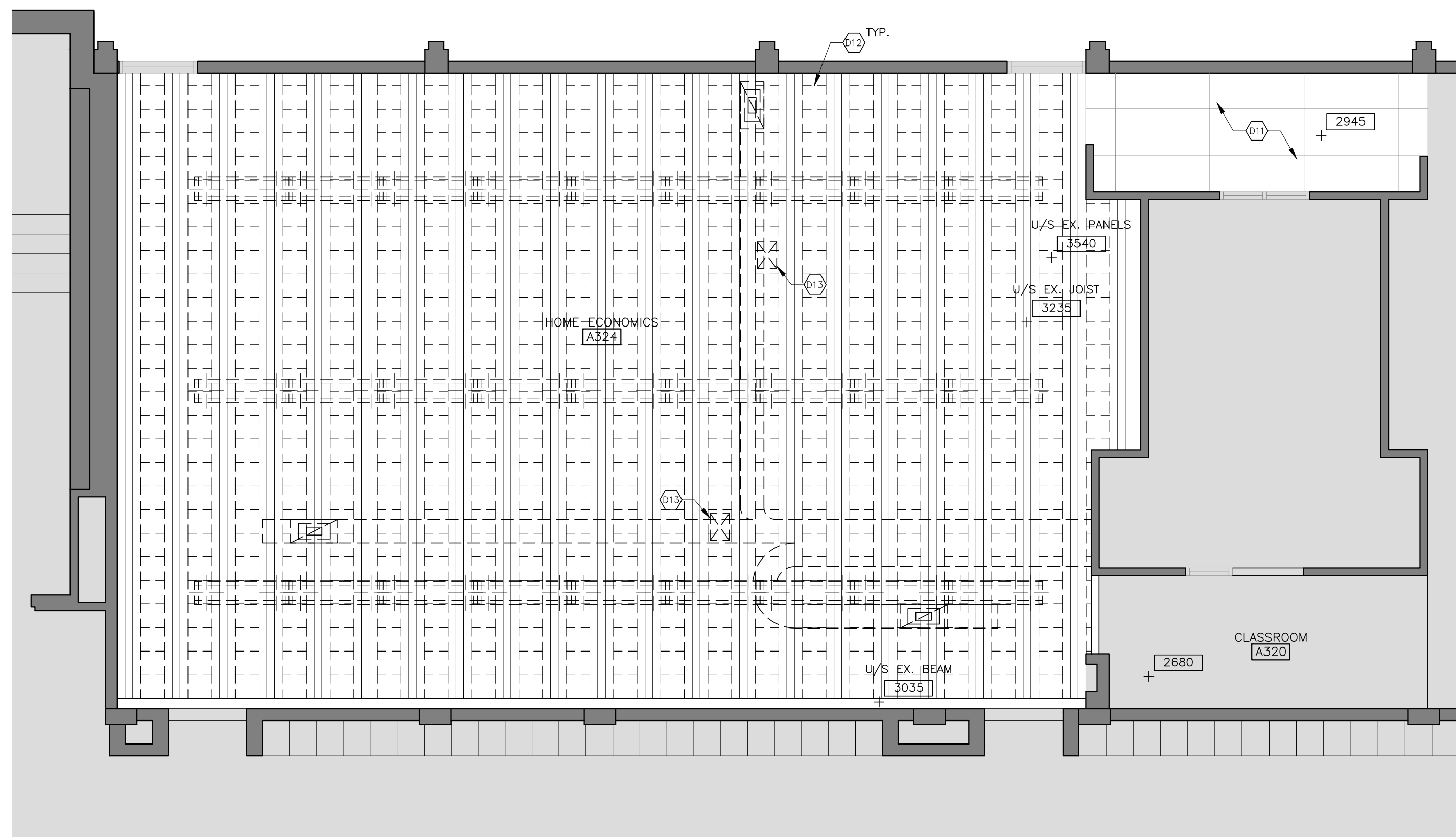
Drwn: Chkd: SG  
Proj. No.: 25028  
Scale: As noted  
Date: 01/07/26

Drawing No.:  
**A2.1**





2 PARTIAL PROPOSED RCP  
A2.2 1:50



1 PARTIAL DEMOLITION RCP  
A2.2 1:50

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- DEMOLITION
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- EXISTING DOOR TO REMAIN
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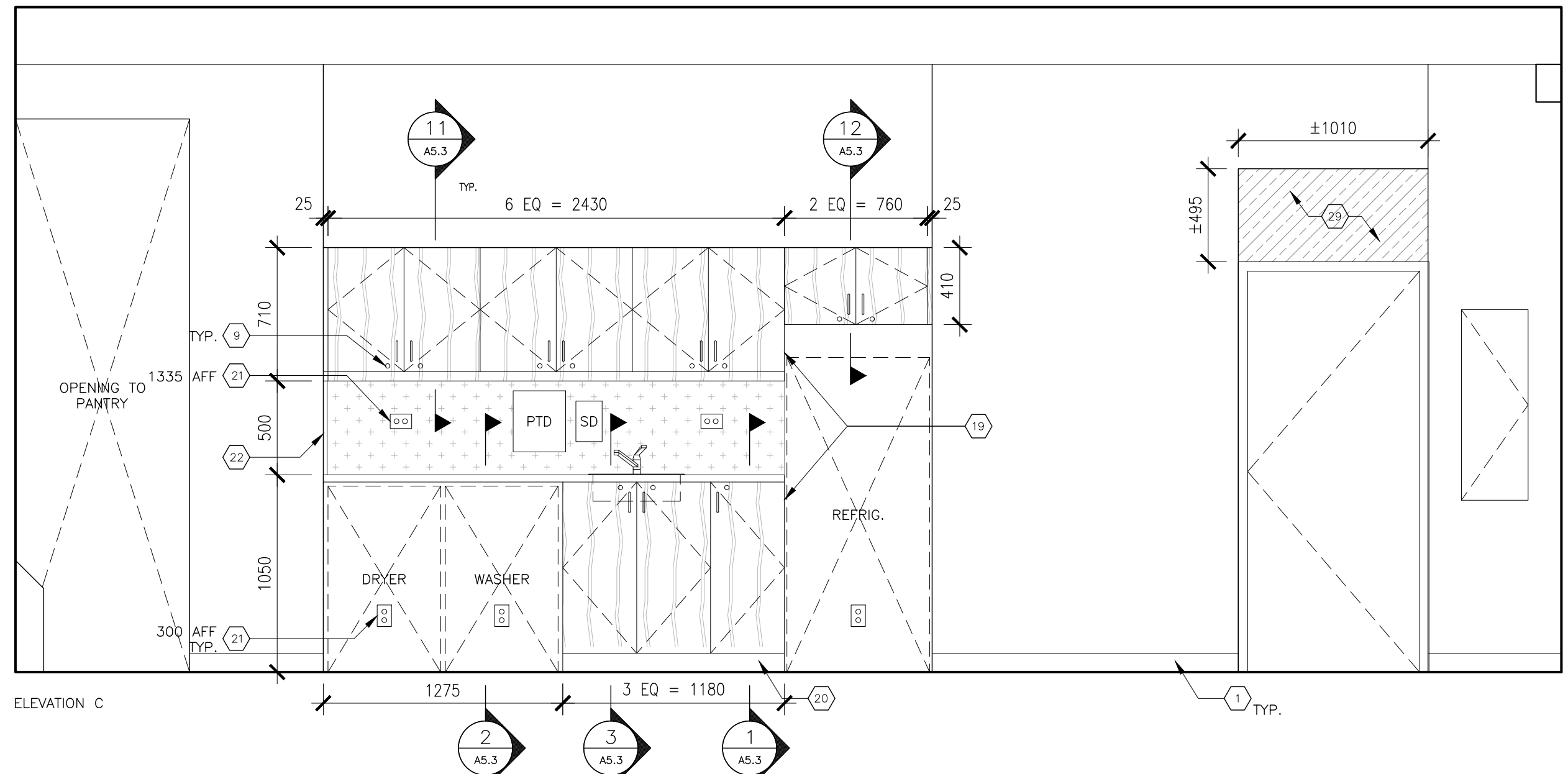
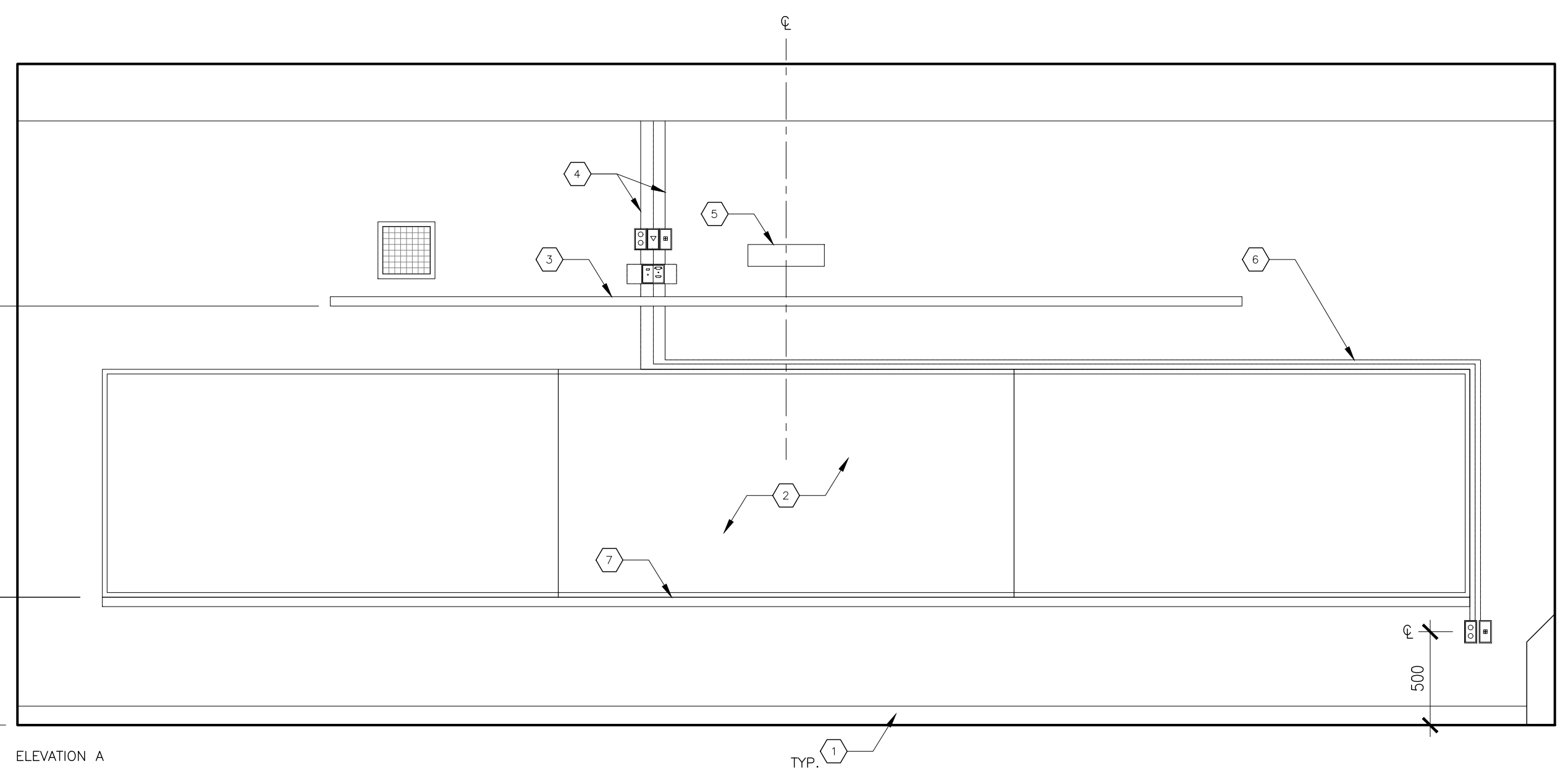
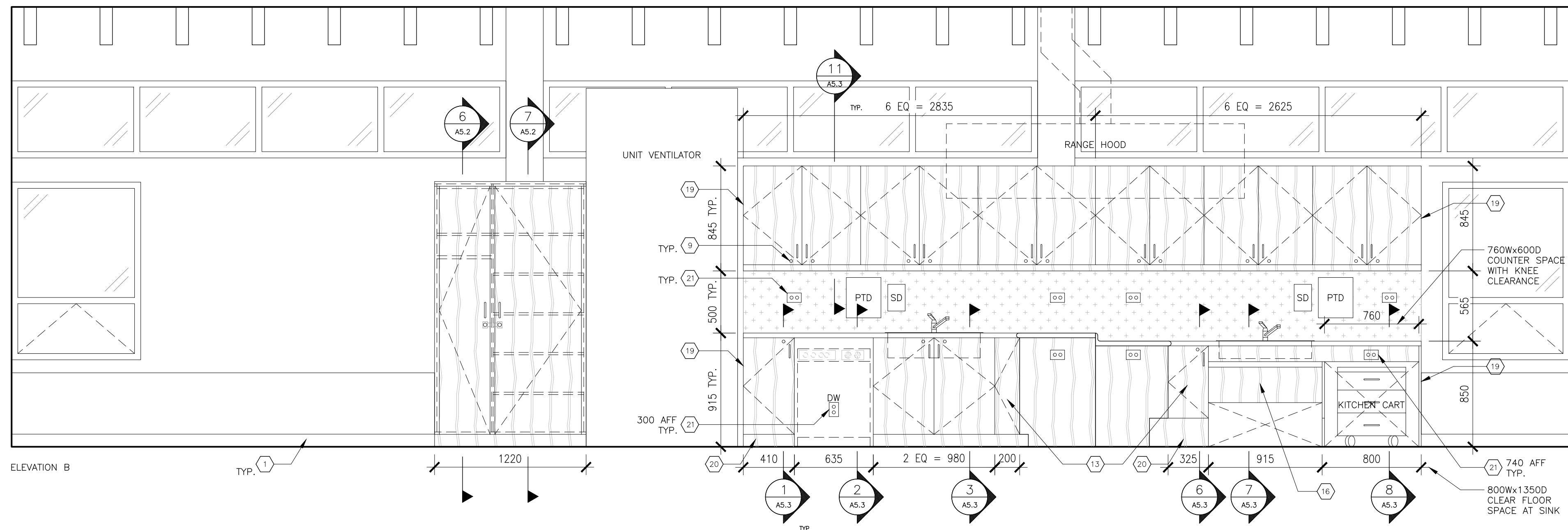
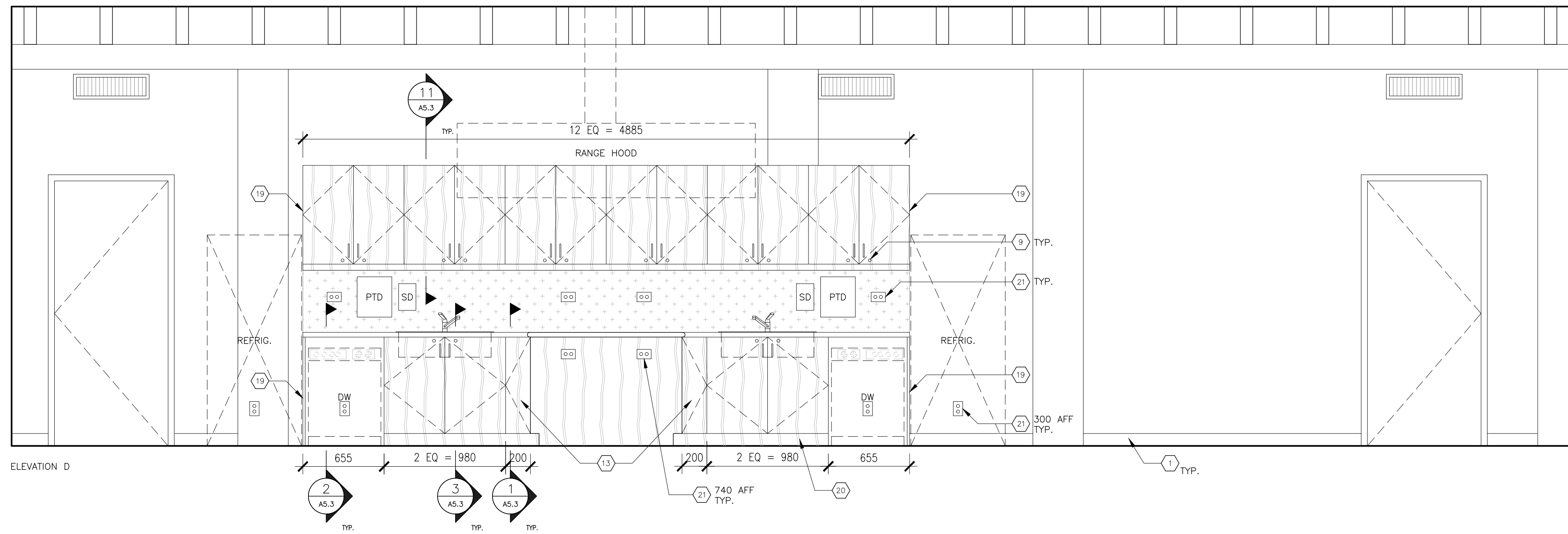
Interior Renovations to  
**HDSB White Oaks**  
**Family Studies Classroom**  
 1330 Montclair Dr, Oakville, ON

Dwg. Title:  
**Partial Third Floor Reflected Ceiling Plan**

Drwn: Chkd: SG  
 Proj. No.: 25028  
 Scale: As noted  
 Date: 01/07/26

Drawing No.:  
**A2.2**





- KEYNOTES**
- NOTE: ALL KEYNOTES MAY NOT BE USED
- 1 100 FLOOR BASE
  - 2 WHITE-BOARD
  - 3 CONTINUOUS TACK STRIP (MAP RAIL)
  - 4 CONDUIT FOR POWER & DATA
  - 5 OVERHEAD PROJECTOR (SUPPLIED BY CLIENT, INSTALLED BY CONTRACTOR)
  - 6 WIREMOLD (SEE ELECTRICAL)
  - 7 MARKER TRAY
  - 8 METAL PULL, TYP.
  - 9 CABINET LOCK, KEYPED PER CLASSROOM DOOR
  - 10 HEAVY-DUTY ROLLER CATCH, TOP & BOTTOM
  - 11 FIXED SHELF
  - 12 SOLID HARDWOOD DOOR JAMB C/W EDGE RABBET @ PANELS, TYP.
  - 13 PLANO HINGED CORNER DOORS, NO CABINET POST IN CORNER
  - 14 P-LAM BACKSPASH, TYP.
  - 15 ADJUSTABLE SHELVES
  - 16 REMOVABLE APRON (SEE DETAIL 13/A5.2)
  - 17 P-LAM COUNTER TOP AND NOSING
  - 18 RECESSED PILASTER STRIPS
  - 19 FINISHED END GABLE
  - 20 MILLWORK TOE KICK, TYP. FINISH TO MATCH CABINET
  - 21 DUPLEX RECEPTACLE @ 1200 AFF, UNO
  - 22 RETURN TILE ON ADJACENT WALL. DEPTH OF COUNTER UNO.
  - 23 U/S OF UPPER CABINETS TO BE P-LAM AND MATCH EXISTING BOX FRAMES
  - 24 VALENCE LIGHT W/ SWITCH
  - 25 COAT HOOK
  - 26 COAT ROD
  - 27 FIXED FACE BOARD
  - 28 CASTER WHEELS (4 PER CART, 2 W/ BRAKES)
  - 29 INFILL OPENING WITH P1 TYPE WALL, FLUSH TO MATCH EXISTING ADJACENT WALLS.

- GENERAL NOTES**
1. P-LAM: PLASTIC LAMINATE ON 19 PLYWOOD CORE
  2. ALL MELAMINE TO BE GREY COLOUR
  3. FINISH ALL VISIBLE EDGES AND SURFACES
  4. ALL BLOCKING TO BE 140X19 PLYWOOD, CONTINUOUS ON ALL SURFACES OF CABINETS ABUTTING WALLS
  5. ALL GABLE ENDS NOT ABUTTING A WALL ARE TO BE FINISHED
  6. ALL APPLIANCES ARE SUPPLIED BY OWNER. INSTALLED BY CONTRACTOR.

ε - DENOTES CENTRELINE

**MILLWORK MATERIALS (UNO)**

DOOR:	P-LAM
BOX FRAMES (INT.):	19 MELAMINE
BOX FRAMES (EXT.):	19 P-LAM ON PLYWOOD (WHERE VISIBLE), 19 MELAMINE ELSEWHERE
DRAWERS:	13 MELAMINE INTERIOR, 19 P-LAM ON PLYWOOD FRONTS
SHELVES:	19 P-LAM ON PLYWOOD (WHERE VISIBLE), 19 MELAMINE ELSEWHERE
BACKS:	6 MELAMINE ON 13 PLYWOOD STRAPPING
COUNTERTOPS:	19 P-LAM ON PARTICLE BOARD w/38 WRAPPED BULLNOSE EDGE
TRIM:	SOLID PLASTIC EDGEBANDING

**LEGEND**

	P-LAM PANEL		CT-A
	PTD - PAPER TOWEL DISPENSER (SUPPLIED BY OWNER)		
	SD - SOAP DISPENSER (SUPPLIED BY OWNER)		



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NOTE: DRAWINGS ARE NOT TO BE SCALED.

No.	Date	Remarks
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Interior Renovations to  
**HDSB White Oaks**  
**Family Studies Classroom**  
 1330 Montclair Dr, Oakville, ON

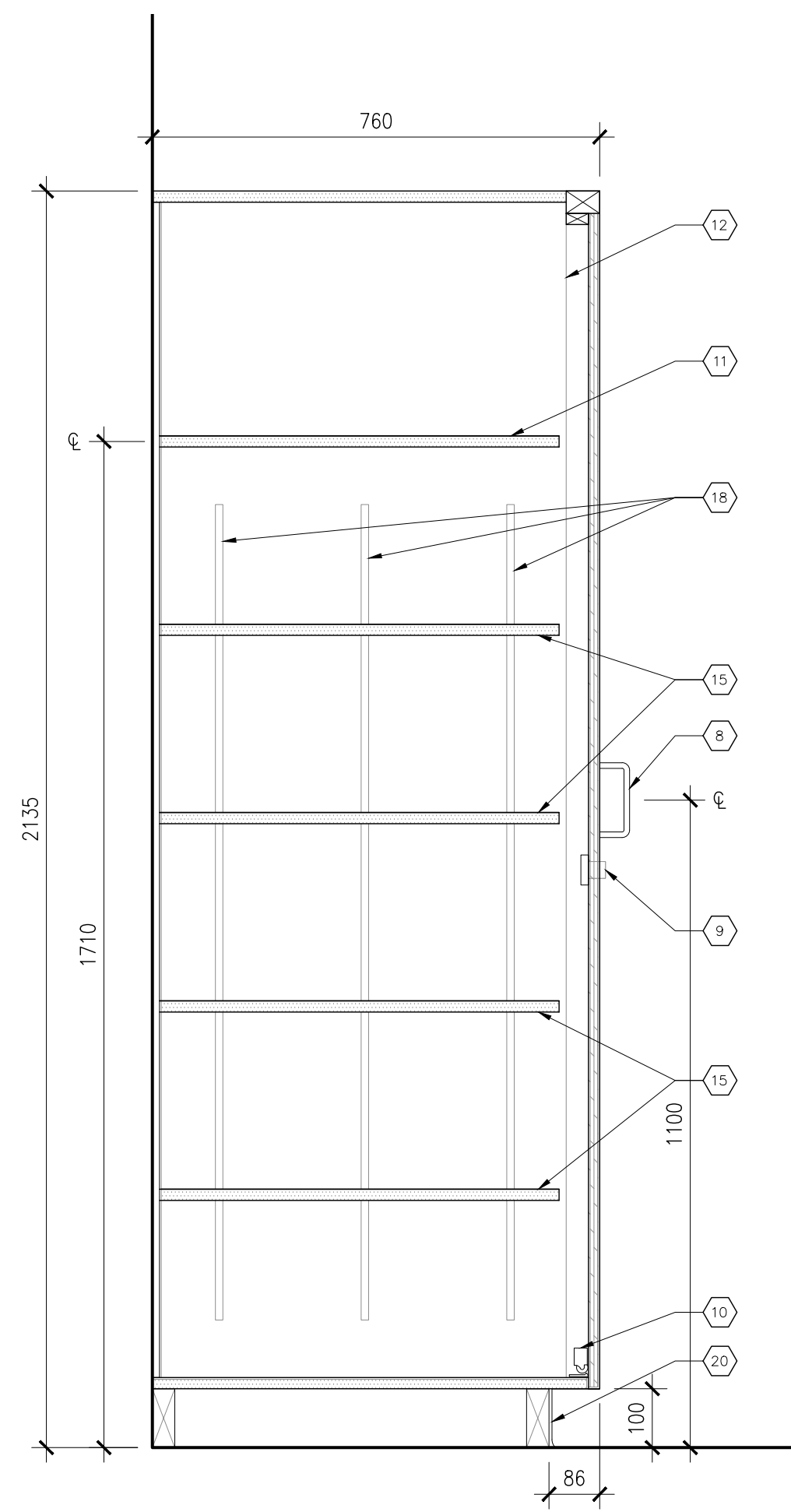
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**Interior Elevations - Home Economics**

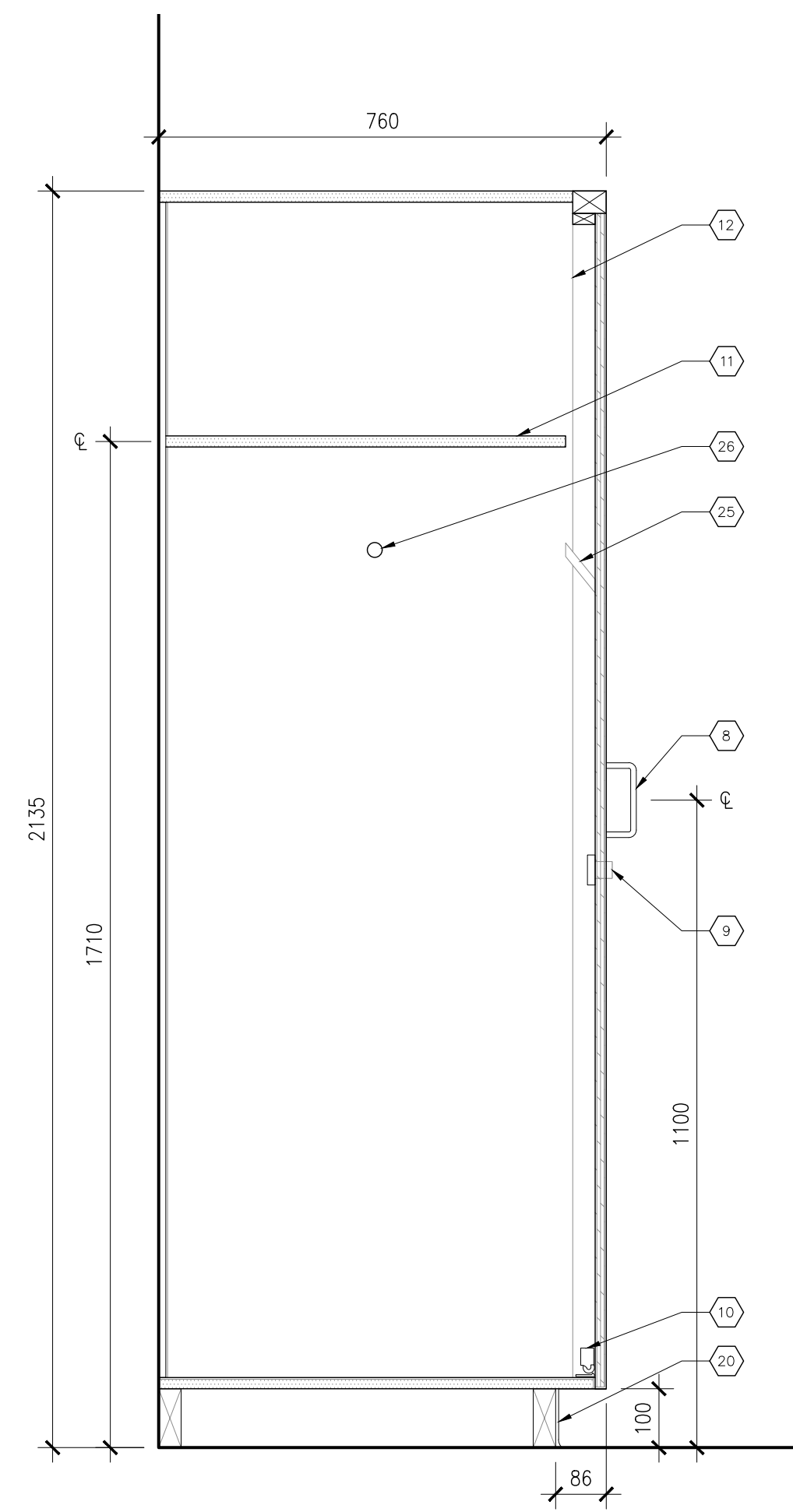
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Proj. No.:	25028
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Date:	01/07/26

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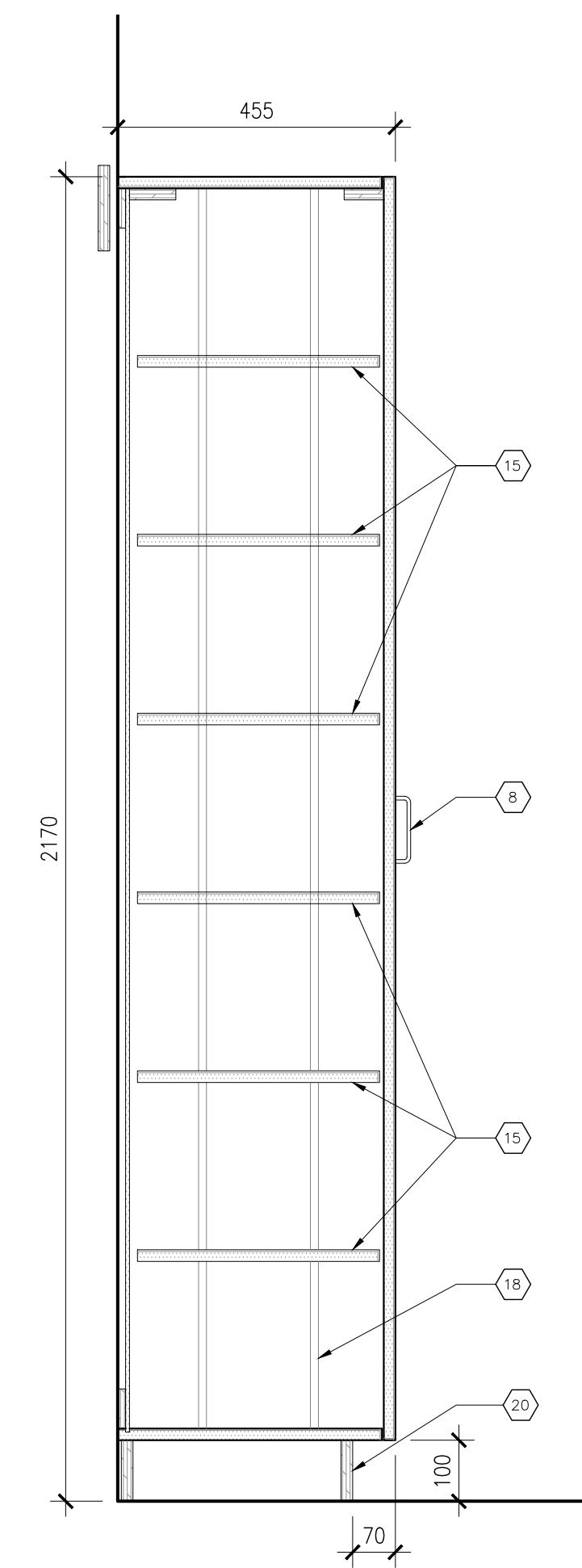
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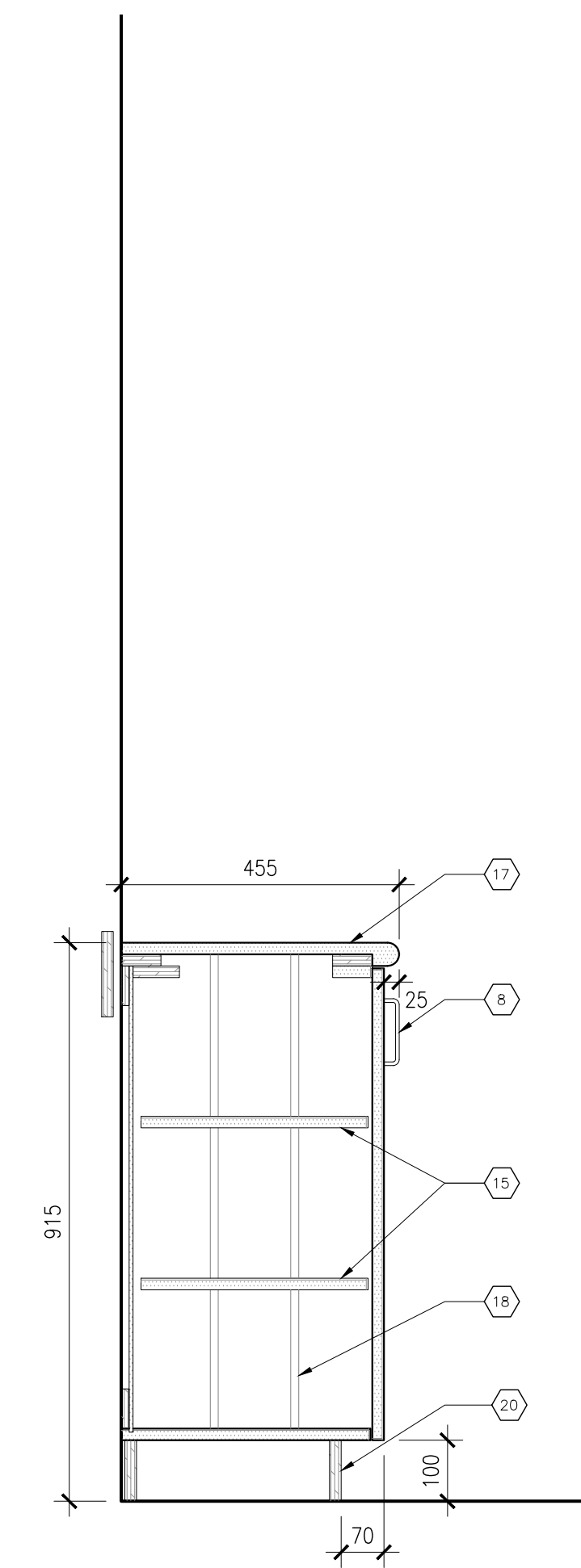
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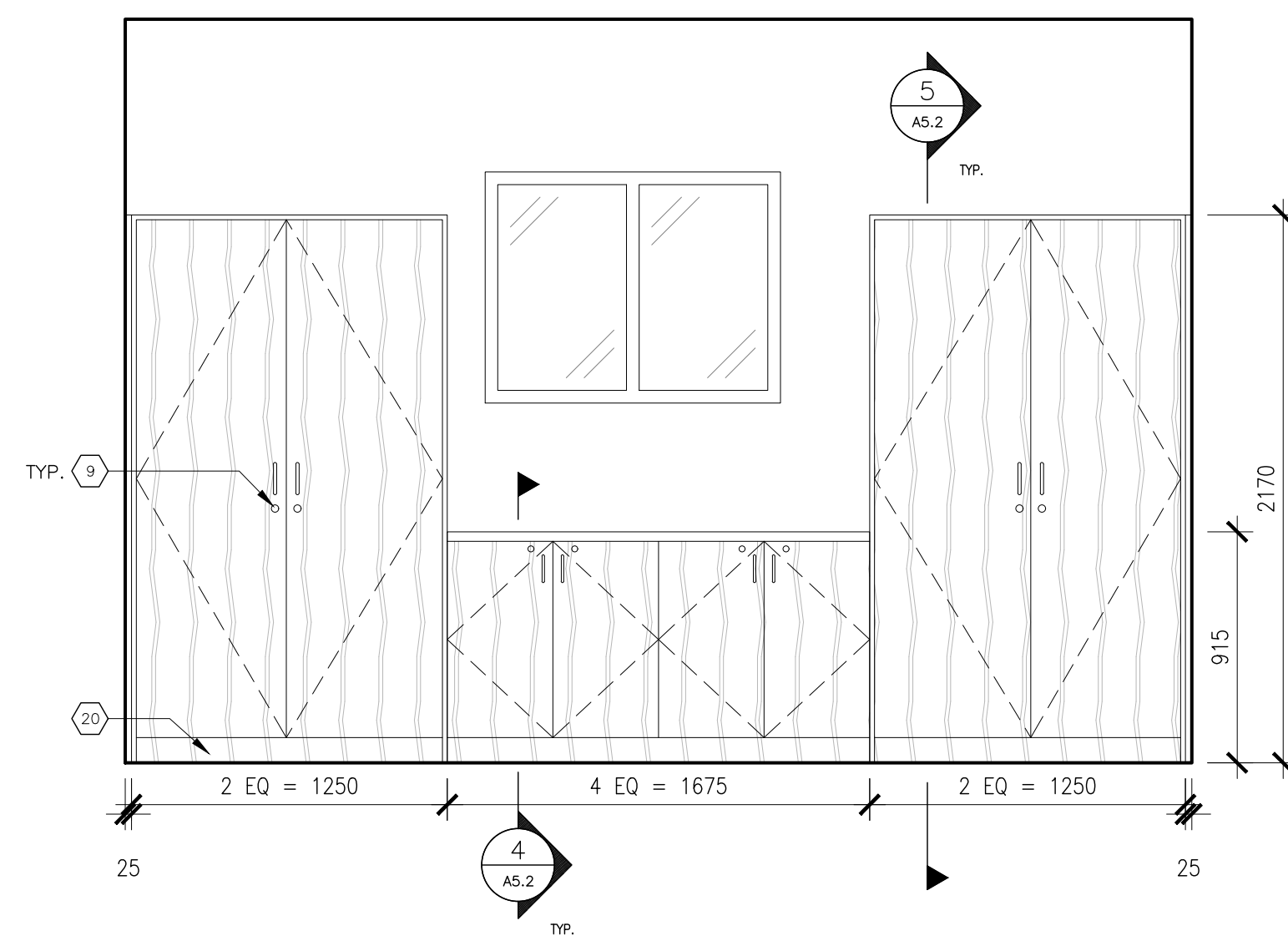
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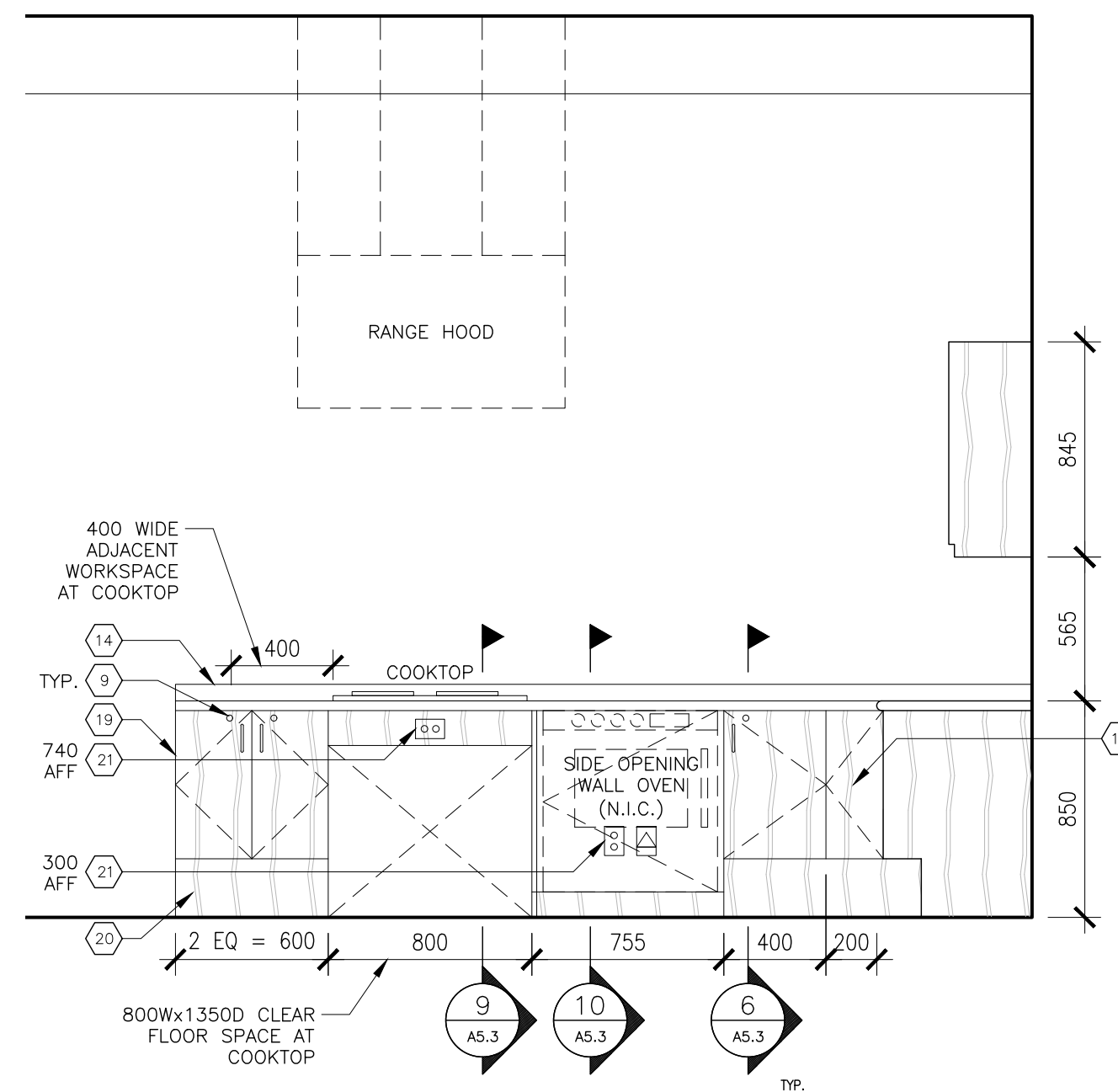
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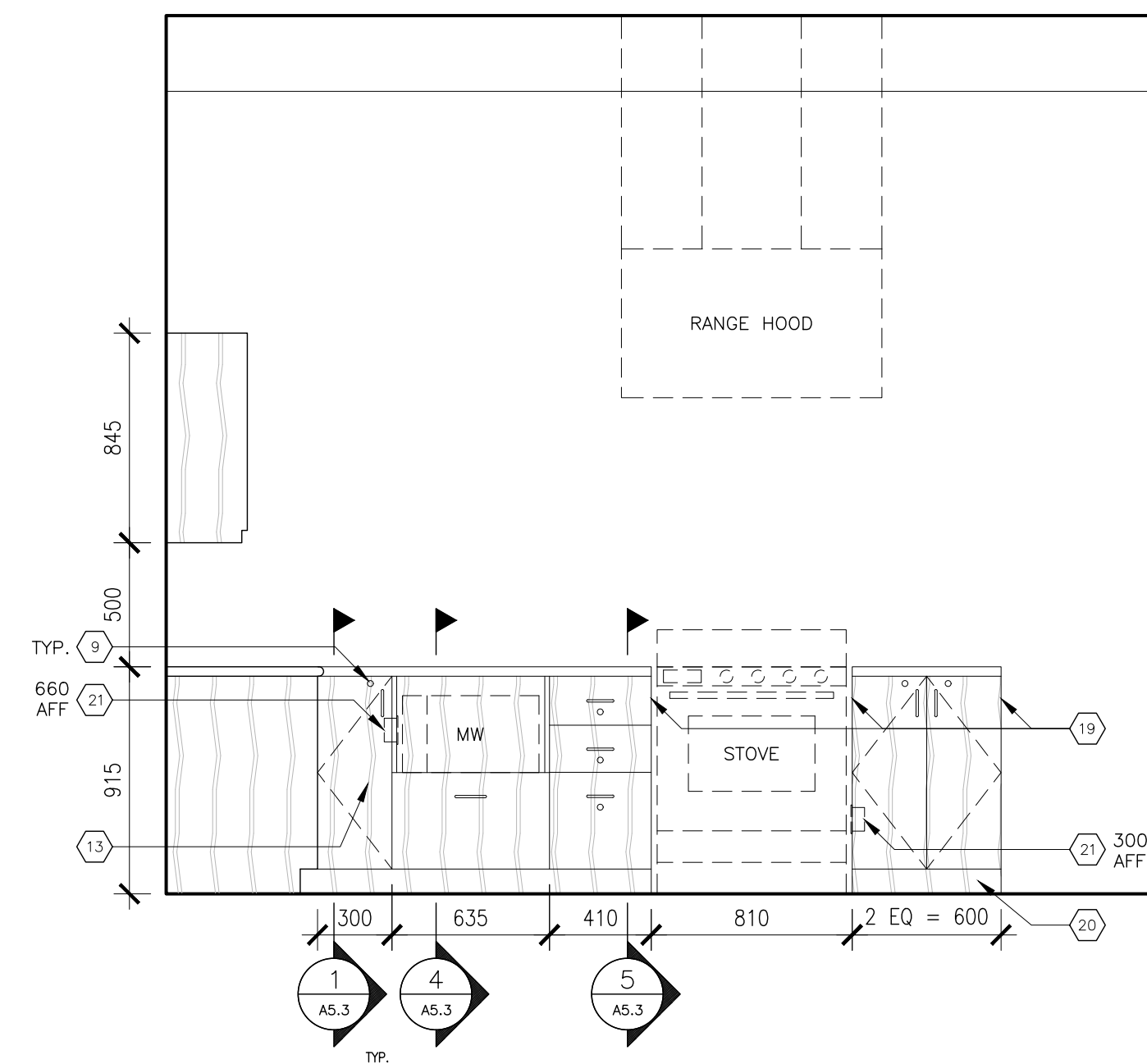
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3 INTERIOR ELEVATION - PANTRY  
A5.2 1:25



2 INTERIOR ELEVATION - BF WORKSTATION  
A5.2 1:25



1 INTERIOR ELEVATION - TYP WORKSTATION  
A5.2 1:25

KEYNOTES

NOTE: ALL KEYNOTES MAY NOT BE USED

- 1 100 FLOOR BASE
- 2 WHITE-BOARD
- 3 CONTINUOUS TACK STRIP (MAP RAIL)
- 4 CONDUIT FOR POWER & DATA
- 5 OVERHEAD PROJECTOR (SUPPLIED BY CLIENT, INSTALLED BY CONTRACTOR)
- 6 WIREMOLD (SEE ELECTRICAL)
- 7 MARKER TRAY
- 8 METAL PULL, TYP.
- 9 CABINET LOCK, KEYPED PER CLASSROOM DOOR
- 10 HEAVY-DUTY ROLLER CATCH, TOP & BOTTOM
- 11 FIXED SHELF
- 12 SOLID HARDWOOD DOOR JAMB C/W EDGE RABBET @ PANELS, TYP.
- 13 PLANO HINGED CORNER DOORS, NO CABINET POST IN CORNER
- 14 P-LAM BACKSPASH, TYP.
- 15 ADJUSTABLE SHELVES
- 16 REMOVABLE APRON (SEE DETAIL 13/A5.2)
- 17 P-LAM COUNTER TOP AND NOSING
- 18 RECESSED PILASTER STRIPS
- 19 FINISHED END GABLE
- 20 MILLWORK TOE KICK, TYP. FINISH TO MATCH CABINET
- 21 DUPLEX RECEPTACLE @ 1200 AFF, UNO
- 22 RETURN TILE ON ADJACENT WALL. DEPTH OF COUNTER UNO.
- 23 U/S OF UPPER CABINETS TO BE P-LAM AND MATCH EXTERIOR BOX FRAMES
- 24 VALENCE LIGHT W/ SWITCH
- 25 COAT HOOK
- 26 COAT ROD
- 27 FIXED FACE BOARD
- 28 CASTER WHEELS (4 PER CART, 2 W/ BRAKES)
- 29 INFILL OPENING WITH P1 TYPE WALL, FLUSH TO MATCH EXISTING ADJACENT WALLS.

GENERAL NOTES

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2. ALL MELAMINE TO BE GREY COLOUR
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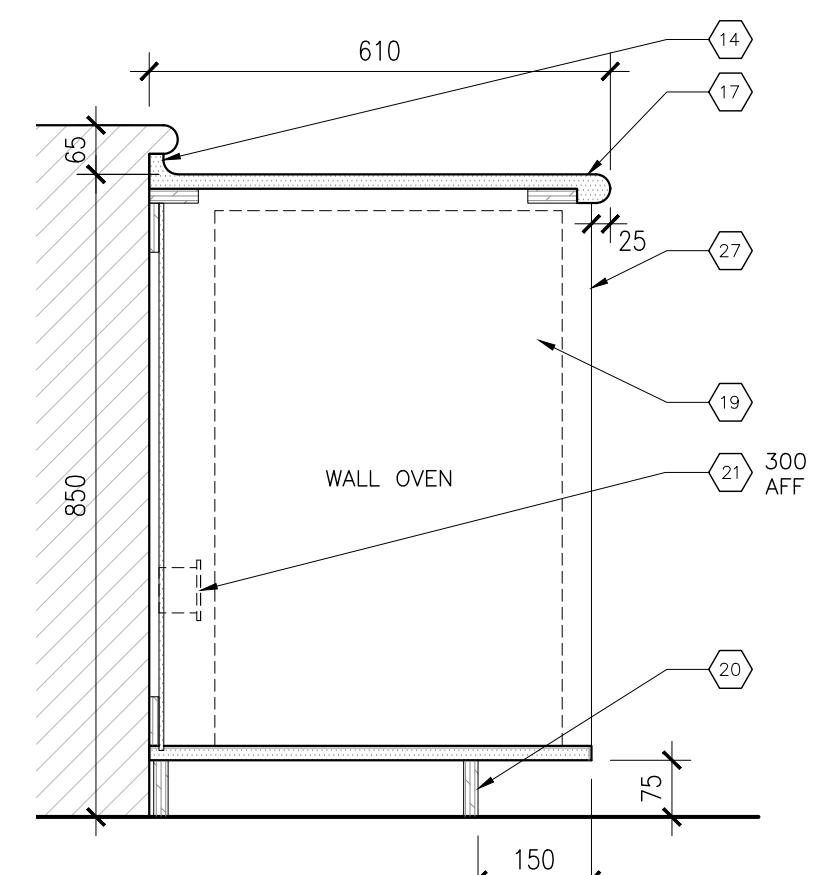
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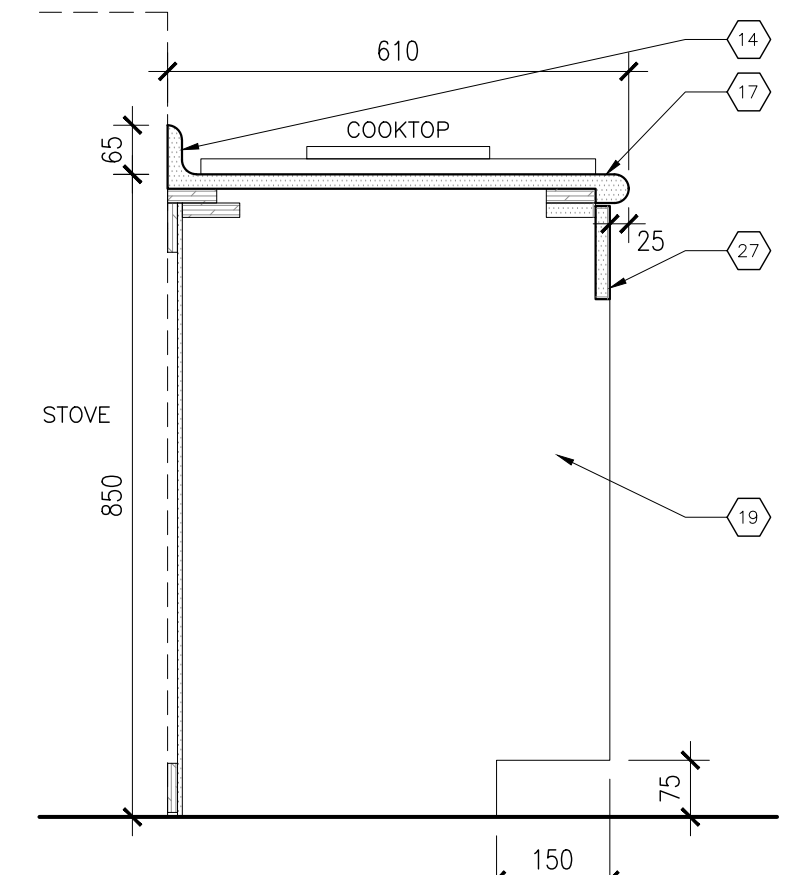
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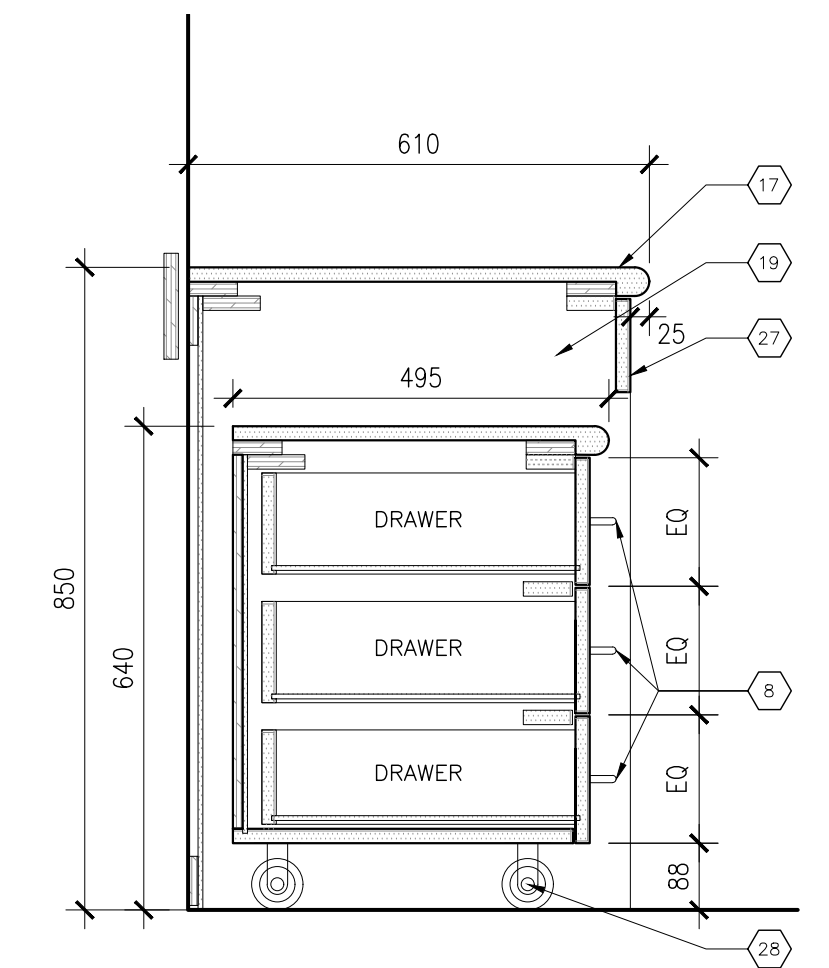
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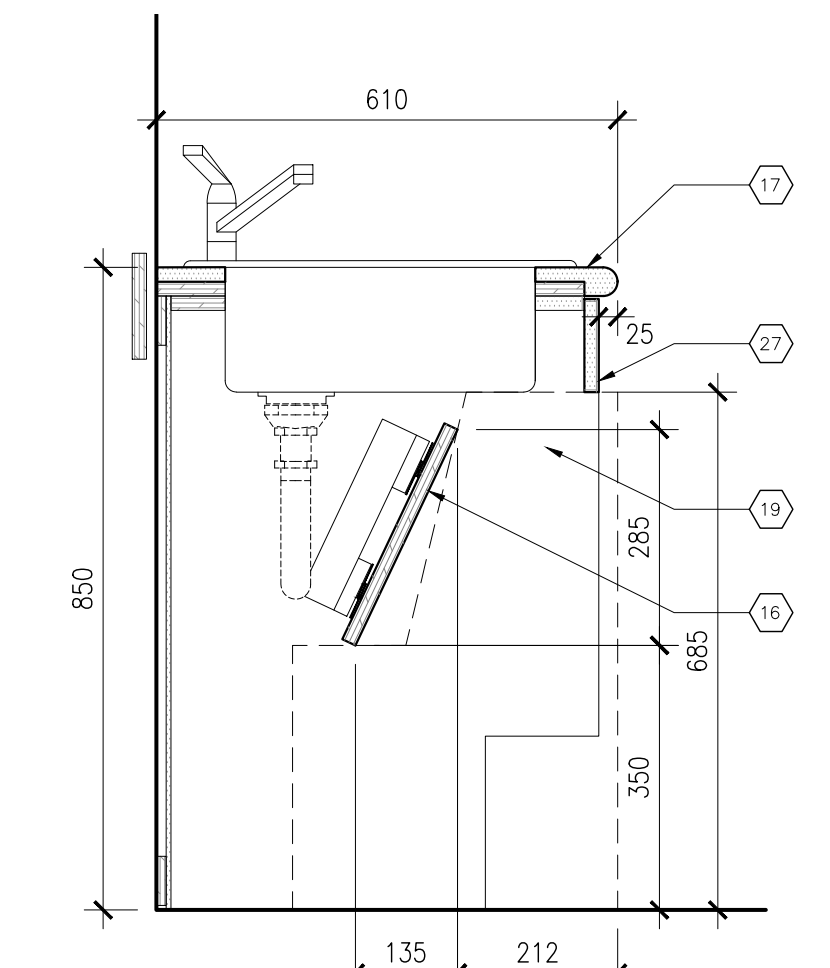
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A5.3 1:10



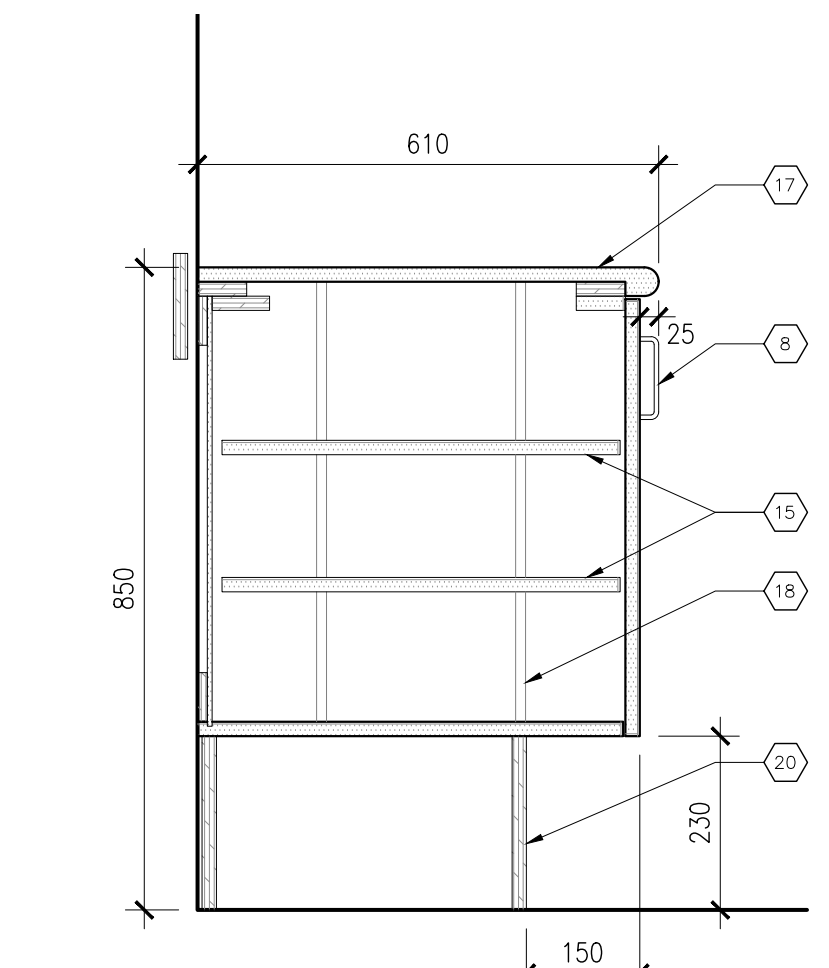
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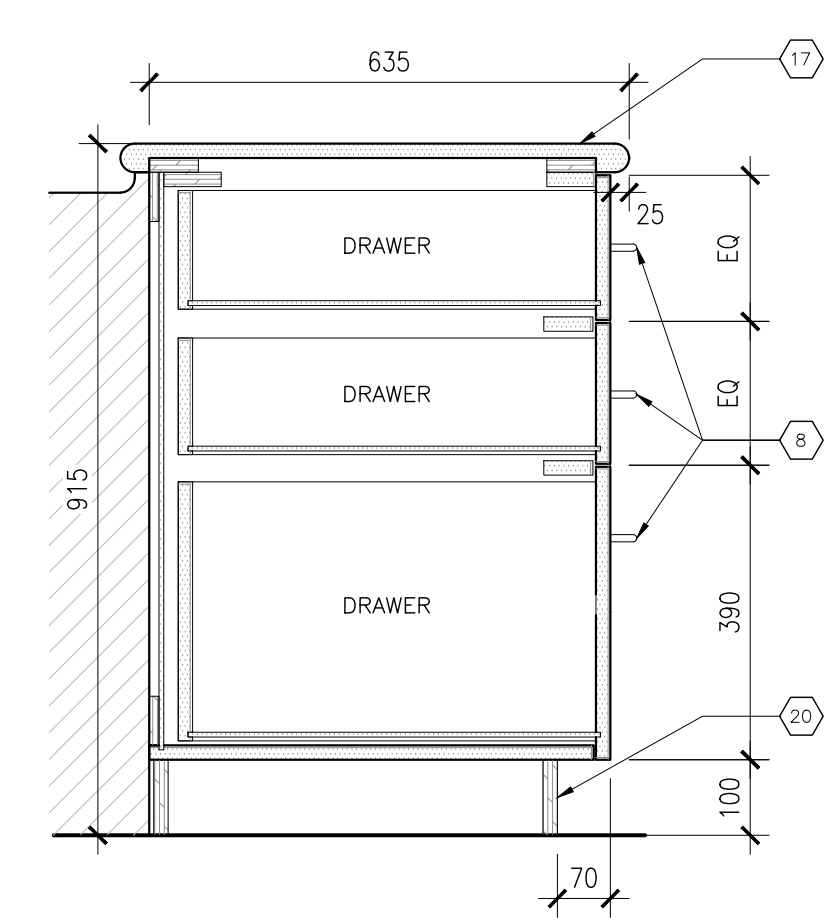
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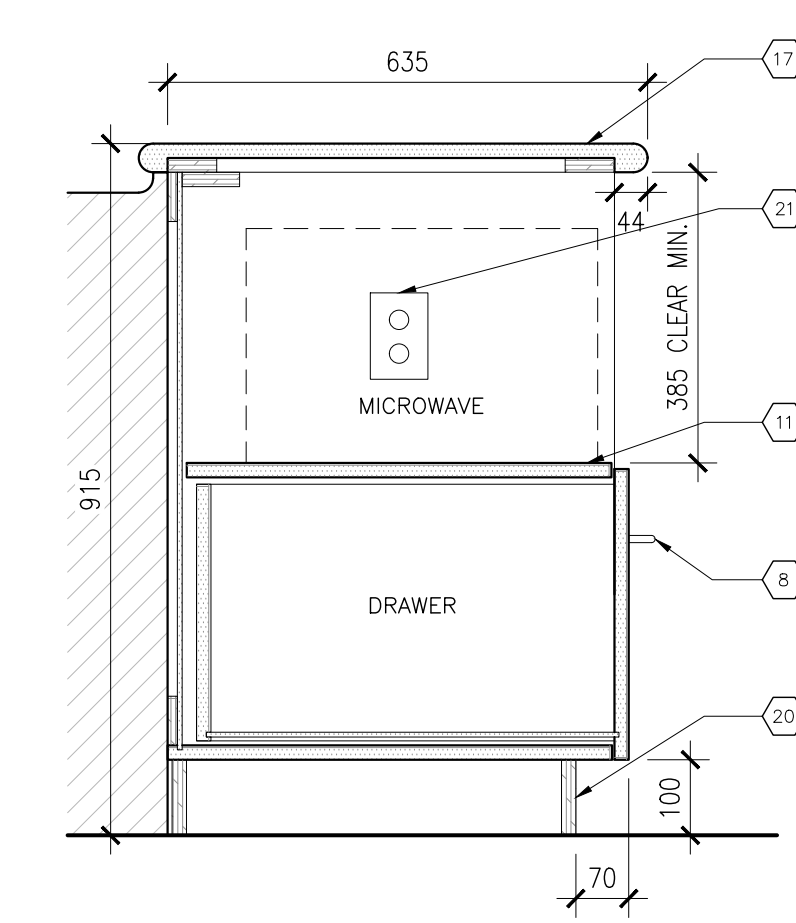
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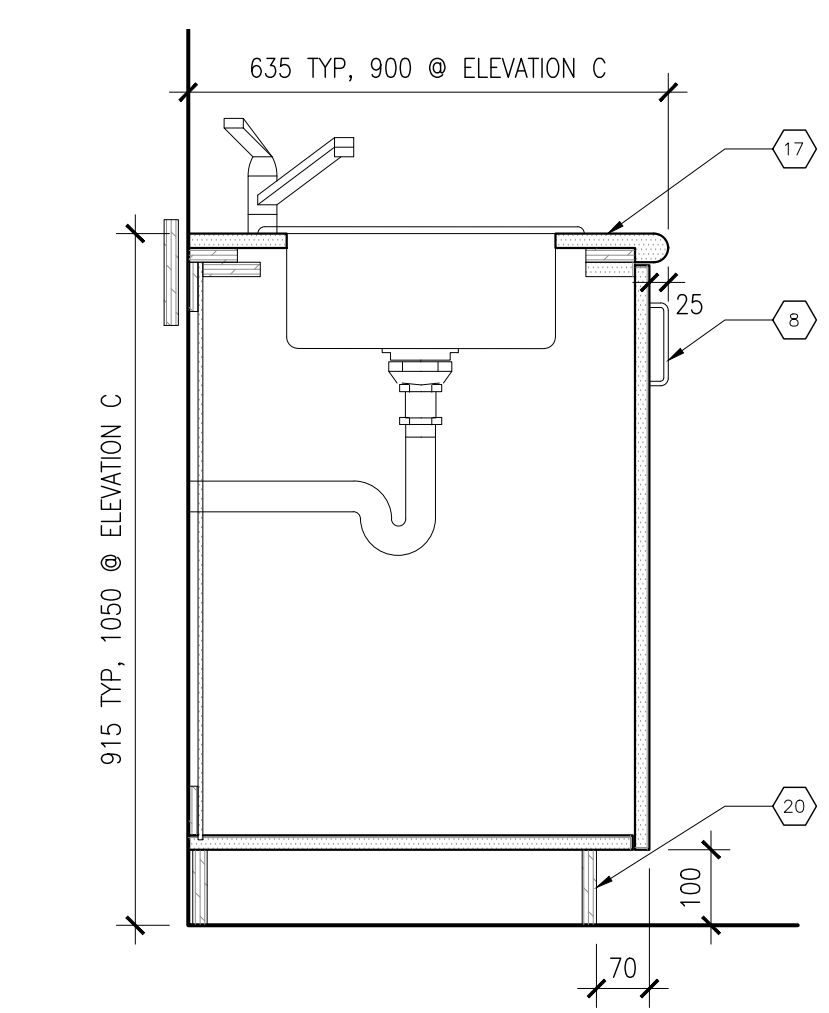
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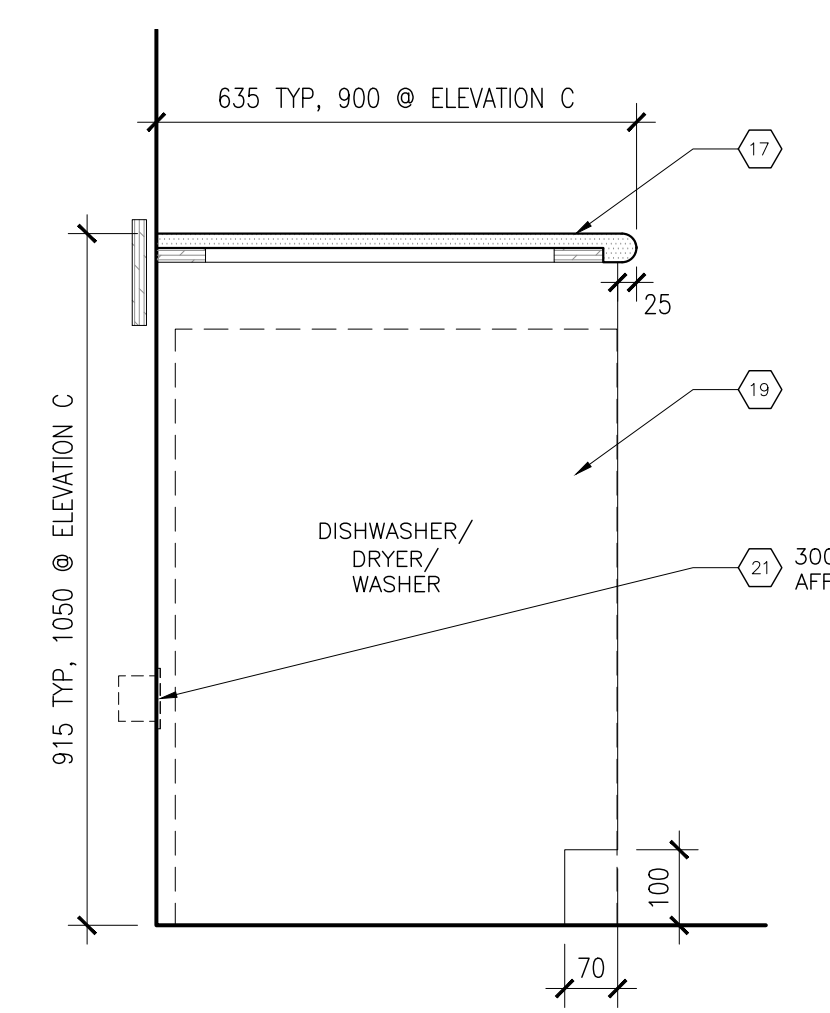
5 MILLWORK DETAIL - LOWER TYP.  
A5.3 1:10



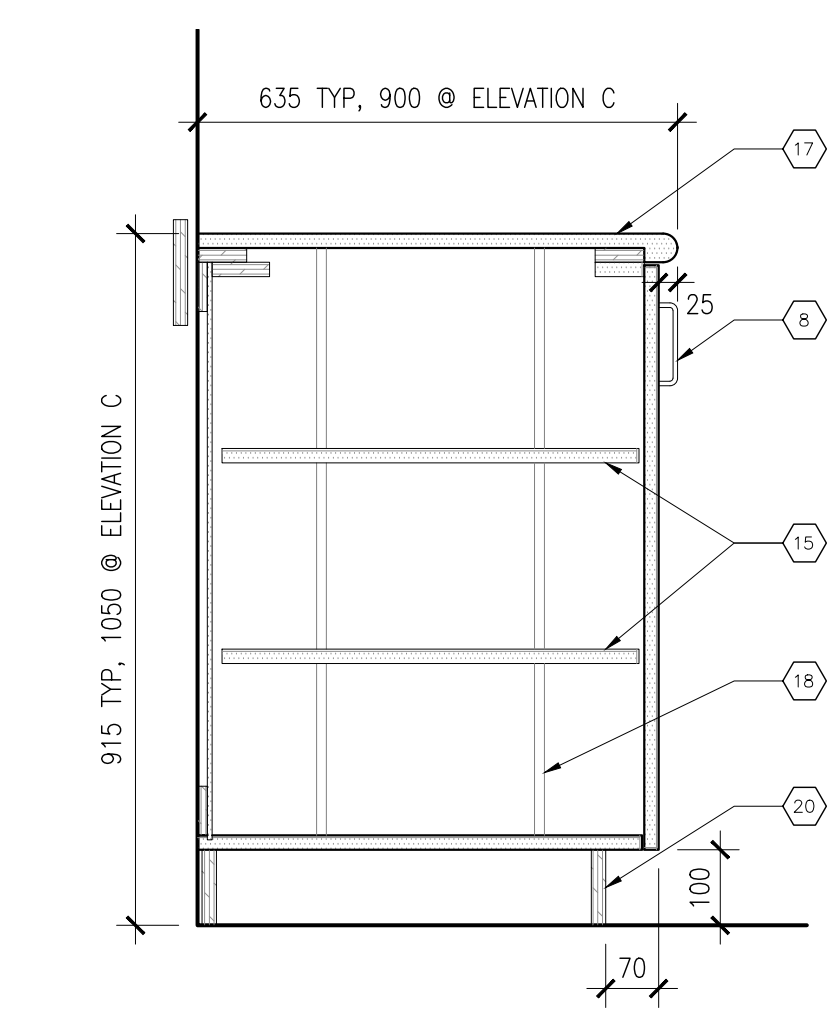
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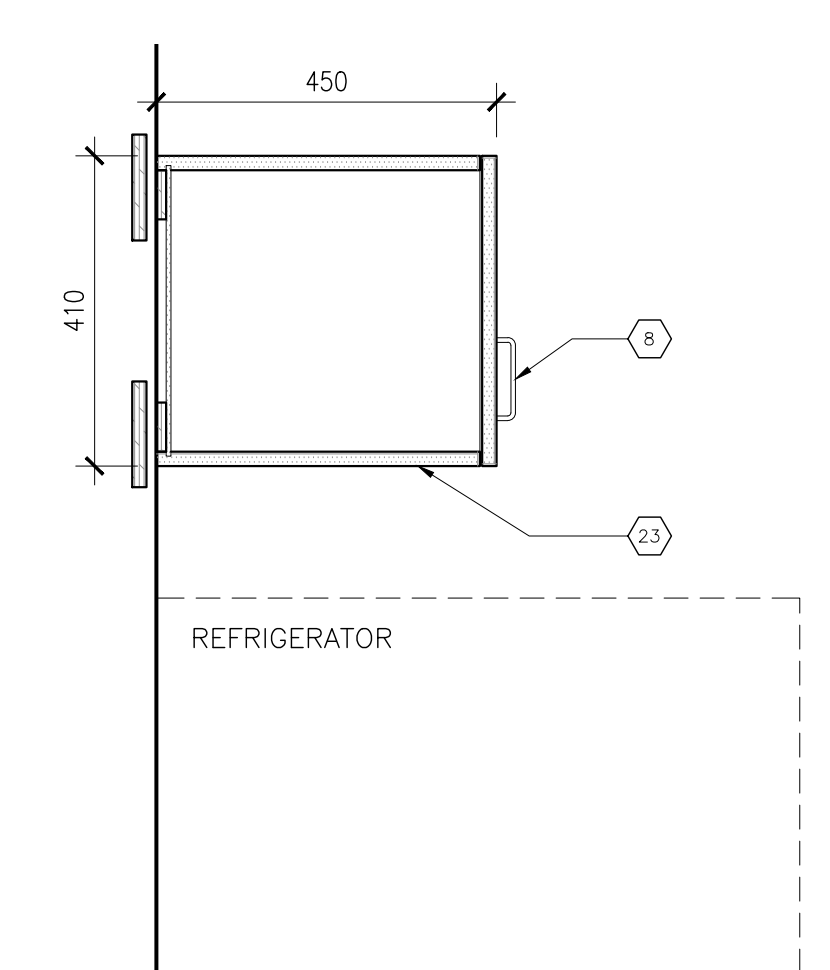
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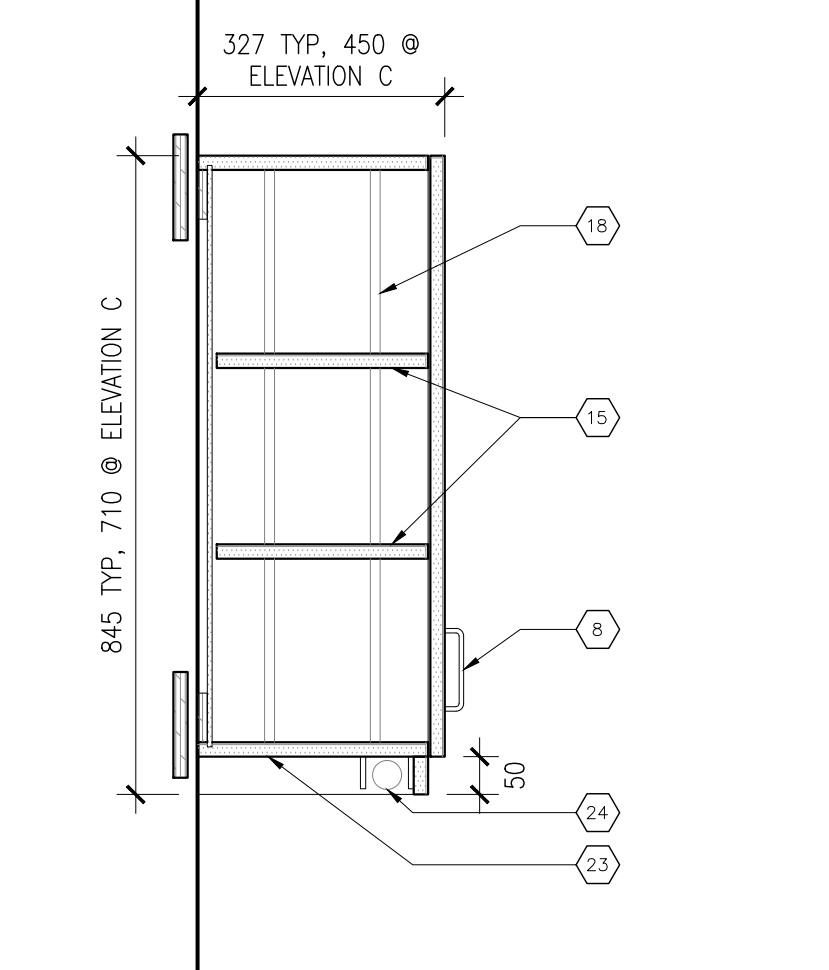
2 MILLWORK DETAIL - LOWER TYP.  
A5.3 1:10



1 MILLWORK DETAIL - LOWER TYP.  
A5.3 1:10



12 MILLWORK DETAIL - UPPER  
A5.3 1:10



11 MILLWORK DETAIL - UPPER  
A5.3 1:10

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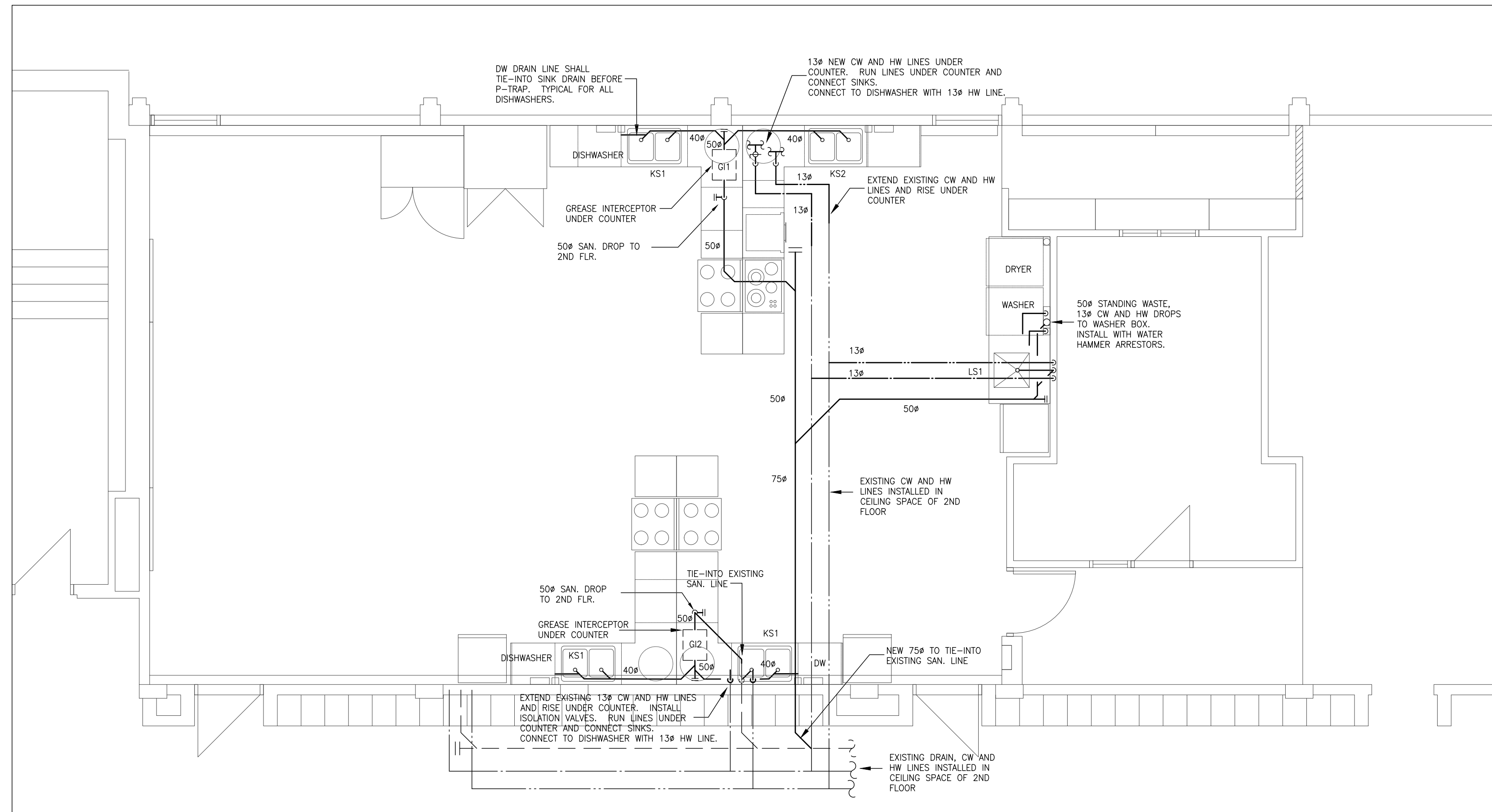
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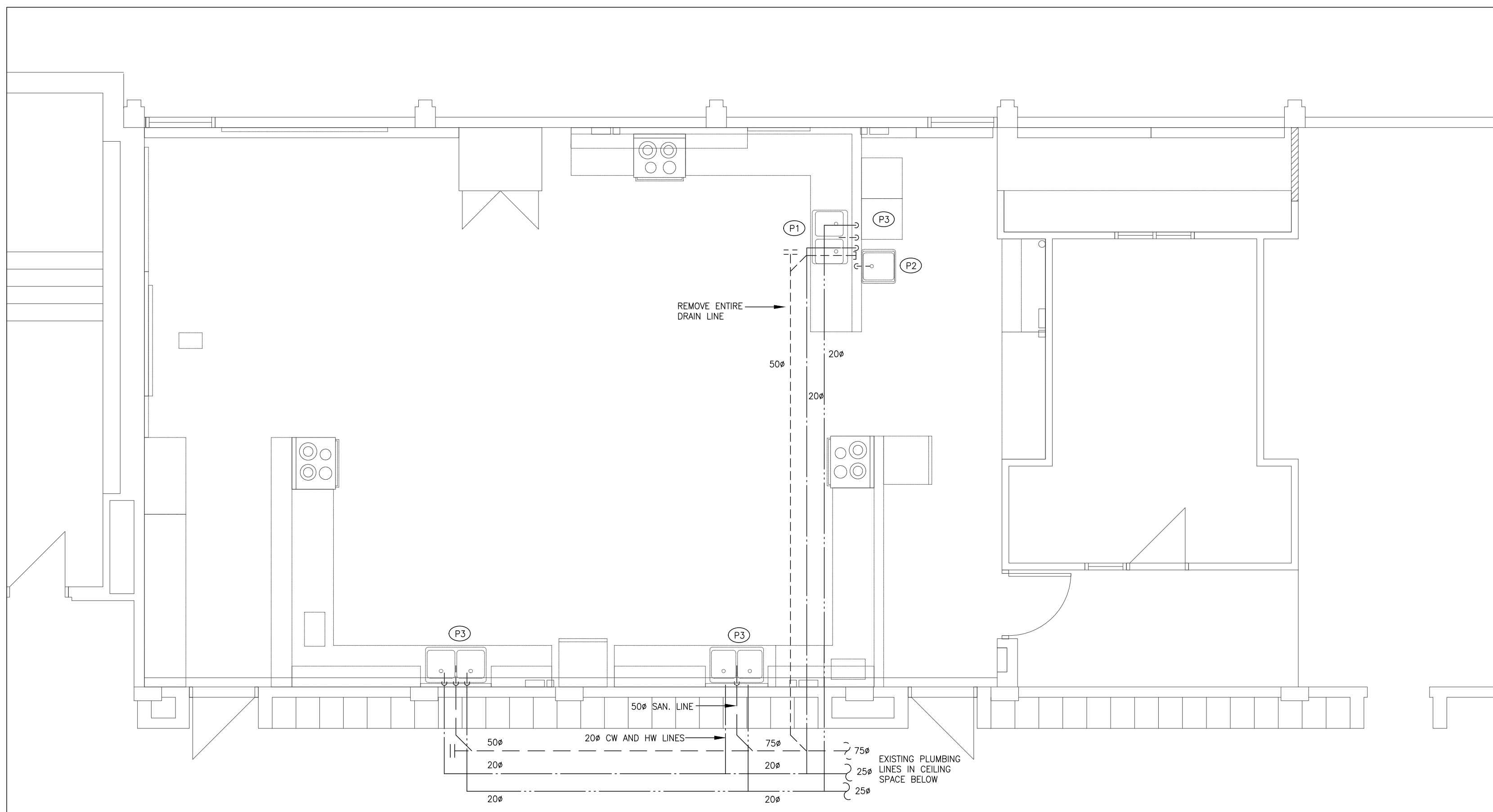
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Date:	01/07/26	

Drawing No.:  
**A5.3**



2 PLUMBING RENOVATION LAYOUT  
M1-1 1:50



1 PLUMBING DEMOLITION LAYOUT  
M1-1 1:50

**PLUMBING DEMOLITION NOTES**

- 1 REMOVE COUNTER MOUNTED SINK. CUTBACK ALL OBSOLETE SANITARY AND DOMESTIC WATER LINES. REMOVE ENTIRE 50# SAN. DRAIN LINE. ALL PLUMBING LINES ARE LOCATED BELOW 3RD LEVEL FLOOR SLAB AND LOCATED AT HIGH LEVEL.
- 2 REMOVE FLOOR MOUNTED SINK. CUTBACK ALL OBSOLETE SANITARY AND DOMESTIC WATER LINES. ALL PLUMBING LINES ARE LOCATED BELOW 3RD LEVEL FLOOR SLAB AND LOCATED AT HIGH LEVEL.
- 3 REMOVE COUNTER MOUNTED SINK. CUTBACK ALL OBSOLETE SANITARY AND DOMESTIC WATER LINES. PLUMBING LINES ARE CONNECTED TO RESPECTIVE MAIN LINES BELOW 3RD LEVEL FLOOR SLAB AND LOCATED IN CORRIDOR CEILING SPACE.

NO.	DATE	REVISION
2	MAY 6/26	ISSUED FOR TENDER
1	APR.16/26	ISSUED FOR PERMIT

DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR DURING THE COURSE OF WORK.

**CoPa ENGINEERING LTD.**

**C.T. PASHARTIS**  
90327800  
MAY 6/26  
PROVINCE OF ONTARIO

29 ROLLING ACRES DR.  
KITCHENER, ONTARIO  
N2A 3W5  
MOB: (519) 496-2672

PROJECT  
Interior Renovations to  
HDSB WHITE OAKS  
FAMILY STUDIES CLASSROOM  
1330 MONTCLAIR DR.  
OAKVILLE ONTARIO

DRAWING  
3RD FLOOR  
DEMOLITION AND RENOVATION  
PLUMBING LAYOUTS

DRAWN BY: C. P. SCALE: 1:50  
CHECKED BY: C. PASHARTIS DATE: MARCH 11, 2026  
PROJECT NO. 25CP097 DRAWING NO. M1-1





**GENERAL NOTES:**

- 1. ANY COMBUSTIBLE MATERIALS INSTALLED IN THE CEILING SPACE USED AS A RETURN AIR PLENUM, SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. PLUMBING AND HVAC CONTRACTORS SHALL COORDINATE WITH ALL OTHER TRADES.
2. WHERE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, ALL WIRING FOR CONTROL, TELEPHONE, DATA, SECURITY, SPEAKER WIRE ETC., SHALL BE FT6, CMP, MPF OR PLENUM VERIFIED.
3. THE SPECIFIED MANUFACTURERS MEANS THAT THE ITEM NAMED AND SPECIFIED, FORMS PART OF SPECIFICATION AND SETS STANDARD REGARDING PERFORMANCE, QUALITY OF MATERIAL AND WORKMANSHIP. ALTERNATE MANUFACTURERS WILL BE CONSIDERED AND ACCEPTED AS FOLLOWS IF THEY MEET THE STANDARD SPECIFIED.

**MECHANICAL GENERAL REQUIREMENTS**

- 1. DESCRIPTION OF WORK
1. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIAL, TOOLS, EQUIPMENT, SUPERVISION AND OTHER SERVICES AS MAY BE REQUIRED TO EXECUTE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS.
2. SITE EXAMINATION
1. BEFORE SUBMITTING TENDERS, CAREFULLY EXAMINE THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS HAVING A BEARING ON THE WORK. VISIT THE EXISTING BUILDING AND THOROUGHLY ASCERTAIN THE EXTENT AND NATURE OF ALL CONDITIONS AFFECTING THE PERFORMANCE OF WORK.
3. CODES AND STANDARDS
1. THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITIONS AND ALL AMENDMENTS OF THE FOLLOWING CODES AND STANDARDS. WHERE CONFLICTS IN REQUIREMENTS OCCUR, THE HIGHER STANDARDS WILL APPLY: ONTARIO BUILDING CODE, ONTARIO FIRE CODE, N.F.P.A., ASHRAE, NATURAL GAS INSTALLATION STANDARD CSA-B149.1 AND LOCAL CODES, STANDARDS AND BY-LAWS.
4. REGULATIONS, PERMITS, FEES, CONNECTION CHARGES AND CERTIFICATES
1. ALL MATERIALS AND WORKMANSHIP SHALL MEET ALL PROVINCIAL BUILDING, MUNICIPAL, N.F.P.A. AND FIRE MARSHAL REGULATIONS, CODES AND BYLAWS IN FORCE IN THE AREA OF THE PROJECT.
2. EACH CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND PAY FOR ALL FEES AND CONNECTION CHARGES FOR ALL SERVICES PROVIDED BY THIS DIVISION.
5. COOPERATION OF TRADES
1. READ SPECIFICATIONS AND DRAWINGS OF OTHER TRADES AND CONFORM WITH THEIR REQUIREMENTS BEFORE PROCEEDING WITH ANY WORK SPECIFIED IN THIS DIVISION RELATED TO OTHER TRADES.
6. DRAWINGS
1. CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE MECHANICAL SYSTEMS AND WORK INCLUDED IN THE CONTRACT.
2. WHERE THE EXACT LOCATIONS OF FIXTURES AND EQUIPMENT ARE NOT DEFINITELY ESTABLISHED, THE CONTRACTOR SHALL OBTAIN THIS INFORMATION FROM THE OWNER AND ENGINEER.
7. REMOVAL OF EXISTING EQUIPMENT
1. EXAMINE THE EXISTING BUILDING AND INCLUDE IN TENDER PRICE ALL NECESSARY ALLOWANCES TO REMOVE EXISTING EQUIPMENT AS DETAILED ON DRAWINGS AND AS DIRECTED BY THE GENERAL CONTRACTOR.
2. MATERIALS REMOVED BY THIS DIVISION SHALL BECOME CONTRACTOR'S PROPERTY AND BE REMOVED FROM WORK SITE, PROVIDED:
1. THE ITEMS HAVE BEEN INSPECTED BY THE OWNER AND GENERAL CONTRACTOR AND RELEASED FOR REMOVAL.
2. ITEMS HAVE NOT BEEN DESIGNATED FOR REUSE IN OTHER SECTIONS OF SPECIFICATIONS OR DRAWINGS.
8. ALTERATION TO EXISTING
1. PRIOR TO REMOVAL AND ALTERATION OF THE EXISTING SYSTEMS, THE CONTRACTOR SHALL IDENTIFY TO THE ENGINEER AT WHICH SECTIONS OF THE EXISTING MECHANICAL EQUIPMENT, PIPING AND DUCTWORK SHALL BE CUT BACK AND REMOVED.
2. RELOCATE EXISTING MECHANICAL EQUIPMENT AND APPURTENANCES AS SPECIFICALLY INDICATED ON DRAWINGS OR SPECIFIED AND AS REQUIRED TO SUIT ALTERATION WORK. CLEAN RELOCATED EQUIPMENT AND INSTALL IN NEW LOCATION, IN ORDER TO NEW EQUIPMENT WITH SAME ATTENTION AS GIVEN TO NEW EQUIPMENT. WHERE EXISTING MATERIAL OR EQUIPMENT IS NO LONGER REQUIRED, SHALL BE CUT BACK AND MAKE GOOD TO SATISFACTION OF THE ENGINEER. WHEN EXISTING MATERIAL OR EQUIPMENT IS DISCONNECTED OR DISASSEMBLED TO FACILITATE RELOCATION, REINSTALL AS ORIGINAL, INCLUDING AUXILIARY WORK, INSULATION, ELECTRICAL WORK ETC.
3. WHERE EXISTING MATERIAL OR EQUIPMENT IS DAMAGED, MAKE GOOD TO THE SATISFACTION OF ENGINEER. IF IT IS FOUND IN AN UNSUITABLE CONDITION, NOTIFY ENGINEER FOR INSTRUCTIONS.
4. OBTAIN WRITTEN AUTHORIZATION FROM ENGINEER FOR ALTERATION WORK THAT IS NOT SPECIFICALLY CALLED FOR OR CLEARLY INDICATED ON DRAWINGS.
9. PROTECTION OF OPENINGS
1. PROTECT EQUIPMENT AND SYSTEMS OPENINGS FROM DIRT, DUST, AND OTHER FOREIGN MATERIALS.
2. THIS CONTRACTOR SHALL PROTECT FINISHED AND UNFINISHED WORK OF HIS OWN AND OTHER SUBCONTRACTORS FROM DAMAGE DUE TO CARRYING OUT HIS WORK. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT SUPPLIED UNDER THIS CONTRACT OR REMOVED FROM EXISTING BUILDING FOR REUSE AND SHALL PROVIDE ALL NECESSARY PROTECTION FOR SAME. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF THE WORK OF THIS SECTION, UNTIL THE BUILDING HAS BEEN COMPLETED AND ACCEPTED.
10. CUTTING AND PATCHING
1. RESPONSIBILITY FOR CUTTING OF OPENINGS TO WALLS, FLOORS, ROOF AND ANY OTHER SURFACES IN THE STRUCTURE SHALL BE COORDINATED WITH GENERAL CONTRACTOR. IN ADDITION, RESPONSIBILITY FOR THE PATCHING AND FINISHING OF THESE SURFACES AND ASSEMBLIES SHALL ALSO BE COORDINATED WITH GENERAL CONTRACTOR. WORK SHALL BE PERFORMED BY THE EXPERT TRADE WHI SPECIALIZES IN THEIR WORK. IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE FOR THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR.
2. BEFORE CUTTING OF OPENINGS IN THE STRUCTURE, THE CONTRACTOR SHALL IDENTIFY TO THE STRUCTURAL ENGINEER AND THE OWNER'S REPRESENTATIVE AT WHICH SECTIONS OF THE BUILDING STRUCTURE ARE TO BE CUT BACK. THE CUTTING, PATCHING AND FINISHING OF THE ASSEMBLIES RESTRICTED BY THE WORK OF THIS DIVISION SHALL BE PERFORMED BY THE AFFECTED/EXPERT TRADE.
3. UNDER NO CIRCUMSTANCES SHALL ANY CUTTING OR BURNING OF THE STRUCTURAL PARTS OF THE BUILDING BE UNDERTAKEN WITHOUT THE WRITTEN AUTHORITY OF THE ENGINEER.
11. EXCAVATING, BACKFILLING, COMPACTING AND FLOOR GENERATING
1. RESPONSIBILITY FOR EXCAVATING, BACKFILLING AND COMPACTING FOR PLUMBING PIPES AND DRAINS PROVIDED BY THIS DIVISION SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL BACKFILLING SHALL BE NEW CLEAN GRANULAR FILL BROUGHT IN SPECIFICALLY FOR THE PURPOSE OF BACKFILLING. ALL BACKFILLING SHALL BE COMPACTED AT INTERVALS OF NOT MORE THAN 6" LAYERS TO THE SATISFACTION OF THE ENGINEER. RESPONSIBILITY FOR THE COORDINATION WITH GENERAL CONTRACTOR, IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE FOR THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR.
12. EQUIPMENT INSTALLATION
1. ALL EQUIPMENT, FIXTURES, PIPES, INSULATION AND ASSOCIATED APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. SPACE FOR SERVICING, DISASSEMBLY AND REMOVAL OF EQUIPMENT AND COMPONENTS: PROVIDE AS RECOMMENDED BY MANUFACTURER OR AS INDICATED.
3. CONTROL PANELS, ELECTRICAL PANELS AND WIRING TERMINATION POINTS PROVIDE MINIMUM 40" CLEARANCE.
4. EQUIPMENT DRAIN: PIPE TO FLOOR DRAIN.
13. ROOF CONES AND FLASHING
1. ROOF CONES FOR PIPES AND ROUND DUCTS PENETRATING ROOF SHALL BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR.
2. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO SEE THAT COMPLETE FLASHING ARE INSTALLED WHERE NECESSARY FOR THE WORK OF HIS TRADE. COUNTER FLASHING IS BY ROOFING CONTRACTOR AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.
14. SLEEVES
1. THIS CONTRACTOR SHALL SUPPLY AND INSTALL SUITABLE SLEEVES FOR PIPING AND DUCTWORK PENETRATIONS TO THE BUILDING STRUCTURE.
2. PIPE SLEEVES: INSTALL AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR U.L.C. FIRE RATED ASSEMBLIES AND AS INDICATED.
3. SCHEDULE 40 STEEL PIPE.
4. SLEEVES WITH ANNULAR FIN CONTINUOUSLY WELDED AT MIDPOINT.
5. SIZES: 1/4" CLEARANCE ALL AROUND, BETWEEN SLEEVE AND NON-INSULATED PIPE OR BETWEEN SLEEVE AND INSULATION.
6. TERMINATE SLEEVES FLUSH WITH SURFACE OF CONCRETE AND MASONRY WALLS AND CONCRETE FLOORS ON GRADE IN FINISHED AREAS.
7. FILL VOIDS AROUND PIPES:
1. WHERE SLEEVES PASS THROUGH WALLS, PROVIDE SPACE FOR FIRE STOPPING, WHERE PIPES PASS THROUGH FIRE RATED WALLS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY.
2. ENSURE NO CONTACT BETWEEN COPPER TUBE OR PIPE AND FERROUS SLEEVE.
3. FILL FUTURE-USE SLEEVES WITH LIME PLASTER OR OTHER EASILY REMOVABLE FILLER.
4. COAT EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT.
15. PREPARATION FOR FIRE STOPPING
1. FIRE STOPPING MATERIALS AND INSTALLATION WITH ANNULAR SPACE BETWEEN PIPES, DUCTS, INSULATION AND ADJACENT FIRE SEPARATION: TO THE APPROVAL OF THE ENGINEER.
2. UNINSULATED UNHEATED PIPES NOT SUBJECT TO MOVEMENT: NO SPECIAL PREPARATION.
3. UNINSULATED HEATED PIPES SUBJECT TO MOVEMENT: WRAP WITH NON-COMBUSTIBLE SMOOTH MATERIAL TO PERMIT PIPE TO MOVE WITHOUT DAMAGING FIRE STOPPING.
4. INSULATED PIPES AND DUCTS: ENSURE INTEGRITY OF INSULATION AND VAPOUR BARRIER AT FIRE SEPARATION.
16. ESCUTCHEONS
1. PROVIDE ON EXPOSED PIPES PASSING THROUGH WALLS, PARTITIONS, FLOORS AND CEILINGS ON FINISHED AREAS.
2. CHROME OR NICKEL PLATED BRASS OR TYPE 302 STAINLESS STEEL, SPLIT PIPE TYPE WITH SET SCREWS.
3. OUTSIDE DIAMETER TO COVER OPENING OR SLEEVE.
4. INSIDE DIAMETER TO FIT AROUND FINISHED PIPE.
5. SECURE TO PIPE OR FINISHED SURFACE BUT NOT INSULATION.
17. TESTS
1. INSULATE OR CONCEAL WORK ONLY AFTER TESTING AND APPROVAL BY ENGINEER.
2. BEAR ALL COSTS IN CONNECTION WITH ALL TESTS, INCLUDING REPAIRING LEAKS RETESTING AND MAKING GOOD.
3. PRIOR TO TESTS, ISOLATE ALL EQUIPMENT AND OTHER PARTS WHICH ARE NOT DESIGNED TO WITHSTAND TEST PRESSURES OR TEST MEDIUM.
4. PROVIDE CERTIFICATES INDICATING RESULTS OF ALL TESTS INCLUDING TEST LOGS.
5. PIPING:
1. PLUMBING LINES SHALL BE TESTED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
2. NATURAL GAS LINES SHALL BE TESTED IN ACCORDANCE WITH STANDARD CSA-B149.1.
18. PIPE FLUSHING AND CLEANING
1. AFTER PRESSURE TESTS ARE COMPLETED AND APPROVED, PRIOR TO START-UP AND PLACING INTO OPERATION, FLUSH AND CLEAN OUT ALL PIPING SYSTEMS.
2. FOR DOMESTIC WATER SYSTEM, CLEAN AS PER ONTARIO BUILDING CODE AND LOCAL REQUIREMENTS.
19. ACCESS DOORS
1. SUPPLY ACCESS DOORS TO CONCEALED MECHANICAL EQUIPMENT FOR OPERATING, INSPECTING, ADJUSTING AND SERVICING.
2. ACCESS DOORS REQUIRED IN LISTED FIRE SEPARATION SHALL BEAR A ULC LABEL TO MATCH WALL CLASSIFICATION.
20. DIELECTRIC COUPLERS
1. PROVIDE WHERE PIPES OF DISSIMILAR METALS ARE JOINED. SHALL BE COMPATIBLE WITH AND TO SUIT PRESSURE RATING OF PIPING SYSTEM.
2. PIPES NPS 2 AND UNDER SHALL BE WITH ISOLATING UNIONS. PIPES NPS 2 1/2 AND OVER SHALL BE ISOLATING FLANGES.
3. PROVIDE FELT OR RUBBER GASKET TO PREVENT DISSIMILAR METALS CONTACT.
21. DRAIN VALVES
1. LOCATE AT LOW POINTS AND AT SECTION ISOLATING VALVES UNLESS OTHERWISE SPECIFIED.
2. MINIMUM NPS 3/4 UNLESS OTHERWISE SPECIFIED. BRONZE, WITH HOSE END MAKE THREE THREADS.
22. EQUIPMENT SUPPORTS
1. EQUIPMENT SUPPORTS NOT SUPPLIED BY EQUIPMENT MANUFACTURER SHALL BE FABRICATED FROM STRUCTURAL GRADE STEEL.
2. RESPONSIBILITY FOR ROOFING AND REINFORCING OF ROOF FOR MECHANICAL EQUIPMENT SUPPORT SHALL BE COORDINATED WITH GENERAL CONTRACTOR. IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE FOR THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR.
23. PIPE HANGERS AND SUPPORTS
1. PROVIDE UPPER ATTACHMENTS, MIDDLE ATTACHMENT ROD, PIPE ATTACHMENT, RISER CLAMPS, SADDLES, SHIELDS AND OTHER DEVICES. RIGID, SWING OR ANY OTHER HANGER SYSTEM SHALL BE SUITABLE FOR THE APPLICATION AND TAKE INTO ACCOUNT ATTACHMENT IN AREAS MADE OF CONCRETE SLAB, STEEL BEAM, WOOD JOISTS AND STEEL JOISTS AND FOR EXPANSION OF PIPING.
2. HANGER SPACING AND MIDDLE ATTACHMENT (ROD) DIAMETER AS PER REGULATORY AUTHORITIES AND MANUFACTURER'S RECOMMENDATIONS.
3. INSTALL HANGER SO THAT ROD IS VERTICAL UNDER OPERATING CONDITIONS. ADJUST HANGERS TO EQUALIZE LOAD. SUPPORT FROM STRUCTURAL MEMBERS, WHERE STRUCTURAL BEARING DOES NOT EXIST OR INSERTS ARE NOT IN SUITABLE LOCATIONS, PROVIDE SUPPLEMENTARY STRUCTURAL STEEL MEMBERS.
4. WHERE SUPPORTING COPPER PIPE, IT SHALL BE ISOLATED FROM ANY NON-COPPER HANGER WITH ELECTROLYTIC ACTION TAPE OR EQUIVALENT.
24. SHOP DRAWINGS AND PRODUCT DATA
1. EQUIPMENT SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
2. SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
1. MOUNTING ARRANGEMENTS.
2. OPERATING AND MAINTENANCE CLEARANCES, EG. ACCESS DOOR, SWING SPACES.
3. TYPE, NAME, CATALOGUE NUMBERS, TECHNICAL PERFORMANCE DATA, WIRING DIAGRAMS ETC.
25. PAINTING
1. APPLY AT LEAST ONE COAT OF CORROSION RESISTANT PRIMER PAINT TO FERROUS SUPPORTS AND SITE FABRICATED WORK.
2. PRIME AND TOUCH UP MARRED FINISHED PAINT WORK TO MATCH ORIGINAL.
3. RESTORE TO NEW CONDITION, FINISHES WHICH HAVE BEEN DAMAGED TO EXTENSIVELY TO BE MERELY PRIMED AND TOUCHED UP.
4. AT AREAS WHERE CUTTING AND PATCHING HAS TAKEN PLACE, PAINTING OF THESE AREAS SHALL BE UNDERTAKEN BY THE AFFECTED (EXPERT) TRADE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR.
26. IDENTIFICATION
1. IDENTIFY AND LABEL EQUIPMENT AND PIPEWORK SERVICES ON COMPLETION OF THE PROJECT.
2. DOMESTIC WATER LINES SHALL SHOW SERVICE AND DIRECTION OF FLOW.
3. EQUIPMENT, PANELS AND CABINETS, SYSTEM NAMEPLATES SHALL BE 1/8" THICK LAMINATED PLASTIC WITH LETTERS AND NUMBERS MACHINE ENGRAVED INTO CORE.
27. ELECTRICAL WORK
1. ALL WIRING AND CONDUIT FOR POWER AND CONTROL SHALL BE BY ELECTRICAL DIVISION, EXCEPT FOR WIRING, CONDUIT AND CONNECTIONS BELOW 50V WHICH ARE RELATED TO AUTOMATIC CONTROL SYSTEMS SHALL BE BY MECHANICAL CONTRACTOR.
2. COORDINATE WITH ELECTRICAL CONTRACTOR FOR WIRING AND TESTING OF ALL MECHANICAL EQUIPMENT.
28. CLEANING
1. UPON COMPLETION AND IN PREPARATION FOR FINAL ACCEPTANCE, CONTRACTOR SHALL REMOVE PROTECTIVE COVERINGS, CLEAN AND REFURISH ALL EQUIPMENT, FREE ALL OBSTRUCTIONS, REPLACE FILTERS, CLEAN STRAINERS AND LEAVE IN OPERATING CONDITION. ALL SURPLUS AND WASTE MATERIAL SHALL BE PROMPTLY REMOVED FROM THE PREMISES.
29. TRIAL USAGE
1. OBTAIN WRITTEN PERMISSION FROM ENGINEER TO START AND TEST PERMANENT EQUIPMENT AND SYSTEMS TO ACCEPTANCE BY OWNER.
2. ENGINEER AND OWNER MAY USE EQUIPMENT AND SYSTEMS FOR TEST PURPOSES PRIOR TO ACCEPTANCE. SUPPLY LABOUR, MATERIAL AND INSTRUMENTS REQUIRED FOR TESTING.
30. TESTING, ADJUSTING AND BALANCING (TAB)
1. THIS OPERATION SHALL BE UNDERTAKEN BY A CONTRACTOR WHOSE PRINCIPAL BUSINESS IS THAT OF TESTING, ADJUSTING AND BALANCING. THIS CONTRACTOR IS TO CONDUCT ACCEPTANCE TESTS TO DEMONSTRATE THAT THE EQUIPMENT AND SYSTEMS ACTUALLY MEET THE SPECIFIED REQUIREMENTS. TESTS MAY BE CONDUCTED AS SOON AS CONDITIONS PERMIT. SUBMIT TAB REPORT TO ENGINEER FOR REVIEW.
2. THE BALANCING CONTRACTOR SHALL BE AFFILIATED WITH AABC OR NEBB.
3. THIS CONTRACTOR SHALL COORDINATE LOCATION AND INSTALLATION OF ALL "TAB" DEVICES, EQUIPMENT, ACCESSORIES, MEASUREMENT PORT AND FITTINGS. ALL NECESSARY TEST PORTS FOR HYDRONIC SYSTEM SHALL BE PROVIDED TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. OPERATE SYSTEMS FOR LENGTH OF TIME REQUIRED FOR TAB. SUBMIT "TAB" REPORT TO ENGINEER FOR VERIFICATION. "TAB" SHALL BE CARRIED OUT FOR THE FOLLOWING SYSTEMS:
1. ALL AIRWAYS WHERE INDICATED.
2. KITCHEN EXHAUST FANS AND MAKE-UP AIR UNIT.
31. DEMONSTRATION, OPERATION AND MAINTENANCE INSTRUCTIONS
1. SUPPLY TOOLS, EQUIPMENT AND PERSONNEL TO DEMONSTRATE AND INSTRUCT CLIENT'S REPRESENTATIVE DURING REGULAR WORK HOURS AND PRIOR TO ACCEPTANCE IN OPERATING, CONTROLLING, AND ADJUSTING OF ALL SYSTEMS AND EQUIPMENT.
32. OPERATION AND MAINTENANCE MANUAL
1. PROVIDE OPERATION AND MAINTENANCE DATA FOR INCORPORATION INTO MANUAL.
2. OPERATION AND MAINTENANCE MANUAL TO BE APPROVED BY AND FINAL COPIES DEPOSITED WITH ENGINEER BEFORE FINAL INSPECTION.
33. RECORD DRAWINGS
1. SITE RECORDS:
1. ON ONE SET OF AUTOCAD MECHANICAL DRAWINGS, MARK ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR.
2. MAKE AVAILABLE FOR REFERENCE PURPOSES AND INSPECTION AT ALL TIMES.
2. AS-BUILT DRAWINGS:
1. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 1/2" HIGH AS FOLLOWS: "AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW MECHANICAL SYSTEMS AS INSTALLED" (SIGNATURE OF CONTRACTOR) (DATE).
2. SUBMIT TO ENGINEER FOR APPROVAL AND MAKE CORRECTIONS AS DIRECTED.
3. SUBMIT COMPLETED REPRODUCIBLE AS-BUILT DRAWINGS WITH OPERATING AND MAINTENANCE MANUALS.
34. GUARANTEE
1. PROVIDE A WRITTEN GUARANTEE TO COVER ALL MATERIALS AND INSTALLATION OF THE COMPLETE MECHANICAL SYSTEMS. THIS GUARANTEE SHALL EXTEND FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATE OF SUBSTANTIAL COMPLETION.
2. SPECIFIC GUARANTEE OF MANUFACTURERS WHOSE WARRANTY NORMALLY EXTENDS OVER LONGER OR SHORTER PERIODS THAN ONE YEAR, SHALL IN NO WAY LIMIT THE GUARANTEE OF THE MECHANICAL WORK.
3. ANY DEFECTS OCCURRING WITHIN THE GUARANTEE PERIOD SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
4. WHERE PERMANENT EQUIPMENT IS USED TO PROVIDE TEMPORARY SERVICES, THE WARRANTY SHALL BE EXTENDED SO THAT THE WARRANTY PERIOD DOES NOT COMMENCE UNTIL THE CERTIFICATE OF SUBSTANTIAL COMPLETION IS ISSUED.

**PLUMBING GENERAL NOTES FOR INSTALLATION**

- 1. DOMESTIC WATER PIPING WITH THE BUILDING:
1. ABOVE GROUND SHALL USE SEAMLESS COPPER WATER TUBE, TYPE L WITH SOLDERED JOINTS.
2. GRAVITY SANITARY, STORM AND VENT PIPE AND FITTINGS:
1. BELOW GRADE SHALL BE PVC-SDR35 (8 IN. AND LARGER), PVC-SDR28 (6 IN. AND SMALLER), ABS-DWV OR PVC-DWV WITH SOLVENT WELD FITTINGS.
2. ABOVE GROUND UP TO 2-1/2" DIA. SHALL BE PVC-DWV ULC APPROVED WITH SOLVENT WELD FITTINGS OR COPPER DWV WITH WROUGHT COPPER FITTINGS.
3. ABOVE GROUND FOR 3" AND OVER SHALL BE PVC-DWV, ULC APPROVED WITH SOLVENT WELD FITTINGS OR CAST IRON WITH MECHANICAL JOINTS, NEOPRENE OR BUTYL RUBBER COMPRESSION GASKETS AND STAINLESS STEEL CLAMPS.
4. IN A RETURN AIR PLENUM USE FULLY CERTIFIED FIRE-RESISTANT PVC-DWV PIPE SUCH AS IPEX SYSTEM XFR 15-50. COORDINATE WITH ARCHITECTURAL AND HVAC DRAWINGS TO CLARIFY AREAS WITH RETURN AIR PLENUM.
5. COMBUSTIBLE PIPE SHALL NOT BE INSTALLED IN A VERTICAL SERVICE SHUNT.
6. WHERE PLASTIC PIPE CROSSES A FIRE SEPARATION IT SHALL BE FITTED WITH APPROVED FIRE STOP DEVICES.
7. INSTALL PLUMBING VENT LINES AS PER OBC PART 7 DISTRIBUTION AND SIZING SHALL BE BY PLUMBING CONTRACTOR.
8. FOR ALL PIPE PENETRATIONS, VOIDS AROUND PIPES SHALL BE SEALED AND CAULKED TO KEEP REQUIRED INTEGRITY.
9. INSTALL PIPE CLEANOUTS FOR SANITARY DRAINAGE LINES.
10. PIPING INSULATION
1. PREFORMED SECTIONAL RIGID FIBREGLASS PIPE INSULATION WITH VAPOUR BARRIER JACKET AND FACING MATERIAL 0-850 DEL.F. SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
1. APPLICATION:
1. DOMESTIC COLD AND HOT WATER, HOT WATER RECIRCULATION LINE SHALL BE INSULATED THROUGHOUT IN ALL LOCATIONS.
2. THICKNESS AND THERMAL CONDUCTIVITY AS PER FOLLOWING: RUNOUTS REFERS TO INDIVIDUAL PLUMBING FIXTURES OR TERMINAL UNITS NOT EXCEEDING 12FT.
1. DOMESTIC COLD AND HOT WATER AND HOT WATER RECIRCULATION LINES: INSULATION THERMAL CONDUCTIVITY 0.24-0.28 BTU.IN/(H.FT2.F) AT 100 DEG. F MEAN TEMP. RATING. NOMINAL PIPE DIAMETER UP TO 2 IN., INSULATION THICKNESS SHALL BE 1 IN. RUNOUTS UP TO 2 IN. NOMINAL PIPE SIZE, THICKNESS SHALL BE 1/2 IN.
2. FASTENINGS:
1. SELF ADHESIVE ALUMINUM TAPE ULC LABELED.
2. LAP SEAL ADHESIVE QUICK SETTING FOR JOINTS AND LAP SEALING OF VAPOUR BARRIERS.
3. LAGGING ADHESIVE FIRE RETARDANT COATING.
8. ALL INSULATED EXPOSED PLUMBING PIPES RUNNING INSIDE THE BUILDING SHALL BE ENTIRELY INSTALLED WITH WHITE PVC JACKETING, UV-RESISTANT WITH MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
9. WHERE SUPPORTING COPPER PIPE, IT SHALL BE ISOLATED FROM ANY NON-COPPER HANGER WITH ELECTROLYTIC ACTION TAPE OR EQUIVALENT.
10. INSTALL VALVED SHUNT TO ISOLATE AT:
1. INSTALL TRAP SEAL PRIMER FOR FLOOR DRAINS AND HUB DRAINS ON COLD WATER SUPPLY TO NEAREST FREQUENTLY USED PLUMBING FIXTURE OR TO A TRAP SEAL PRIMER. INSTALL SOFT COPPER TUBING OR PEX PIPE TO FLOOR DRAIN AND HUB DRAIN.
11. WATER HEATER SHALL BE INSTALLED ON GRAB LINES TO EACH FIXTURE OR GROUP OF FIXTURES HAVING A QUICK CLOSING DEVICE OR SOLENOID OR HOSE BIB.
12. INSTALL BACK FLOW PREVENTER WHERE THERE IS A HEALTH HAZARD POTENTIAL FOR POTABLE WATER SYSTEM AND AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.

**HVAC GENERAL NOTES FOR INSTALLATION**

- 1. THESE GENERAL NOTES FOR INSTALLATION DO NOT APPLY TO KITCHEN EXHAUST HOOD AND EXHAUST DUCT VENTILATION SYSTEM. REFER TO APPLICABLE NOTES FOR KITCHEN VENTILATION SYSTEM. ONLY MAKE-UP AIR DUCT SYSTEM SHALL REFER TO THESE NOTES.
2. WHERE SHOWN OTHERWISE NOTED ALL DUCTWORK AND DUCTWORK ACCESSORIES SHALL BE GALVANIZED STEEL LOW PRESSURE. DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE AS PER THE REQUIREMENTS OF SMACNA.
3. ALL DUCTWORK TRANSVERSE JOINTS AND CONNECTIONS SHALL BE SEALED.
1. EXHAUST EXPOSED TO THE EXTERIOR SHALL BE WATERIGHT.
2. FOR CLOTHES DRYER EXHAUST DUCTS, TRANSVERSE JOINTS AND CONNECTIONS SHALL BE SEALED AND TAPED. WHERE APPLICABLE DUCTS SHALL SLOPE DOWN TOWARDS DUCTWORK GRILLE. OVERLAPPING DUCT CONNECTIONS SHALL BE OF THE TELESCOPIC TYPE AND THE INSIDE DUCT SECTION AT THE JOINT SHALL ALWAYS FOLLOW AIRFLOW.
LONGITUDINAL SEAMS SHALL BE LOCATED AT THE TOP OF THE DUCT. DUCT JOINTS FOR DRYERS SHALL NOT BE SCREWED.
4. INTENSIFIED EXPOSED EXTERIOR WORKING ON ROOF SHALL BE INSTALLED WITH BIRDSCREEN.
5. FLEXIBLE DUCT LENGTH SHALL BE LIMITED TO 8FT. MAXIMUM AND SHALL BE FACTORY FABRICATED TO CAN/ULC S110 SHALL BE ALUMINUM FOIL REINFORCED FILM LAMINATE, PERMANENTLY BONDED TO A CORROSION RESISTANT COATED SPRING STEEL WIRE HELIX. WHERE IT IS REQUIRED TO BE INSULATED, IT SHALL BE INSULATED AS PER R-VALUE SPECIFIED BELOW.
6. DUCTWORK SHALL BE INSULATED AS FOLLOWS. ALL INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
1. EXHAUST DUCT 8 FT. FROM EXTERIOR WALL OR ROOF, SHALL BE INSULATED WITH 2 IN. THICKNESS OF FIBREGLASS FLEXIBLE DUCT INSULATION WITH REINFORCED FOIL/KRAFT VAPOUR RETARDER FACING, DENSITY 0.75 PCF AND NOMINAL R-VALUE OF 6.7 H.F.T2.F/FT.U.
2. SUPPLY AND RETURN DUCTS LOCATED EXPOSED TO OUTDOOR CONDITIONS, SHALL BE INSULATED WITH TWO LAYERS OF 1-1/2" THICKNESS OF RIGID FIBREGLASS INSULATION WITH REINFORCED FOIL/KRAFT VAPOUR RETARDER FACING, DENSITY OF 3.00 PCF AND NOMINAL THERMAL CONDUCTIVITY OF 0.23 BTU.IN/H.FT2.F AT 75 DEG. F MEAN TEMPERATURE TO PROVIDE NOMINAL R-VALUE OF 12.0 H.F.T2.F/FT.U. INSTALL FLEXIBLE SELF-ADHERING WEATHERPROOFING SYSTEM WITH PEEL OFF RELEASE PAPER AND PRESS MEMBRANE INTO PLACE. SHALL BE SUITABLE FOR EXTERIOR USE WITH STUCCO-EMBEDDED ALUMINUM, WEATHER RESISTANT, UV STABLE FOR EXTERIOR, SHALL EXCEED 25/50 FLAME/SMOKE RATING AND RESIST VAPOUR TRANSMISSION.
3. FASTENINGS:
1. SELF ADHESIVE ALUMINUM TAPE ULC LABELED.
2. LAP SEAL ADHESIVE QUICK SETTING FOR JOINTS AND LAP SEALING OF VAPOUR BARRIERS.
3. CONTACT ADHESIVE QUICK SETTING.
7. WHERE INDICATED ON THE DRAWINGS AND AS SPECIFIED BELOW, ACOUSTIC LINER FOR DUCTWORK SHALL BE 1" THICKNESS RIGID FIBREGLASS OF DENSITY 2.0 PCF. INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. DUCT SIZE DIMENSION INDICATED ON DRAWING IS THE INTERNAL DIMENSION OF THE ASSEMBLED DUCT WITH ACOUSTIC LINER.
1. TRANSFER AIR DUCTS:
2. MAKE-UP AIR UNIT (MUA), FROM THE DISCHARGE DUCT OUTLET TO THE ROOF PENETRATION.
8. WHERE DUCTS CROSS A FIRE SEPARATION, INSTALL FIRE DAMPERS TO SUIT APPLICATION. FIRE DAMPERS SHALL BE OF THE DYNAMIC CLOSURE TYPE WITH BLADE OUT OF AIRSTREAM, ULC LISTED AND FUSIBLE LINK WITH TEMPERATURE RATING TO SUIT APPLICATION. SHALL BE INSTALLED AS PER NFPA 90A WITH BREAKAWAY JOINTS, RETAINING ANGLES AND ACCESS DOOR ADJACENT TO FIRE DAMPER.
9. FOR DUCT PENETRATIONS AT WALL, VOIDS AROUND DUCT SHALL BE SEALED AND CAULKED TO MAINTAIN REQUIRED INTEGRITY.
10. NATURAL GAS PIPING INSTALLATION:
1. ABOVE GROUND NATURAL GAS PIPING SHALL BE BLACK STEEL SCHEDULE 40 AND INSTALLED AS PER THE REQUIREMENTS OF NATURAL GAS INSTALLATION CODE, CSA-B149.1, LOCAL UTILITY REQUIREMENTS AND TSSA REQUIREMENTS. "GASITITE" FLEXIBLE GAS TUBING CAN ALSO BE CONSIDERED AS ALTERNATE WHERE INDICATED ON DRAWINGS. INSTALL PLUG VALVES AT ALL GAS FIRED EQUIPMENT. INSTALL GAS PRESSURE REGULATORS AS FIRED EQUIPMENT WHERE SHOWN. FOR ROOFTOP PIPE SUPPORTS SUPPLY AND INSTALL DURA-BLOCK SERIES TYPE COMPLETE WITH RUBBER SUPPORT BASES UV RESISTANT WITH CHANNEL. CHANNELS SHALL BE GALVANIZED STEEL AND FITTINGS AND HARDWARE SHALL BE ELECTRO-PLATED STEEL.
2. PIPE SIZING SHOWN ON DRAWINGS IS BASED ON BLACK STEEL SCHEDULE 40. FINAL GAS PIPE SIZING, DISTRIBUTION AND CONNECTION TO VARIOUS GAS FIRED EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
3. INSTALL EXPANSION CONTROL LOOPS AND OFFSETS OR EXPANSION JOINTS WHERE APPLICABLE AND AS REQUIRED.
4. GAS PIPE EXTERIOR TO THE BUILDING SHALL BE PAINTED IN YELLOW PAINT AND INSIDE THE BUILDING SHALL BE IDENTIFIED WITH YELLOW BANDS.
5. MECHANICAL CONTRACTOR SHALL INCLUDE IN TENDER PRICE TO CONTACT AND COORDINATE WITH LOCAL GAS UTILITY FOR INCREASE IN GAS CAPACITY AND REPLACEMENT OF GAS METER IF NECESSARY.

**PLUMBING FIXTURES AND EQUIPMENT SCHEDULE**

- K51 KITCHEN SINK, TOP MOUNTED, STAINLESS STEEL, 2-BOWL, STEEL QUEEN QDD2031-7, OVERALL SIZE 31 1/2"X20 1/2"X7" DEEP. COMPLETE WITH 3-FAUCET HOLES AND STRAINER BASKET. SINGLE LEVER FAUCET SET DELTA 100LF-HDF. INSTALL P-TRAP WITH CLEANOUT AND FLEX SUPPLIES WITH HANDLE LOCKSHIELD STRUCTURE.
K52 KITCHEN SINK, TOP MOUNTED, BARRIER-FREE, STAINLESS STEEL, 2-BOWL, KINDRED CREEMORE, RDLA3319-6, OVERALL SIZE 32 1/4"X18 1/4"X6" DEEP. COMPLETE WITH 3-FAUCET HOLES AND STRAINER BASKET. SINGLE LEVER FAUCET SET DELTA 100LF-HDF. OFFSET P.L.O. PLUG, P-TRAP WITH CLEANOUT AND FLEX SUPPLIES WITH HANDLE LOCKSHIELD STRUCTURE.
L51 LAUNDRY SINK, TOP MOUNTED, STAINLESS STEEL, 1-BOWL, STEEL QUEEN QSLA225 (OVERALL SIZE 25 1/2"X22 1/2"X10" DEEP. COMPLETE WITH 3-FAUCET HOLES AND STRAINER BASKET. TWO HANDLE FAUCET SET DELTA 26C323 WITH 8" CENTRES AND 8" TUBULAR SWING SPOUT. INSTALL P-TRAP WITH CLEANOUT AND FLEX SUPPLIES WITH HANDLE LOCKSHIELD STRUCTURE.
G1 AND G2 DRAIN INTERCEPTOR, ON FLOOR TYPE, ENGINEERED THERMOPLASTIC (POLYPROPYLENE), CANPLAS ENDURA 15 US.GPM FLOW RATE, 35 LBS GREASE CAPACITY, 2" DIA. INLET/OUTLET. SHALL BE COMPLETE WITH FLOW CONTROL VALVE.
DW DISHWASHER TO BE SUPPLIED BY OTHERS AND INSTALLED BY PLUMBING CONTRACTOR. PLUMBING CONTRACTOR TO SUPPLY AND INSTALL DRAIN TEMPERING KIT, PRESSURE REDUCING VALVE, STRAINER, BACKFLOW PREVENTER AND ALL REQUIRED PIPING. BACKFLOW PREVENTER ONLY REQUIRED IF DISHWASHER IS NOT INSTALLED WITH INTEGRATED BACKFLOW PREVENTER.

**HVAC EQUIPMENT SCHEDULE**

DIFFUSERS, GRILLES AND REGISTER BY E.H. PRICE. COLOUR TO BE FINALIZED ON SITE WITH ARCHITECT REF: T01: TRANSFER GRILLE, 80/F/A

**KITCHEN HOOD, EXHAUST FAN AND MAKE-UP AIR SYSTEM EQUIPMENT SCHEDULE**

- EH1D AND EH2D GREASE EXHAUST HOOD SHALL BE BOX CANOPY ISLAND TYPE AND BUILD IN ACCORDANCE WITH NFPA 96 AND AS PER DETAIL, CAPTIVEWARE MODEL NDI WITH PERFORATED SUPPLY PLENUM P5P. HOOD SIZE 84" LONG X 48" WIDE X 24" HIGH (REFER TO SECTION). SHALL EXHAUST 1440 CFM AND SUPPLY AIR TO MAIN PLENUM SHALL BE 325 AT EACH PLENUM. COMPLETE WITH EXHAUST COLLAR AND MAKE-UP AIR OPENINGS TO PLENUM. EXHAUST HOOD SHALL BE CONSTRUCTED OF STAINLESS STEEL NOT LESS THAN 0.0118 GA (0.0437) IN THICKNESS ALL EXTERNALLY WELDED CONSTRUCTION. HOOD SHALL BE CONSTRUCTED WITH HANGER ROD BRACKETS WELDED AT EACH CORNER OF HOOD. ULC LISTED Baffle Grease Filters STAINLESS STEEL CONSTRUCTION OF 2" THICKNESS MOUNTED IN AN INTEGRAL 304 STAINLESS STEEL V-SHAPE FILTER RACK, INCLINED AT AN ANGLE BETWEEN 45 TO 60 FROM THE HORIZONTAL AND SHALL BE SIZED FOR 200 TO 250 FPM. THE FILTER RACK SHALL INCLUDE A 1/2" LINE GRADE GUTTER WITH A REMOVABLE GREASE CUP. IF SPACERS ARE NECESSARY THERE SHOULD BE INSTALLED IN AREAS WHERE LOW UPDRAUGHTS ARE EXPECTED. SHALL BE COMPLETE WITH 2 LED LIGHTS.
MUA1 MAKE-UP AIR UNIT, NATURAL GAS DIRECT FRED, CGA APPROVED, OUTDOOR HORIZONTAL, WITH BOTTOM DISCHARGE, CAPTIVEWARE AT-D. SUPPLY AIR 1300 CFM AT 1.5" ESP (INCLUDES DUCTWORK ONLY), HEATING INPUT/OUTPUT 114/104 MBH AT 74 DEG. F TEMPERATURE RISE. COMPLETE WITH FOLLOWING ACCESSORIES:
-INLET HOOD WITH REPLACEABLE MEDIA FILTERS AND BIRDSCREEN
-MOTORIZED TWO POSITION INLET DAMPER
-PREFABRICATED ROOF CURB 20" HIGH
-FAN MOTOR STARTER
-REMOTE CONTROL PANEL WALL MOUNTED COMPLETE WITH TEMPERATURE SELECTION, ON/OFF SWITCH, SUMMER/WINTER SWITCH AND STATUS LIGHTS.
-REMOTE CONTROL PANEL FOR ENERGY MANAGEMENT SYSTEM BASED ON VFD SYSTEM MODULATING MUA1 AND EXHAUST FAN KEF1 AND KEF2. EXHAUST DUCT TEMPERATURE SENSOR TO ACTIVATE VFD SYSTEM.
-EXHAUST FAN INTERLOCK FOR MUA1 WITH KEF1 AND KEF2 AND DUCT TEMPERATURE SENSOR WITH CONTROL TRANSFORMER
-MANIFOLD EQUIPPED FOR ELECTRONIC MODULATION FOR MODULATING DISCHARGE TEMPERATURE CONTROL
-INTERNAL SPRING ISOLATION
-AIR PROVING SWITCHES
-VARIABLE PITCH DRIVE MOTOR PULLEY
-PREPARED VALVE TRAIN MANIFOLDED FOR NATURAL GAS
-UNFUSED DISCONNECT SWITCH
MOTOR ELECTRICAL DATA: 208V/3/60, 1.5HP (1.0 BHP) ODP MOTOR, 1400 RPM
REMOTE CONTROL PANEL ELECTRICAL DATA: 120V/1/60
SEPARATE POWER FEED FOR MUA1 ROUTED THROUGH THE CONTROL PANEL.
KEF1 AND KEF2 EXHAUST FAN, ROOF MOUNTED, VERTICAL DISCHARGE CONFIGURATION, DIRECT DRIVE, CAPTIVEWARE USB130D-RM RESTAURANT MODEL, UL 762 LISTED, 1440 CFM AT 1.00" E.S.P. SHALL BE COMPLETE WITH CLEANOUT DOOR, DRAIN FITTING, DISCHARGE OUTLET FLANGES, 2" DRAIN WITH GREASE CUP, VIBRATION ISOLATORS AND DISCONNECT SWITCH.

**PLUMBING LEGEND**

Table with 2 columns: SYMBOL and DESCRIPTION. Symbols include lines for new and existing lines, various pipe types (capped, ducting, sanitary, storm), valves (gate, ball, butterfly, globe, check), dampers (splitter, fire, smoke), and other fixtures like pumps, meters, and diffusers.

**HVAC LEGEND**

Table with 2 columns: SYMBOL and DESCRIPTION. Symbols include equipment to remain, relocate, or remove, ducting, diffusers, grilles, flexible ducts, dampers, fans, thermostats, and various valves and controls.

Table with 3 columns: NO., DATE, REVISION. Contains two entries: 2 MAY 6/26 ISSUED FOR TENDER and 1 APR.16/26 ISSUED FOR PERMIT.

DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR DURING THE COURSE OF WORK.

CoPa ENGINEERING LTD. logo and contact information: 29 ROLLING ACRES DR. KITCHENER, ONTARIO N2A 3W5. MOB: (519) 496-2672.

PROJECT: Interior Renovations to HDSB WHITE OAKS FAMILY STUDIES CLASSROOM. DRAWING: MECHANICAL EQUIPMENT SCHEDULES. DRAWN BY: C. P., SCALE: AS NOTED. CHECKED BY: C. PASHARTIS, DATE: MARCH 11, 2026. PROJECT NO. 25CP097, DRAWING NO. M4-1.

## ELECTRICAL SPECIFICATION

### GENERAL CONDITIONS

- THE CANADIAN STANDARD FORM OF CONSTRUCTION CONTRACT AND GENERAL CONDITIONS GOVERNING THE SAME CCDC PARTS 1 TO 12 INCLUSIVE ARE HEREBY MADE PART OF THIS SPECIFICATION.
- ALL WORK SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THE 2021 ONTARIO ELECTRICAL SAFETY CODE, ELECTRICAL SAFETY AUTHORITY (ESA), AND THE LOCAL BUILDING INSPECTION DEPARTMENT REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL INCLUDE FOR ESA INSPECTION FEES.
- THIS CONTRACTOR SHALL MAINTAIN LIABILITY INSURANCE AS REQUIRED.
- ALL WORKMANSHIP SHALL BE EXECUTED TO A STANDARD DETERMINED BY GOOD PRACTICE. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE THE EQUIPMENT & INSTALLATION FOR ONE YEAR FROM SUBSTANTIAL COMPLETION.
- THE ELECTRICAL CONTRACTOR SHALL SUBMIT ONE SET OF ELECTRONIC PDF SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW. SHOP DRAWINGS TO INCLUDE ALL ELECTRICAL EQUIPMENT, DEVICES & ULC LISTED FIRE STOPPING DETAILS. MATERIALS **SHALL NOT BE ORDERED** UNTIL REVIEW HAS BEEN COMPLETED. APPROVAL IS FOR GENERAL DESIGN COMPLIANCE ONLY.
- THE OWNERS RESERVE THE RIGHT TO ALTER THE LOCATION OF ANY ITEM UP TO TEN FEET (3m) WITHOUT INCURRING EXTRA COSTS, PROVIDED THE REQUEST IS MADE PRIOR TO INSTALLATION.
- ALL MATERIAL AND EQUIPMENT USED ON THIS PROJECT SHALL BE C.S.A. APPROVED, ESA FIELD EVALUATED, OR MUST BEAR AN ESA RECOGNIZED CERTIFICATION MARK.
- CUTTING AND PATCHING FOR ELECTRICAL WORK SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND THEN MAKE NECESSARY ALLOWANCES IN THEIR TENDER PRICE FOR REMOVAL, RELOCATION, REROUTING AND/OR RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND WIRING, AS MAY BE NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS PROJECT. EXTRA CHARGES FOR PREMIUM TIME LABOUR SHALL BE INCLUDED IN THE TENDER PRICE, ALLOWING FOR AFTER HOURS, WEEKEND AND HOLIDAY LABOUR REQUIREMENTS.
- THE DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES OR CONTRADICTIONS SHALL BE BROUGHT TO THE CONSULTANT'S ATTENTION.
- THE ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT IS TO BE CONFIRMED WITH MECHANICAL DRAWINGS & SCHEDULES PRIOR TO RELATED WORK.
- ALL TEMPORARY LIGHTING AND POWER DURING CONSTRUCTION SHALL BE BY THE GENERAL CONTRACTOR AFTER AGREEMENT WITH THE ELECTRICAL CONTRACTOR. POWER SHALL BE PROVIDED FROM PANELS WITH REQUIRED SUPPLY AND CAPACITY.
- TENDER SHALL BE BASED UPON THE SPECIFIED EQUIPMENT AND MATERIAL. REQUESTS FOR CONSIDERATION OF ALTERNATES TO THE SPECIFIED MATERIALS SHALL BE MADE TO THE CONSULTANT ONE WEEK PRIOR TO TENDER CLOSING AND SHALL INCLUDE MANUFACTURER, MODEL, AND COST MODIFICATION. COSTS OF ANY CHANGE REQUIRED TO OTHER TRADES AS A RESULT OF USING ALTERNATE EQUIPMENT ARE TO BE INCURRED BY THE ELECTRICAL CONTRACTOR.
- ALL CLAIMS FOR EXTRA WORK NOT COVERED IN THE CONTRACT TO BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIALS AND LABOUR.
- DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS ARE TO BE TAKEN FROM THE ARCHITECTURAL DRAWINGS AND CONFIRMED ON SITE.
- PROVIDE FIRE STOPPING PROTECTION FOR OPENINGS THROUGH ALL FIRE RATED ASSEMBLIES. ULC LISTED ASSEMBLY NUMBERS ARE TO BE USED.
- LOW VOLTAGE CABLES (IE NETWORK, SECURITY, CONTROL, ETC...) ROUTED WITHIN PLENUM SPACES SHALL BE FT6, CMP OR PLENUM RATED WHEN ROUTING THROUGH MECHANICAL CEILING PLENUMS.

### MOUNTING HEIGHTS

- DEVICE MOUNTING HEIGHT TO CENTRE OF DEVICE IS AS FOLLOWS:
    - LIGHT SWITCHES 1090mm (or 1200mm IN SERVICE ROOMS)
    - RECEPTACLE 400mm
    - DATA OUTLETS 400mm
    - THERMOSTATS 1400mm (or 1200mm BARRIER FREE PATH OF TRAVEL)
    - POWER DOOR OPERATORS 1000mm
    - OTHER BUILDING CONTROLS 1000mm
- NOTE: AUDIBLE FIRE ALARM DEVICES TO BE AT LEAST 150mm BELOW CEILING.

### ELECTRICAL EQUIPMENT, DEVICES & MATERIAL

- ALL EQUIPMENT, DEVICES & MATERIAL TO BE INSTALLED AS PER MANUFACTURERS INSTRUCTIONS.
- ALL BRANCH CIRCUIT WIRING SHALL BE RUN IN ELECTRICAL METALLIC TUBING (E.M.T.) OR FLEXIBLE ARMoured CABLE (AC90) RECESSED IN WALLS OR CEILING EXCEPT WHERE SPECIFICALLY NOTED ON THE PLANS. ALL WIRING TO BE COPPER AND MINIMUM #12 AWG UNLESS STATED OTHERWISE.
- ALL SURFACE WIRING SHALL BE T90/RW90 COPPER IN EMT CONDUIT WHERE WIRING AND CONDUIT CANNOT BE RECESSED.
- ALL ELECTRICAL DEVICES AND LIGHTING CONTROLS, TO HAVE **TYPED CIRCUIT LABEL** ON DEVICE COVER PLATE. LABEL TO BE BLACK LETTERING ON CLEAR BACKING.
- ELECTRICAL PANELS TO HAVE BOLT ON CIRCUIT BREAKERS. ALL PANELS TO HAVE HINGED PANEL COVERS. PANELS SHALL HAVE TYPED DIRECTORIES.
- ALL NON-RESIDENTIAL EQUIPMENT (PANELS, SWITCHBOARDS, SPLITTERS, TRANSFORMERS, ETC...) TO HAVE LAMACODI LABEL INDICATING: EQUIPMENT ID, VOLTAGE, PHASE/WIRE, AND "SUPPLIED FROM: EQUIPMENT ID".
- ALL JUNCTION AND PULL BOXES ARE TO BE ACCESSIBLE AND BE PROVIDED WITH SCREWED PLATES COLOUR MATCHED TO ADJACENT WALL OR CEILING FINISHES.
- PULL BOXES SHALL BE PROVIDED EVERY 30m AND EVERY THREE 90° BENDS.
- ALL WIRING SHALL BE PARALLEL WITH ARCHITECTURAL LINES AND DESIGN.
- PROVIDE A NYLON PULL STRING IN ALL EMPTY CONDUIT.
- ALL NEW SWITCH AND RECEPTACLE DEVICES & PLATES SHALL BE WHITE. ALL DEVICES TO BE COMMERCIAL GRADE DECORA SERIES OR EQUAL UNLESS OTHERWISE STATED.
- DO NOT MOUNT WALL OUTLETS BACK TO BACK IN WALLS, STAGGER TO PREVENT SOUND TRANSFER.
- WIRING TO FIXTURES IN SUSPENDED CEILING IS TO CONSIST OF AC90 'DROPS' WITH A MAXIMUM LENGTH OF 4.5m (15 FT) AND T90 WIRING IN EMT CONDUIT BACK TO SOURCE PANEL.
- ALL CONDUITS TO BE SECURELY FASTENED WITH APPROVED CLIPS AND SCREWS. NAILS OR THE WIRES ARE NOT ACCEPTABLE.
- ALL ELECTRICAL EQUIPMENT, DEVICES, AND WIRING ARE TO BE INDEPENDENTLY SUPPORTED. KEEP CLEAR OF MECHANICAL PIPING WHERE POSSIBLE.
- WIRING FOR MECHANICAL EQUIPMENT SHALL BE AS DETAILED ON THE PLANS.
- PROVIDE 21mm (3/4") CONDUIT RACEWAY BETWEEN MECHANICAL EQUIPMENT AND CONTROLS AS PER MECHANICAL AND ELECTRICAL PLANS.
- PROVIDE EQUIPOTENTIAL BONDING OF NON-ELECTRICAL EQUIPMENT AS PER OESC 10-700, AND WIRE MESH/REBAR SUPPORTING ELECTRICAL RADIANT HEATING CABLES. REFER TO MECHANICAL AND ARCHITECTURAL PLANS.

### LIGHTING

- SUPPLY AND INSTALL LIGHTING FIXTURES AND DEVICES AS NOTED ON THE PLANS AS PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS.
- INSTALL ALL FIXTURES PARALLEL WITH BUILDING LINES UNLESS INDICATED OTHERWISE.
- FOR RECESSED FIXTURES (LED PLUCK LIGHTS EXEMPTED) WITHIN SUSPENDED CEILING, PROVIDE EITHER:
  - SAFETY 'JACK CHAIN' TO BUILDING STRUCTURE, OR
  - MANUFACTURER APPROVED FASTENING DEVICES OR 'EARTHQUAKE CLIPS' FASTENED TO T-BAR.
- INSTALL A SEPARATE NEUTRAL CONDUCTOR FOR EACH LIGHTING BRANCH CIRCUIT.
- LIGHTING CONTROL WIRING NOT RUN WITHIN CONDUIT SHALL BE PLENUM RATED (FT6).

### FIRE ALARM

- GENERAL:
- FIRE ALARM WIRING SHALL BE MINIMUM #18 AWG 300V FAS CABLE (WIRING TO BE SIZED BY FIRE ALARM VENDOR FOR VOLTAGE DROP) RUN AS FOLLOWS:
    - EXPOSED WALL: SURFACE WALL WIRING SHALL BE FAS WIRING IN SURFACE METAL WIREMOLD PAINTED TO MATCH WALL WHERE WIRING AND CONDUIT CANNOT BE RECESSED.
    - ACCESSIBLE CEILING SPACES, CONCEALED SPACES, FINAL DEVICE CONNECTIONS: ARMoured FAS CABLE
    - EXPOSED CEILING, RISER CLOSETS, SERVICE ROOMS: FAS WIRING IN EMT CONDUIT.
    - BELOW GRADE: FAS WIRING IN CONCRETE ENCASED PVC CONDUIT.
  - COMMISSIONINGS OF LIFE SAFETY SYSTEMS SHALL BE INCLUDED IN ELECTRICAL CONTRACTORS PRICE.
  - FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH CAN/ULC-5524:2019, "INSTALLATION OF FIRE ALARM SYSTEMS".
  - FIRE ALARM SYSTEM SHALL BE VERIFIED IN CONFORMANCE WITH CAN/ULC-5537:2019, "VERIFICATION OF FIRE ALARM SYSTEMS" BY A THIRD PARTY (ARMS LENGTH).
  - ANNUNCIATOR PANEL TO BE UPDATED WITH NEW ZONES LABELS.
  - IF A FIRE ALARM OR VOICE COMMUNICATION SYSTEM OR ANY PART THEREOF IS SHUT DOWN:
    - THE FIRE DEPARTMENT AND BUILDING OCCUPANTS SHALL BE NOTIFIED, AND
    - IF APPLICABLE THE SUPERVISORY STAFF SHALL BE NOTIFIED, AND
    - POST NOTICES ON ALL FLOORS BY ELEVATORS AND AT ENTRANCES, STATING THE SCOPE OF WORK AND WHEN IT IS EXPECTED TO BE COMPLETED.
    - HAVE STAFF OR OTHER RELIABLE PERSON(S) PATROL THE AFFECTED AREA(S) AT LEAST ONCE EVERY HOUR. REFER TO CAN/ULC-5537:2019(18) APPENDIX B - ALTERNATE MEASURES FOR OCCUPANT FIRE SAFETY.
  - WHERE EXISTING, UNLESS NOTED OTHERWISE, FIRE ALARM TO BE KEPT. THE ELECTRICAL CONTRACTOR TO INCLUDE ALL COSTS ASSOCIATED WITH RELOCATION OF ANY DEVICES OR EQUIPMENT.
  - NEW LIFE SAFETY DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM. WHERE EXISTING ZONE CIRCUITS ARE USED TO FEED NEW DEVICES, CONTRACTOR TO CONFIRM EXISTING INITIATING AND ANNUNCIATING ZONE WIRING IS COMPLETE WITH A BOND WIRE PRIOR TO RELATED WORK.

### EXISTING CONDITIONS

- ELECTRICAL WORK AFFECTING OTHER TENANTS SHALL BE PERFORMED AFTER BUSINESS HOURS (EVENINGS AND WEEKENDS). COORDINATE WITH LANDLORD.
- SERVICE AND DISTRIBUTION SYSTEM POWER INTERRUPTIONS SHALL BE KEPT TO A MINIMUM. POWER INTERRUPTIONS MUST BE COORDINATED WITH THE OWNER AND ALL OTHER TRADES BY THIS CONTRACTOR. WRITTEN APPROVAL FOR ELECTRICAL INTERRUPTIONS MUST BE RECEIVED FROM THE OWNER INDICATING THE DATE, TIME AND ESTIMATED DURATION OF THE INTERRUPTION. APPLICATION FOR APPROVAL OF THE POWER INTERRUPTIONS MUST BE SUBMITTED TO THE OWNERS AND/OR ARCHITECTS AT LEAST TWO WEEKS PRIOR TO THE REQUESTED SHUTDOWN DATE.
- EXISTING ELECTRICAL EQUIPMENT, REMOVED AND INDICATED FOR REUSE, SHALL BE CLEANED BEFORE RE-INSTALLATION.
- WIRING LOCATED IN AREAS BEING ALTERED OR DEMOLISHED, BUT FEEDING OUTLETS OR EQUIPMENT REQUIRED TO REMAIN IN SERVICE, MUST BE REWORKED IN ORDER TO MAINTAIN THE CONTINUITY OF THE EXISTING WIRING.
- REPAIRS TO EXISTING WALLS, FLOORS, AND CEILING ARE TO BE PERFORMED BY THE GENERAL CONTRACTOR TO MEET THE EXISTING CONDITIONS.
- SEQUENCE OF REMOVAL AND RELOCATION OF EXISTING EQUIPMENT AND WIRING SHALL BE COORDINATED WITH THE OTHER TRADES AND SHALL CONFORM TO THE REQUIREMENTS AND CONDITIONS OUTLINED.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT THROUGHOUT THE PROJECT, PARTICULARLY WHERE WIRING AND ELECTRICAL EQUIPMENT HAVE BECOME EXPOSED TO MECHANICAL DAMAGE OR MOISTURE IN THE COURSE OF ALTERATIONS OR NEW CONSTRUCTION.
- NEW OUTLETS AND EQUIPMENT SHOWN IN THE SAME LOCATION AS EXISTING OUTLETS MAY BE FED THROUGH THE EXISTING CONDUITS/WIRING, PROVIDED THAT THEY ARE IN GOOD CONDITION AND ARE ACCEPTABLE TO THE ESA INSPECTION DEPARTMENT.

### DEMOLITION

- ALL EXISTING ELECTRICAL EQUIPMENT, WIRING, AND ROUGH-IN DEVICES ARE TO BE REMOVED COMPLETE TO SUIT THE DEMOLITION AND RENOVATION OF THE SPACES. ALL EXISTING ELECTRICAL EQUIPMENT, NOT BEING REUSED, SHALL BECOME THE PROPERTY OF THE OWNER. ELECTRICAL CONTRACTOR SHALL PROPERLY DISPOSE OF EQUIPMENT NOT DESIRED BY OWNER.
- ALL DEVICES & EQUIPMENT MADE OBSOLETE SHALL BE REMOVED FROM THE CONSTRUCTION SITE.

### GENERAL CLOSE OUT PROCEDURES

- DOCUMENTS:** ELECTRICAL CONTRACTOR TO SUBMIT:
  - FIRE ALARM SYSTEM ULC-5537:2019 VERIFICATION REPORT (INCLUDING DEVICE & AUDIBILITY REPORT).
  - ESA CERTIFICATE OF INSPECTIONS;
- TRAINING:** ELECTRICAL CONTRACTOR SHALL PROVIDE TRAINING SESSIONS TO THE OWNER ON ALL MAJOR ELECTRICAL SYSTEMS.
- COMMISSIONING:** ALL MAJOR SYSTEMS ARE TO BE COMMISSIONED BY THE MANUFACTURERS REPRESENTATIVE INCLUDING FIRE ALARM, LIGHTING CONTROL SYSTEMS.
- FUNCTIONAL TESTING** (AT CONTRACTORS EXPENSE):
  - LIGHTING CONTROL SYSTEM TESTING SHALL INCLUDE OCCUPANCY SENSOR PLACEMENT, SENSITIVITY, AND CONTROL SETTING CALIBRATION. PROPERLY OPERATING OCCUPANCY SENSORS ARE TO TURN OFF LIGHTS WITHIN A REASONABLE PERIOD OF TIME IN UNOCCUPIED SPACES AND SHALL NOT ALLOW LIGHTS TO TURN ON UNLESS SPACE IS OCCUPIED. CONFIRM ALL TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF. COORDINATE WITH MECHANICAL, HVAC SYSTEM TO BE ON DURING TESTING.
  - LIGHTING CONTROL SYSTEM FUNCTIONAL TESTING IS TO BE PERFORMED BY THIRD PARTY REPRESENTATIVE AS PER ASHRAE-90.1-2013 9.4.3. TESTING CERTIFICATION IS TO BE INCLUDED IN CLOSE-OUT DOCUMENTS.
- RECORD DRAWINGS:** ELECTRICAL CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ACTUAL INSTALLATION TO OWNERS WITHIN 30 DAYS OF SYSTEM ACCEPTANCE. DRAWINGS ARE TO INCLUDE SINGLE LINE DIAGRAM OF DISTRIBUTION SYSTEM; FLOOR PLANS SHOWING THE LOCATION OF DISTRIBUTION EQUIPMENT AND THE AREAS SERVED BY THAT EQUIPMENT; CHANGES TO LIGHTING, LIGHTING CONTROLS & CIRCUITING.

### INSPECTIONS BY CONSULTANT

- CONTRACTOR SHALL NOTIFY CONSULTANTS WHEN INSPECTIONS ARE REQUIRED. ALLOW FOR MINIMUM OF THREE BUSINESS DAYS OF NOTICE PRIOR TO INSPECTION.
- INSPECTIONS ARE REQUIRED AT THE FOLLOWING MILESTONES:
  - DEVICE ROUGH-IN (PRIOR TO DRYWALL)
  - FINAL INSPECTION

### DEVICE/EQUIPMENT OPTIONS & TAGS

	SHEET NOTE LABEL - REFER TO SHEET NOTES
CL	CEILING MOUNT
FL	FLOOR MOUNT
GFI	DEVICE WIRED TO LOAD SIDE OF GFCI RECEPTACLE/BREAKER
RP	REPLACE EXISTING DEVICE WITH NEW DEVICE IN SAME LOCATION.
REL	RELOCATED DEVICE/EQUIPMENT. REWORK WIRING AS NEEDED. IF APPLICABLE PROVIDE NEW DEVICE BOX & CONNECTORS.

- NEW DEVICE/EQUIPMENT
- TO BE REMOVED
- EXISTING TO REMAIN

### 1 New, Removed, Existing

### 2 Tags - Mechanical Equipment

### 3 Tags - Low Voltage Devices

### 4 Tags - Electrical Devices

### 5 Tags - Lighting Devices

Electrical Sheet List	
Sheet #	Sheet Name
E1	Electrical Legend & Specification
E2	Demo - Electrical Plan
E3	Proposed - Electrical Plan
E4	Details & Schedules
E5	Elevations
Total: 5	

### ELECTRICAL LEGEND

SCHEDULE (x = TYPE)	EXISTING	DEMO	NEW	DESCRIPTION
LIGHTING DEVICE SCHEDULES			x	LIGHT SWITCH
			x	DIMMER SWITCH
			x	LIGHTING MOTION SENSOR
LIGHTING FIXTURE SCHEDULES			x	LIGHTING POWER PACK
			x	EXIT SIGN, CEILING MOUNT, HATCH = SIGN, ARROW = DIRECTION
			x	EXIT SIGN, WALL MOUNT, HATCH = SIGN, ARROW=DIRECTION
ELECTRICAL EQUIPMENT SCHEDULES			x	EXIT / EMERG COMBO, WALL MOUNT, HATCH=SIGN, ARROW=DIRECTION
			x	EMERGENCY LIGHT, BATTERY UNIT
			x	EMERGENCY LIGHT, REMOTE HEAD
MECHANICAL EQUIPMENT SCHEDULES			x	LIGHTING FIXTURE
			x	WALL MOUNTED LIGHTING FIXTURE
			x	LIGHTING FIXTURE
KITCHEN EQUIPMENT SCHEDULES			x	ELECTRICAL POWER PANEL
			x	ELECTRICAL DISCONNECT (FUSED OR UNFUSED)
			x	ELECTRICAL EQUIPMENT - MISCELLANEOUS
ELECTRICAL DEVICE SCHEDULES			x	MECHANICAL EQUIPMENT CONTROL
			x	MECHANICAL EQUIPMENT - HARDWARE CONNECTION
			x	MECHANICAL EQUIPMENT c/w LOCAL DISCONNECT
FIRE ALARM DEVICE SCHEDULES			x	KITCHEN EQUIPMENT - HARDWARE CONNECTION
			x	KITCHEN EQUIPMENT c/w LOCAL DISCONNECT
			x	KITCHEN EQUIPMENT - DUPLEX RECEPTACLE 15A
ELECTRICAL EQUIPMENT SCHEDULES			x	KITCHEN EQUIPMENT - DUPLEX RECEPTACLE 20A
			x	KITCHEN EQUIPMENT - SPECIAL REC
			x	HARDWARE CONNECTION
FIRE ALARM DEVICE SCHEDULES			x	DUPLEX RECEPTACLE 15A
			x	DUPLEX RECEPTACLE 15A - COUNTER (100mm ABOVE BACKSPASH)
			x	DUPLEX RECEPTACLE 20A
FIRE ALARM DEVICE SCHEDULES			x	DUPLEX RECEPTACLE 20A - COUNTER (100mm ABOVE BACKSPASH)
			x	SPECIAL RECEPTACLE
			x	FIRE ALARM SMOKE DETECTOR
FIRE ALARM DEVICE SCHEDULES			x	FIRE ALARM HEAT DETECTOR
			x	FIRE ALARM BELL

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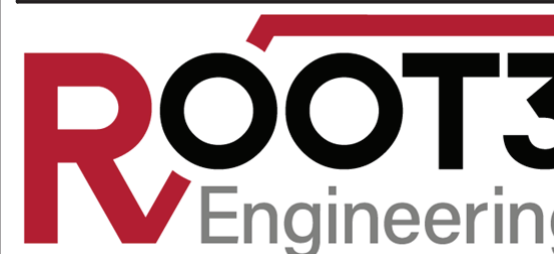
THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER, BEFORE PROCEEDING WITH THE WORK.

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3	Issued For Tender	May 07, 2026
2	Issued For Permit	Apr 17, 2026
1	Issued For Review	Apr 15, 2026

NO.	DESCRIPTION	DATE
<b>REVISION SCHEDULE</b>		



PROJECT NAME  
**HDSB - White Oaks Family Studies Classroom**  
 1330 Montclair Drive, Oakville, ON

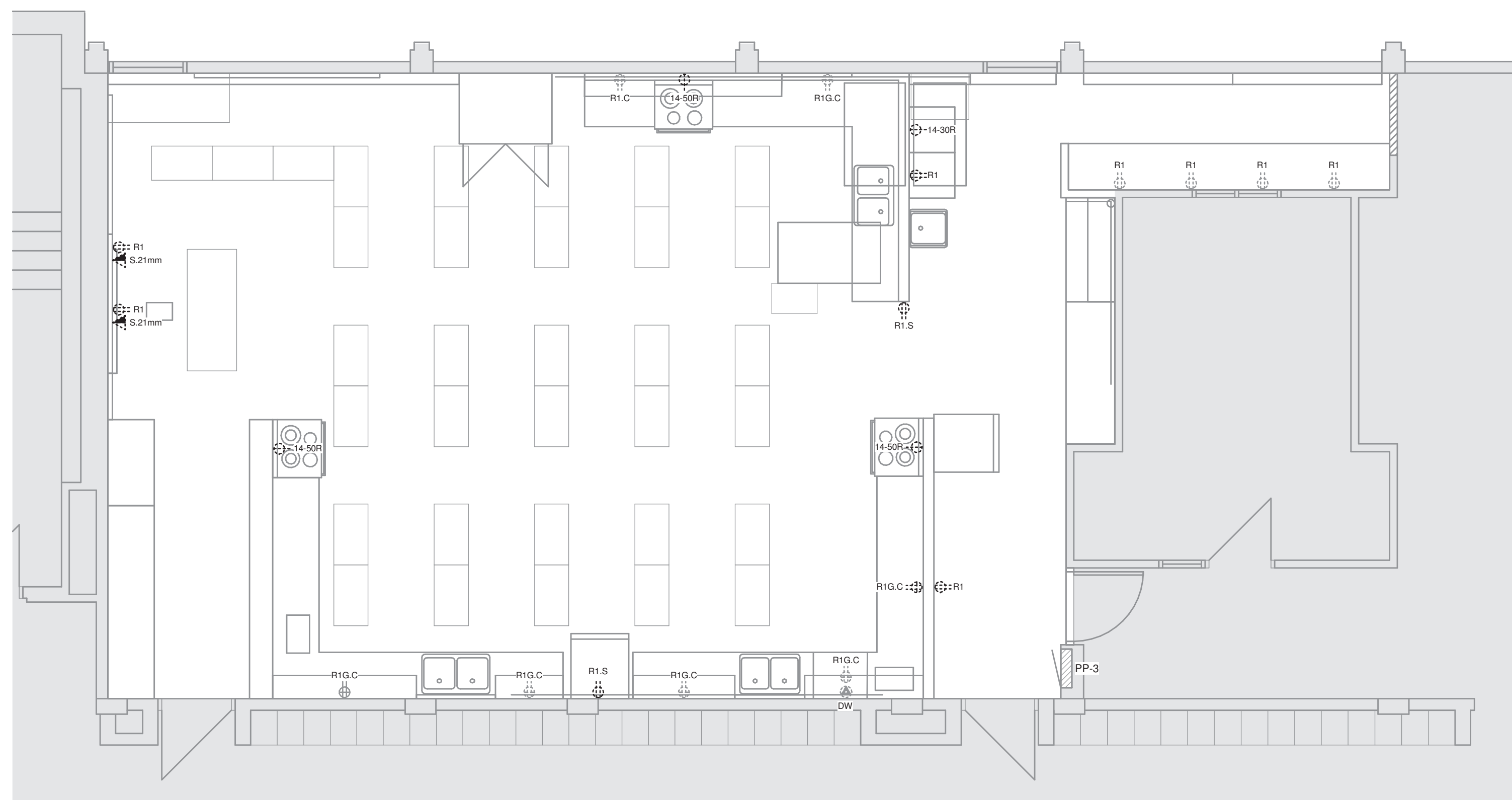
DRAWING TITLE  
**Electrical Legend & Specification**

SCALE 1 : 1	DRAWING NUMBER <b>E1</b>
SHEET SIZE 24"x36"	DESIGNER SSA
PROJECT NUMBER 25153	

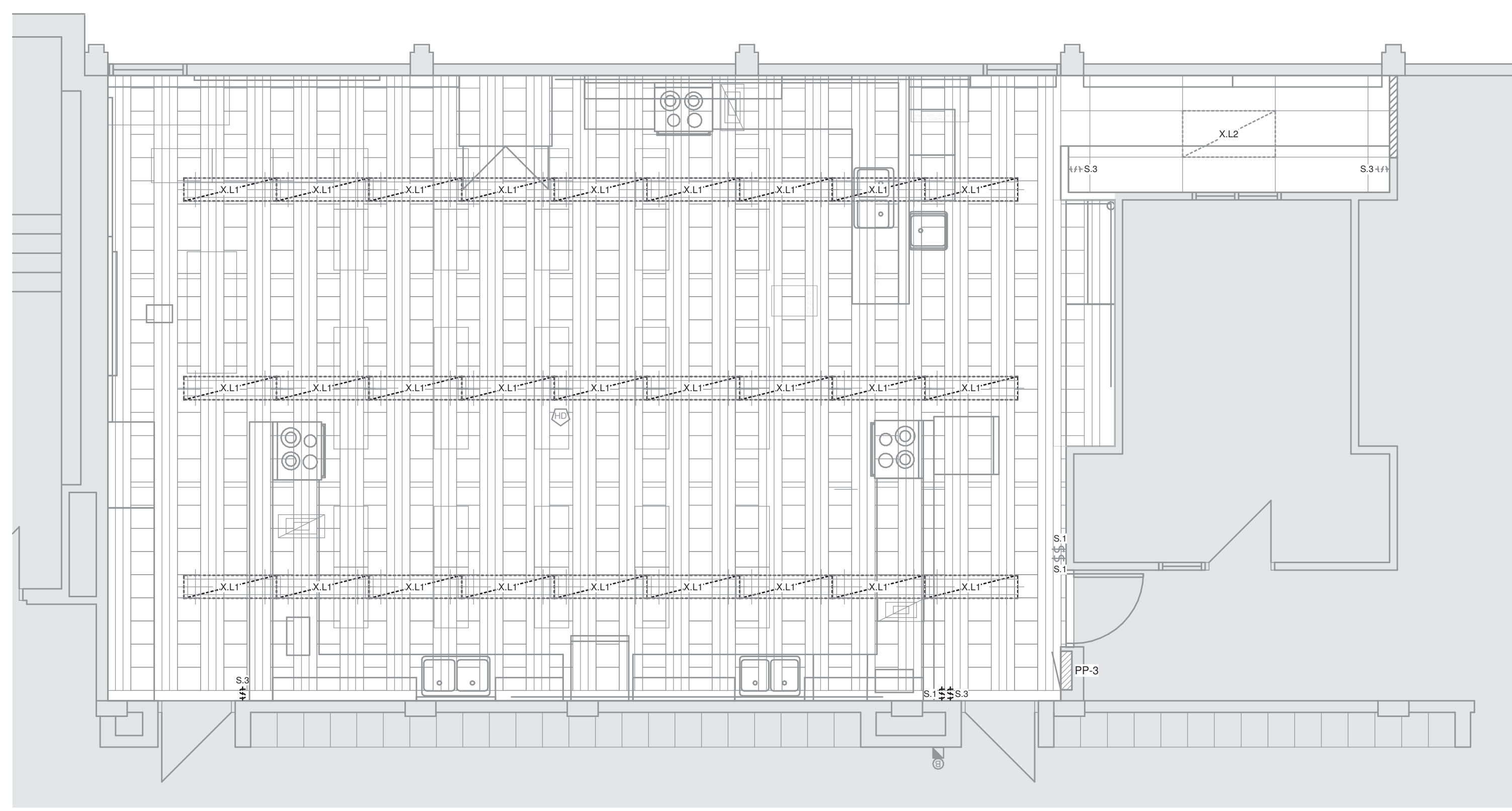
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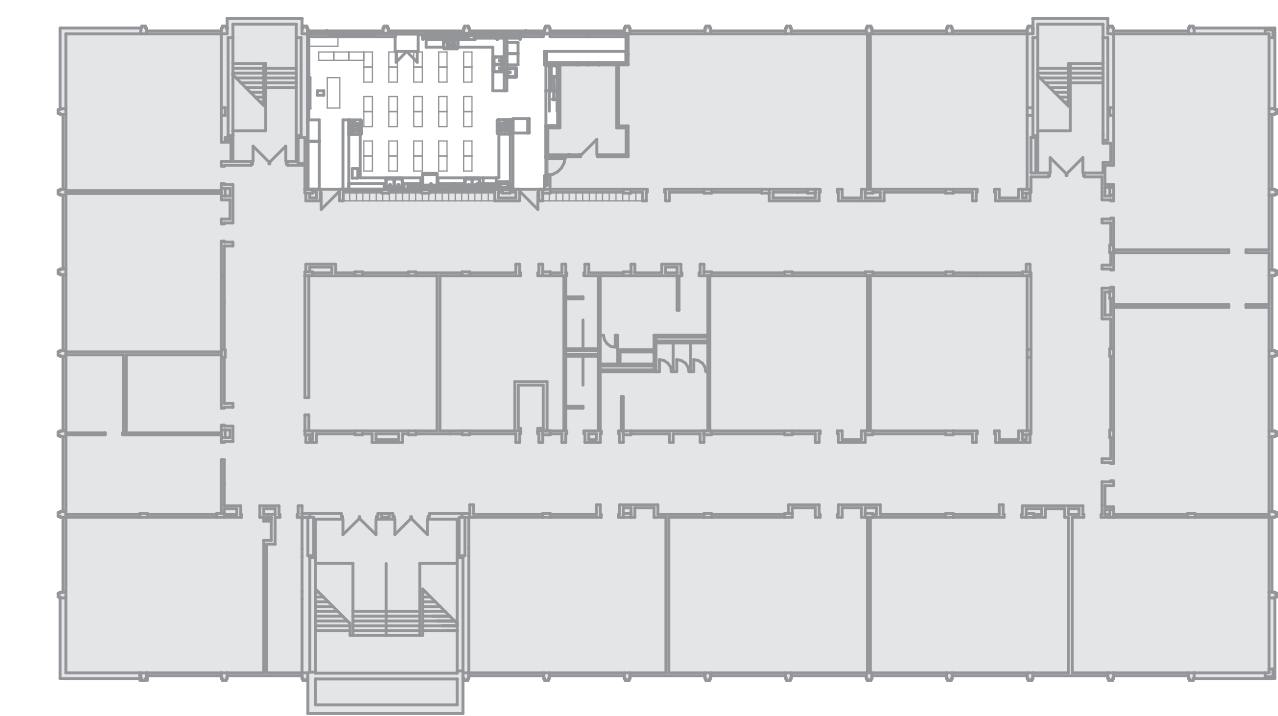
DRAWINGS ARE NOT TO BE SCALED.



1 Demo - Power & Data Plan  
1 : 50



2 Demo - Lighting & Life-Safety  
1 : 50



3 KEYMAP  
1 : 400



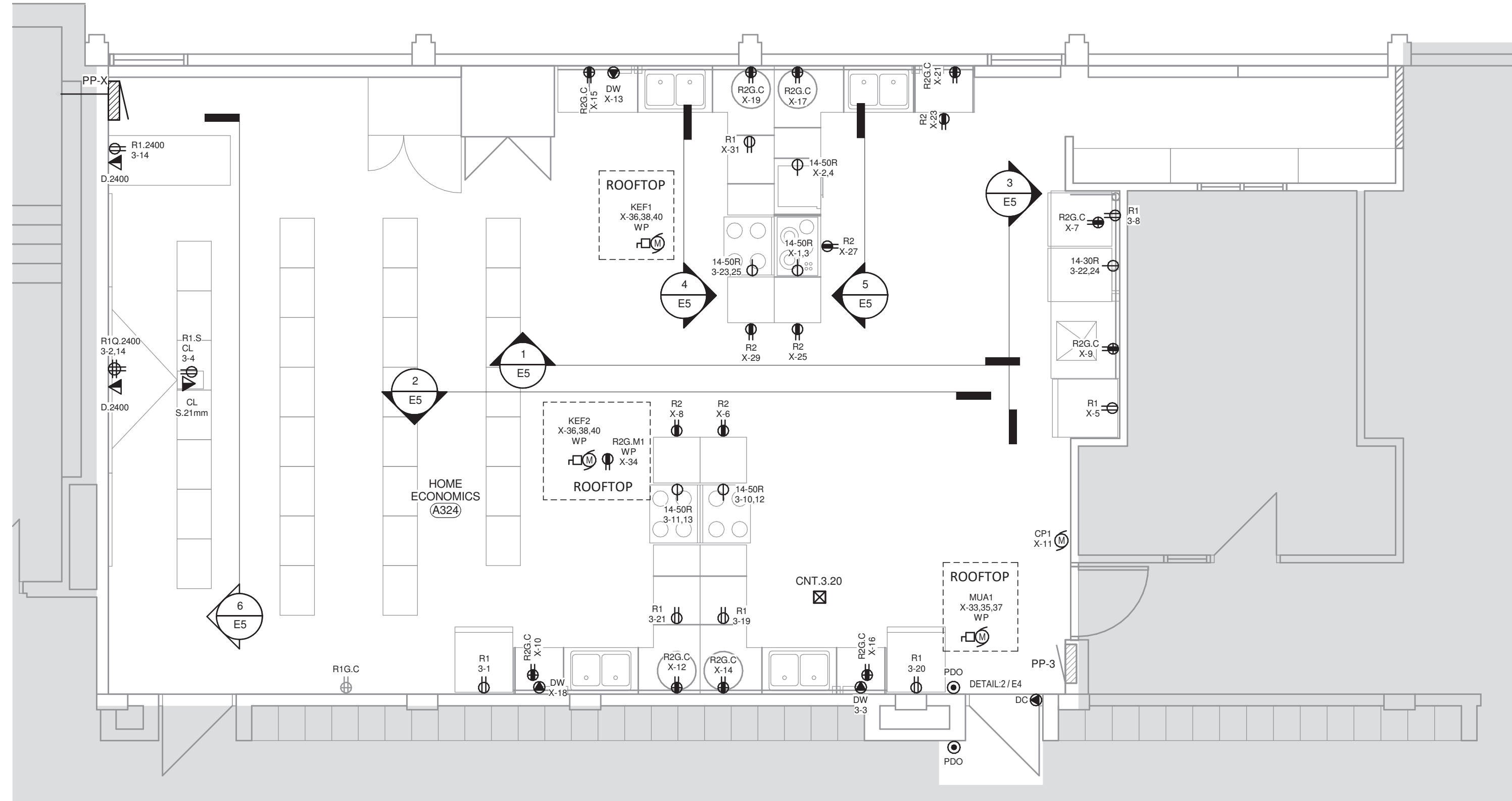
NO.	DESCRIPTION	DATE
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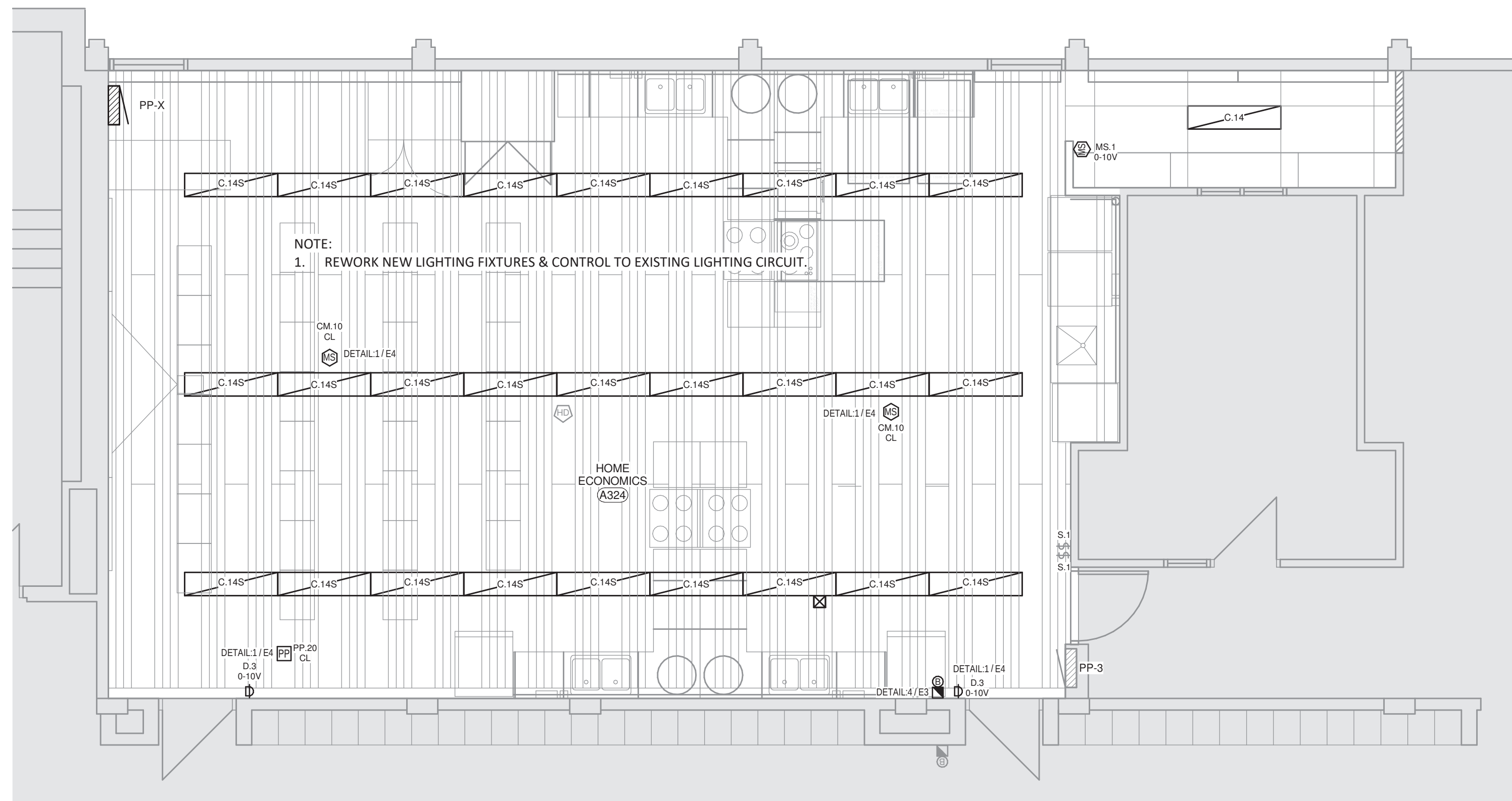
PROJECT NAME  
**HDSB - White Oaks Family Studies Classroom**  
1330 Montclair Drive, Oakville, ON

DRAWING TITLE  
**Electrical Demo - Plan**

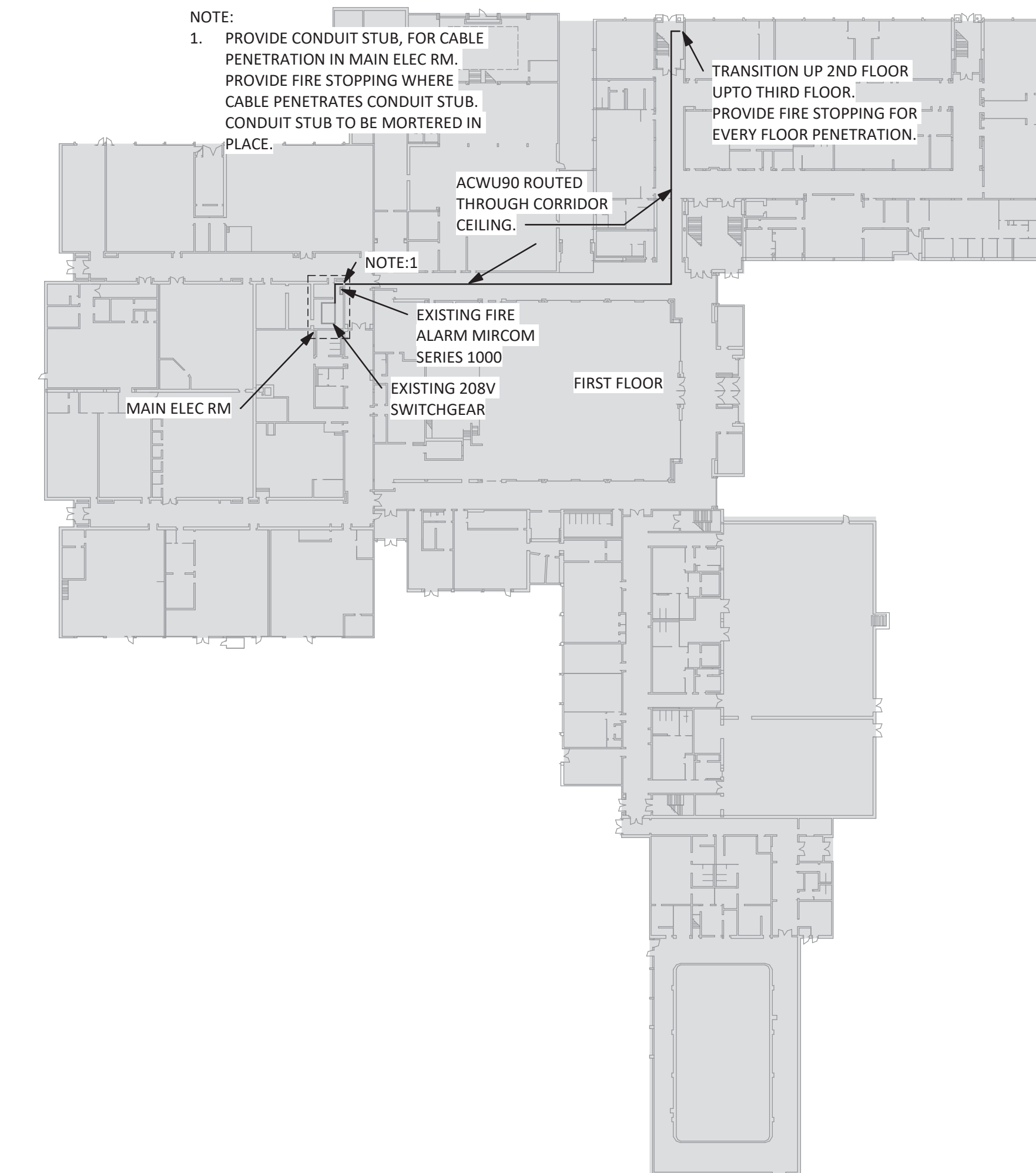
SCALE As indicated	DRAWING NUMBER <b>E2</b>
SHEET SIZE 24"x36"	DESIGNER SSA
PROJECT NUMBER 25153	



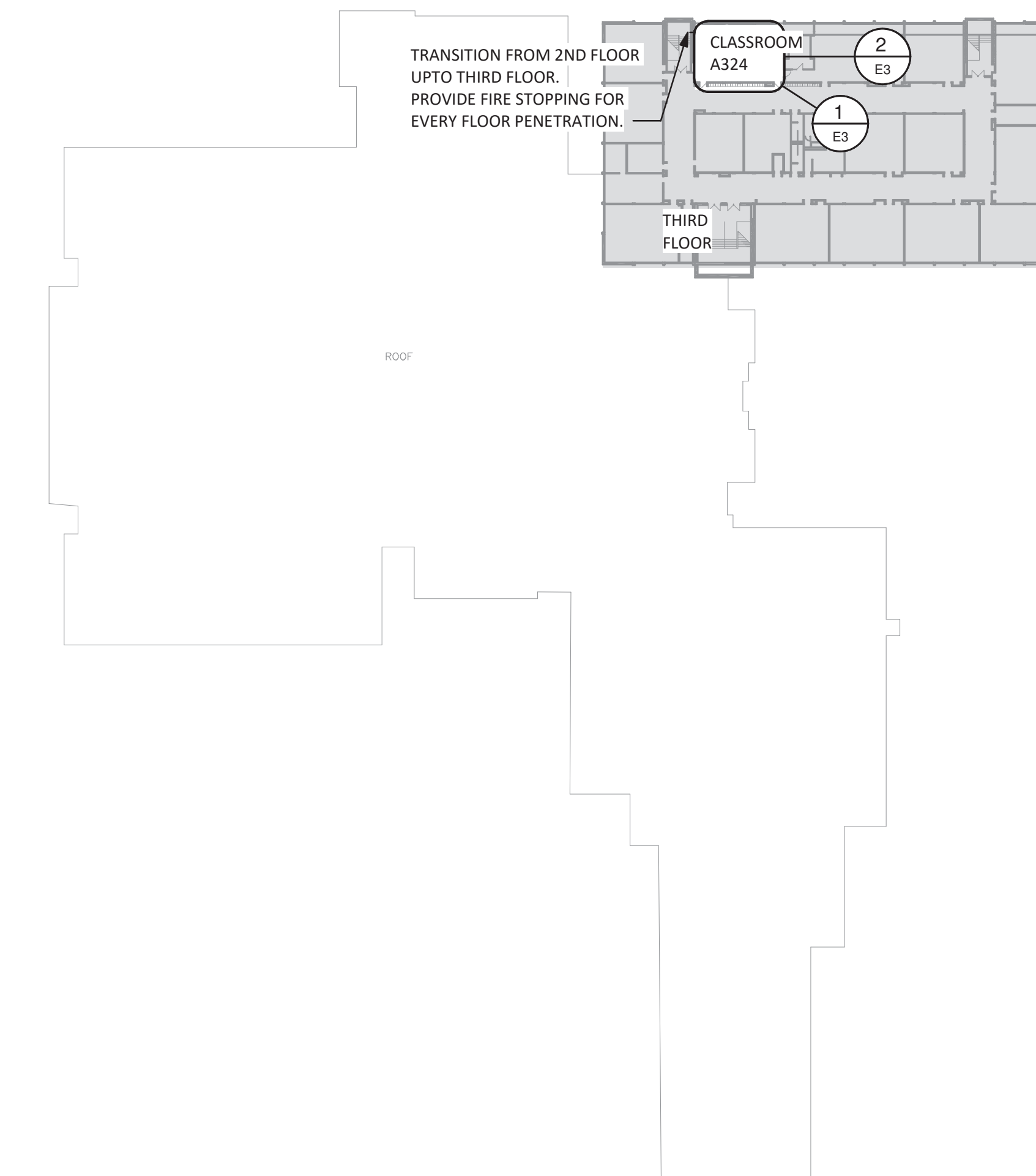
2 Proposed - Power & Data Plan Classroom A324  
1 : 50



1 Proposed - Lighting & Life-Safety  
1 : 50



4 KEYMAP - First Floor  
1 : 500



3 KEYMAP - 3rd Floor

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DRAWINGS ARE NOT TO BE SCALED.



NO.	DESCRIPTION	DATE
3	Issued For Tender	May 07, 2026
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1	Issued For Review	Apr 15, 2026

NO.	DESCRIPTION	DATE
REVISION SCHEDULE		



1920 YONGE ST, SUITE 200  
TORONTO, ON, M4S 3E2

PROJECT NAME  
**HDSB - White Oaks Family Studies Classroom**  
1330 Montclair Drive, Oakville, ON

DRAWING TITLE  
**Electrical Proposed - Plan**

SCALE	DRAWING NUMBER
As indicated	<b>E3</b>
SHEET SIZE 24"x36"	DESIGNER SSA
PROJECT NUMBER 25153	

1 - Total Removed - Low Voltage Device Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: None		
QTY	Type	Conduit	Description	Phase Added	Phase Removed	
2	S.21mm	21mm EMT	Surface Mount Device Box & Conduit to accessible ceiling; Conduit Bushing	EXISTING	Tender	
Total: 2						

3 - Total Removed - Electrical Device Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: None		
Qty	Type ID	Description	Type Comments	Phase Added	Phase Removed	
1	14-30R	Dryer Receptacle	208/240V 2 Pole 3 Wire; 14-30R Receptacle; Mounted @ ~900mm to Center	EXISTING	Tender	
3	14-50R	Range Receptacle	208/240V 2 pole 3 wire; 14-50R Receptacle; Mounted 120mm to Center; Horizontally centered in range space; U-Ground Slot oriented to either side; OESC:26-744	EXISTING	Tender	
1	DW	Direct Hardwire Connection	Dishwasher; 120V 15A	EXISTING	Tender	
8	R1	15A Duplex Receptacle; 1-Gang Box	120V 5-15R; 1-Gang Box	EXISTING	Tender	
1	R1.C	15A Duplex Receptacle	120V 5-15R; Mounted at Counter Height, 4" Above Backsplash.	EXISTING	Tender	
2	R1.S	15A Duplex Receptacle	120V 5-15R; Surface mount device box.	EXISTING	Tender	
5	R1G.C	15A Duplex Receptacle	120V 5-15R; Class A - GFI Receptacle; Mounted at Counter Height, 4" Above Backsplash.	EXISTING	Tender	
Total: 21						

5 - Total Removed - Lighting Control Device Schedule							
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: None			
Qty	Type	Mfg.	Model	Description	Type Comments	Phase Added	Phase Removed
1	S.1	TBD	TBD	Switch, 1-Pole Architectural Decora Style	120V	EXISTING	Tender
4	S.3	TBD	TBD	Switch, 3-Way Architectural Decora Style	120V	EXISTING	Tender
Total: 5							

6 - Total Removed - Lighting Fixture Schedule										
CURRENT SCHEDULE PHASE: Tender					SHOWING PHASE ITEMS: None					
Qty	Image	Type	Mfg.	Model#	Mounting	Height	Description	Remarks	Phase Added	Phase Removed
27		X.L1	TBD	TBD			TBD	TBD	EXISTING	Tender
1		X.L2	TBD	TBD			TBD	TBD	EXISTING	Tender
Total: 28										

### PANEL: PP-X

Location: Classroom A324  
 Supply From:  
 Mounting: Recessed  
 Enclosure: Type 1

Volts: 208/120 WYE  
 Phases: 3  
 Wires: 4

A.I.C. Rating:  
 Mains Type: MLO  
 Mains Rating: 100 A  
 MCB Rating:

#### Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
X-1	BF Workstation - Cooktop	40 A	2				2	40 A	BF Workstation - Wall Oven	X-2
X-3	East Wall - Fridge	15 A	1				1	20 A	South Workstation 3 - Rec 2	X-6
X-5	East Wall - Counter Rec 1	20 A	1				1	20 A	South Workstation 2 - Rec 2	X-8
X-7	East Wall - Counter Rec 2	20 A	1				1	20 A	South Wall - Counter Rec 1	X-10
X-9	CP1 - Control Panel	15 A	1				1	20 A	South Wall - Counter Rec 2	X-12
X-11	North Wall - Dishwasher 1	15 A	1				1	20 A	South Wall - Counter Rec 3	X-14
X-13	North Wall - Kitchen Counter Rec 1	20 A	1				1	20 A	South Wall - Counter Rec 4	X-16
X-15	North Wall - Kitchen Counter Rec 3	20 A	1				1	15 A	South Wall - Dishwasher 1	X-18
X-17	North Wall - Kitchen Counter Rec 2	20 A	1				1	20 A		X-20
X-19	North Wall - Kitchen Counter Rec 4	20 A	1				1	20 A		X-22
X-21	North Wall - Rec 1	20 A	1				1	20 A		X-24
X-23	North BF Workstation - Rec 1	20 A	1				1	20 A		X-26
X-25	North BF Workstation - Rec 2	20 A	1				1	20 A		X-28
X-27	North Workstation 1 - Rec	20 A	1				1	20 A		X-30
X-29	North Workstation 1 - Microwave	15 A	1				1	20 A		X-32
X-31	MUA1 - Rooftop	15 A	3				1	20 A	Rooftop Rec	X-34
X-33							3	15 A	KEF1 & KEF2 - Rooftop	X-36
X-35							3	15 A		X-38
X-37										X-40
X-39										X-42
X-41										

#### Notes:

Existing Westinghouse NPLB Panel.

### PANEL: PP-3

Location: Classroom A324  
 Supply From:  
 Mounting: Recessed  
 Enclosure: Type 1

Volts: 208/120 WYE  
 Phases: 3  
 Wires: 4

A.I.C. Rating:  
 Mains Type: C.B.  
 Mains Rating: 100 A  
 MCB Rating:

#### Notes:

Existing Westinghouse NPLB Panel.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
3-1	South Wall - Fridge 1	15 A	1				1	15 A	Teaching Wall 1	3-2
3-3	South Wall - Dishwasher 2	15 A	1				1	15 A	Projector	3-4
3-5	Spare	15 A	1				1	15 A	Recept. - West Counter	3-6
3-7	Recept - North Counter	15 A	1				1	15 A	East Wall - Washer	3-8
3-9	Recept - North Counter	15 A	1				2	40 A	South Workstation 3 - Stove	3-10
3-11	South Workstation 2 - Stove	40 A	2				1	15 A	Teaching Wall 1	3-12
3-13	Floor Outlets - Rm. A323	15 A	1				1	15 A	Floor Outlets - Rm. A323	3-16
3-15	Floor Outlets - Rm. A323	15 A	1				1	15 A	Floor Outlets - Rm. A323	3-18
3-17	South Workstation 3 - Microwave	15 A	1				1	15 A	South Wall - Fridge 2	3-20
3-19	South Workstation 2 - Microwave	15 A	1				2	30 A	East Wall - Dryer	3-22
3-21	North Workstation 1 - Stove	50 A	2							3-24
3-23										3-26
3-25										3-28
3-27										3-30
3-29										

#### Notes:

HATCH ITEMS ARE EXISTING.

1 - Total New/Relocated - Low Voltage Device Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: Show Previous + New		
QTY	Type	Conduit	Description	Phase Added	Phase Removed	
2	D.2400	2400 Divided Series Raceway	Refer to referenced detail for overall requirements.			Tender
2	PDO	16mm EMT	Power Door Operator; Device box & conduit to Door controller.			Tender
1	S.21mm	21mm EMT	Surface Mount Device Box & Conduit to accessible ceiling; Conduit Bushing			Tender
Total: 5						

3 - Total New/Relocated - Electrical Device Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: Show Previous + New		
Qty	Type ID	Description	Type Comments	Phase Added	Phase Removed	
1	14-30R	Dryer Receptacle	208/240V 2 Pole 3 Wire; 14-30R Receptacle; Mounted @ ~900mm to Center			Tender
5	14-50R	Range Receptacle	208/240V 2 pole 3 wire; 14-50R Receptacle; Mounted 120mm to Center; Horizontally centered in range space; U-Ground Slot oriented to either side; OESC:26-744			Tender
1	DC	Direct Hardwire Connection	Powered Door Controller; Wired to line side of local lighting circuit. Estimated ~300W non-continuous load.			Tender
3	DW	Direct Hardwire Connection	Dishwasher; 120V 15A			Tender
7	R1	15A Duplex Receptacle; 1-Gang Box	120V 5-15R; 1-Gang Box			Tender
1	R1.2400	15A Quad Receptacle	One - 15A Duplex receptacle in divided 2 gang surface wire mold box; refer to referenced detail for overall requirements.			Tender
1	R1.S	15A Duplex Receptacle	120V 5-15R; Surface mount device box.			Tender
1	R1Q.2400	Quad Receptacle	120V - Two - 15A Duplex Receptacle in Divided 2 Gang surface wire mold box; Refer to referenced detail for overall requirements.			Tender
6	R2	20A Duplex Receptacle	120V 5-20R; 1-Gang Box			Tender
10	R2G.C	20A Duplex Receptacle	120V 5-20R; Class A - GFI Receptacle; Mounted at Counter Height, 4" Above Backsplash.			Tender
1	R2G.M1	20A Duplex GFI Receptacle	120V 5-20R; Class A - GFI Receptacle; Rooftop Receptacle in weatherproof box; Provide Extra-Duty, while in use cover. Provide ballasted galvanized unistrut frame to support receptacle; Mounted not less than 750mm above finished roof as per OESC: 26-710. Located within 7.5m of equipment served.			Tender
Total: 37						

5 - Total New/Relocated - Lighting Control Device Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: Show Previous + New		
Qty	Type	Mfg.	Model	Description	Type Comments	Phase Added
2	CM.10	Sensor Switch	CM 10	PIR Ceiling Occ Sensor, 24V	24V; White; 360deg large motion;	Tender
2	D.3	Sensor Switch	SPODM SA 3X D WH	SwitchPod, Manual On, 3-Way, 0-10V Dimming, 24V, Push Button		Tender
1	MS.1	Sensor Switch	WSX D WH	PIR 0-10V Dimming Wall Switch Occ Sensor, Auto On	120V; Dimming; White	Tender
1	PP.20	Sensor Switch	PP20	Class 1 120V, to Class 2 15V Power / Relay Pack	Plenum Rated; Power up to 14 sensors	Tender
Total: 6						

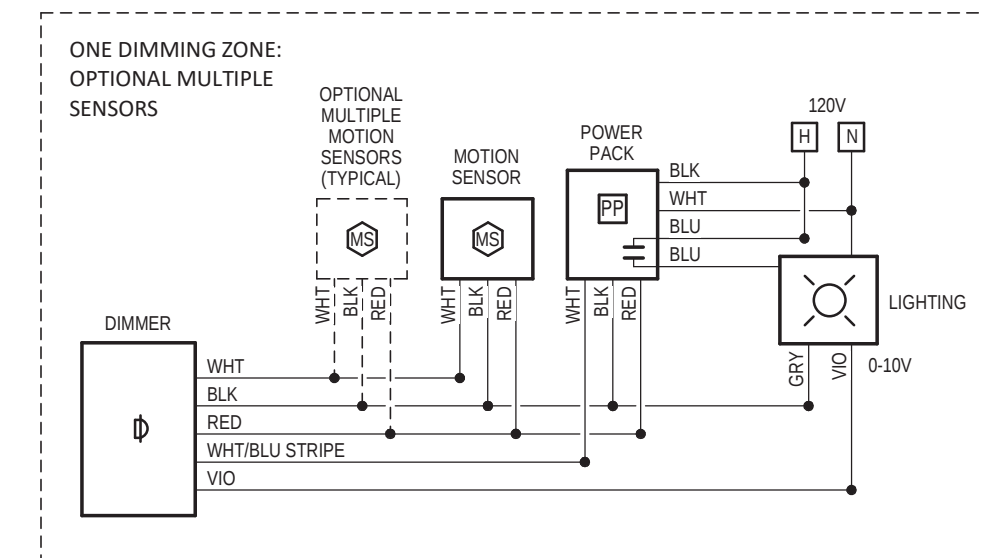
6 - Total New/Relocated - Lighting Fixture Schedule										
CURRENT SCHEDULE PHASE: Tender					SHOWING PHASE ITEMS: Show Previous + New					
Qty	Image	Type	Mfg.	Model#	Mounting	Height	Description	Remarks	Phase Added	Phase Removed
1		C.14	Lithonia	CPANL 1X4 AL01 SWW7 M4	Recessed		LED 1x4 Flat Panel	120V, 22/31/41W; 2400/3300/4400 Lumen; 80 CRI; Set fixture to 4000K and 4400 Lumen		Tender
27		C.14S	Lithonia	CPANL 1X4 AL01 SWW7 M4 c/w PAC 2DNF 36	Suspended	~3000mm	LED 1x4 Flat Panel	120V, 22/31/41W; 2400/3300/4400 Lumen; 80 CRI; Set fixture to 4000K and 2400 Lumens, c/w Panel Air Craft Kit, 2 cables with Y splitter, No Power Feed, 36 inches		Tender
Total: 28										

### 4 - Total New/Relocated - Fire Alarm Device Schedule

CURRENT SCHEDULE PHASE: Tender					SHOWING PHASE ITEMS: Show Previous + New	
QTY	Model	Description	Type Comments	Phase Added	Phase Removed	
1	12"	ANNUNCIATING	Bell - 12"; Connect to Existing Annunciating Zone		Tender	
Total: 1						

7 - Total New/Relocated - Mechanical Equipment Schedule												
CURRENT SCHEDULE PHASE: Tender					SHOWING PHASE ITEMS: Show Previous + New							
QTY	Type ID	Description	EQUIPMENT			ELECTRICAL			REMOVAL ITEMS	Phase Added		
			VOLTAGE	PHASE	HP - kW	MCA	MOC	Interlock With			Isolation Switch By	Weather Proof
1	CP1	Control Panel	120 V	1		15 A	15 A			No	Power wiring for MUA1, KEF1 & KEF2. Route through control panel. Confirm final location on site.	Tender
1	KEF1	Roof Mounted Exhaust Fan	208 V	3	1HP	4.6 A	15 A			E	C/W local disconnect switch. Provide separate power feed routed through control panel in Kitchen.	Tender
1	KEF2	Roof Mounted Exhaust Fan	208 V	3	1HP	4.6 A	15 A			E	C/W Local disconnect switch. Provide separate power feed routed through control panel in Kitchen.	Tender
1	MUA1	Roof Mounted Make Up Air Unit	208 V	3	1.5HP	6.6 A	15 A			E	C/W Local disconnect switch. Provide separate power feed routed through control panel in Kitchen.	Tender
Total: 4												

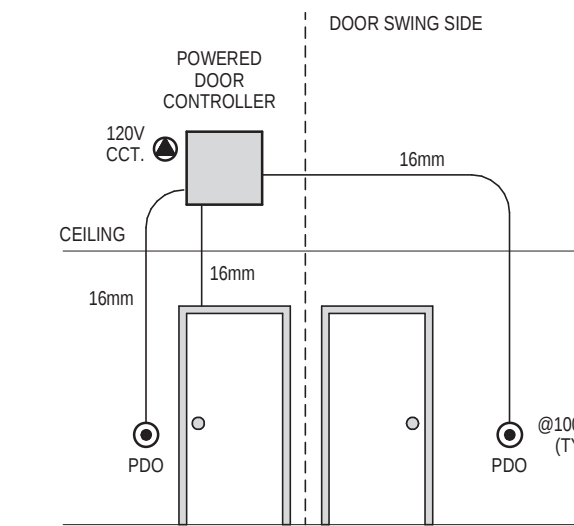
2 - Total New/Relocated - Electrical Equipment Schedule						
CURRENT SCHEDULE PHASE: Tender				SHOWING PHASE ITEMS: Show Previous + New		
Qty	Equip ID	Description	Type Comments	Enclosure	Mounting	Phase Added
1	CNT.3.20	Contactors	3 Pole 20A 120V Contacts. All electrical items under hood to shutdown on signal from fire alarm.	Type 1	Surface	Tender
1	PP-X	Commercial Electrical Panel.	208/120V 3Ø4W 200A; Bolt On Breakers	Type 1	Recessed	Tender
Total: 2						



WIRING DIAGRAM FOR 1 DIMMABLE MOTION CONTROLLED LIGHTING ZONE

ONE DIMMING ZONE, WITH ONE OR MORE MOTION SENSORS FOR COVERAGE. DIMMER TYPE AS PER SCHEDULE DETERMINES AUTO-ON OR MANUAL-ON

## 1 SensorSwitch-Motion Controlled Dimming - Single Zone



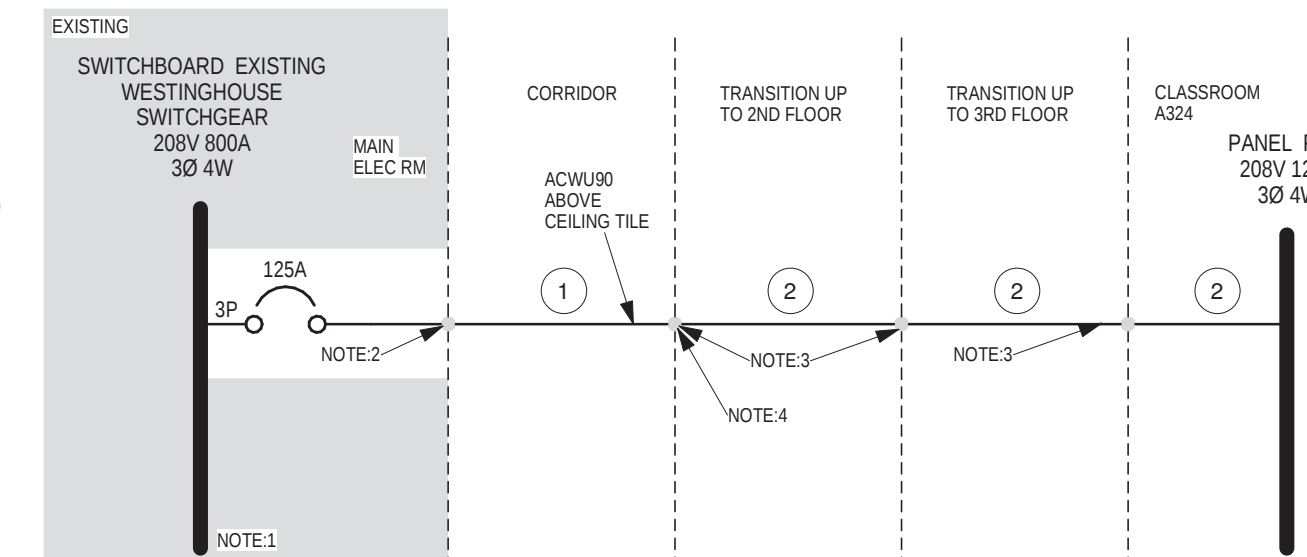
PROVIDE BACKING BOX & 16mm EMT FROM EACH DEVICE TO POWER DOOR CONTROLLER. COORDINATE WITH CONTROLLER PROVIDER.

- 16mm EMT TO DOOR HEADER, PULL STRING TO ELECTRIC STRIKE.
- PDO BUTTON OUTSIDE DOOR SWING AS SHOWN ON PLAN.
- PDO BUTTON ON DOOR SWING SIDE, BETWEEN 600mm & 1500mm FROM DOOR SWING
- PULL STRING IN ALL CONDUITS
- MOTION SENSOR MOUNTED AT 1050mm TO CENTRE

## 2 Conduit Detail - PDO

### WIRE SCHEDULE

- 4#930 AWG ACWU90 AL
- 3#330 AWG RW90 AL (PHASE)
- 1#330 AWG RW90 AL (NEUTRAL)
- 1#44 AWG RW90 AL (BOND)
- 1" IN 53mm EMT C.



#### NOTES:

- MAIN SWITCHGEAR MANUFACTURER ASSUMED TO BE WESTINGHOUSE. NAMEPLATE COULD NOT BE IDENTIFIED ON SITE. PROVIDE NEW 3P-125A CIRCUIT BREAKER (BRAND, KAIC, & BREAKER TYPE TO BE CONFIRMED ON SITE TO COMPATIBLE WITH EXISTING SWITCHGEAR.)
- PROVIDE CONDUIT STUB, FOR CABLE PENETRATION INTO ELECTRICAL ROOM. PROVIDE FIRE STOPPING WHERE CABLE PENETRATES CONDUIT STUB. CONDUIT STUB TO BE MORTERED IN PLACE.
- PROVIDE FIRE STOPPING WHERE CABLE PENETRATES.
- TRANSITION FROM ACWU90 TO EMT.

## 4 Single Line Diagram

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DRAWINGS ARE NOT TO BE SCALED.



NO.	DESCRIPTION	DATE
3	Issued For Tender	May 07, 2026
2	Issued for Permit	Apr 17, 2026
1	Issued For Review	Apr 15, 2026

## ROOT3 Engineering

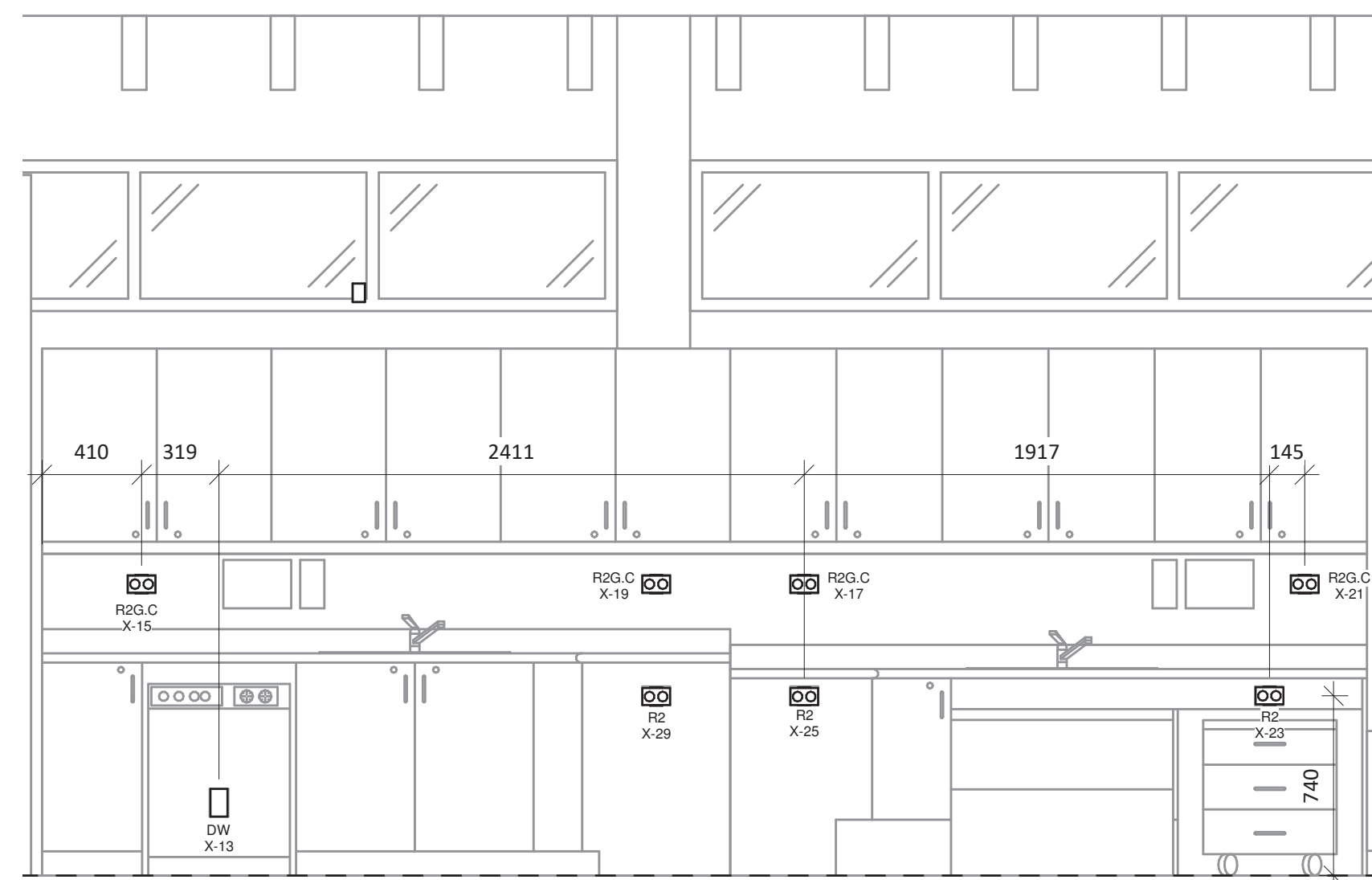
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 TORONTO, ON, M4S 3E2

PROJECT NAME  
**HDSB - White Oaks Family Studies Classroom**  
 1330 Monclair Drive, Oakville, ON

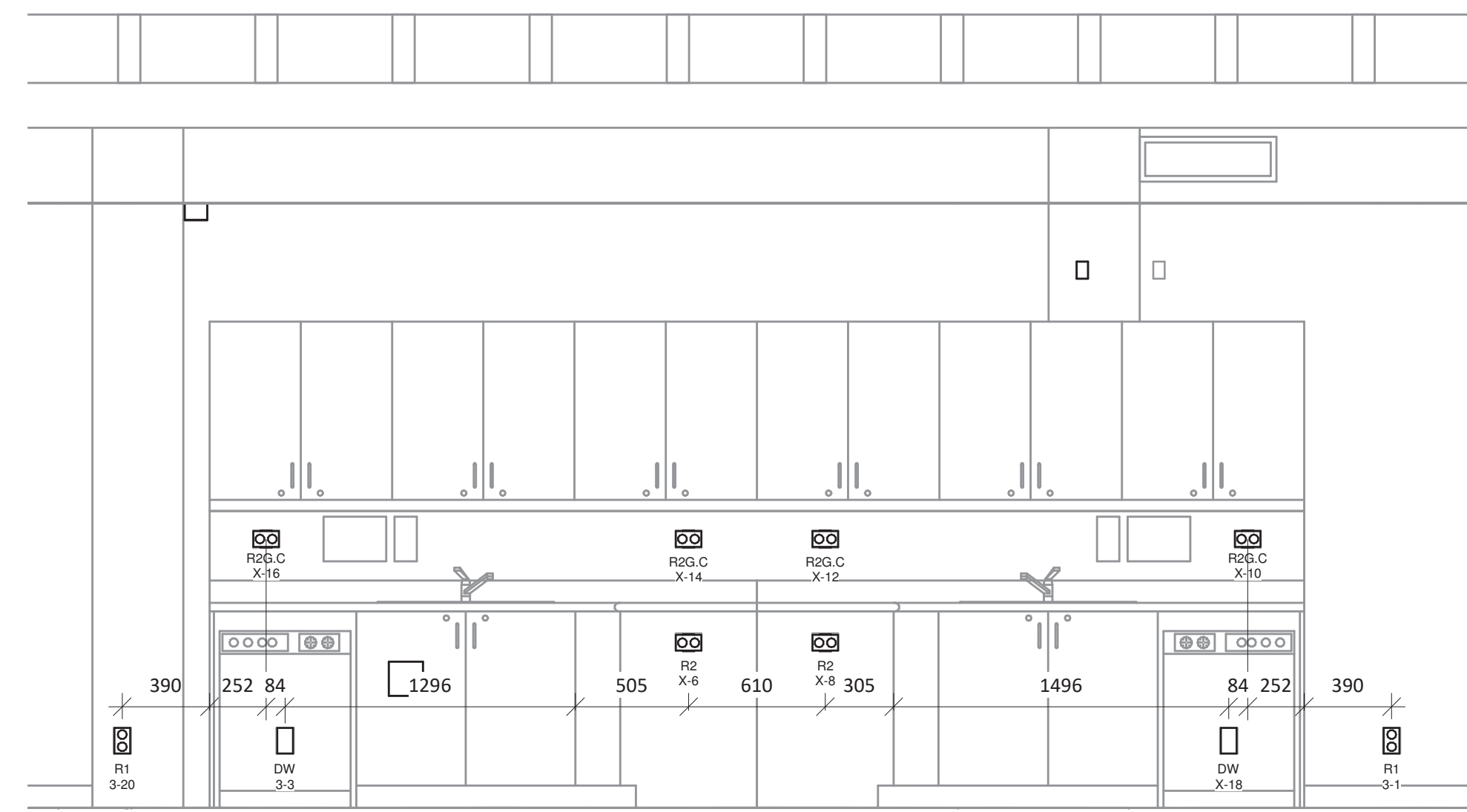
## Electrical Details & Schedules

SCALE 1 : 1	DRAWING NUMBER <b>E4</b>
SHEET SIZE 24"x36"	DESIGNER SSA
PROJECT NUMBER 25153	

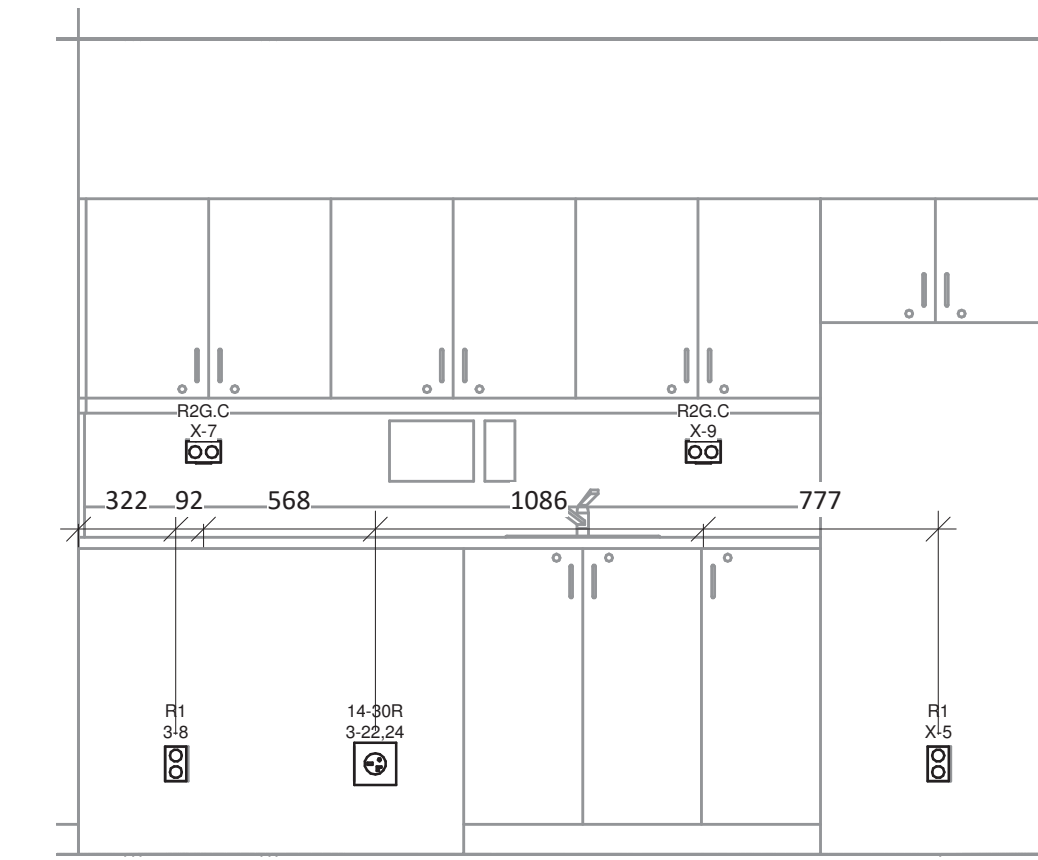
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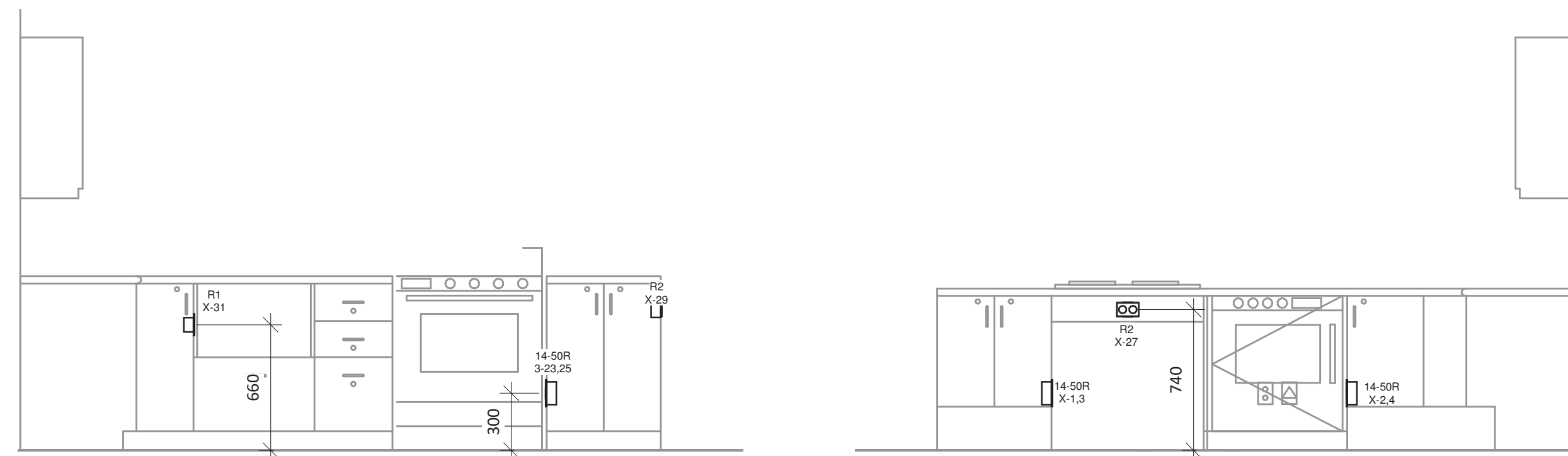
1 North Wall  
1 : 25



2 South Wall  
1 : 25

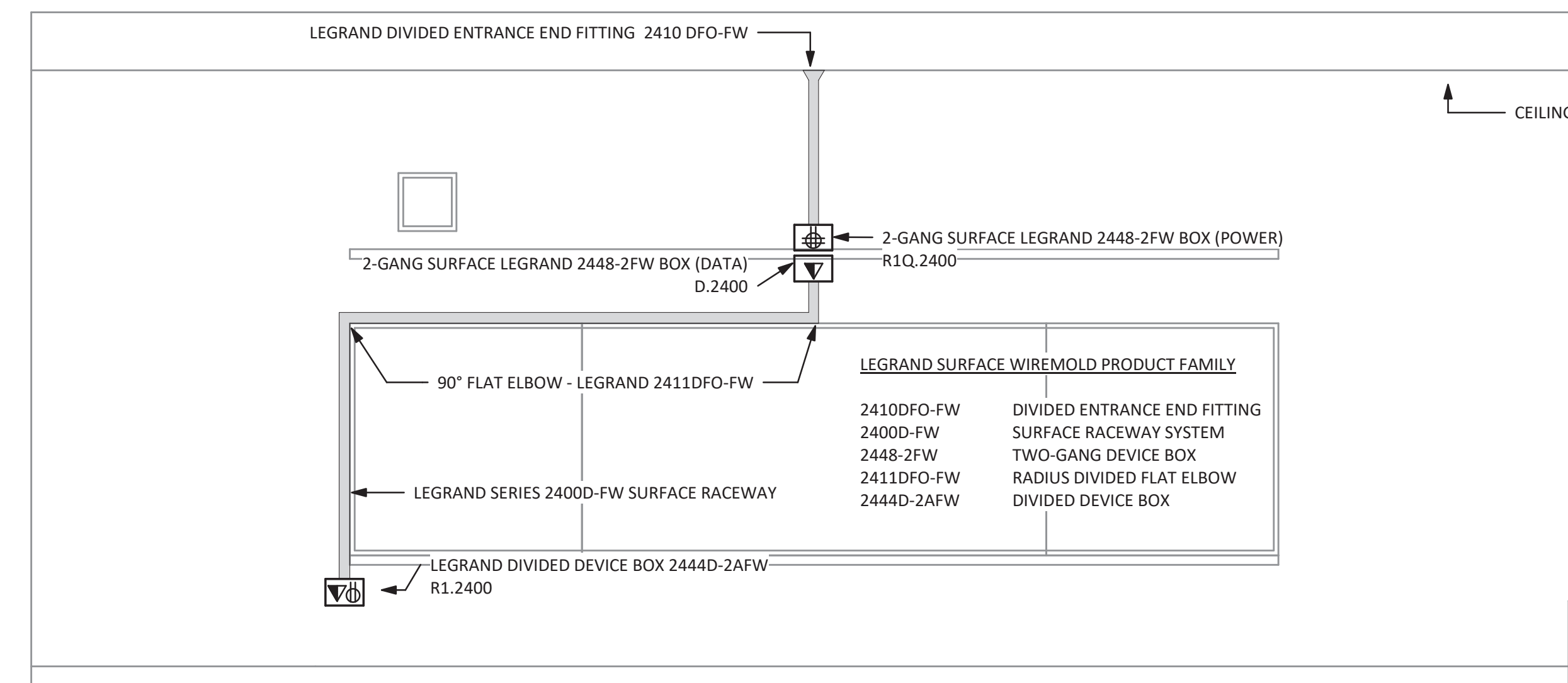


3 East Wall  
1 : 25



4 TYP Workstation  
1 : 25

5 BF Workstation  
1 : 25



6 Typical Teaching Wall



NO.	DESCRIPTION	DATE
3	Issued For Tender	May 07, 2026
2	Issued for Permit	Apr 17, 2026
1	Issued For Review	Apr 15, 2026



**HDSB - White Oaks Family Studies Classroom**  
 1330 Montclair Drive, Oakville, ON

**Electrical Details & Elevations**

SCALE 1 : 25	DRAWING NUMBER <b>E5</b>
SHEET SIZE 24"x36"	DESIGNER SSA
PROJECT NUMBER 25153	