



# OCOOF Warren Daycare

INTERIOR IMPROVEMENTS

38 RUTLAND AVENUE

TMW 2026-09  
2603

JUNE 5, 2026

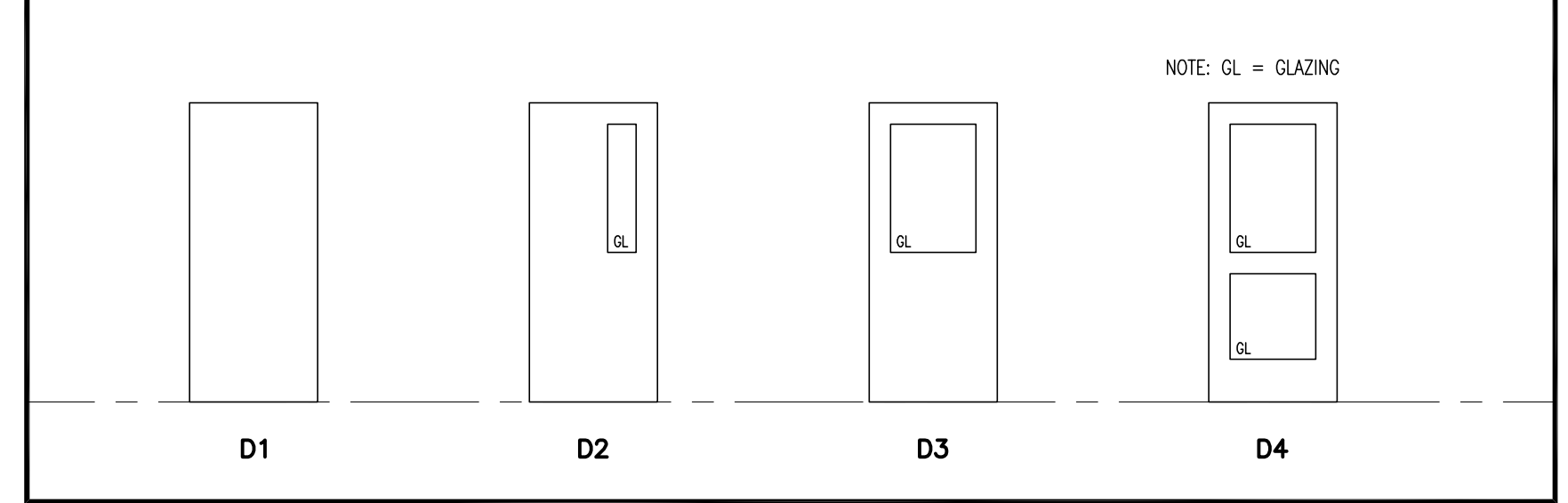
ISSUED FOR TENDER JUNE 24, 2026

**ROOM FINISH SCHEDULE**

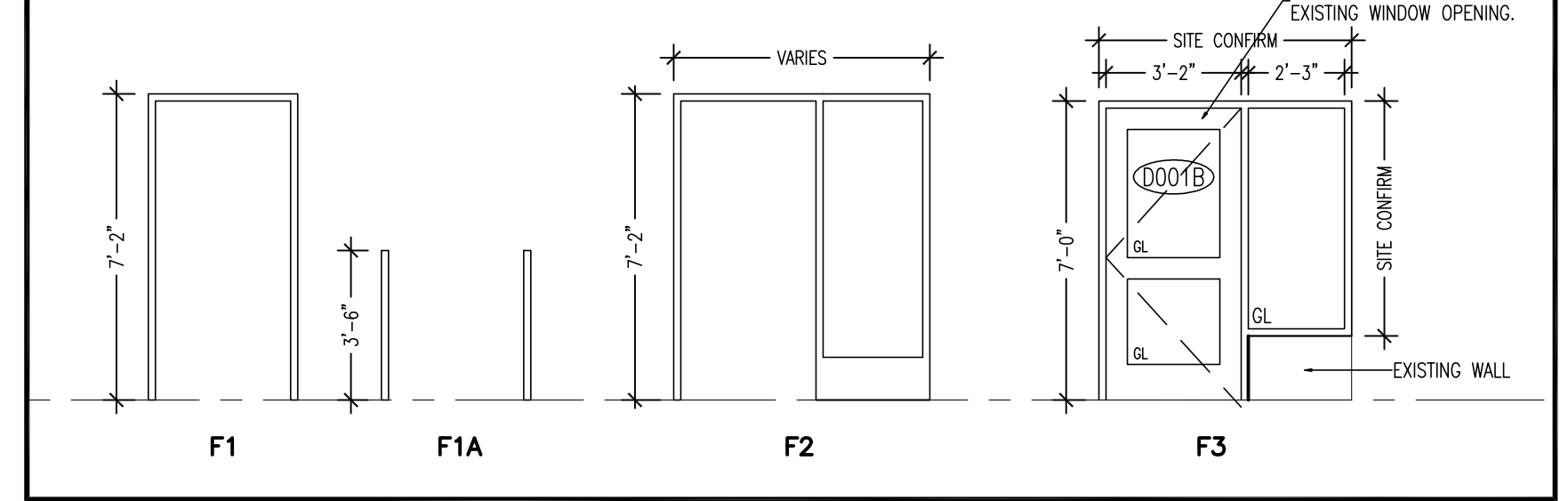
NO.	ROOM	FLOOR		BASE		WALLS								CEILING			REMARKS
		MAT.	FIN.	MAT.	FIN.	NORTH		EAST		SOUTH		WEST		MAT.	FIN.	HT.	
						MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.				
100	STAIR	PLY	SH	G.BD	RB	EX	RPT	-	-	EX	RPT	EX	RPT	G.BD	PT	8'-0"	NEW VINYL STAIR TREADS/RISERS.
100A	ENTRY	PLY	SH	G.BD	RB	G.BD	PT	G.BD	PT	G.BD	PT	G.BD	PT	G.BD	PT	8'-0"	
101	TODDLER	PLY	SH	G.BD	SH/C/B	EX/G.BD	RPT/PT	EX/G.BD	RPT/PT	EX	RPT	EX	RPT	G.BD	PT	8'-0"/7'-6"/7'-2"	
101A	SHARED WR	PLY	SH	G.BD	SH/C/B	G.BD	PT	EX	RPT	G.BD	PT	G.BD	PT	G.BD	PT	7'-2"	WALL PROTECTION ON ALL WALLS.
102	PRESCHOOL	PLY	SH	G.BD	SH/C/B	EX	RPT	EX	RPT	G.BD	PT	EX/G.BD	RPT/PT	G.BD	PT	8'-0"/7'-6"/7'-2"	
103	SERVERY	PLY	SH	G.BD	SH/C/B	G.BD	PT	G.BD	PT	G.BD	PT	EX	RPT	G.BD	PT	8'-0"	
000	STAIR	CONC	SH	G.BD	SH/C/B	EX	RPT	EX	RPT	EX	RPT	EX	RPT	EX	RPT	EX	45 MINUTE CEILING RATING (F1). NEW VINYL STAIR TREADS/RISERS.
001	INFANT	CONC	SH	G.BD	SH/C/B	EX/G.BD	RPT/PT	G.BD	PT	EX	RPT	EX	RPT	G.BD	PT	8'-5"/7'-2"	45 MINUTE CEILING RATING (F1).
001A	SLEEP	CONC	SH	G.BD	SH/C/B	G.BD	PT	EX	RPT	G.BD	PT	G.BD	PT	ACT	-	7'-8"	45 MINUTE CEILING RATING (F1).
002	STAFF	CONC	SH	G.BD	SH/C/B	EX	RPT	EX	RPT	EX	RPT	EX	RPT	ACT	-	7'-8"	45 MINUTE CEILING RATING (F1).
003	OFFICE	CONC	SH	G.BD	SH/C/B	EX	RPT	EX	RPT	EX	RPT	EX	RPT	ACT	-	7'-8"	45 MINUTE CEILING RATING (F1).
004	STAFF WR	CONC	SH	G.BD	SH/C/B	G.BD	PT	EX	RPT	G.BD	PT	G.BD	PT	ACT	-	7'-2"	45 MINUTE CEILING RATING (F1).
005	MECH/ELEC.	CONC	SH	G.BD	SH/C/B	EX	RPT	EX	RPT	EX	RPT	EX	RPT	G.BD	PT	8'-5"	45 MINUTE CEILING RATING (F1).

GENERAL NOTES:  
REPAINT EXISTING WALLS INCLUDING DOORS/FRAMES/EXPOSED SURFACES LOCATED WITHIN THE SCOPE OF WORK.

**DOOR TYPES**



**FRAME TYPES**



**ABBREVIATIONS**

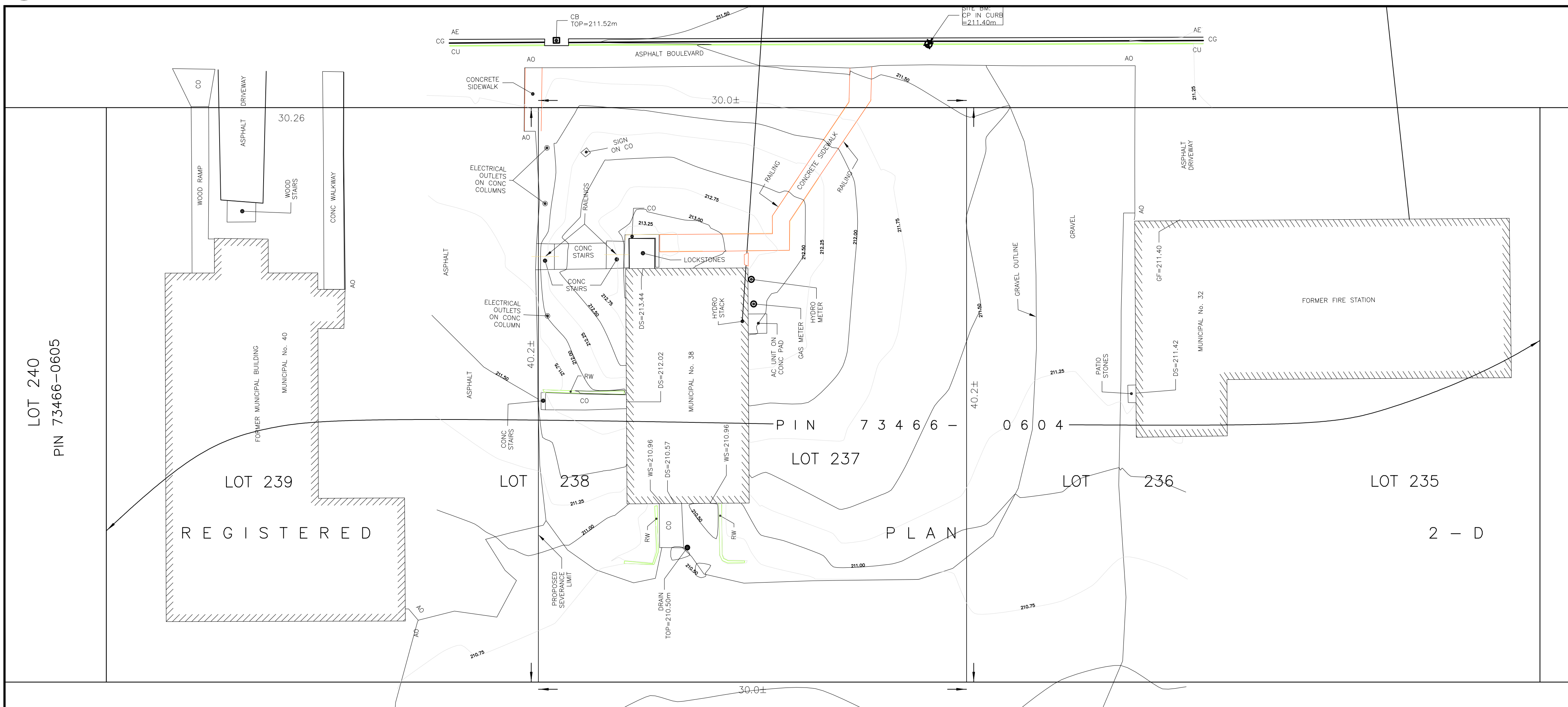
- ACT ACOUSTIC TILE ON T-BAR
- ALUM ALUMINUM
- CONC CONCRETE SLAB
- G.BD GYPSUM BOARD
- H.MET HOLLOW METAL
- PT PAINT FINISH
- RPT REPAINT
- SH RESILIENT SHEET FLOORING
- SH/C/B RESILIENT SHEET COVERED BASE
- F.F. FACTORY FINISH
- RB RUBBER BASE
- PLY PLYWOOD SHEATHING
- WD SOLID WOOD CORE
- EX EXISTING

**DOOR SCHEDULE**

NO.	TYPE	DOOR						FRAME		RATING	REMARKS
		WIDTH	HEIGHT	MATERIAL	THICK	FINISH	MATERIAL	FINISH			
EX1	EX	EX	EX	EX	EX	EX	EX	RPT	EX	-	
D101C	D4	3'-2"	7'-0"	ALUM	1 3/4"	PT	ALUM	-	F2	-	POWER DOOR OPERATOR.
D101	D4	3'-2"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F2	-	
D101A	D1	3'-2"	3'-6"	WD	1 3/4"	F.F.	H.MET	PT	F1A	-	
D102	D4	3'-2"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F1	-	
D102A	D1	3'-2"	3'-6"	WD	1 3/4"	F.F.	H.MET	PT	F1A	-	
D102B	D4	3'-2"	7'-0"	H.MET	1 3/4"	PT	H.MET	PT	F1	-	
D103	D2	3'-0"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F1	-	
EX3	EX	EX	EX	EX	EX	EX	EX	EX	EX	-	POWER DOOR OPERATOR.
D000	D3	3'-0"	7'-0"	H.MET	1 3/4"	PT	EX	RPT	EX	45 MIN.	
D001	D4	3'-2"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F1	-	
D001A	D4	3'-2"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F2	-	
D001B	D4	3'-2"	7'-0"	H.MET	1 3/4"	F.F.	H.MET	PT	F3	-	
D002	D4	3'-0"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F2	-	
D003	D4	3'-0"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F2	-	
D004	D1	3'-2"	7'-0"	WD	1 3/4"	F.F.	H.MET	PT	F1	-	
D005	D1	3'-0"	7'-0"	H.MET	1 3/4"	PT	H.MET	PT	F1	45 MIN.	

**1 SCHEDULES**

A001 1/16"=1'-0"



**1 EXISTING SITE PLAN**

A001 1/16"=1'-0"

**ONTARIO BUILDING CODE MATRIX**

PROJECT NAME:	OCOF WARREN DAYCARE INTERIOR RENOVATION
PROJECT NUMBER:	2603
REVIEWED BY:	EG
DATE:	JUNE 5 2026
APPROVED BY:	CP

This checklist is intended to assist architects in a review of code requirements to be considered in the preparation and review of documents to support a permit application. A simple review of the checklist is not a substitute for a thorough review of the OBC. Modify the checklist to note applicable code requirements for the project.

ITEM	DESCRIPTION	OBC REFERENCE																																																							
1	Project Description: <input type="checkbox"/> New <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Change of Use																																																								
2	Major Occupancy(s): GROUP A DIVISION 2 ASSEMBLY	3.1.2.1(1)																																																							
3	Building Area (m <sup>2</sup> ): Existing 140m <sup>2</sup> New 0m <sup>2</sup> Total 140m <sup>2</sup>	1.4.1.2																																																							
4	Gross Area (m <sup>2</sup> ): Existing 140m <sup>2</sup> New 0m <sup>2</sup> Total 140m <sup>2</sup>	1.4.1.2																																																							
5	Number of Storeys: Above Grade: 1 Below Grade: 1	3.2.1.1 & 1.4.1.2																																																							
6	Height of Building(m): 1 Storey	1.4.1.2																																																							
7	Number of Streets/Access Routes: 3	3.2.2.10																																																							
8	Building Classification: Group A, Division 2, One Storey	3.2.2.28																																																							
9	Sprinkler System Proposed: <input type="checkbox"/> Entire Building <input type="checkbox"/> Basement Only <input type="checkbox"/> In lieu of roof rating <input checked="" type="checkbox"/> Not required	3.2.2.26 3.2.1.5 3.2.2.17																																																							
10	Standpipe Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.9.1.c																																																							
11	Fire Alarm Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.4																																																							
12	Water Service/Supply is Adequate: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																								
13	High Building: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6																																																							
14	Permitted Construction: <input type="checkbox"/> Combustible <input type="checkbox"/> Non-combustible <input checked="" type="checkbox"/> Both	3.2.2.26																																																							
15	Mezzanine(s) Area (m <sup>2</sup> ): N/A	3.2.1.1(3)-(8)																																																							
16	Occupancy Load Based: 50 <input checked="" type="checkbox"/> Design of Building <input type="checkbox"/>	3.1.17																																																							
17	Barrier-Free Design: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.8																																																							
18	Hazardous Substances: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2(1)																																																							
19	Required Fire Resistance Rating (FRR)	3.2.1.4																																																							
<table border="1"> <tr> <th>Horizontal Assemblies (FRR) Hours</th> <th>Floors:</th> <th>Roof:</th> <th>Mezzanine:</th> <th>Supporting Members (FRR) Hours</th> <th>Floors:</th> <th>Roof:</th> <th>Mezzanine:</th> </tr> <tr> <td>COMBUSTIBLE</td> <td>COMBUSTIBLE</td> <td>COMBUSTIBLE</td> <td>n/a</td> <td>COMBUSTIBLE</td> <td>COMBUSTIBLE</td> <td>COMBUSTIBLE</td> <td>n/a</td> </tr> <tr> <td>45 MINUTES</td> <td>0 MINUTES</td> <td>0 MINUTES</td> <td>n/a</td> <td>45 MINUTES</td> <td>0 MINUTES</td> <td>0 MINUTES</td> <td>n/a</td> </tr> </table>		Horizontal Assemblies (FRR) Hours	Floors:	Roof:	Mezzanine:	Supporting Members (FRR) Hours	Floors:	Roof:	Mezzanine:	COMBUSTIBLE	COMBUSTIBLE	COMBUSTIBLE	n/a	COMBUSTIBLE	COMBUSTIBLE	COMBUSTIBLE	n/a	45 MINUTES	0 MINUTES	0 MINUTES	n/a	45 MINUTES	0 MINUTES	0 MINUTES	n/a																																
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20	Spatial Separation - Construction of Exterior Walls:	3.2.3																																																							
<table border="1"> <thead> <tr> <th>Wall</th> <th>Area of EBF (m<sup>2</sup>)</th> <th>L.D. (m)</th> <th>L/H or H/L</th> <th>Permitted Max % of Openings</th> <th>Proposed Max % of Openings</th> <th>FRR (Hours)</th> <th>Listed Design or Description</th> <th>Comb. Constr.</th> <th>Comb. Non-Comb. Colding</th> <th>Non-Comb. Constr.</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>South</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>East</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>West</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		Wall	Area of EBF (m <sup>2</sup> )	L.D. (m)	L/H or H/L	Permitted Max % of Openings	Proposed Max % of Openings	FRR (Hours)	Listed Design or Description	Comb. Constr.	Comb. Non-Comb. Colding	Non-Comb. Constr.	North	-	-	-	-	-	-	-	-	-	-	South	-	-	-	-	-	-	-	-	-	-	East	-	-	-	-	-	-	-	-	-	-	West	-	-	-	-	-	-	-	-	-	-	
Wall	Area of EBF (m <sup>2</sup> )	L.D. (m)	L/H or H/L	Permitted Max % of Openings	Proposed Max % of Openings	FRR (Hours)	Listed Design or Description	Comb. Constr.	Comb. Non-Comb. Colding	Non-Comb. Constr.																																															
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East	-	-	-	-	-	-	-	-	-	-																																															
West	-	-	-	-	-	-	-	-	-	-																																															

DATE: JUNE 24, 2026

REVISIONS: ISSUED FOR TENDER



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OCOF WARREN DAYCARE  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
ROOM FINISH/DOOR SCHEDULES & OBC MATRIX

DATE: JUNE 5, 2026

SCALE: AS NOTED

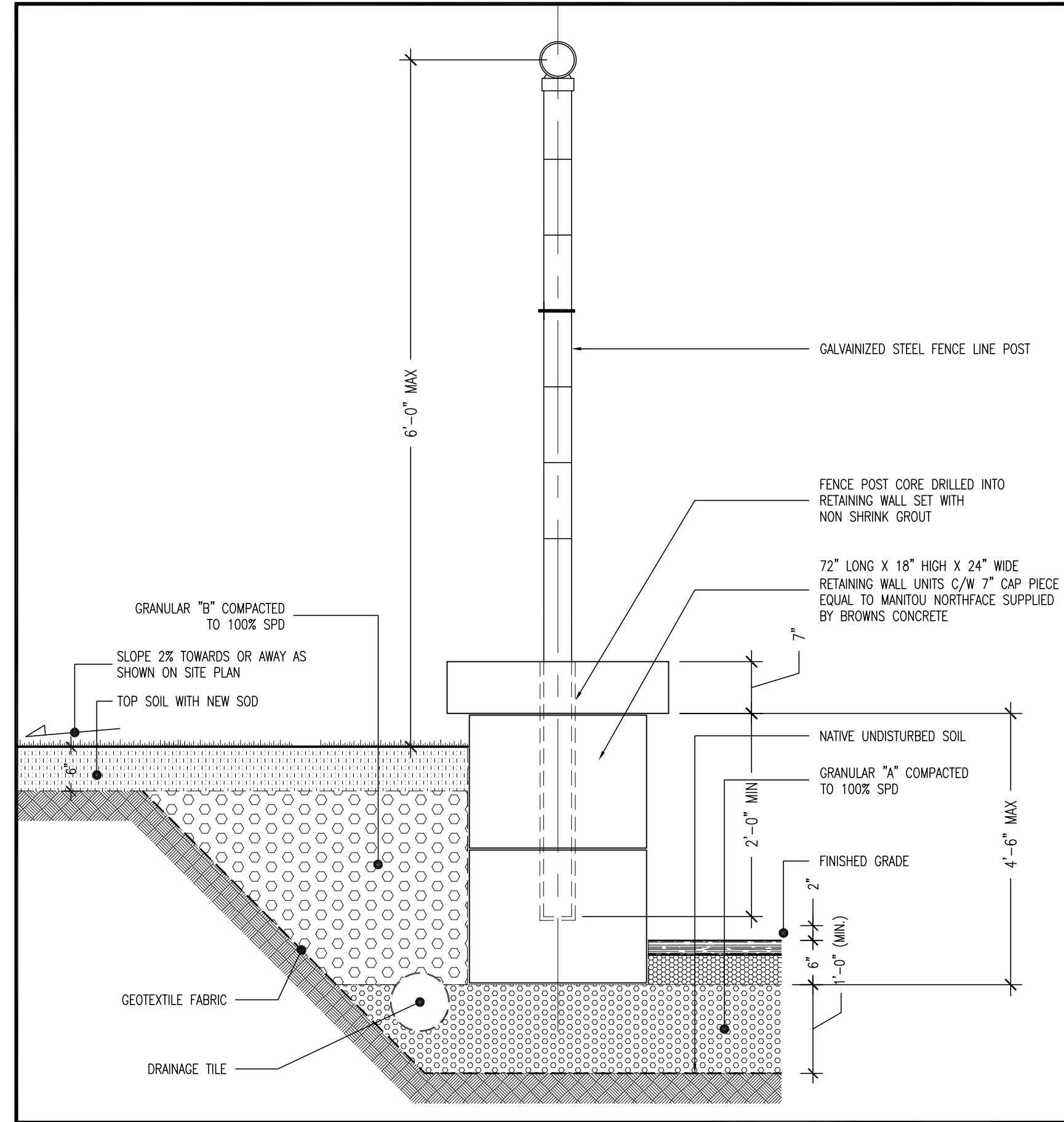
DRAWN: EG CHK: CP

JOB: 2603

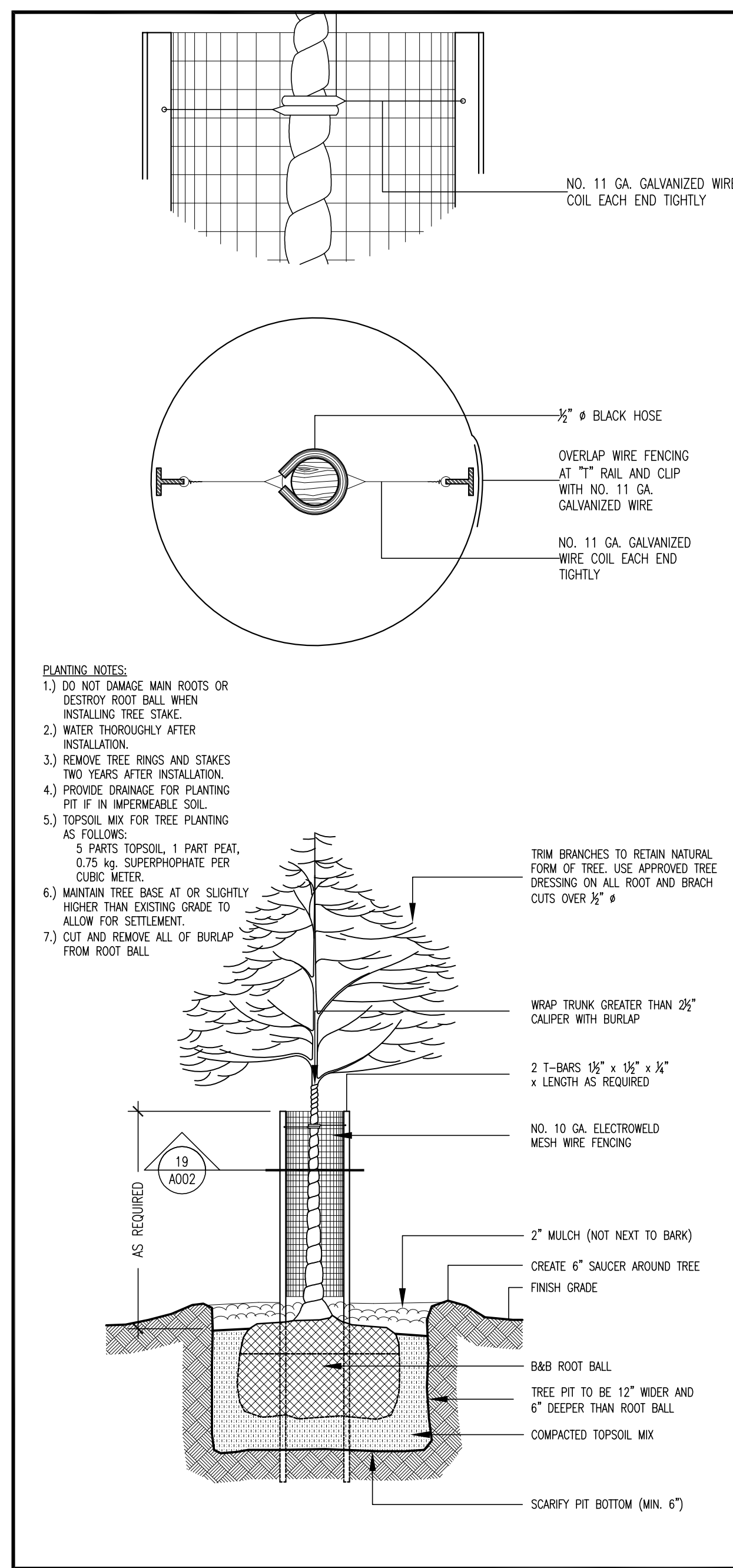
SHEET: A001

**LEGEND:**

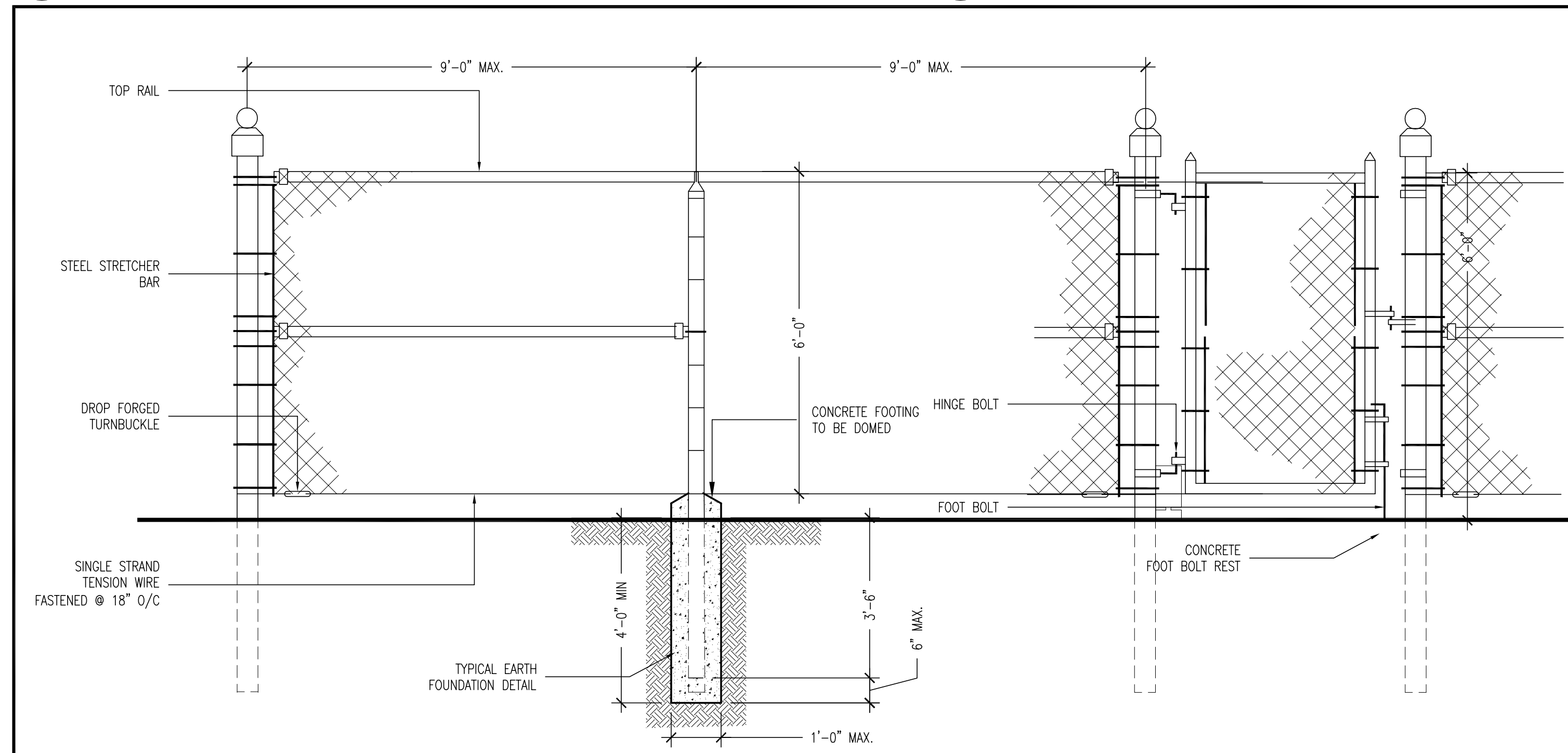
- DENOTES SURVEY MONUMENT
- SSIB DENOTES SHORT STANDARD IRON BAR
- PIN DENOTES PROPERTY IDENTIFIER NUMBER
- AN DENOTES GUY ANCHOR
- CB DENOTES CATCH BASIN
- HP DENOTES UTILITY POLE
- MH DENOTES MANHOLE
- P.SCREEN DENOTES PRIVACY SCREEN
- ↔ DENOTES BUILDING ENTRANCE
- ↔ DENOTES SECONDARY BUILDING ENTRANCE
- ↔ DENOTES EXISTING SPOT ELEVATION
- DENOTES CONCRETE CURB
- DENOTES DEPRESSION IN CONCRETE CURB
- DENOTES 15'-0" SUGAR MAPLE TREE
- ▨ DENOTES CONCRETE SLAB
- ▨ DENOTES CONCRETE PAVERS SIDEWALK
- ▨ DENOTES RIVER ROCK
- DENOTES PROPOSED BUILDING
- DENOTES SODDED AREA
- FRS — DENOTES "FIRE ROUTE NO PARKING" SIGNAGE
- DENOTES LAMP BASE /W 1 175 WATT METAL HALIDE
- DENOTES SURFACE MOUNT WALL LAMP /W 1 100 WATT METAL HALIDE



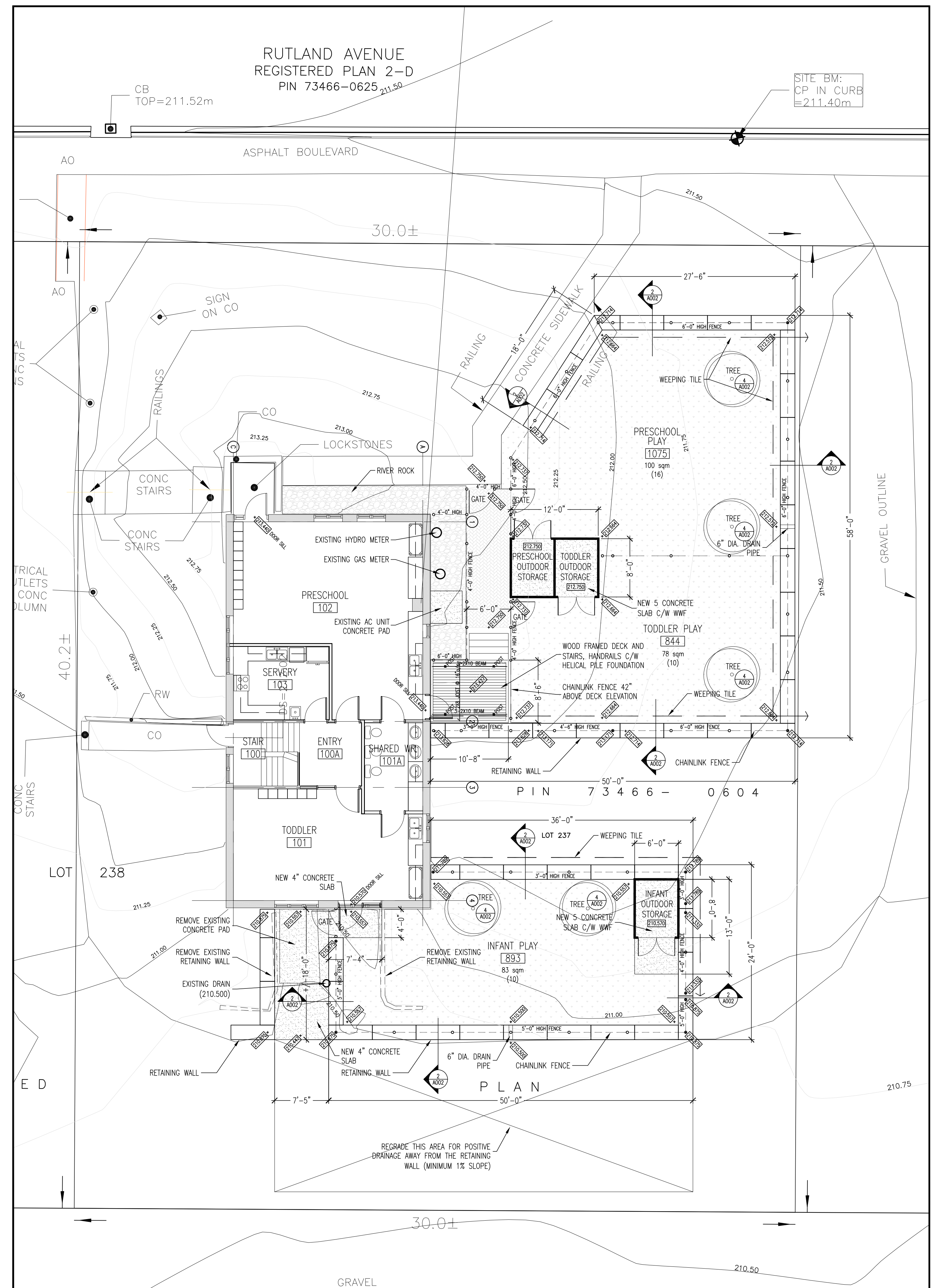
**2** TYPICAL RETAINING WALL FENCE DETAIL  
A002 3/4"=1'-0"

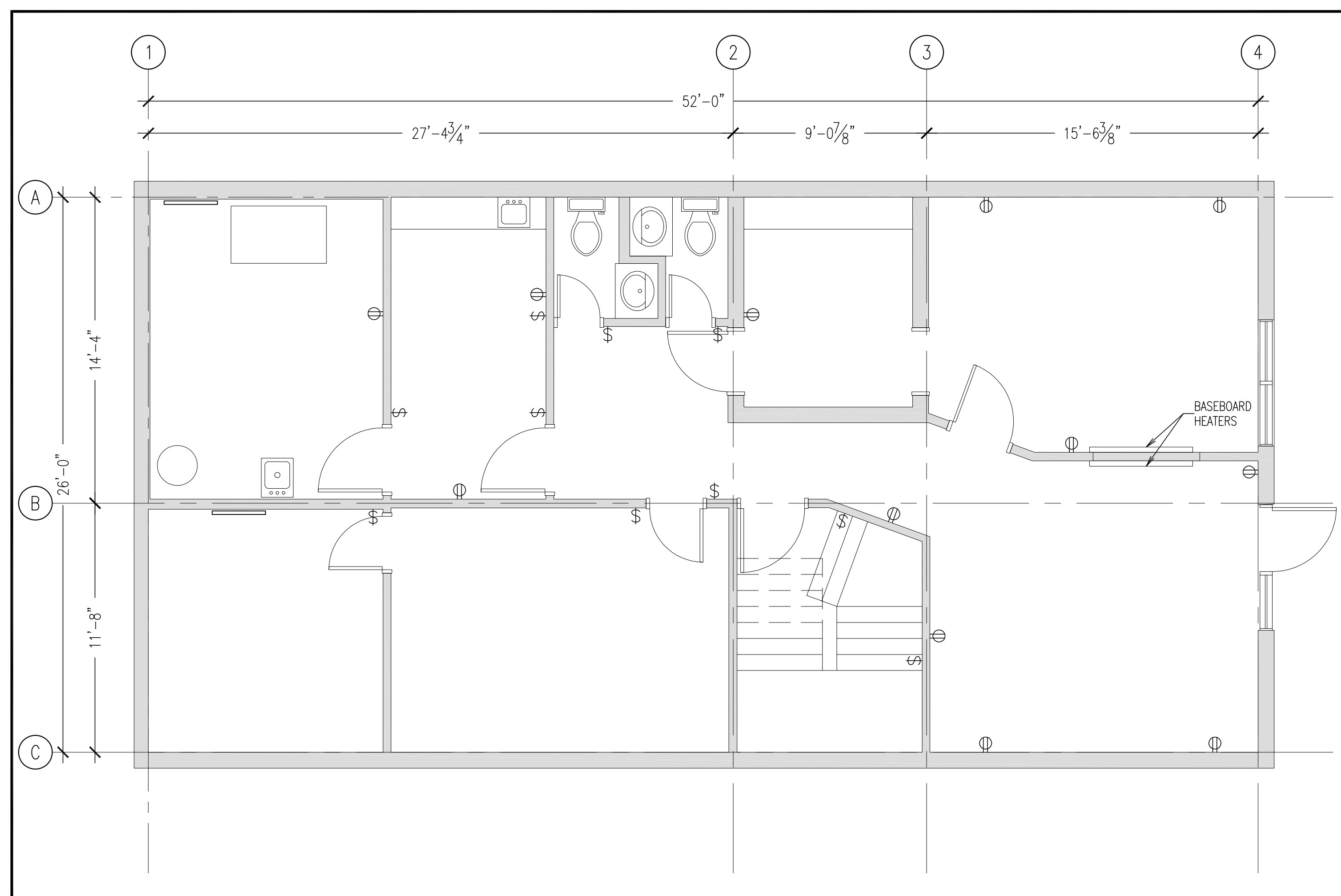


**4** TREE PLANTING DETAIL  
A002 NTS

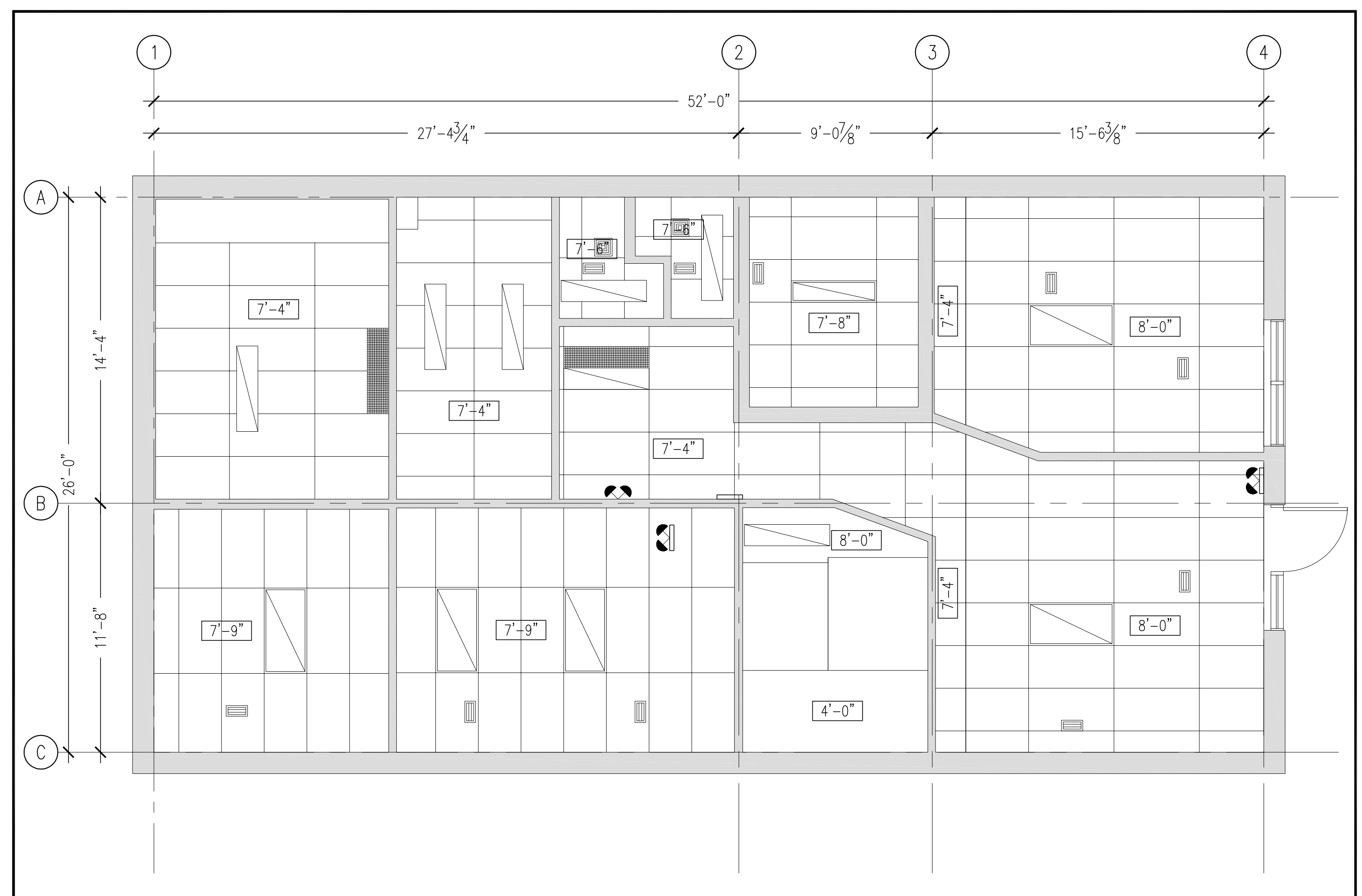


**3** CHAINLINK FENCE ELEVATION DETAIL  
A002 1/2"=1'-0"

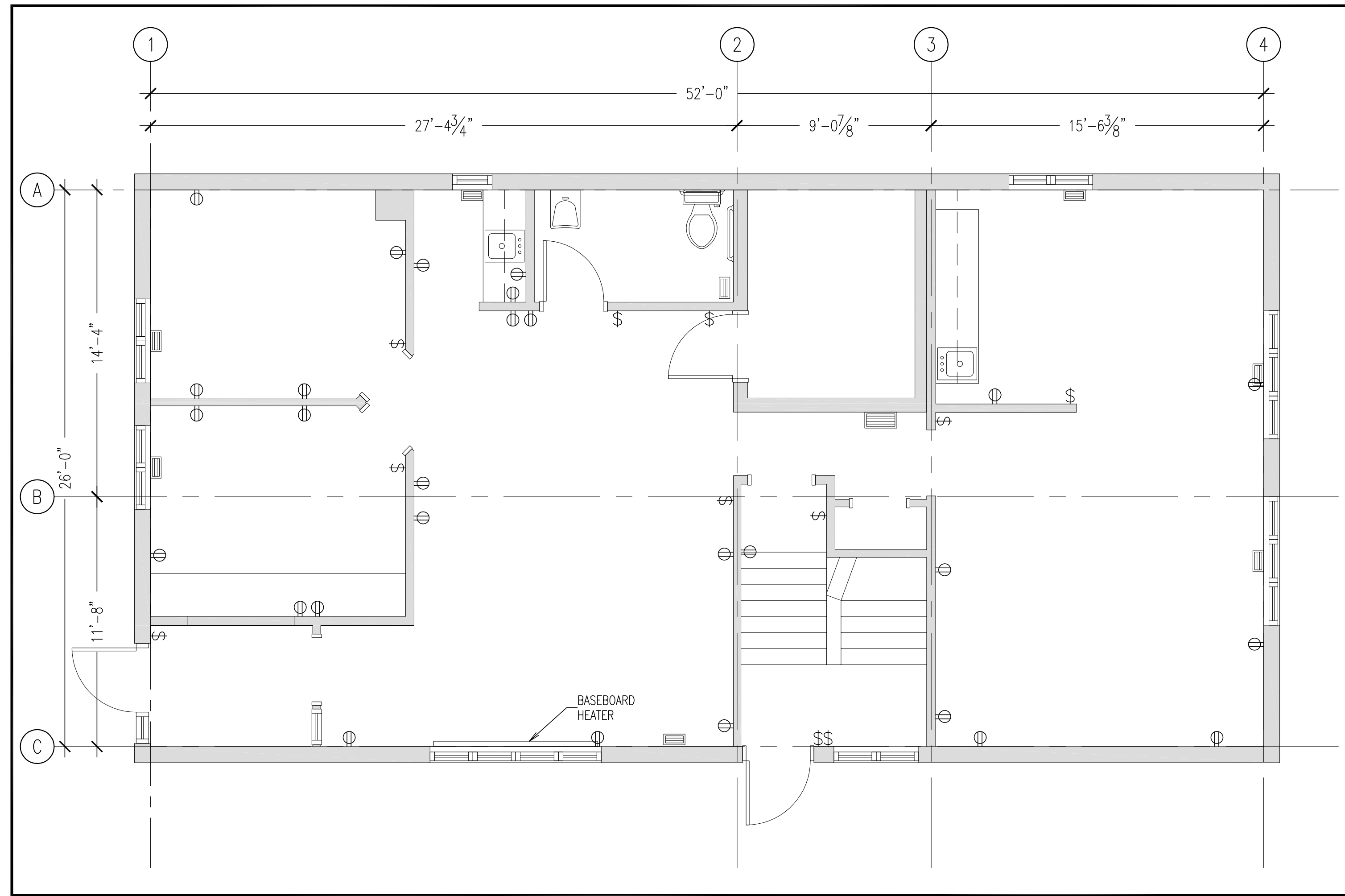




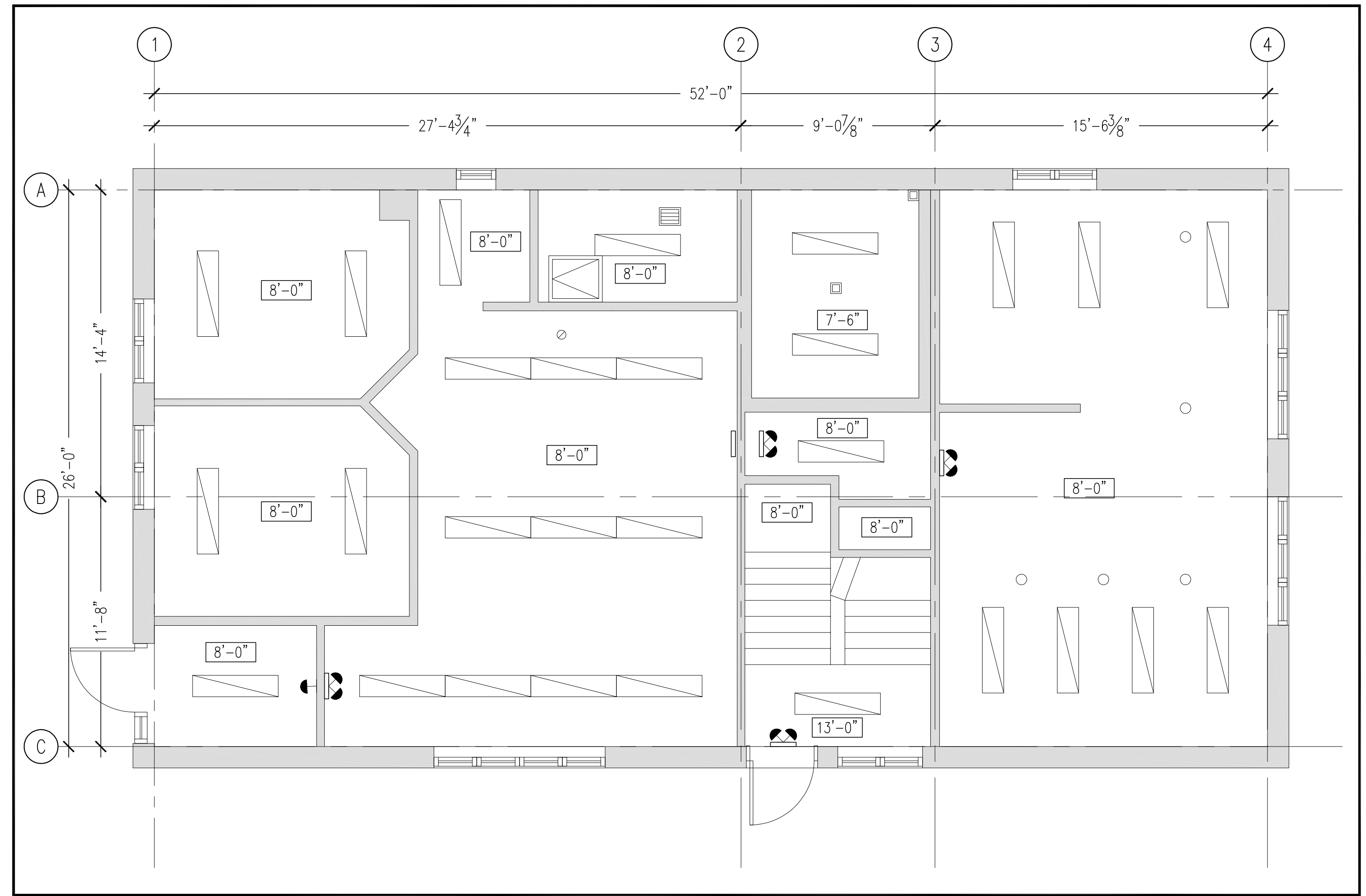
1 BASEMENT FLOOR EXISTING PLAN  
A100 1/4"=1'-0"



3 BASEMENT EXISTING CEILING PLAN  
A100 1/4"=1'-0"



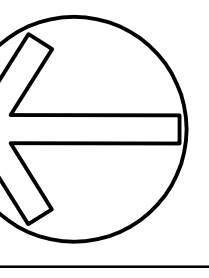
2 FIRST FLOOR EXISTING PLAN  
A100 1/4"=1'-0"



4 FIRST FLOOR EXISTING CEILING PLAN  
A100 1/4"=1'-0"

DATE: JUNE 24, 2026

REVISIONS:  
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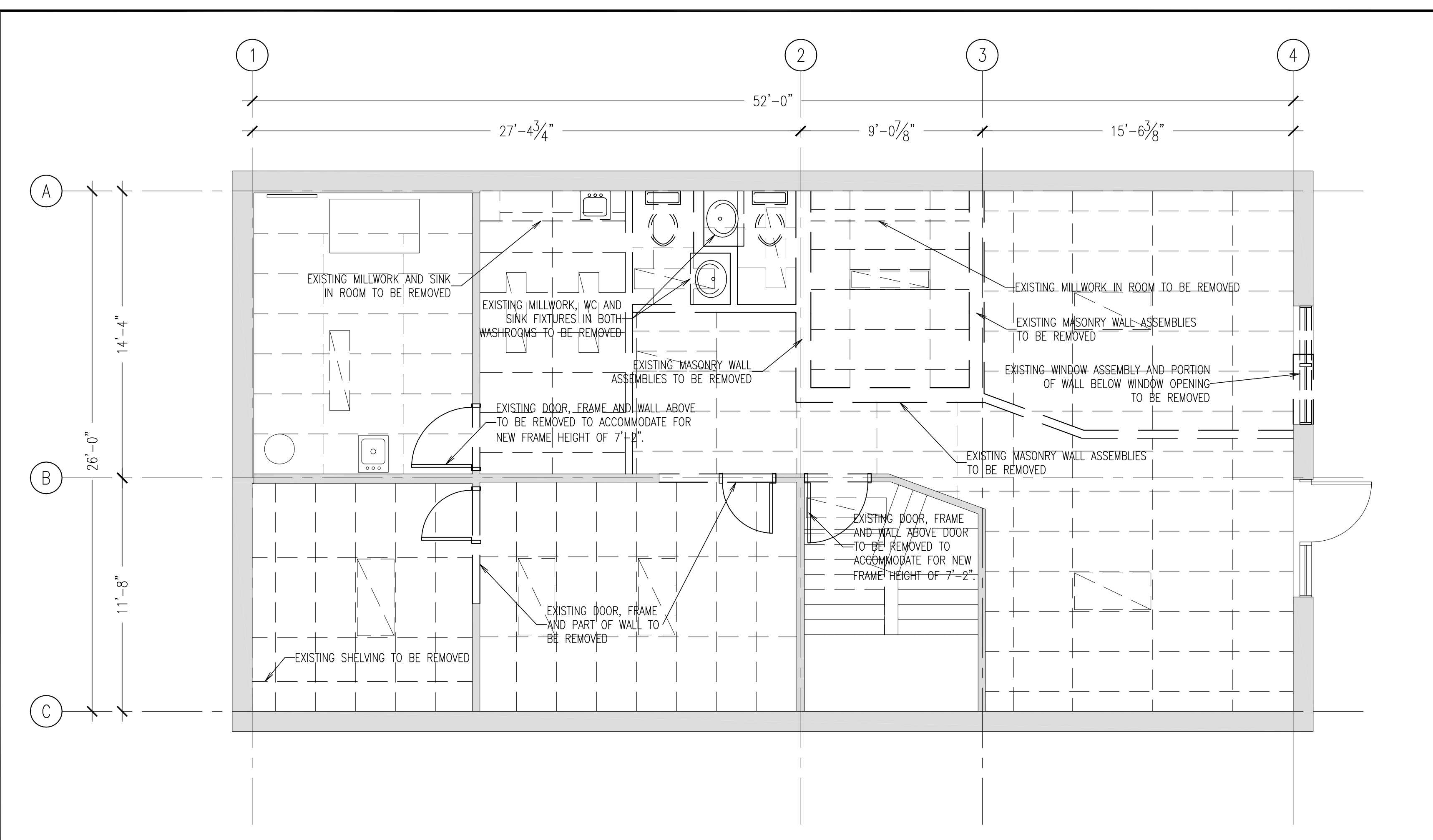
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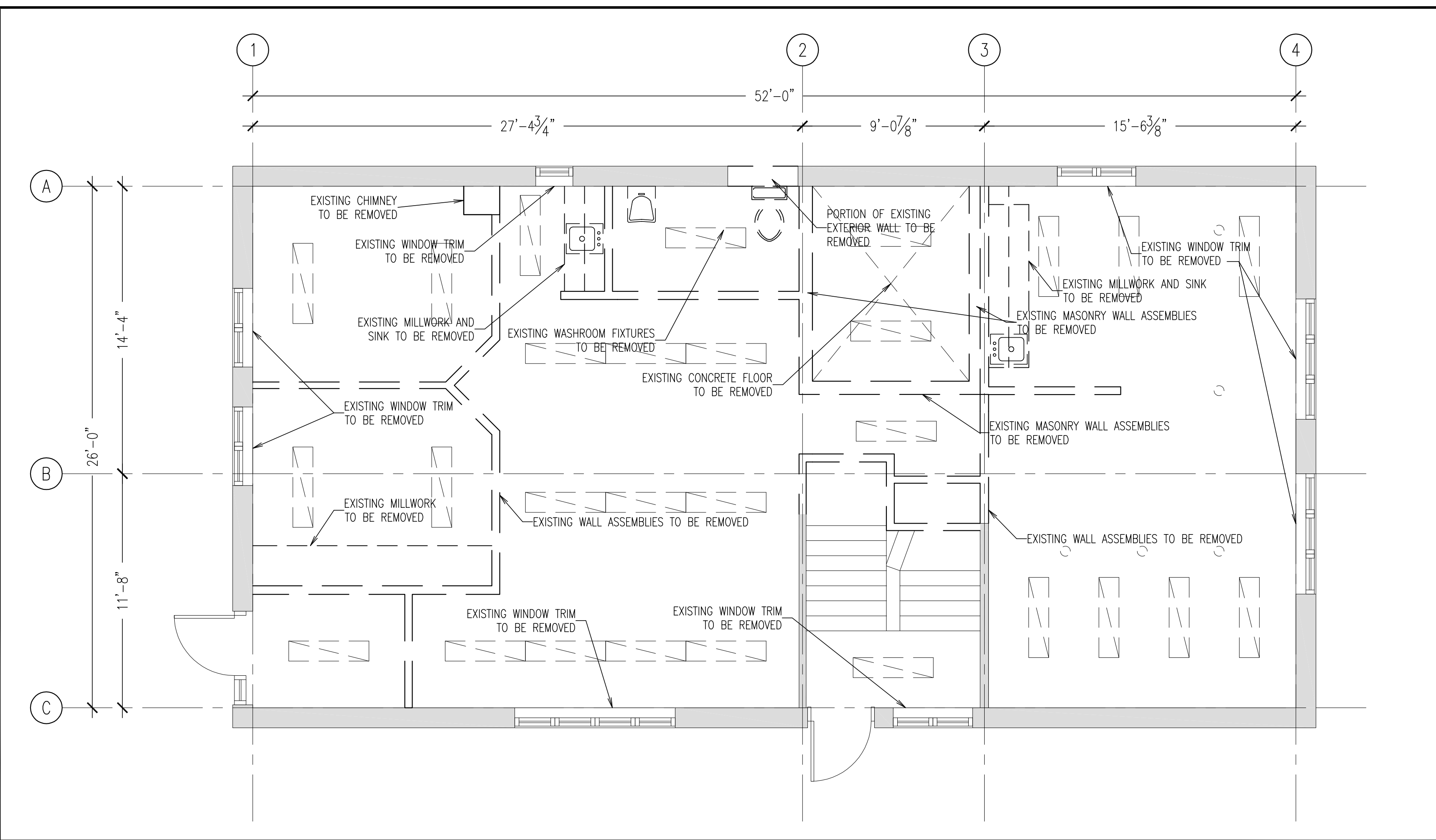
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
EXISTING FLOOR & CEILING PLANS

Date: JUNE 5, 2026  
Scale: AS NOTED  
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Job: 2603  
Sheet:

A100



**1** BASEMENT REMOVALS PLAN  
A100 1/4"=1'-0"



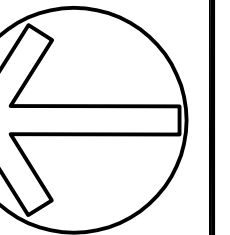
**2** FIRST FLOOR REMOVALS PLAN  
A100 1/4"=1'-0"

### DEMOLITION REMOVALS NOTES

1. REMOVE EXISTING WALL CONSTRUCTION AND ALL RELATED WALL/FLOOR/CEILING COMPONENTS INCLUDING EXISTING DOORS, FRAMES, TRIMS, BASE, FLOORING AND THE LIKE. MAKE GOOD ALL ADJOINING FINISHES READY TO RECEIVE NEW FINISHES AS PER ROOM FINISH SCHEDULE.
2. SURVEY THE CONDITION OF THE BUILDING TO DETERMINE ACCURACY OF THE PLANS AND STRUCTURAL INTEGRITY OF ALL ELEMENTS AFFECTED BY THE DEMOLITION PROCESS. REPORT AND HAZARDS TO THE OWNER PRIOR TO CONTINUING.
3. EXCEPT AS INDICATED, ALL MATERIALS SALVAGED FROM THE DEMOLITION AND PREPARATORY WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
4. ITEMS NOTED FOR REINSTALLATION SHALL BE CAREFULLY REMOVED.
5. REMOVE AND CAP ABANDONED UTILITIES AS REQUIRED CONCEALED UTILITIES WHICH DO NOT INTERFERE WITH THE NEW WORK MAY REMAIN IN PLACE. UTILITIES SCHEDULED TO BE RETURNED TO SERVICE SHALL BE CAPPED IN A MANNER TO FACILITATE RECONNECTION.
6. DEMOLISH WALLS IN SMALL SECTIONS CAREFULLY REMOVE AND LOWER ANY STRUCTURAL FRAMING AND ANY OTHER HEAVY AND LARGE OBJECTS. PROVIDE TEMPORARY BRACING AS REQUIRED TO REMOVE STRUCTURAL COMPONENTS.
7. PREVENT DEBRIS FROM BLOCKING EXISTING MECHANICAL AND ELECTRICAL SYSTEMS WHICH REMAIN IN OPERATION.
8. ALL EXISTING MAIN FLOOR CEILINGS AND CEILING FIXTURES INCLUDING STAIRCASE TO BE REMOVED.
9. ALL EXISTING MAIN FLOOR FLOORING TO BE REMOVED.
10. ALL BASEMENT T-BAR CEILINGS AND CEILING FIXTURES TO BE REMOVED.
11. ALL BASEMENT FLOORING TO BE REMOVED.
12. ALL EXISTING STAIR FLOORING TO BE REMOVED.
13. REFINISH AFFECTED SURFACES. PATCH, REPAIR AND MAKE GOOD ALL EXISTING SURFACES AFFECTED BY REMOVALS. MAKE GOOD ALL ADJOINING FINISHES READY TO RECEIVE NEW FINISHES AS PER ROOM FINISH SCHEDULE.
14. SURVEY THE CONDITION OF THE BUILDING TO DETERMINE ACCURACY OF THE PLANS AND STRUCTURAL INTEGRITY OF ALL ELEMENTS AFFECTED BY THE DEMOLITION PROCESS. REPORT ANY HAZARDS TO THE OWNER PRIOR TO CONTINUING.
15. DEMOLISH WALLS IN SMALL SECTIONS. CAREFULLY REMOVE AND LOWER ANY STRUCTURAL FRAMING AND ANY OTHER HEAVY AND LARGE OBJECTS. PROVIDE TEMPORARY BRACING AS REQUIRED TO REMOVE STRUCTURAL COMPONENTS.
16. DESIGNATED SUBSTANCE SURVEY REPORT 26068 ISSUED APRIL 7 2026 FROM GREENSTONE ENVIRONMENTAL ENGINEERING AVAILABLE TO REFERENCE.

DATE: JUNE 24, 2026

REVISIONS:  
ISSUED FOR TENDER



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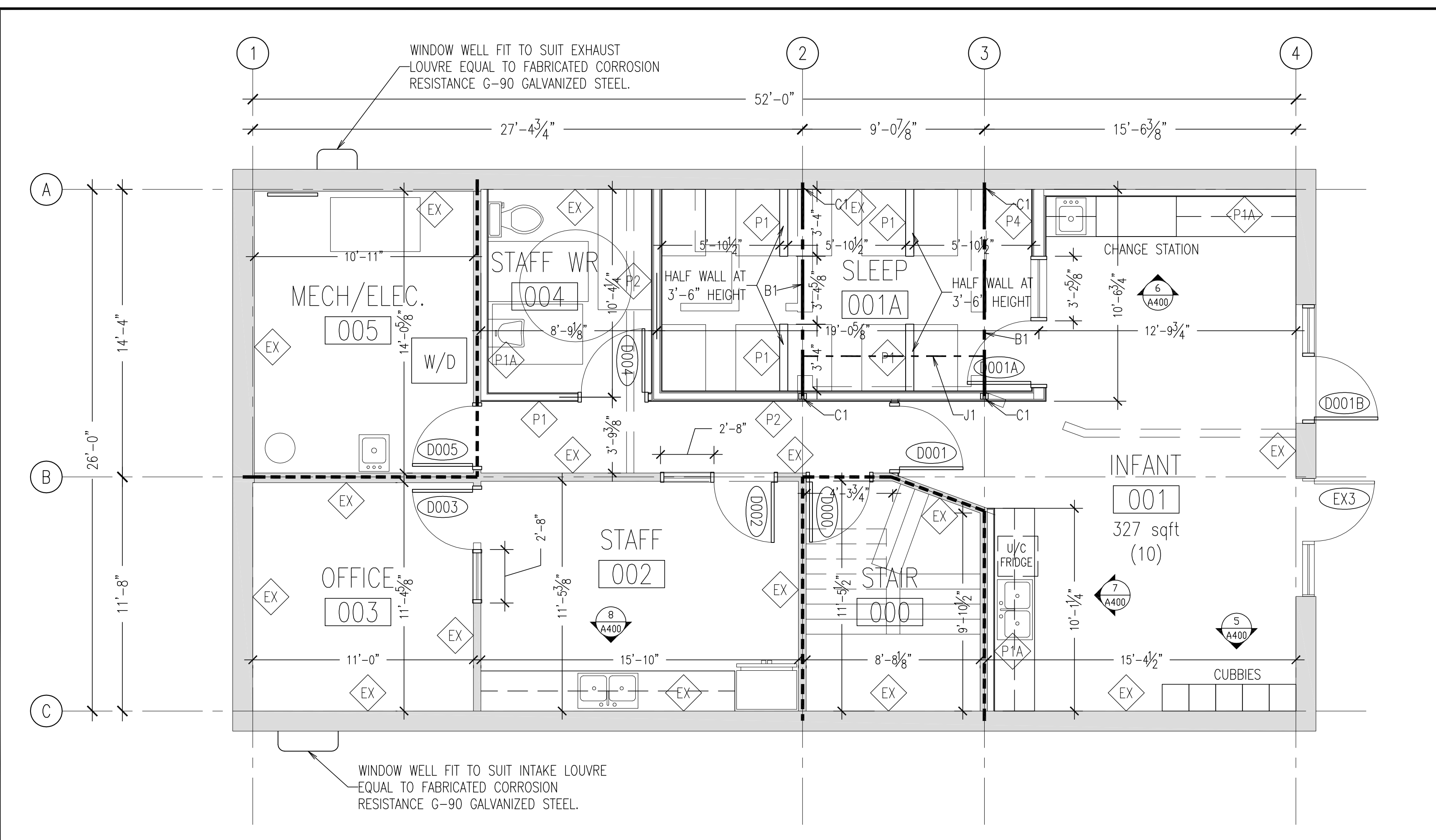
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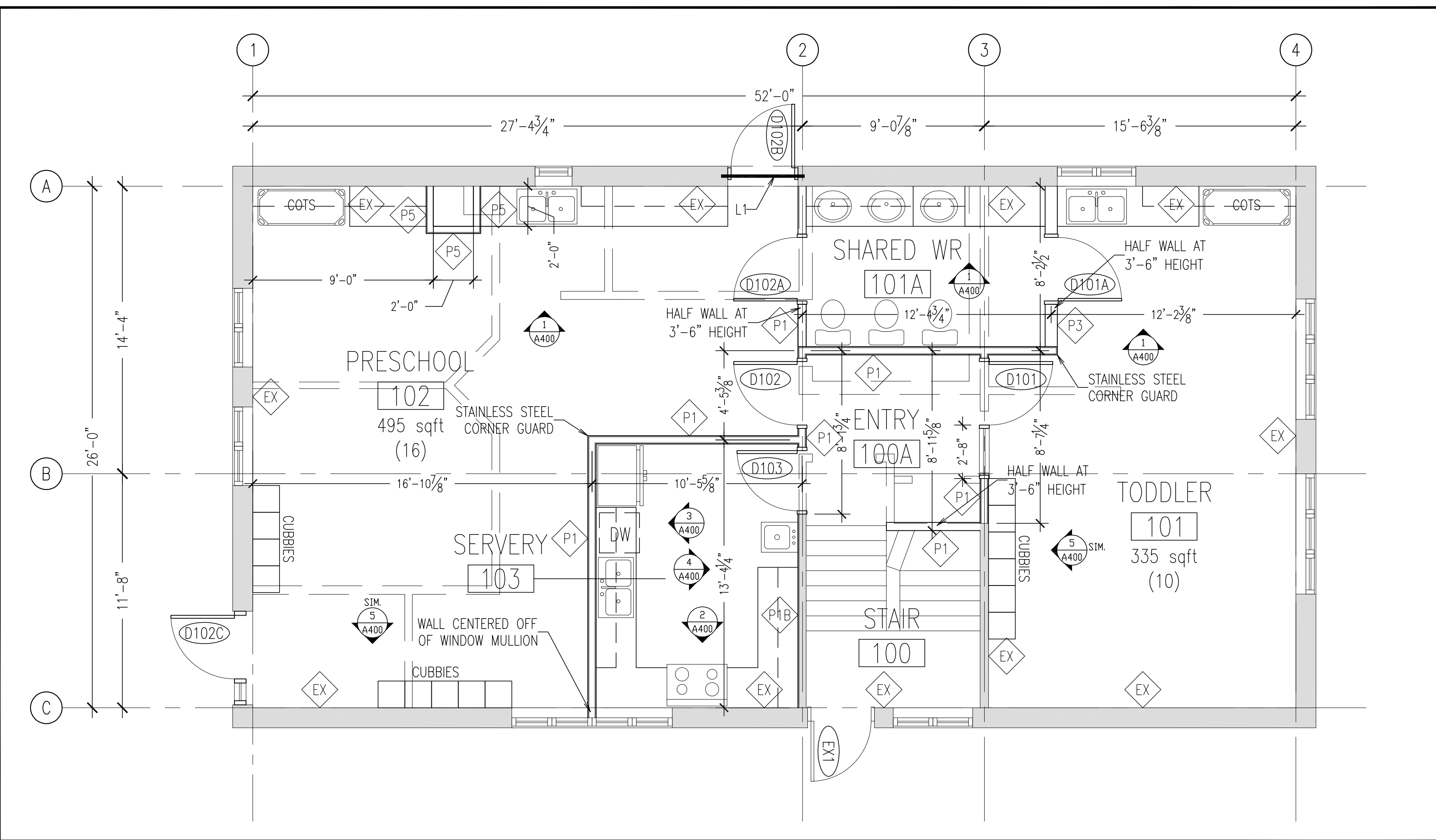
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
REMOVAL PLANS

Date: JUNE 5, 2026  
Scale: AS NOTED  
Drawn: EG CP  
Job: 2603  
Sheet:

**A101**



1 BASEMENT FLOOR PLAN  
A100 1/4"=1'-0"



2 FIRST FLOOR PLAN  
A100 1/4"=1'-0"

### DRAWING LEGEND

- DENOTES EXISTING WALL CONSTRUCTION
- DENOTES 45 MIN FIRE SEPARATION

### INTERIOR PARTITIONS

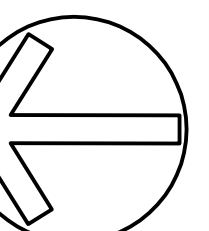
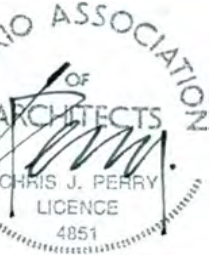
- P1** PAINT FINISH  
5/8" TYPE X GYPSUM BOARD  
2"x4" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P1A** EXISTING WALL CONSTRUCTION  
2"x4" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P1B** EXISTING WALL CONSTRUCTION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P2** PAINT FINISH  
5/8" TYPE X GYPSUM BOARD  
5/8" TYPE X GYPSUM BOARD  
2"x4" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P3** PAINT FINISH  
5/8" TYPE X GYPSUM BOARD  
2"x6" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P4** PAINT FINISH  
5/8" TYPE X GYPSUM BOARD  
2"x6" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH
- P5** 2"x4" METAL STUDS 25 GAUGE @ 24" O/C  
SOUND BATT INSULATION  
5/8" TYPE X GYPSUM BOARD  
PAINT FINISH

### CEILING ASSEMBLIES

- C1** 45 MINUTE FIRE RATING:  
BULKHEAD OR ACT CEILING ASSEMBLY WHERE INDICATED  
(SEE REFLECTED CEILING PLAN)  
TYPE X 5/8" GYPSUM BOARD  
RESILIENT CHANNEL  
2x12" WOOD JOISTS @ 12" O/C  
PLYWOOD  
FLOOR FINISH (REFER TO ROOM FINISH SCHEDULE)
- C2** BULKHEAD WHERE INDICATED (SEE REFLECTED CEILING PLAN)  
TYPE X 5/8" GYPSUM BOARD  
RESILIENT CHANNEL  
VAPOUR BARRIER  
ATTIC INSULATION (R60)  
WOOD ROOF TRUSS  
ROOF SHEATHING (EXISTING)  
ICE & WATER SHIELD (EXISTING ROOF AREA)  
ASPHALT SHINGLES (30 YEAR)


### STRUCTURAL MEMBERS

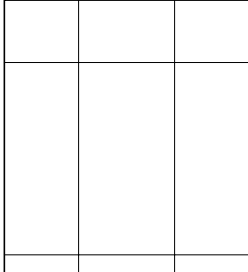
- L1** 2 - 2 x 8" WOOD LINTEL
- B1** 3 - 2 x 12" WOOD BEAM
- C1** 3 - 2 x 4" WOOD COLUMN
- J1** 2 x 12" 12" O/C WOOD JOIST



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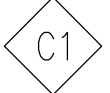
## NEW PROJECT CEILING TYPES


 PAINTED GYPSUM BOARD  
FLAT CEILING PAINT FINISH ON THE UNDERSIDE OF NEW GYPSUM BOARD CEILINGS AND OR BULKHEADS

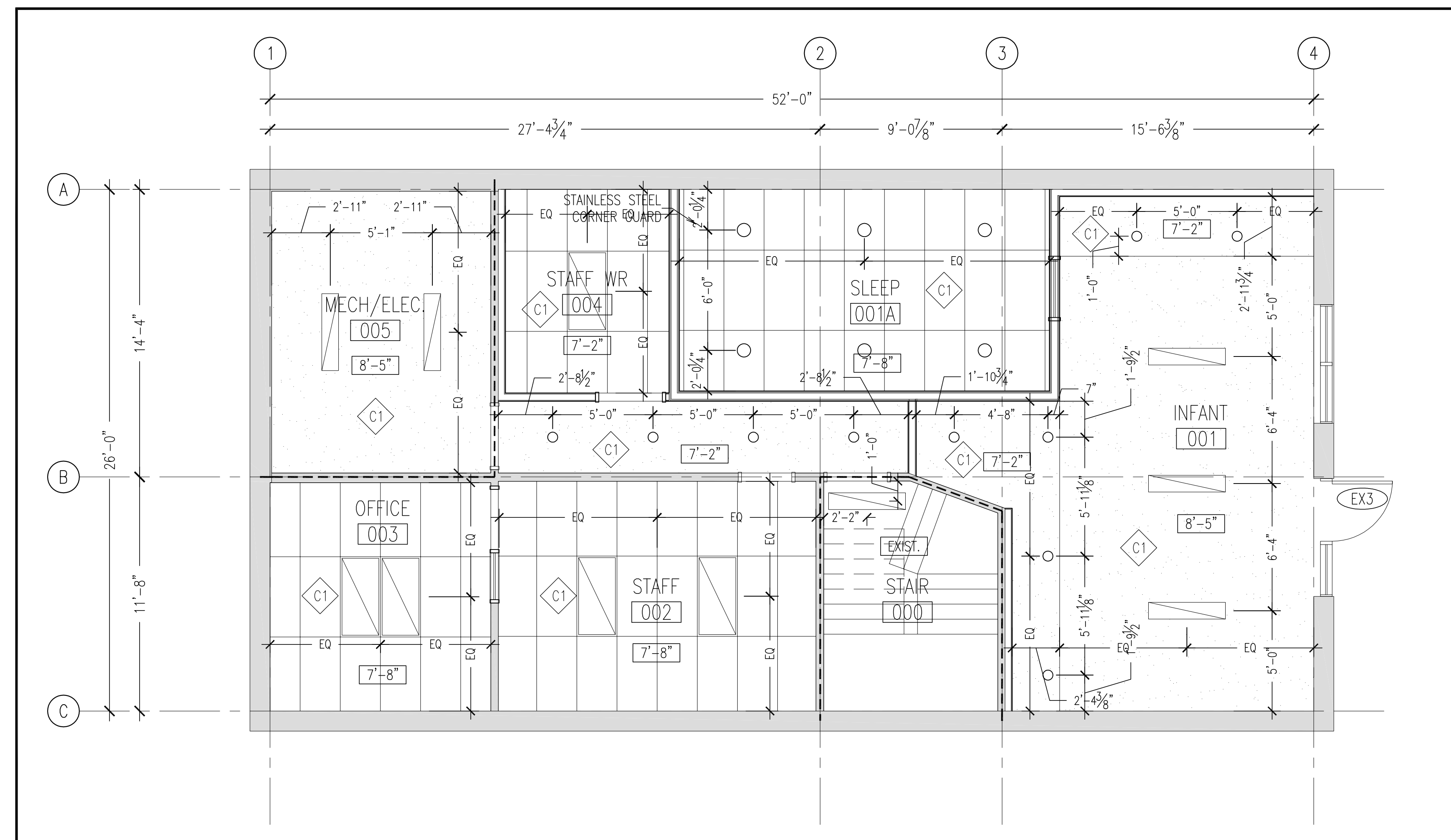
 SUSPENDED CEILING  
24"x48" MINERAL FIBER, ACOUSTIC CEILING TILES IN PRE FINISHED, SUSPENDED METAL T-BAR GRID SYSTEM /W SHADOW REVEAL PERIMETER WALL TRIM

NOTES:  
TYPE X  $\frac{5}{8}$ " GYPSUM BOARD AND RESILIENT CHANNEL TO BE INSTALLED ON CEILINGS BELOW 2x12" WOOD JOISTS (BASEMENT) AND CEILINGS BELOW WOOD ROOF TRUSSES & VAPOUR BARRIER (MAIN FLOOR) FOR THE ENTIRE INTERIOR PROJECT AREA INCLUDING AREAS COVERED BY LOWER GYPSUM/ACT CEILINGS AND BULKHEADS.

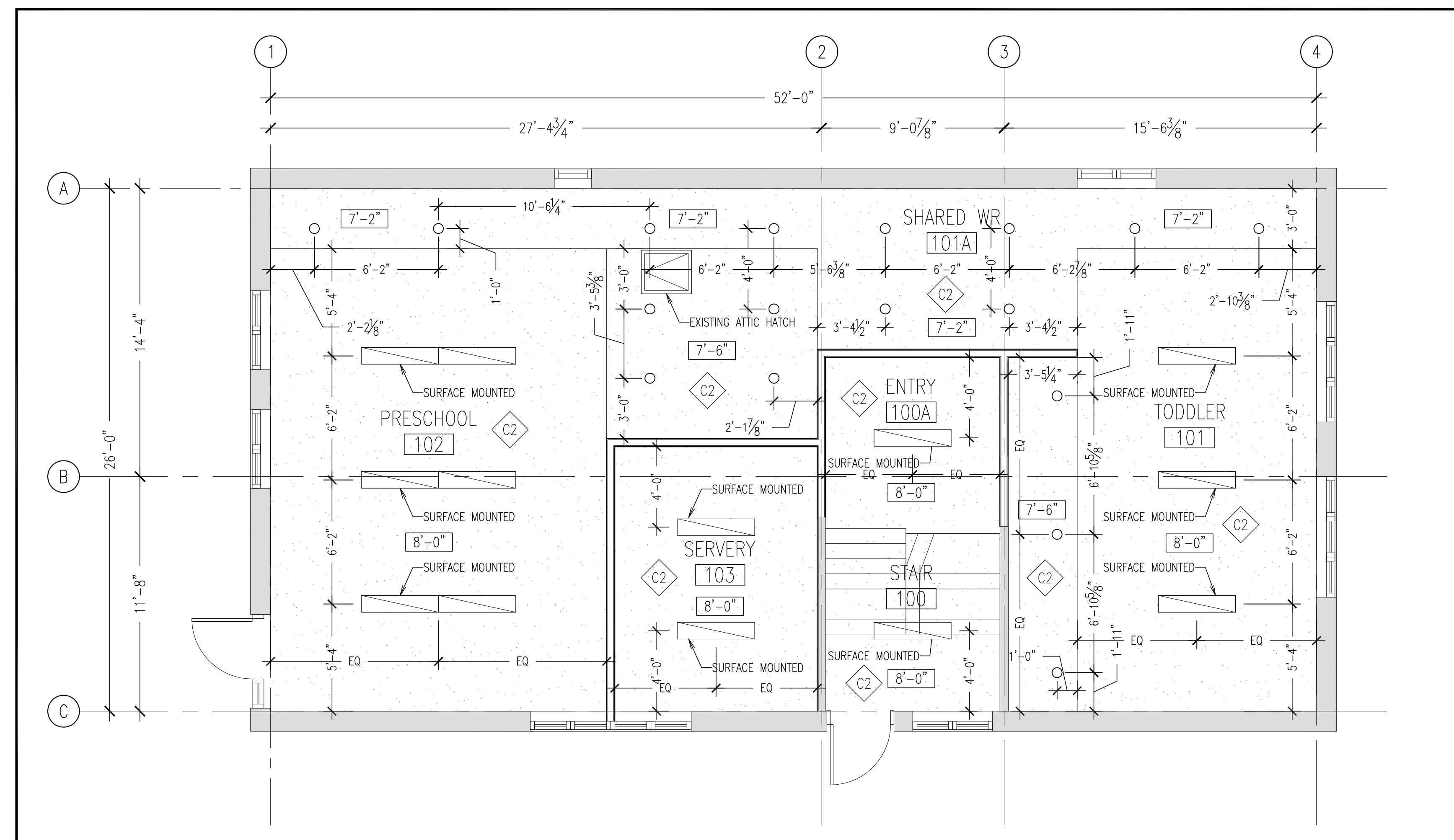
## CEILING ASSEMBLIES

 45 MINUTE FIRE RATING:  
BULKHEAD OR ACT CEILING ASSEMBLY WHERE INDICATED (SEE REFLECTED CEILING PLAN)  
TYPE X  $\frac{5}{8}$ " GYPSUM BOARD  
RESILIENT CHANNEL  
2x12" WOOD JOISTS @ 12" o/c  
PLYWOOD  
FLOOR FINISH (REFER TO ROOM FINISH SCHEDULE)

 BULKHEAD WHERE INDICATED (SEE REFLECTED CEILING PLAN)  
TYPE X  $\frac{5}{8}$ " GYPSUM BOARD  
RESILIENT CHANNEL  
VAPOUR BARRIER  
ATTIC INSULATION (R60)  
WOOD ROOF TRUSS  
ROOF SHEATHING (EXISTING)  
ICE & WATER SHIELD (EXISTING ROOF AREA)  
ASPHALT SHINGLES (30 YEAR)



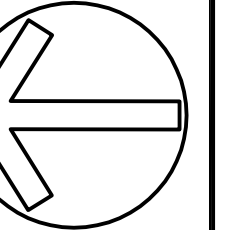
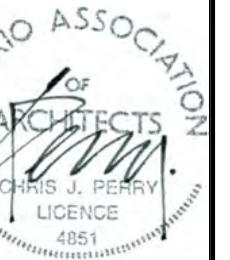
**1** BASEMENT FLOOR PLAN  
A100 1/4"=1'-0"



**2** FIRST FLOOR PLAN  
A100 1/4"=1'-0"

DATE:  
JUNE 24, 2026

REVISIONS:  
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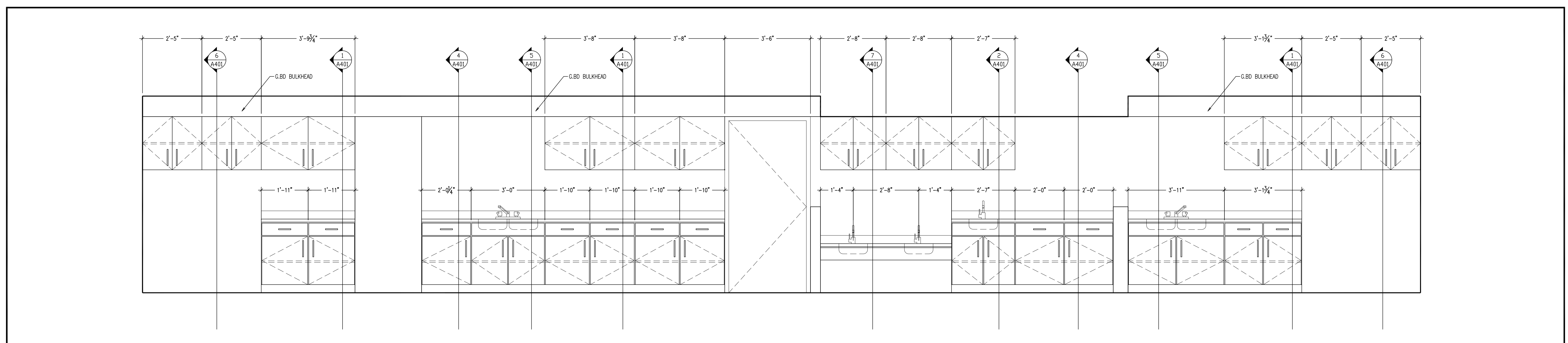
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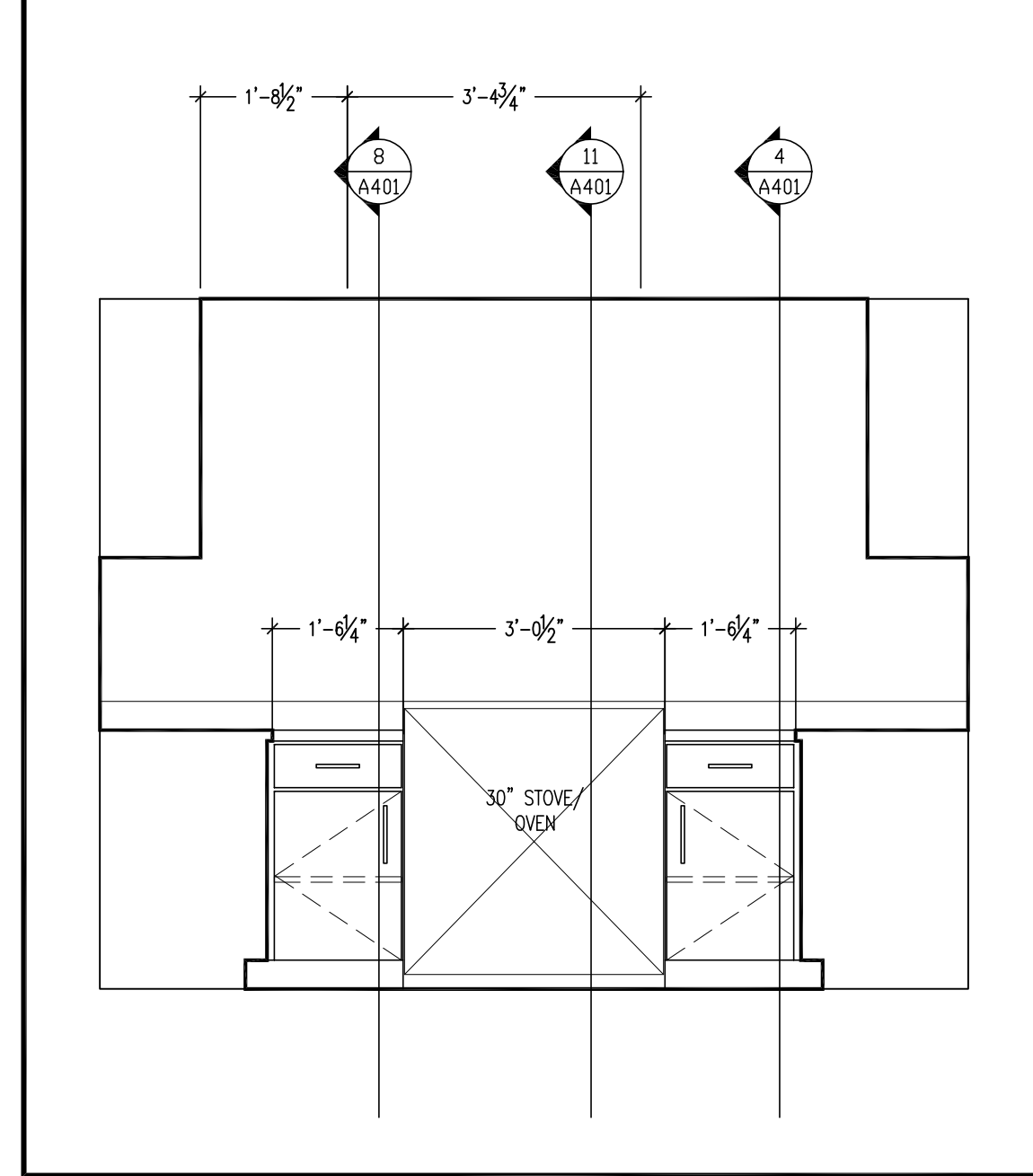
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
REFLECTED CEILING PLANS

Date  
JUNE 5, 2026  
Scale  
AS NOTED  
Drawn  
EG CP  
Job  
2603  
Sheet

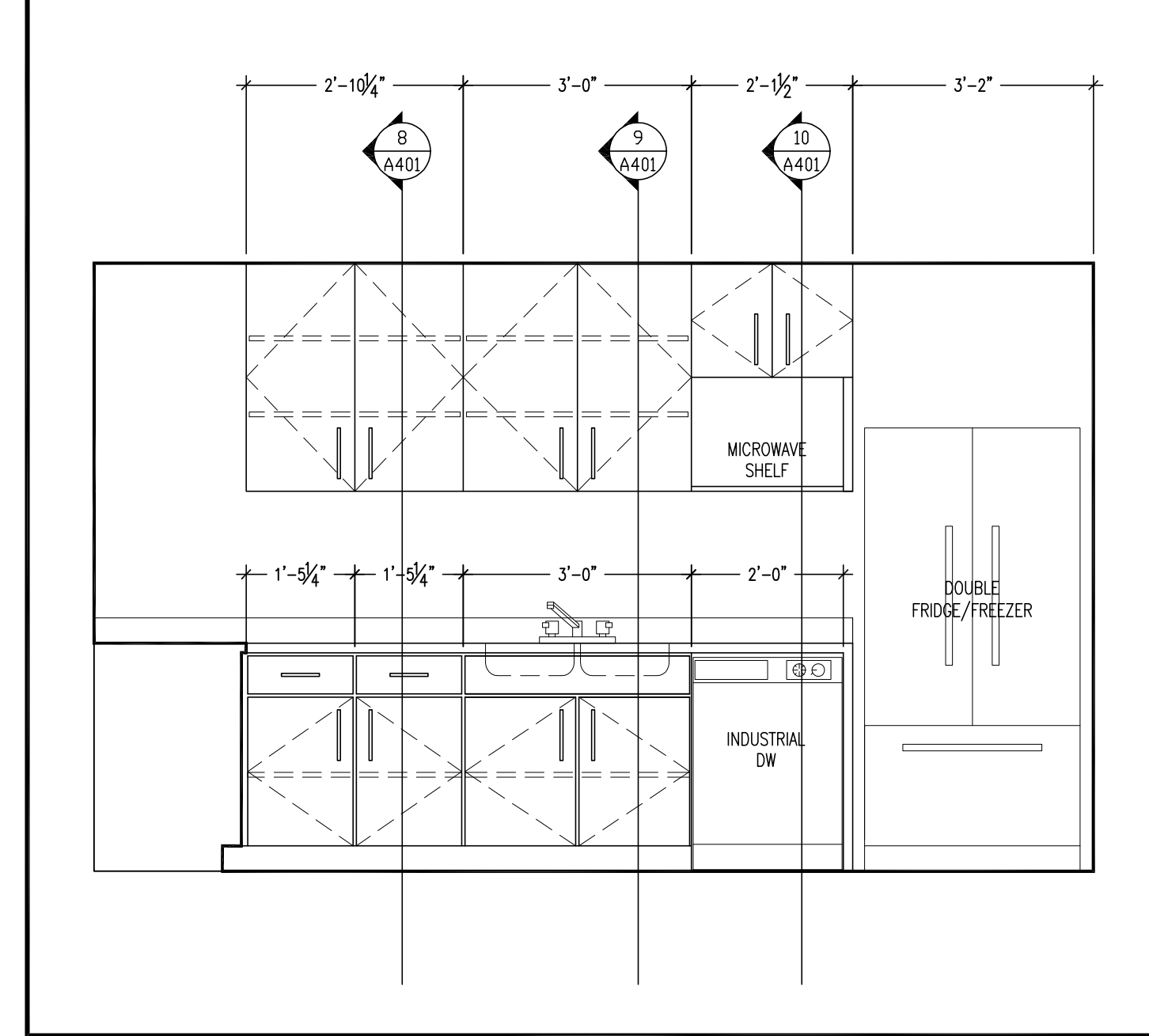
**A103**



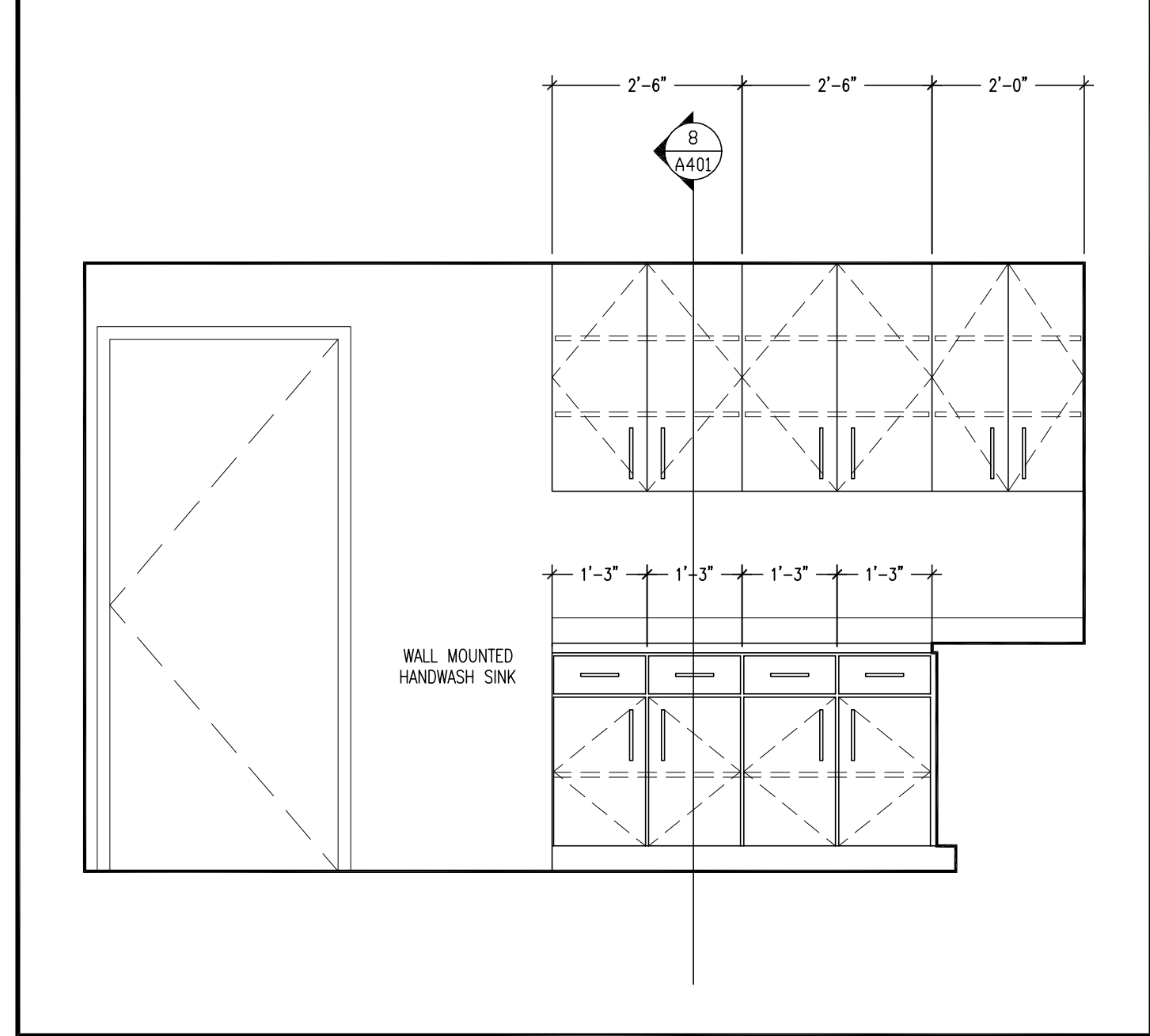
**1 FIRST FLOOR EAST WALL**  
 A400 1/2"=1'-0"



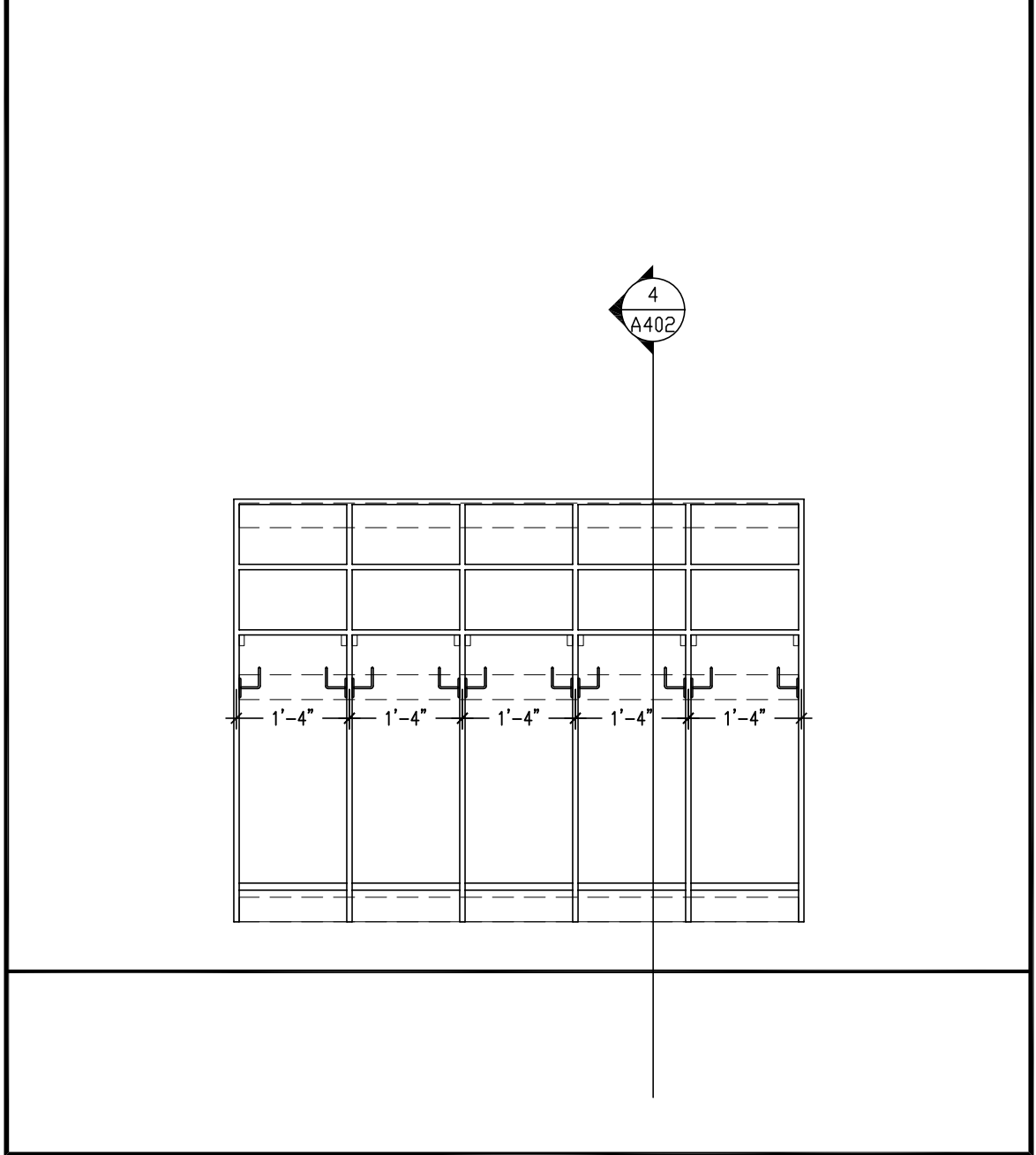
**2 SERVERY WEST WALL**  
 A400 1/2"=1'-0"



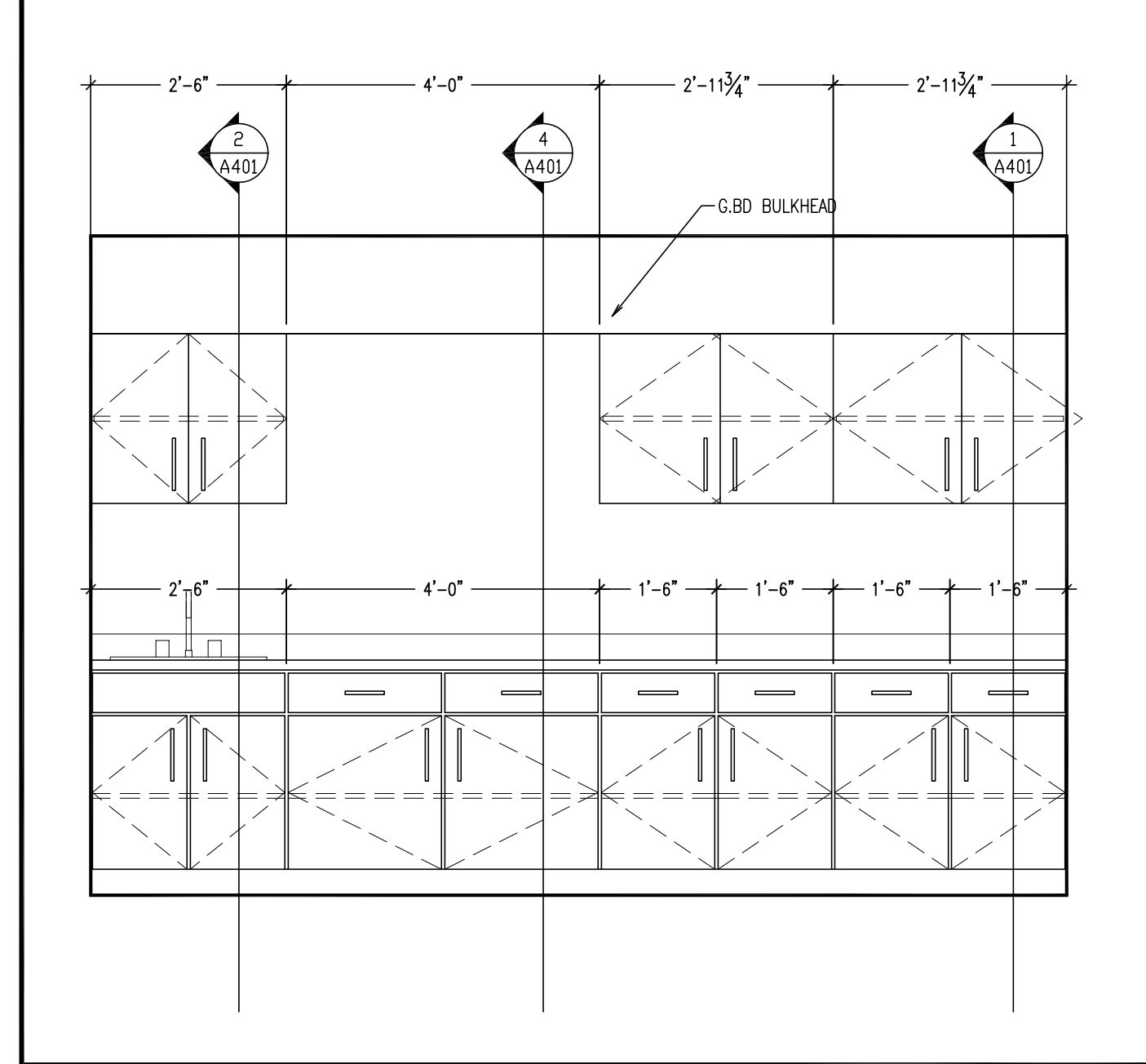
**3 SERVERY NORTH WALL**  
 A400 1/2"=1'-0"



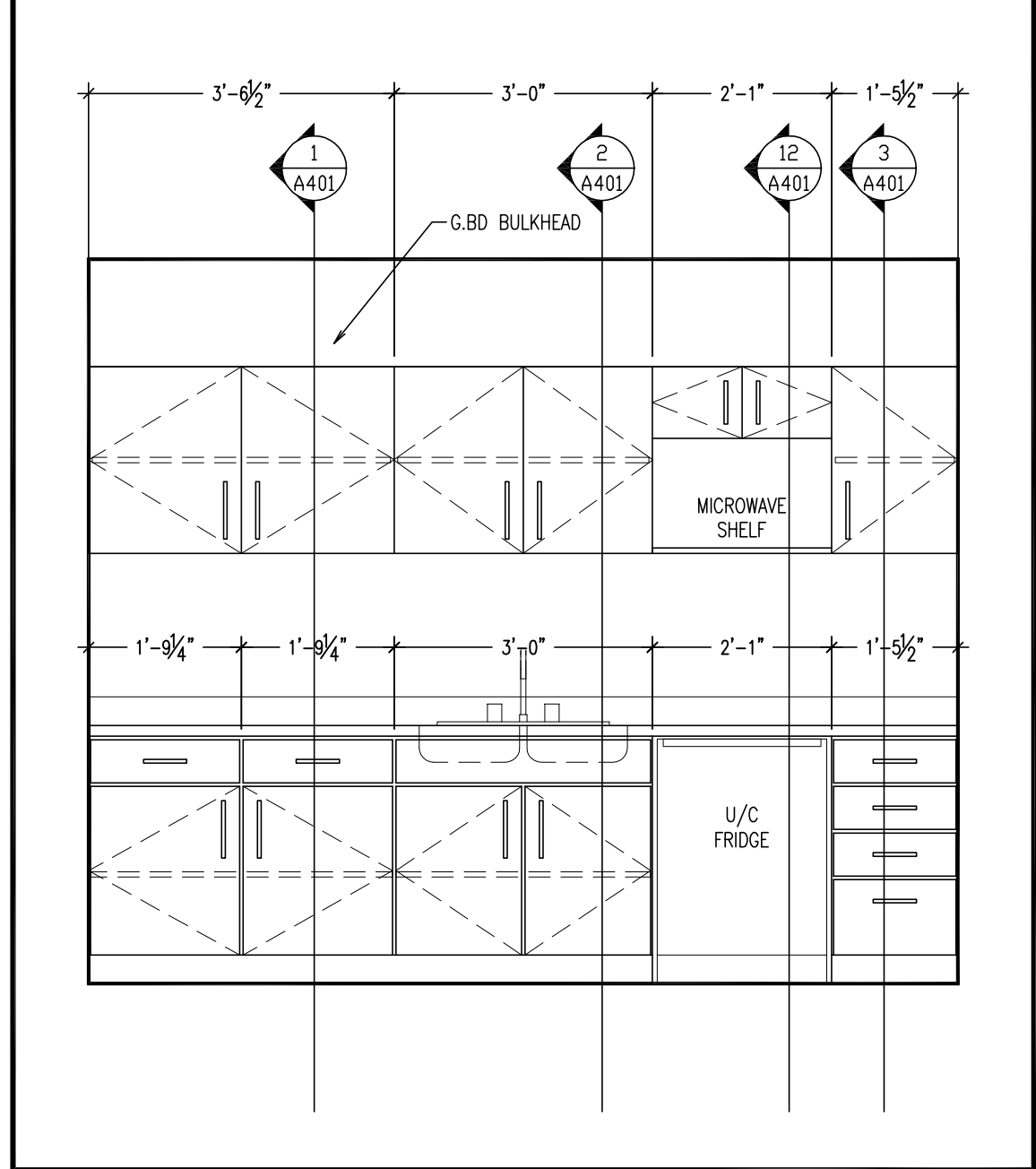
**4 SERVERY SOUTH WALL**  
 A400 1/2"=1'-0"



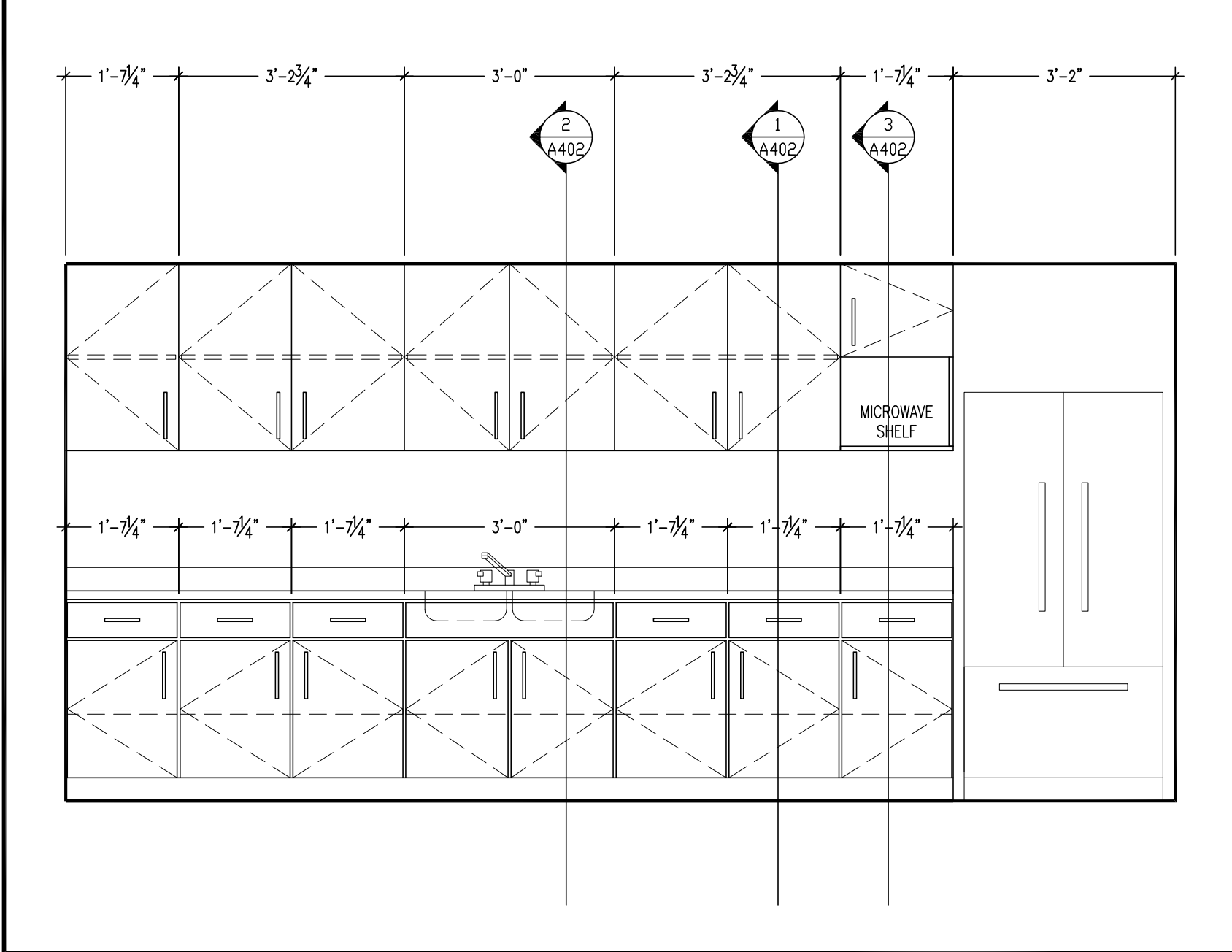
**5 CUBBIES (TYPICAL)**  
 A400 1/2"=1'-0"



**6 INFANT CHANGE STATION**  
 A400 1/2"=1'-0"



**7 INFANT SERVERY**  
 A400 1/2"=1'-0"



**8 STAFF ROOM**  
 A400 1/2"=1'-0"

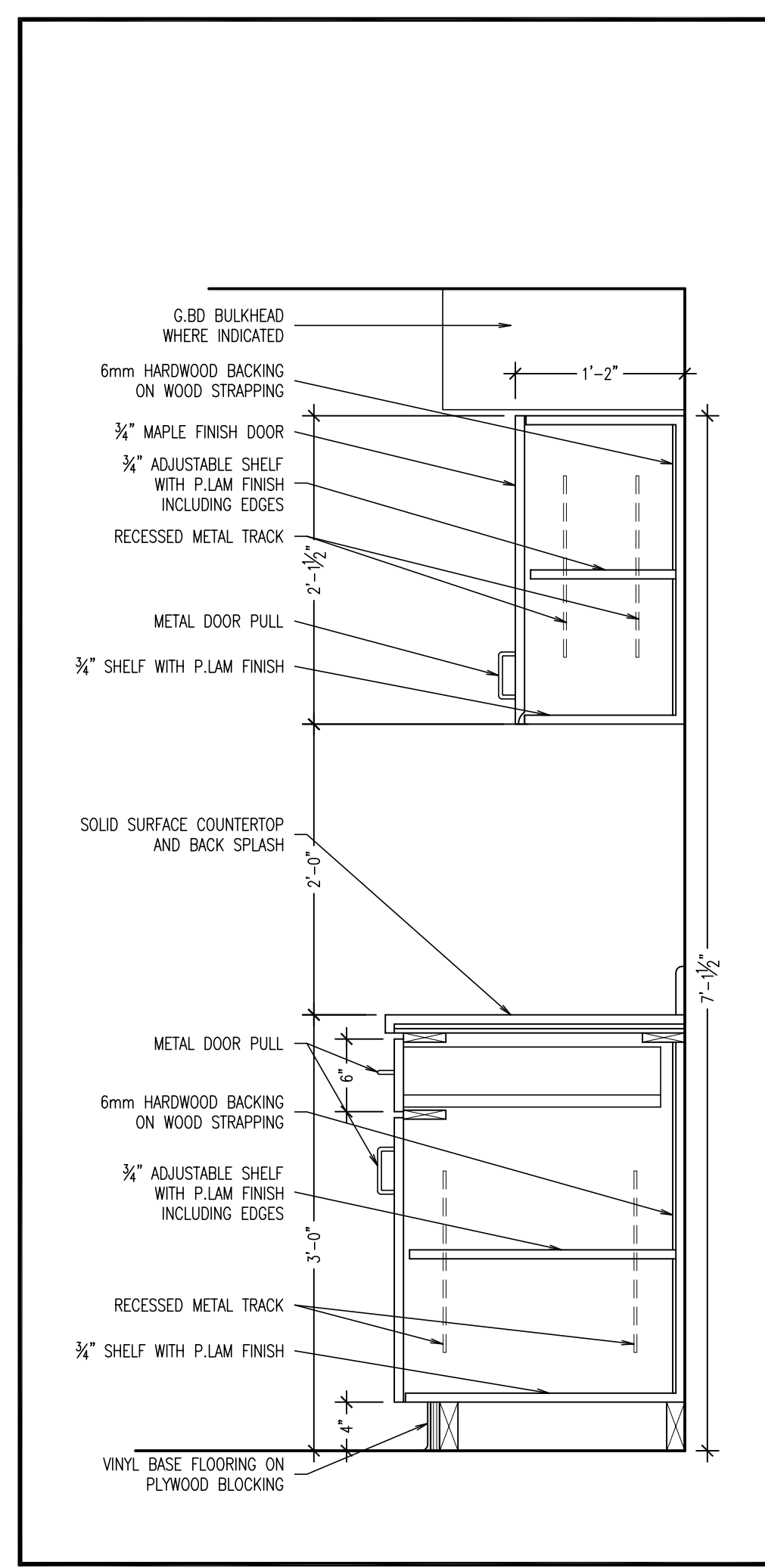


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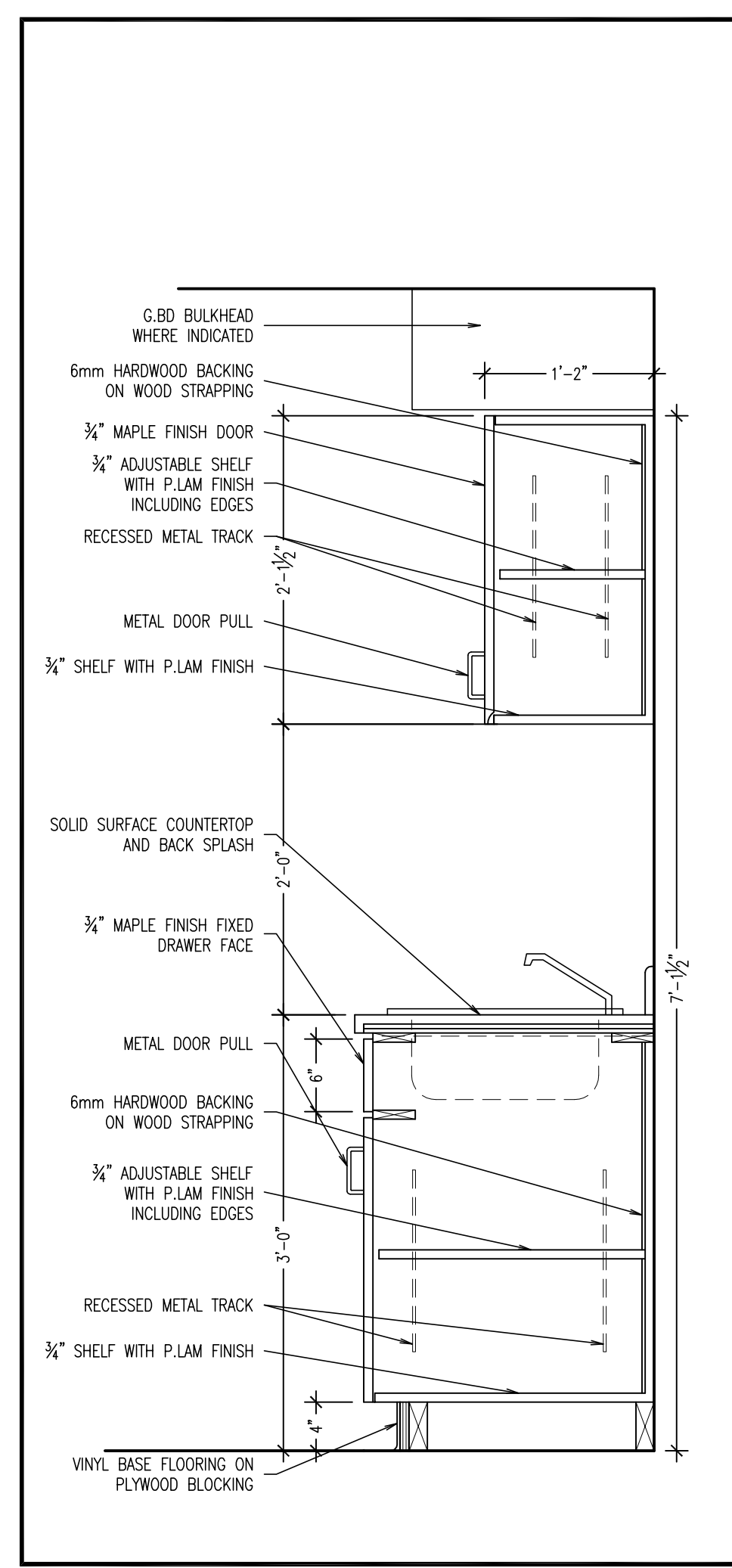
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 (705) 888-0440  
 www.perryarchitects.com

**OCOF WARREN DAYCARE**  
 INTERIOR RENOVATION  
 38 RUTLAND AVENUE, WARREN ON  
 MILLWORK ELEVATIONS

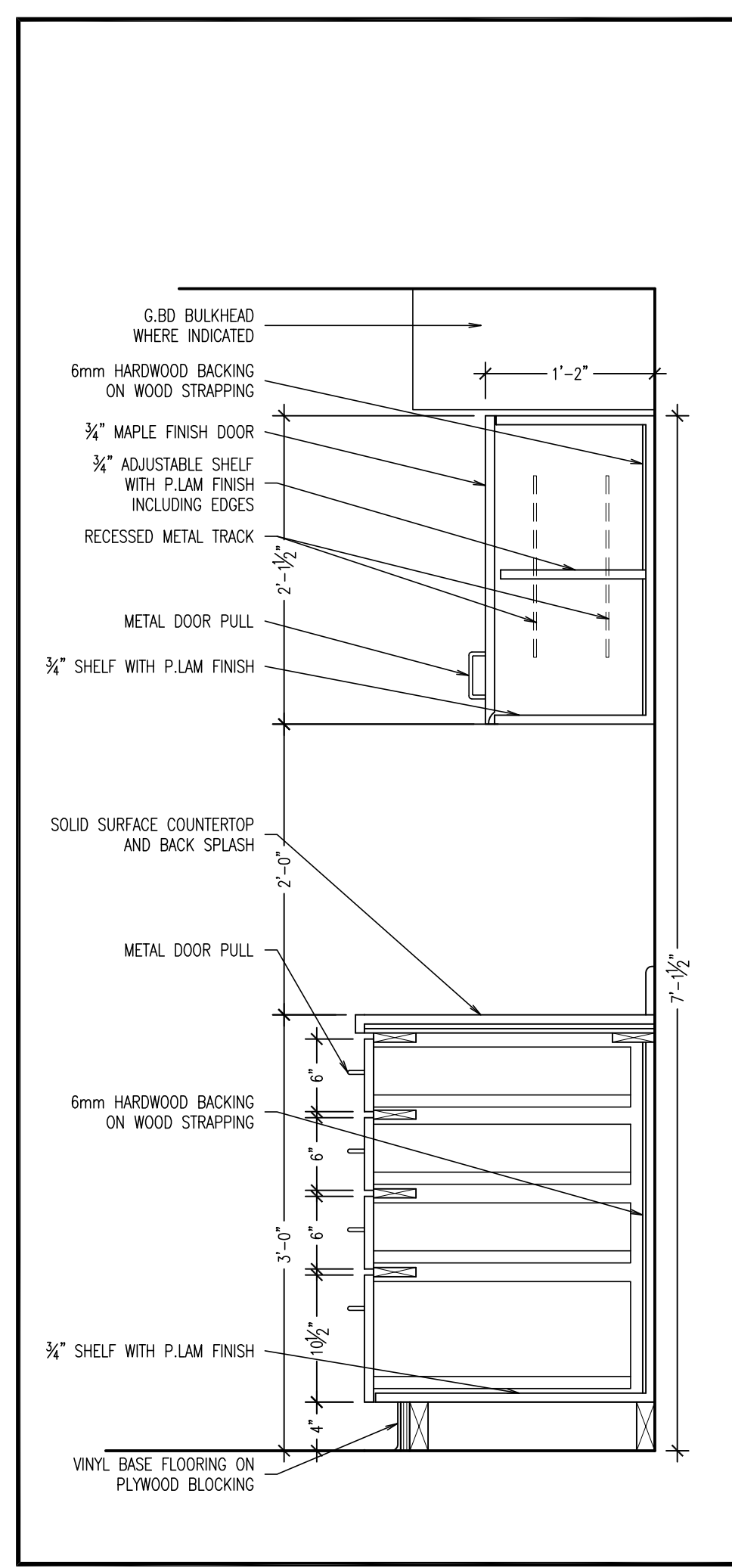
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Job	2603
Sheet	



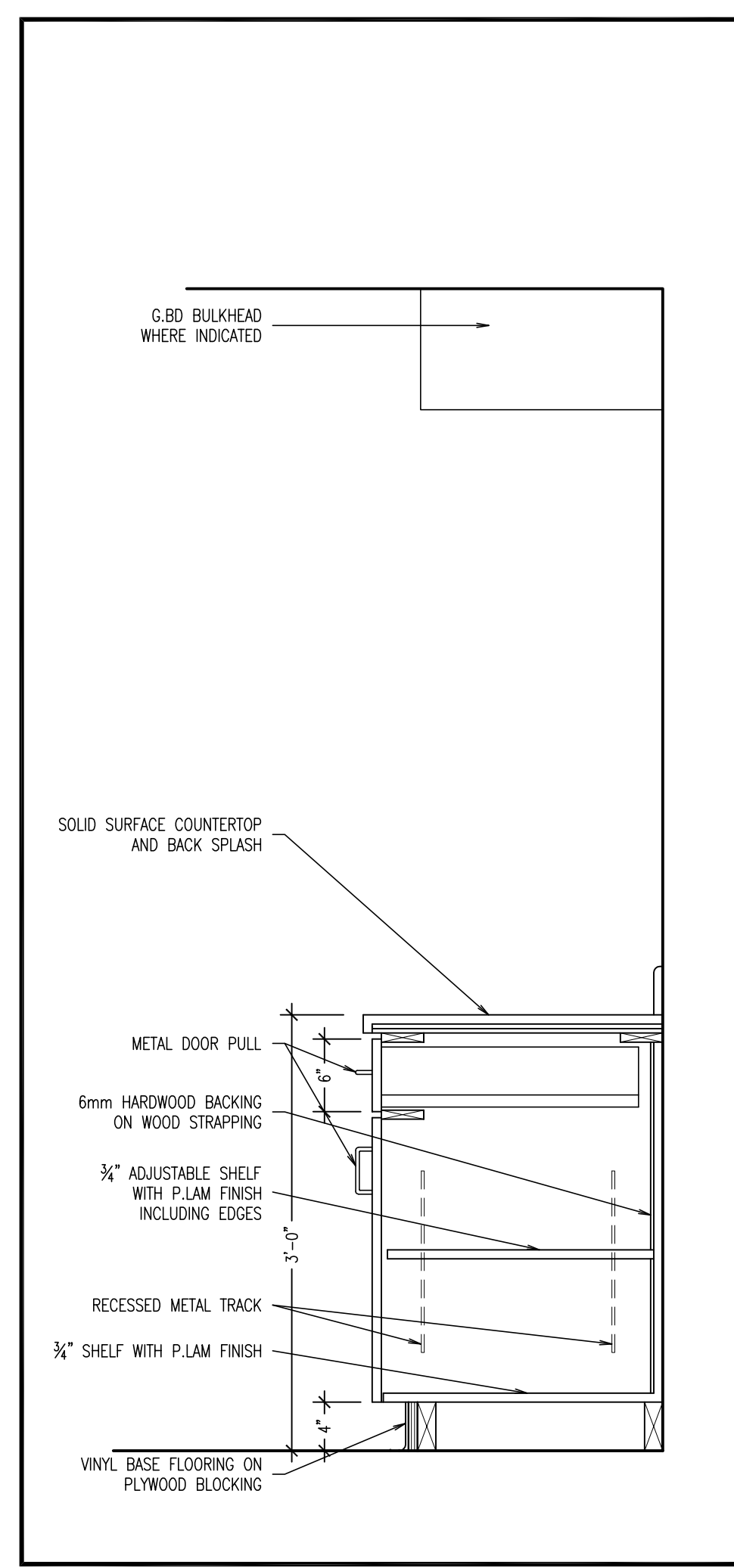
1 MILLWORK SECTION  
A401 1"=1'-0"



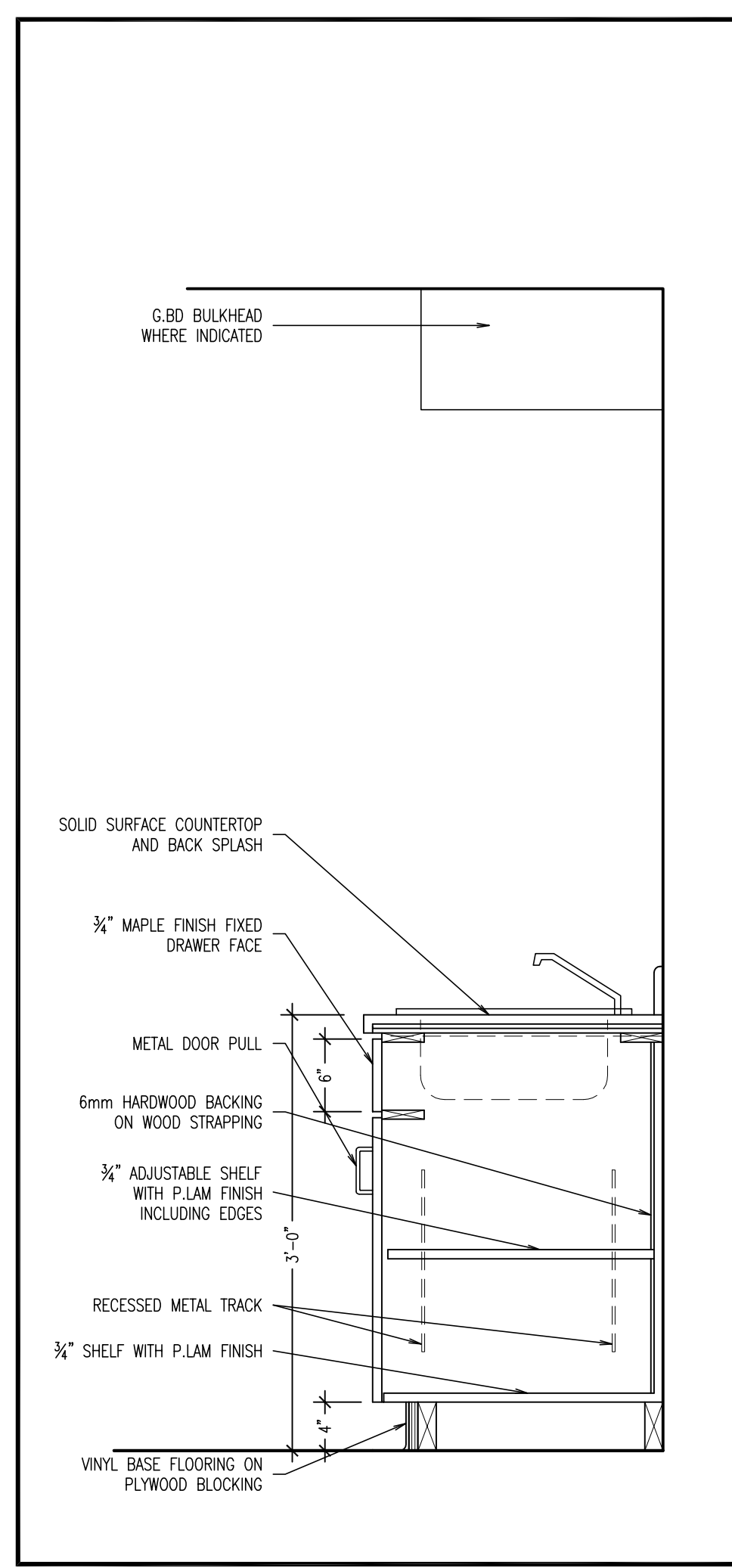
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A401 1"=1'-0"



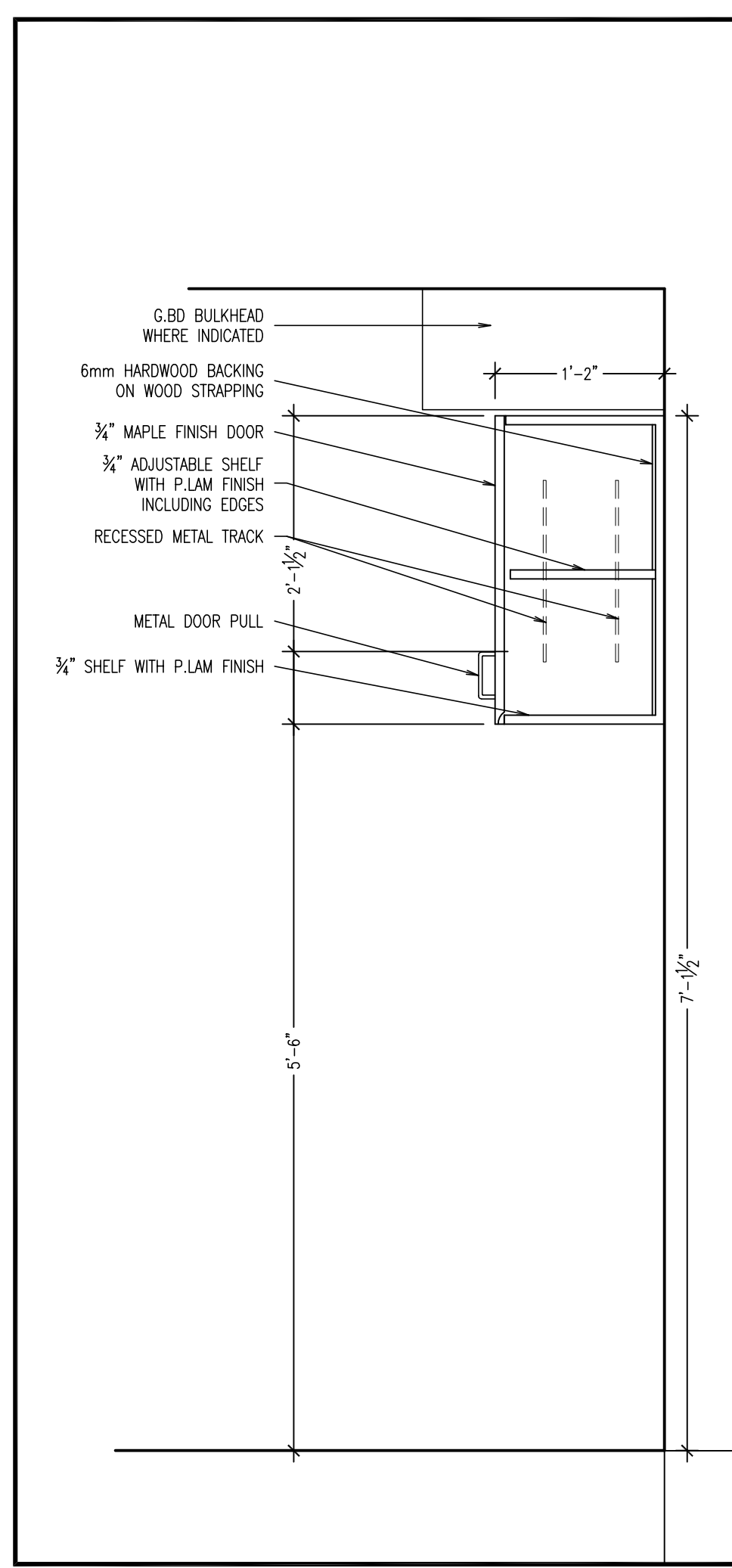
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A401 1"=1'-0"



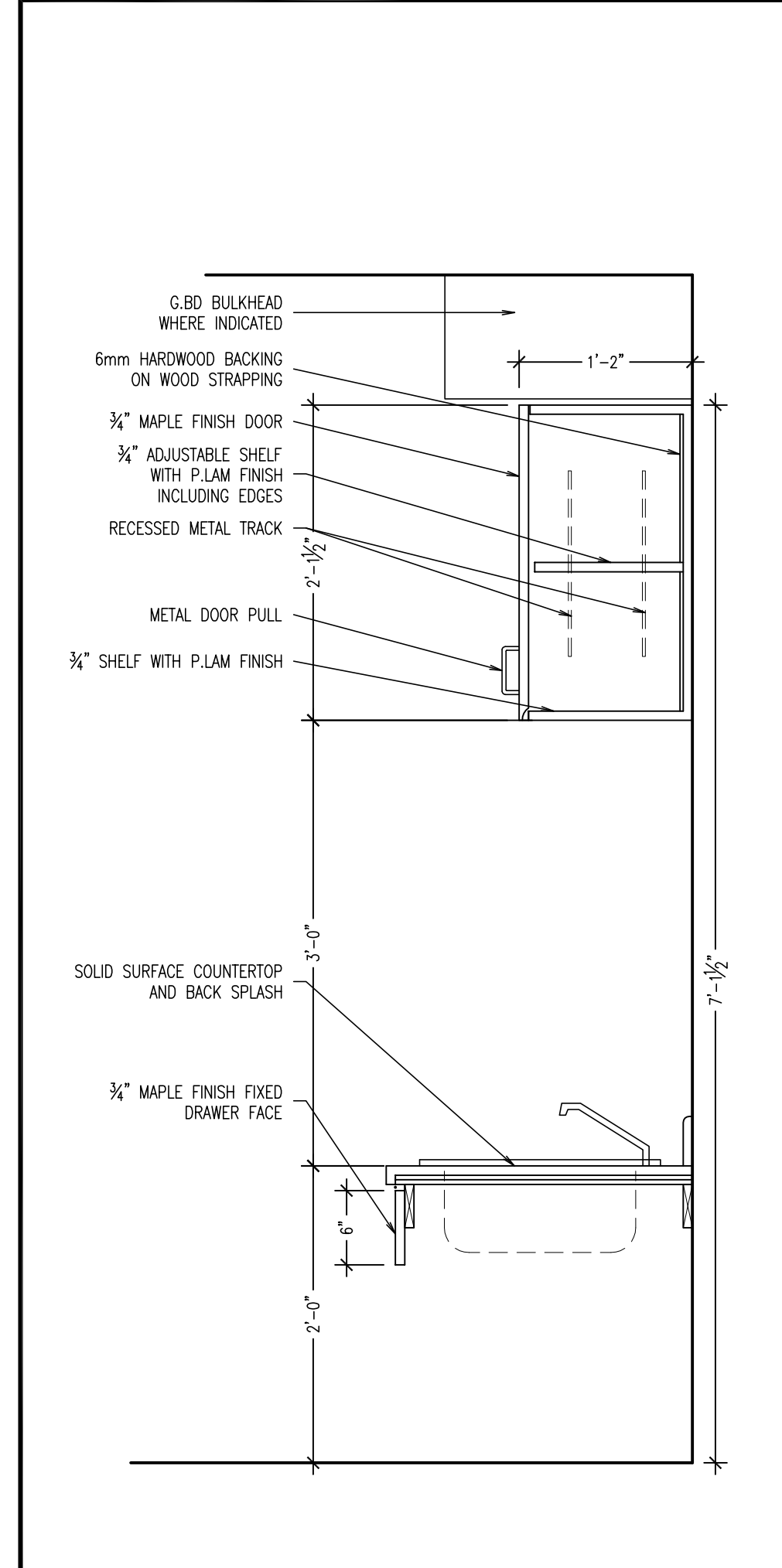
4 MILLWORK SECTION  
A401 1"=1'-0"



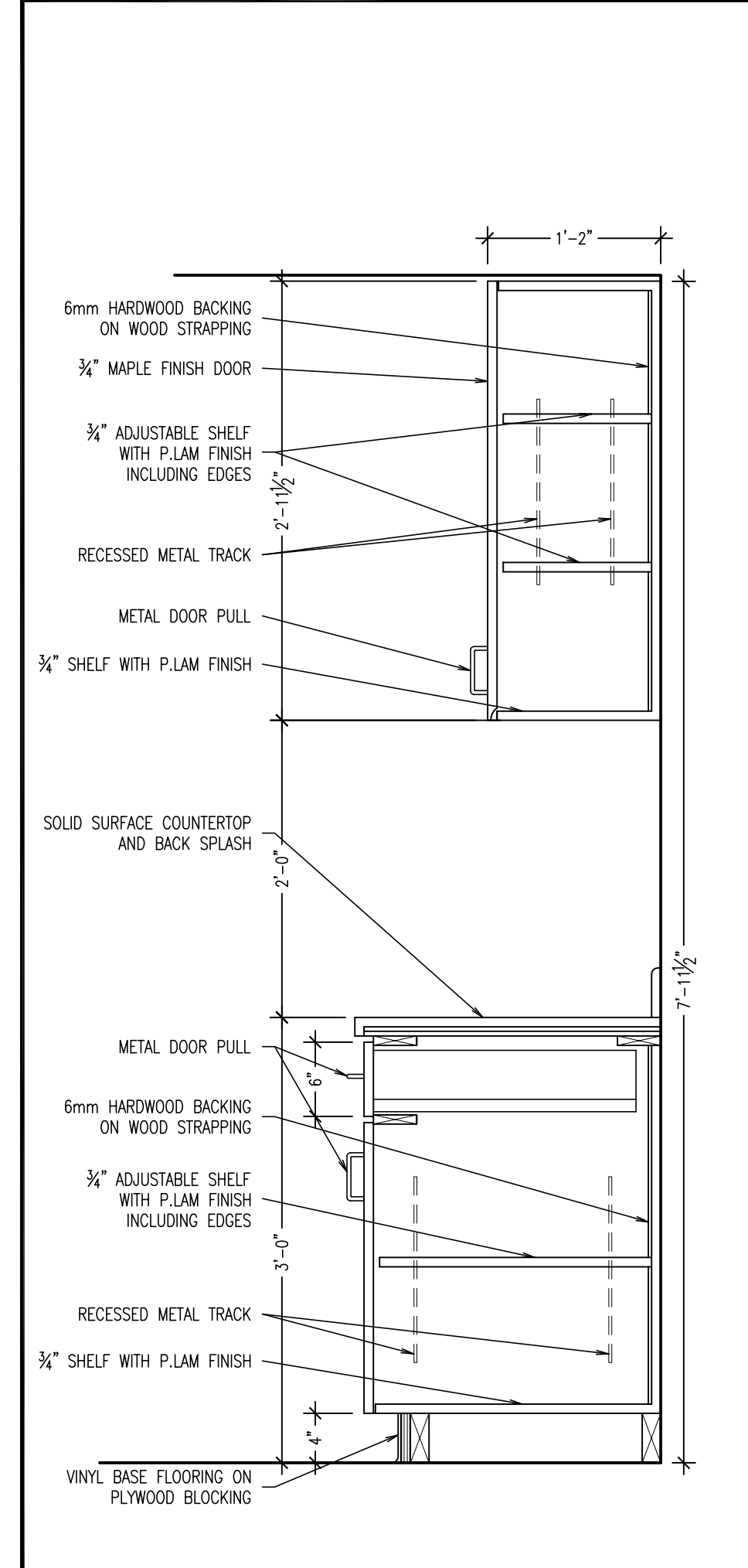
5 MILLWORK SECTION  
A401 1"=1'-0"



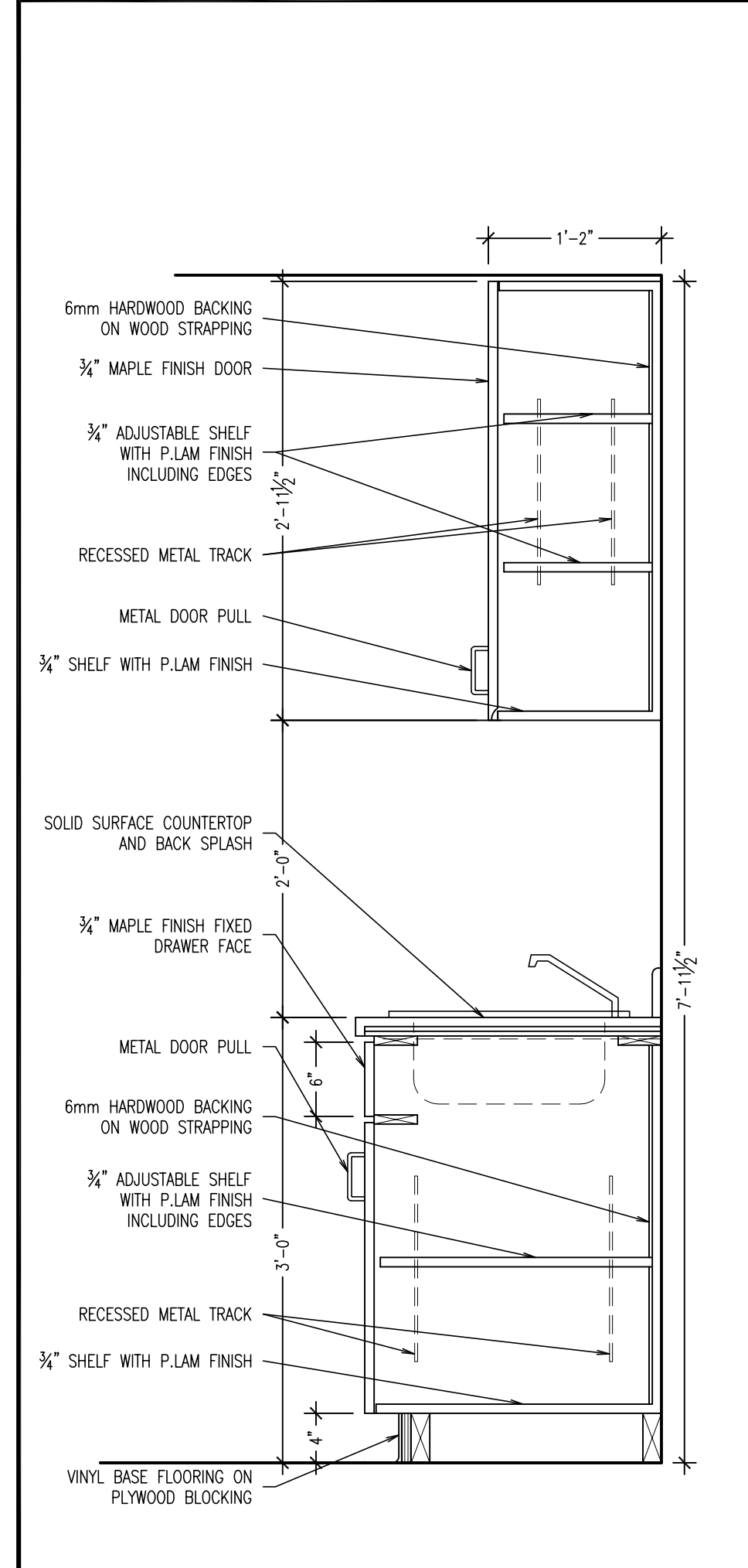
6 MILLWORK SECTION  
A401 1"=1'-0"



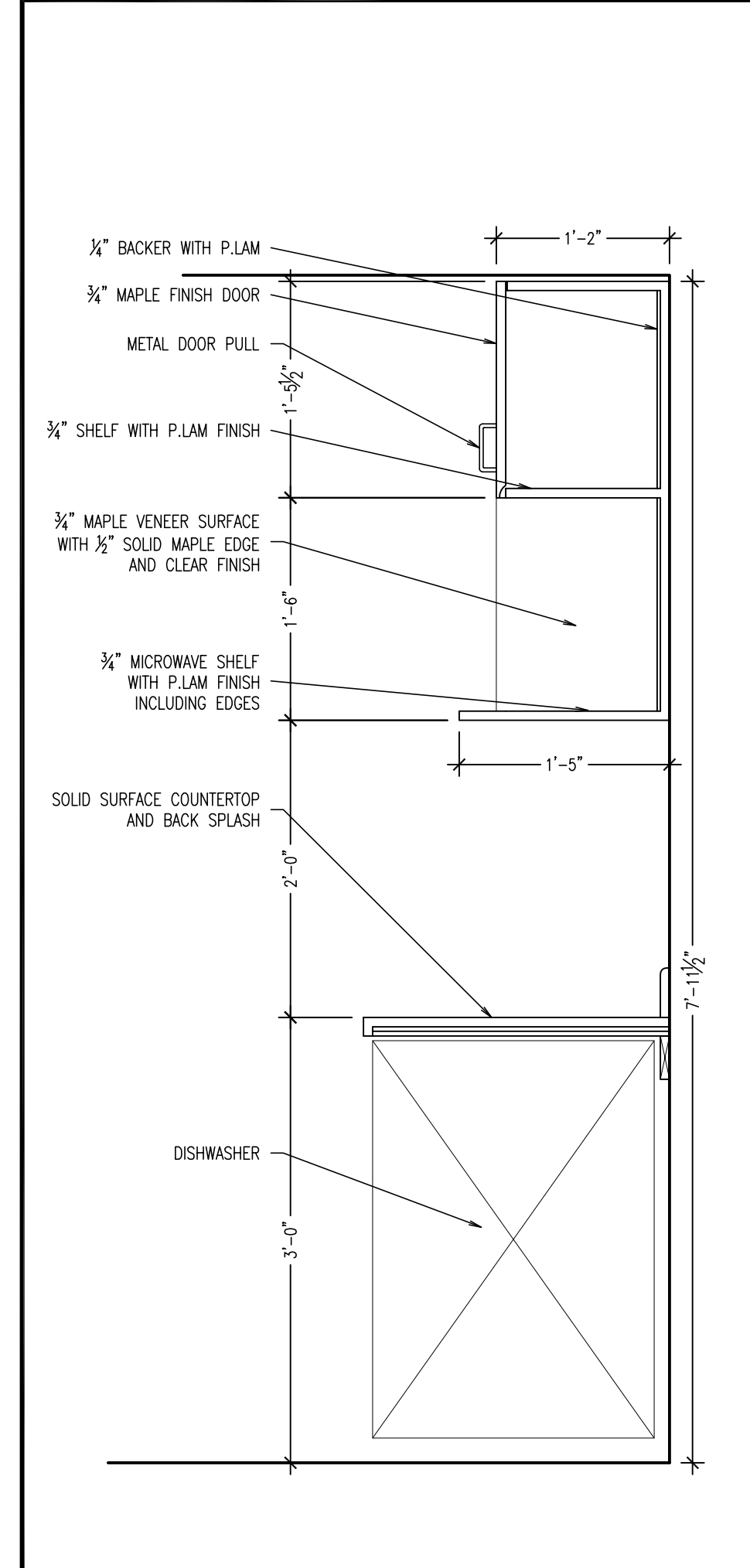
7 MILLWORK SECTION  
A401 1"=1'-0"



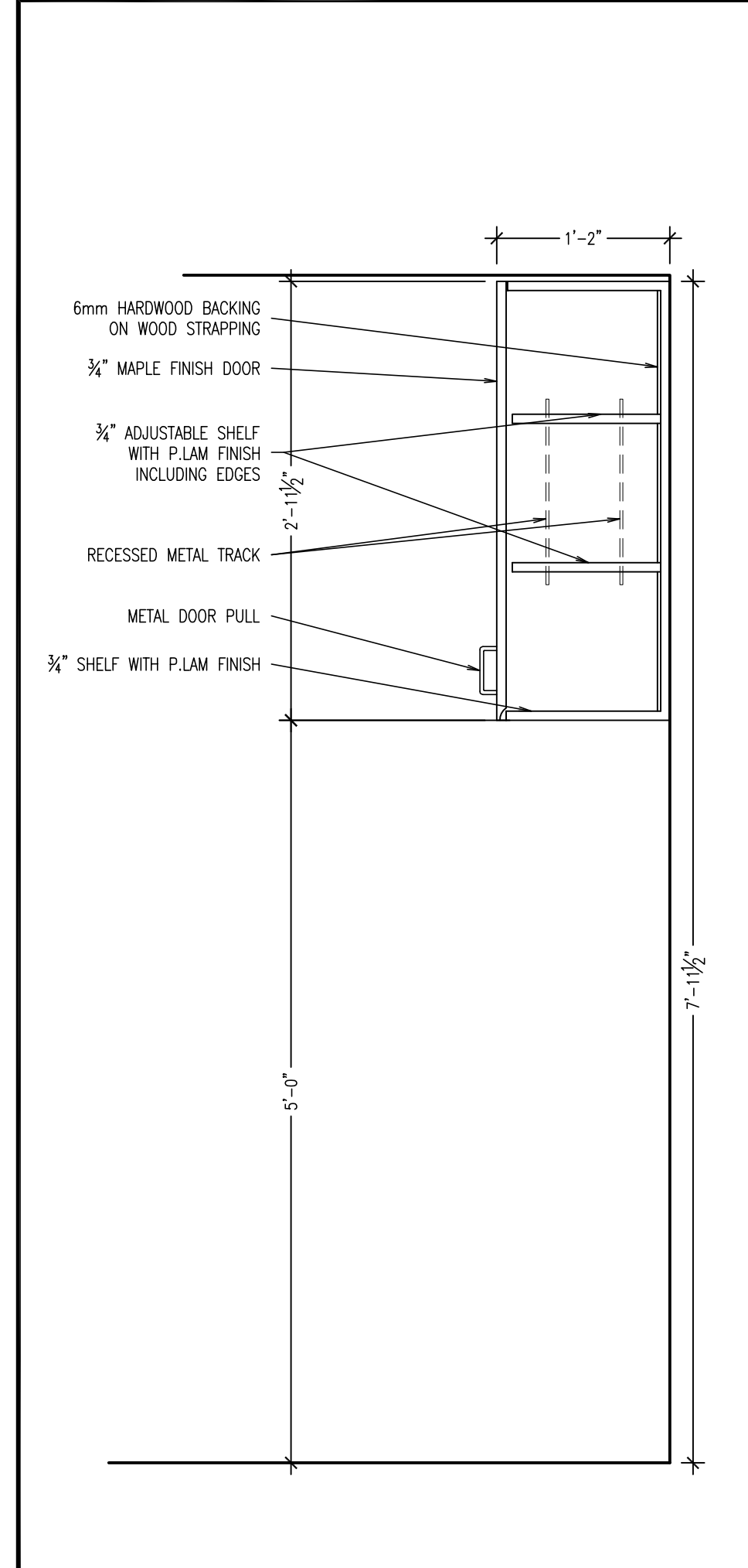
8 MILLWORK SECTION  
A401 1"=1'-0"



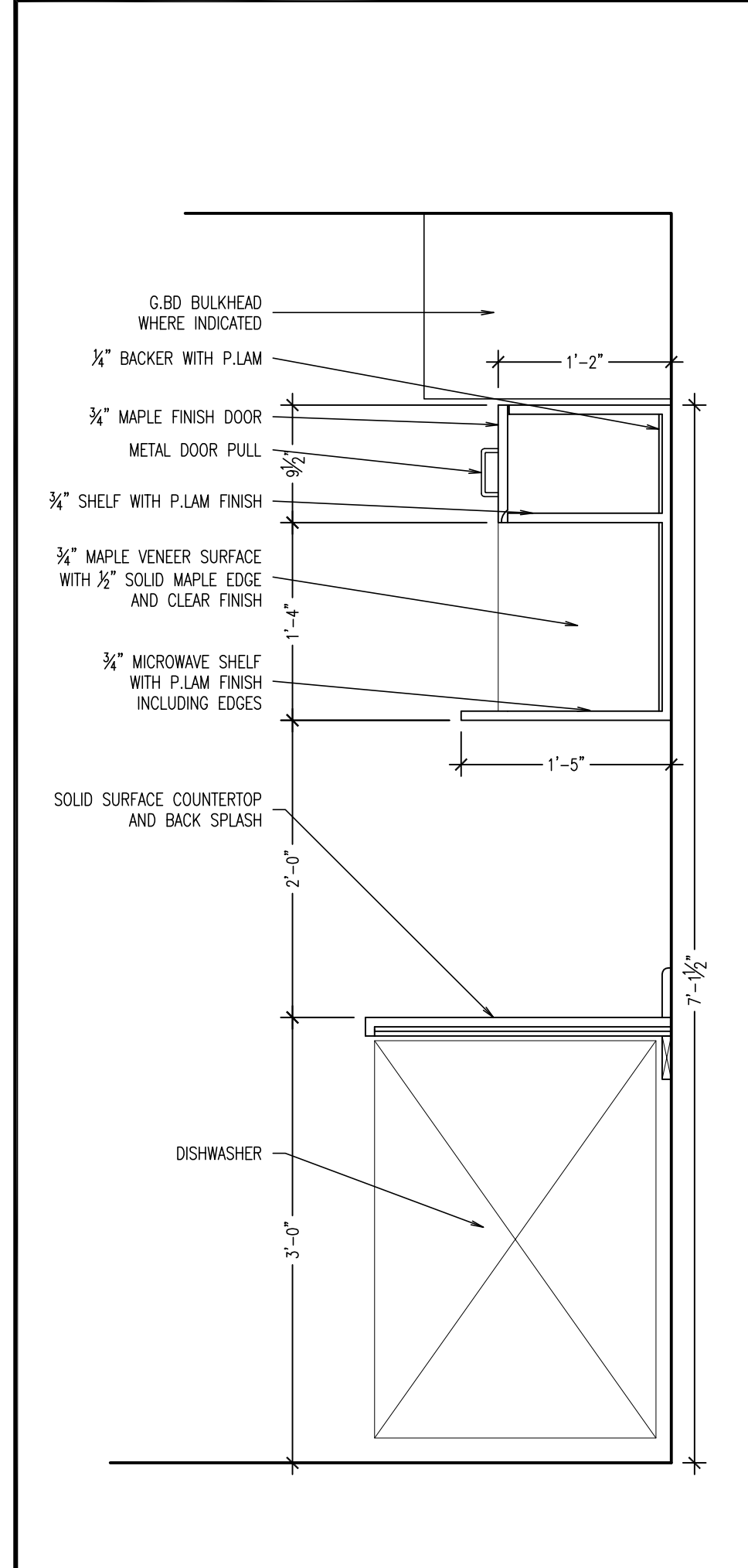
9 MILLWORK SECTION  
A401 1"=1'-0"



10 MILLWORK SECTION  
A401 1"=1'-0"



11 MILLWORK SECTION  
A401 1"=1'-0"



12 MILLWORK SECTION  
A401 1"=1'-0"

DATE: JUNE 24, 2026

REVISIONS: ISSUED FOR TENDER

CHAS J. PERRY  
LICENCE  
4881

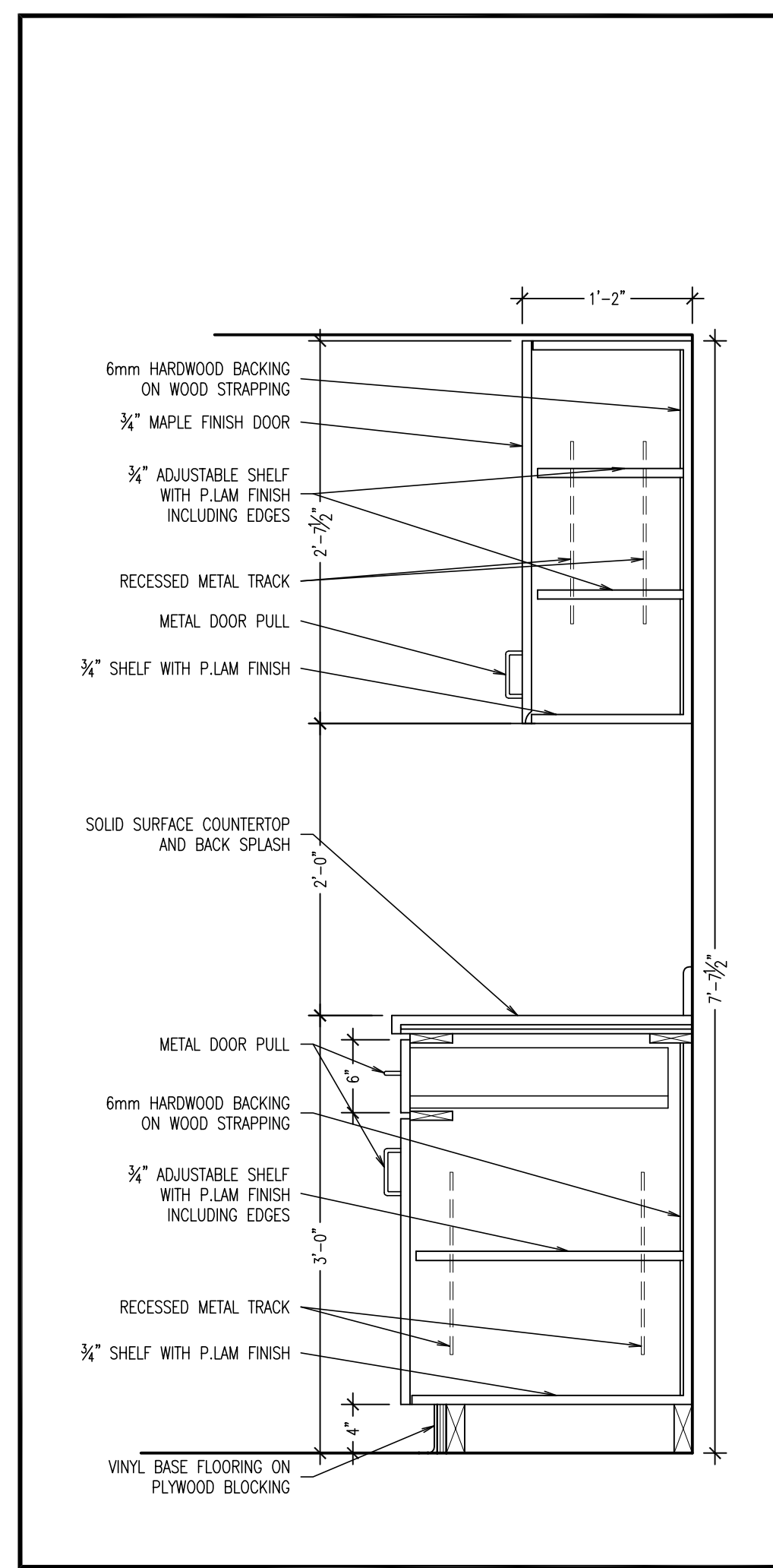
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perry perry

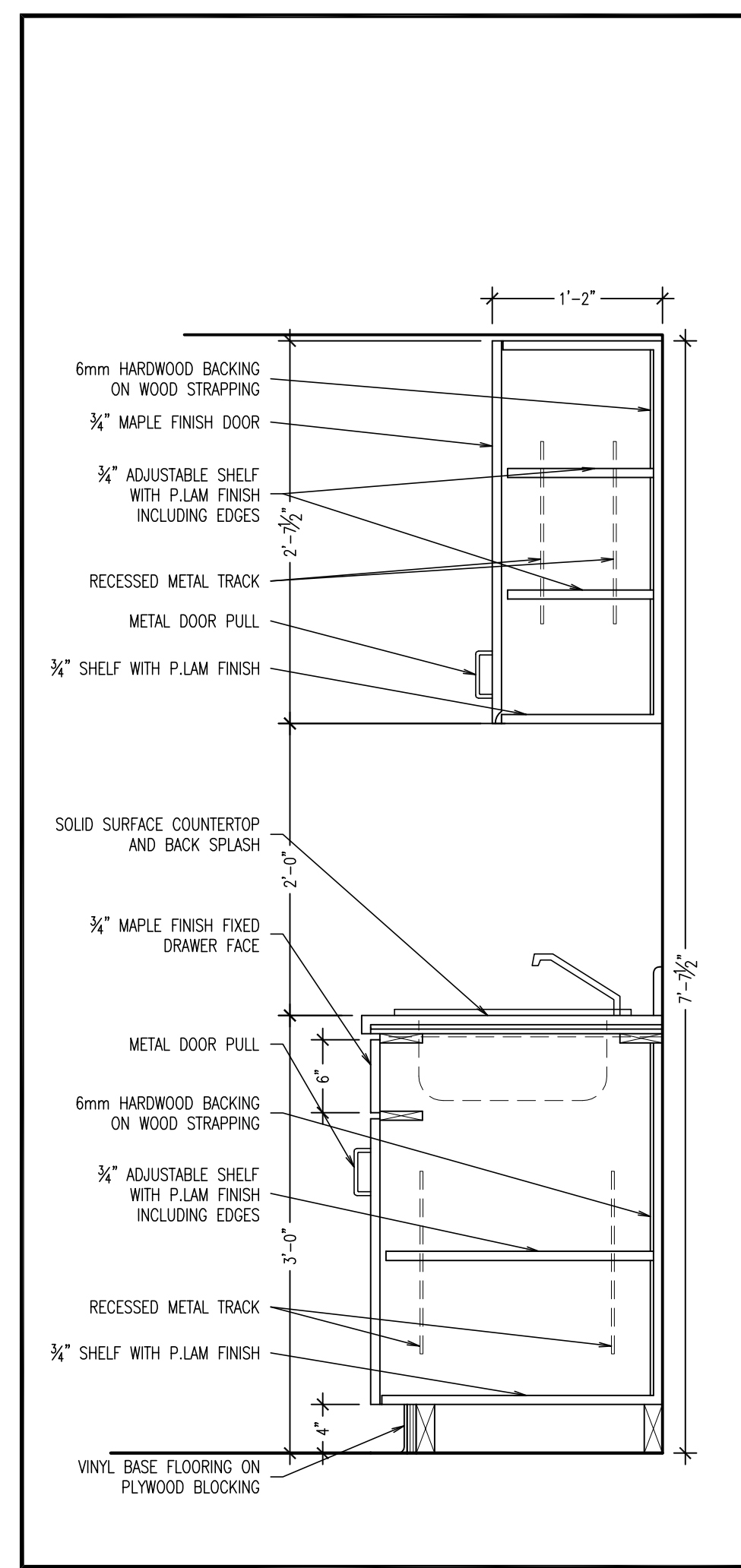
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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION 38 RUTLAND AVENUE, WARREN ON  
MILLWORK SECTIONS

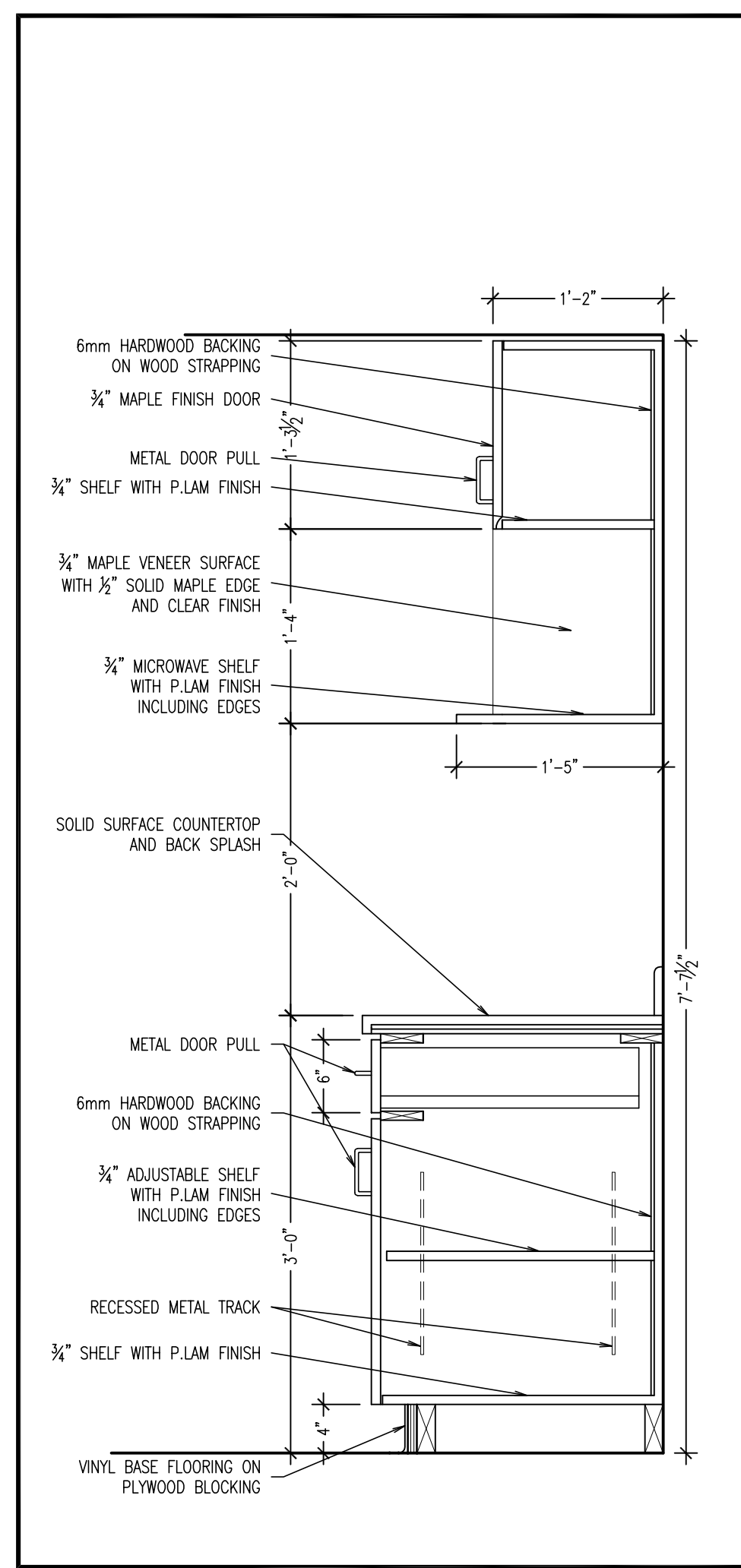
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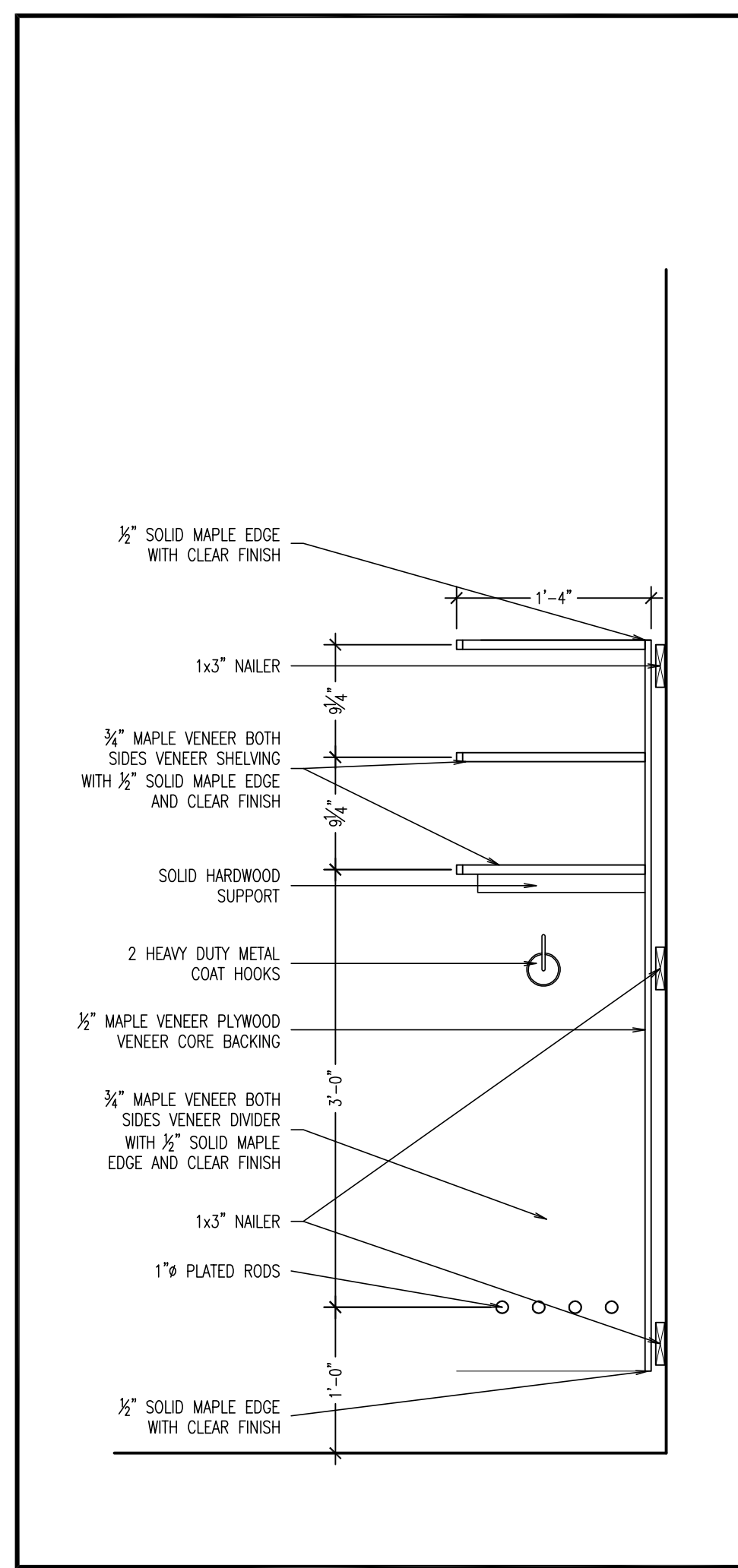
1 MILLWORK SECTION  
A402 1"=1'-0"



2 MILLWORK SECTION  
A402 1"=1'-0"



3 MILLWORK SECTION  
A402 1"=1'-0"



4 MILLWORK SECTION  
A402 1"=1'-0"

DATE: JUNE 24, 2026

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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION 38 RUTLAND AVENUE, WARREN ON  
MILLWORK SECTIONS

Date	JUNE 5, 2026
Scale	AS NOTED
Drawn	EG CP
Job	2603
Sheet	A402

**DIVISION 01 - MECHANICAL GENERAL REQUIREMENTS**

- PROVIDE ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS. USE OF ANY FORM OF THE WORD "PROVIDED" REQUIRES FURNISHING OF LABOUR, MATERIALS AND SERVICES TO PROVIDE THE REFERENCED ITEM.
- THESE MECHANICAL GENERAL REQUIREMENTS SHALL BE READ IN CONJUNCTION WITH THE ALL OTHER DIVISION 01 SPECIFICATIONS ISSUED AS PART OF THIS CONTRACT.
- THIS SECTION SHALL APPLY TO DIVISIONS 21, 22, 23, AND 25.
- SHOULD ANY DISCREPANCY APPEAR BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS, OR BETWEEN ONE PART OF THE SPECIFICATIONS AND ANOTHER, OR BETWEEN ONE LOCATION ON THE DRAWINGS AND ANOTHER, TO CAUSE DOUBT AS TO THE TRUE MEANING AND INTENT OF THE DRAWINGS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE CONSULTANT BEFORE SUBMITTING THE TENDER. IF THIS IS NOT DONE, IT WILL BE ASSUMED THAT THE MORE EXPENSIVE ALTERNATIVE HAS BEEN INCLUDED IN THE CONTRACT.
- ANY ERROR OR INCONSISTENCY IN THE DRAWINGS OR SPECIFICATIONS DISCOVERED AFTER AWARD OF CONTRACT MUST BE REPORTED TO THE CONSULTANT BEFORE COMMENCING WORK ON THE ITEM INVOLVED. THE OMISSION OR INCORRECT MENTION OF ANY WORK THAT IS ABSOLUTELY NECESSARY TO DELIVER COMPLETE, SAFE, AND OPERATIONAL SYSTEMS AT THE COMPLETION OF THE PROJECT DOES NOT RELIEVE THIS CONTRACTOR OF PROVIDING SUCH WORK. ADDITIONAL COSTS RESULTING FROM COMMENCEMENT OF WORK WITHOUT PRIOR RESOLUTION OF ERRORS OR OMISSIONS WILL NOT BE ACCEPTED.
- SUBMIT DIGITAL (PDF) COPY OF SHOP DRAWINGS FOR REVIEW COVERING MANUFACTURED ITEMS I.E. FANS, PLUMBING FIXTURES, AC UNITS, STARTERS, GREASE INTERCEPTOR, PUMPS, CONTROLS, GRILLES, DIFFUSERS, FIRE DAMPERS, PROJECT-SPECIFIC FIRESTOPPING SYSTEMS, ACCESS DOORS, ETC.
- WHERE ITEMS ARE SUBMITTED BY THE CONTRACTOR AND APPROVED AS EQUAL BY THE CONSULTANT, THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, METHODS, TRADES, DIMENSIONS, CLEARANCES, AND WORK AFFECTED BY THE CHANGE IS COORDINATED AND ALTERED TO SUIT NEW ITEMS. APPROVED EQUALS SHALL NOT INCREASE COSTS OR SCHEDULE. APPROVED EQUALS MUST BE FULLY COORDINATED WITH OTHER TRADES AND MATERIALS, AND REVIEWED BY THE CONSULTANT BEFORE COMMENCING WORK. REVISED WORK SHALL BE INTEGRATED INTO THE AS-BUILT DRAWINGS. THIS CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY FAILURE OF THE ALTERNATE/EQUAL TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS. THE REVIEW AND ACCEPTANCE OF AN ALTERNATE/EQUAL BY THE CONSULTANT DOES NOT REMOVE OR CHANGE SUCH RESPONSIBILITY.
- MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT. SUBMIT WSIB CLEARANCE CERTIFICATE BEFORE COMMENCING WORK.
- ARRANGE FOR AND PAY ALL FEES FOR PERMITS, TESTS, CERTIFICATES OF INSPECTIONS, AND UTILITY CONNECTIONS. SUBMIT APPLICATIONS REQUIRING OWNER'S SIGNATURE BEFORE COMMENCING WORK.
- PROVIDE TEMPORARY BUILDINGS FOR MATERIAL STORAGE, SITE OFFICES, ETC. AS REQUIRED. COORDINATE AND PAY ALL COSTS FOR TEMPORARY POWER, SECURITY, OTHER SERVICES, AND INSURANCE. COVERAGE FOR DAMAGE OR THEFT IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- IDENTICAL EQUIPMENT AND MATERIALS SHALL BE OF SAME MANUFACTURER (VALVES, FIRE DAMPERS, ACCESS DOORS, ETC.) UNLESS PRIOR APPROVAL IS RECEIVED FROM THE ENGINEER.
- PROVIDE ALL NECESSARY ACCESS DOORS FOR MECHANICAL SERVICES AND EQUIPMENT WHERE CONCEALED BEHIND FINISHED SURFACES I.E. VALVES, RISER CLEANOUTS, AIR ADMITTANCE VALVES, FIRE DAMPER ACCESS DOORS, ETC. ACCESS DOORS SHALL BE FLUSH TYPE WITH RECESSED HINGES. ACCESS DOORS IN FIRE SEPARATIONS SHALL MATCH FIRE RATING AND SHALL BE ULC APPROVED. ALL ACCESS DOORS SHALL BE EQUIPPED WITH SCREWDRIVER LOCKS. ACCESS DOORS SHALL BE MINIMUM SIZE 18" X 12" AND 24" X 18" WHERE IT IS NECESSARY FOR PERSONS TO ENTER AND SHALL BE ADEQUATELY SIZED AND LOCATED TO PROPERLY SERVICE THE EQUIPMENT SERVED. COORDINATE INSTALLATION WITH DRYWALL AND MASONRY TRADES.
- EXAMINE SITE, EXISTING SERVICES AND ALL DRAWINGS PRIOR TO SUBMITTING TENDERS. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR FAILURE TO DO SO.
- THE DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY AND DO NOT SHOW EVERY STRUCTURAL AND ARCHITECTURAL DETAIL. TAKE ALL INFORMATION INVOLVING ACCURATE MEASUREMENTS FROM THE BUILDING SITE. IF DIMENSIONED ARCHITECTURAL DRAWINGS ARE AVAILABLE, THEY MAY BE USED TO VERIFY SITE MEASUREMENTS.
- BE RESPONSIBLE FOR THE DETAILED LAYOUT OF WORK WITH RESPECT TO THE BUILDING STRUCTURE, CEILINGS AND ARCHITECTURAL FEATURES, AND TO OTHER PIPING, DUCTS, CONDUIT, ETC. IF REQUIRED IN CERTAIN SECTIONS, PRODUCE FIELD DRAWINGS TO SHOW THE RELATIVE POSITIONS OF VARIOUS SERVICES AND HAVE THESE APPROVED BEFORE PROCEEDING WITH THE WORK. MAKE GOOD ANY DAMAGE TO OWNER'S PROPERTY OR OTHER TRADES WORK CAUSED BY IMPROPERLY LOCATING OR CARRYING OUT OF WORK.
- LOCATION OF FLOOR DRAINS, CONNECTORS, UNIT HEATERS, DIFFUSERS, REGISTERS, GRILLES, AND OTHER SIMILAR ITEMS MAY BE ALTERED PROVIDED INFORMATION IS GIVEN PRIOR TO ROUGHING IN. NO EXTRA COSTS WILL BE APPROVED FOR EXTRA LABOUR AND MATERIALS FOR RELOCATING DRAINS, FIXTURES, AND EQUIPMENT UP TO 3 METERS (10 FEET) FROM THE ORIGINAL LOCATION, NOR WILL CREDITS BE ANTICIPATED WHERE THIS RELOCATION REDUCES MATERIAL AND LABOUR. OTHER CASES WILL BE CONSIDERED ON THEIR INDIVIDUAL MERITS.
- ALL CUTTING AND PATCHING FOR MECHANICAL WORK WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- SUPPLY, LOCATE, AND INSTALL ALL BASES, PADS, SUPPORTS, SLEEVES, CURBS, ETC. REQUIRED FOR THIS WORK.
- FLASHING OF ROOF PENETRATIONS SHALL BE BY ROOF TRADES. COUNTER-FLASHING BY THIS CONTRACTOR UNLESS OTHERWISE NOTED. HIRE CERTIFIED TRADE TRUERS TO PERFORM ALL ROOFING WORK.
- SUPPLY PROPERLY SIZED, NEMA 12 RATED COMBINATION STARTERS WITH OVERLOAD PROTECTION AND FUSED DISCONNECT SWITCHES FOR POWERED MECHANICAL EQUIPMENT AND HAND OVER TO ELECTRICAL CONTRACTOR FOR INSTALLATION. THREE PHASE STARTERS SHALL BE COMPLETE WITH SOLID STATE AUTOMATIC OVERLOAD RELAYS FOR OVERLOAD AND PHASE UNBALANCE/LOSS OF MOTION. PROVIDE FULL VOLTAGE MONITORING FOR MOTOR STARTERS WITH PILOT LIGHT FOR ALL 120 VOLT MOTORS. ALL STARTERS SHALL BE HAND/OFF/AUTO TYPE WITH AUXILIARY OUTPUT CONTACTS FOR INTERLOCK OR BAS MONITORING, AND 120V FUSED CONTROL TRANSFORMERS INSIDE THE STARTER ENCLOSURE SIZED FOR STARTER REQUIREMENTS PLUS ADDITIONAL POWER LOAD TO POWER DAMPERS, EXHAUSTORS AND OTHER ACCESSORIES. STANDARD OF ACCEPTANCE SHALL BE SCHNEIDER, EATON, SIEMENS, ALLEN-BRADLEY.
- CONTROL AND INTERLOCK WIRING FOR MECHANICAL SYSTEMS BY MECHANICAL CONTRACTOR (REGARDLESS OF VOLTAGE). CABLE TO BE INSTALLED CONCEALED ABOVE CEILINGS AND BEHIND WALLS, WHERE POSSIBLE. CABLE SHALL BE SUPPORTED FROM OR ANCHORED TO STRUCTURAL MEMBERS. DO NOT SUPPORT CABLE FROM DUCTWORK, ELECTRICAL CONDUITS, PIPING, OR CEILING SUSPENSION SYSTEMS. WHERE CABLE IS EXPOSED, IT IS TO BE RUN EITHER PARALLEL OR PERPENDICULAR TO STRUCTURE OR ARCHITECTURE. WALLS AND BE NEATLY SECURED AT 10 FT. INTERVALS. WIRING EXPOSED IN RETURN AIR PLENUMS SHALL BE FT-6. HIRE CERTIFIED ELECTRICAL TRADESMEN TO PERFORM LINE VOLTAGE WORK.
- COMPLETE EXCAVATING AND BACKFILLING FOR MECHANICAL WORK. BED PIPING, AND BACKFILL TO 12" ABOVE PIPE WITH CLEAN SAND, COMPACTED IN 6" LAYERS. USE EXCAVATED MATERIAL FOR REMAINDER OF BACKFILLING.
- PIPE HANGERS SHALL BE ADJUSTABLE CLEVIS TYPE WITH THREADED STEEL RODS. FOR COPPER PIPE, USE COPPER HANGERS. USE OVERSIZED HANGERS AND SADDLES FOR ALL COLD SERVICE PIPING.
- EQUIPMENT OR PIPING SHALL NOT BE SUPPORTED DIRECTLY FROM ROOF DECK WITHOUT PERMISSION FROM ENGINEER. PROVIDE NECESSARY STEEL TO TRANSFER LOAD TO STRUCTURAL MEMBERS. SUBMIT STEEL SHOP DRAWINGS WHEN REQUIRED OR REQUESTED BY THE ENGINEER. PROTECT STEEL FROM CORROSION WHERE EXPOSED TO WET OR HUMID CONDITIONS BY USING GALVANIZED MATERIAL, OR BY PAINTING WITH EPOXY-TYPE PAINT (COLOUR TO BE APPROVED BY ENGINEER).
- ALL DISSIMILAR METALS (STEEL-COPPER, ETC.) SHALL BE SEPARATED USING DI-ELECTRIC FITTINGS TO PREVENT GALVANIC CORROSION. DI-ELECTRIC FITTINGS OR ELECTRICAL SEPARATION MAY BE USED IN CERTAIN CIRCUMSTANCES WHERE APPROVED BY THE ENGINEER.
- INSTALL CHROME-PLATED ESCUTCHEONS WHERE BRANCH PIPES PASS THROUGH FINISHED SURFACE.
- ACCURATE AND UP-TO-DATE "AS-BUILT" DRAWINGS SHALL BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION. SUBMIT FINAL COPIES BEFORE CERTIFICATE OF SUBSTANTIAL COMPLETION. ANY NEWLY INSTALLED BURIED SERVICES MUST BE DIMENSIONED FROM GRID-LINES OR COLUMNS.
- ALL SURFACES MUST BE LEFT CLEAN AND SMOOTH, READY FOR PAINTING BY GENERAL TRADES.
- IDENTIFY ALL PIPING, VALVES, AND DUCTWORK. USE STENCILS OR COLOUR CODED LABELS WITH SYSTEM DESCRIPTION AND DIRECTIONAL ARROWS. FOR VALVES, USE STAMPED - NUMBERED BRASS VALVE TAGS WITH BEAD CHAIN. VERIFY OWNER'S SERVICE IDENTIFICATION SYSTEM BEFORE COMMENCING WORK. NEW IDENTIFICATION SHALL FOLLOW

**EXISTING SYSTEMS, UNLESS ADVISED OTHERWISE BY OWNER OR ENGINEER.**

- IDENTIFY ALL AIR HANDLERS, FANS, PUMPS, STARTERS, REMOTE CONTROL AND ALL OTHER EQUIPMENT BY AN ENGRAVED BLACK PLASTIC LAMINCO NAMEPLATE WITH WHITE CORE, PROMINENTLY FASTENED WITH SCREWS TO EACH UNIT. NAMING CONVENTION/EQUIPMENT IDENTIFICATION TO FOLLOW DESIGN DRAWINGS, UNLESS ADVISED OTHERWISE BY OWNER OR ENGINEER.
- REMOVE FROM THE PREMISES ALL TOOLS, GARBAGE, SURPLUS AND WASTE MATERIALS RESULTING FROM MECHANICAL WORK. CLEAN ALL EQUIPMENT AND AREAS AROUND MECHANICAL EQUIPMENT, AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
- BEFORE FINAL PAYMENT IS MADE, THE MECHANICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM AND HIS SUBCONTRACTORS IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER ANY AND ALL DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
- INSTRUCT OWNER'S REPRESENTATIVE IN SYSTEM AND EQUIPMENT OPERATION AND MAINTENANCE AND PROVIDE ELECTRONIC (PDF) VERSIONS OF OPERATING AND MAINTENANCE MANUALS, STANDARDS AND EXTENDED WARRANTY DOCUMENTATION, INSPECTION AND TEST CERTIFICATES, COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT AND AS-BUILT DRAWINGS.
- INCLUDE WITH OPERATION AND MAINTENANCE MANUALS ALL SYSTEM AND EQUIPMENT TESTING CERTIFICATES, BALANCING REPORTS, EQUIPMENT START-UP SHEETS, AND EQUIPMENT MANUFACTURER'S COMPLETED COMMISSIONING DOCUMENTATION.

**DIVISION 22 - PLUMBING**

- ALL PLUMBING AND DRAINAGE WORK SHALL BE INSTALLED BY LICENSED PLUMBERS AS REQUIRED BY ONTARIO BUILDING CODE, REVISED TO DATE, AND SHALL MEET THE REQUIREMENTS OF ALL PROVINCIAL AND MUNICIPAL AUTHORITIES HAVING JURISDICTION.
- MAKE ALL NECESSARY CONNECTIONS TO EXISTING SERVICES.
- PROVIDE ALL HOT AND COLD WATER, WASTE AND VENT CONNECTIONS REQUIRED FOR "NOT IN CONTRACT" (N.I.C.) ITEMS, "CASH ALLOWANCE" ITEMS, AND "SUPPLIED BY OWNERS" (S.B.O.) ITEMS. THIS INCLUDES DISHWASHERS, CLOTHES WASHERS, ICE MAKERS, CONDENSER UNITS, COFFEE MAKERS, ETC. COORDINATE WITH ALL OTHER TRADES TO DETERMINE FINAL LOCATIONS OF EQUIPMENT AND ANY CONNECTIONS THEY REQUIRE AND MAKE ALL SUCH CONNECTIONS. PROVIDE ISOLATION VALVES AND UNIONS ON EACH WATER AND GAS CONNECTION CLOSE TO EACH PIECE OF EQUIPMENT. PROVIDE A CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND VENT FOR ALL EQUIPMENT WASTE CONNECTIONS. WHERE EQUIPMENT WASTE DISCHARGES INTO A FLOOR DRAIN OR FLOOR SINK, PROVIDE PIPING FROM EQUIPMENT WASTE CONNECTION TO FLOOR DRAIN c/w AIR GAP AS REQUIRED. PLUMBER SHALL COMPLETE ALL FINAL CONNECTIONS TO EQUIPMENT TO PERMIT OPERATION. TRAP SHALL BE INSTALLED IN ACCORDANCE WITH THE OWNER OR GENERAL CONTRACTOR AND SHALL INCLUDE FOR INSTALLATION OF ALL EQUIPMENT AND EQUIPMENT ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLETE AND SUBMIT WRITTEN START-UP REPORTS AND CHECKLISTS WHERE PROVIDED WITH EQUIPMENT INSTALLATION INSTRUCTIONS.
- PROVIDE ALL NECESSARY WATER PRESSURE REGULATORS, FLEXIBLE CONNECTIONS, AND WATER HAMMER ARRESTORS WHERE REQUIRED BY EQUIPMENT.
- INSULATION FOR DOMESTIC WATER PIPING SHALL HAVE A MAX. K-VALUE=0.29 AT 125°F MEAN TEMPERATURE. DOMESTIC WATER PIPING (COLD, HOT, AND HOT WATER REGRIC.), VALVES AND FITTINGS UP TO 1 1/2" IN DIAMETER SHALL BE INSULATED WITH 1" THICK PIPE INSULATION WITH ASJ. USE 1/2" THICK FIBERGLASS PIPE INSULATION WITH ASJ FOR PIPING, VALVES AND FITTINGS 1 1/2" AND OVER.
- MITRE INSULATION AT ELBOWS. SEAL RAW ENDS OF INSULATION WITH VAPOUR RETARDER MASTIC. IN EXPOSED AREAS FINISH WITH P.V.C. JACKETING, USING PRE-FORMED JACKETING FOR ELBOWS, FITTINGS, VALVES, ETC. INSULATION SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE THERMAL INSULATION ASSOCIATION OF CANADA STANDARDS.
- ABOVE GROUND WATER PIPING SHALL BE TYPE "A" COPPER C/W LEAD-FREE SOLDER JOINTS. SYSTEMS USING PRESS-FIT STYLE FITTINGS SHALL BE PRE-APPROVED FOR USE BY THE ENGINEER PRIOR TO SUBMITTING TENDERS. PUSH CONNECT FITTINGS WILL NOT BE PERMITTED FOR PERMANENT USE.
- ISOLATION VALVES UP TO 4" SHALL BE LEAD-FREE FULL THROAT BRONZE BALL VALVES. 6" AND OVER SHALL BE BUTTERFLY VALVES. VALVES SHALL BE CERTIFIED TO NSF/ANSI/CAN 61 STANDARD.
- CIRCUIT BALANCING VALVES (CBV) SHALL BE SUITABLE FOR DOMESTIC WATER USAGE AND SHALL BE CAPABLE OF BEING USED AS A SHUT OFF VALVE. BALANCE TO FLOWS INDICATED ON DRAWINGS. VALVES TO BE MACHINED VENTURI TYPE c/w BRASS METERING PORTS WITH CHECK VALVES AND GASKETTED CAPS, MULTI-TURN 360 DEGREE ADJUSTMENT WITH MICROMETER TYPE INDICATORS ON THE VALVE HANDWHEEL. HIDDEN MEMORY STOP TO LOCK VALVE IN POSITION AFTER SETTING FLOW AND LIMIT OPENING TRAVEL. DISTANCE FROM CONTRACTOR OR BALANCER IS TO USE A FLOW METER WHEN SETTING THE DESIGN FLOWS AND RECORD AND SUBMIT VALUES ON A WATER BALANCING REPORT. STANDARD OF ACCEPTANCE ARMSTRONG CBV, IMI TA.
- ALL BURIED SANITARY AND STORM DRAINAGE PIPING SHALL BE PVC SDR 35 WITH SOLVENT JOINTS TO CSA B182.2. PIPING 8" AND OVER SHALL USE GASKETTED JOINTS.
- ALL ABOVE GROUND SANITARY AND STORM DRAINAGE AND VENT PIPING IN LOW-RISE BUILDINGS WHERE PIPING DOES NOT RUN THROUGH AIR PLENUMS SHALL BE PVC DWV TO CSA B181.2 AND CAN/ULC S102.2 STANDARDS. STANDARD OF ACCEPTANCE, IPEX SYSTEM 15 PVC.
- ALL ABOVE GROUND SANITARY AND STORM DRAINAGE AND VENT PIPING IN HIGH BUILDINGS AND/OR WHERE PIPING RUNS THROUGH AIR PLENUMS SHALL BE PVC DWV TO CSA B181.2 WITH FLAME SPREAD RATING NO GREATER THAN 25 AND SMOKE DEVELOPED CLASSIFICATION NOT GREATER THAN 50. STANDARD OF ACCEPTANCE, IPEX SYSTEM XFR PVC.
- CONDENSATE PIPE SHALL BE RIGID PVC APPROVED FOR FLAME SPREAD AND SMOKE. COPPER PIPING IS TO BE USED WHERE PVC IS NOT PERMITTED. CLEAR FLEXIBLE TUBING SUPPLIED WITH EQUIPMENT IS NOT ACCEPTABLE.
- ENTIRE SANITARY VENTING SYSTEM IS NOT INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL FIXTURES, DRAINS, ETC. ARE VENTED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE, PROVIDE ALL NEW VENTING SYSTEMS INCLUDING ROOF PENETRATIONS. ONLY CONNECT TO EXISTING PLUMBING VENTING WHERE SUFFICIENTLY SIZED AND IN LOCATIONS APPROVED BY THE ENGINEER. LOCATE AND INSTALL SANITARY VENTING TERMINATIONS NO CLOSER THAN 15 FEET TO BUILDING FRESH AIR INTAKES.
- PROVIDE ALL PLUMBING FIXTURES AS SHOWN ON DRAWINGS AND LISTED IN THE FIXTURE LIST AND SCHEDULES.
- FLOOR DRAINS SHALL BE TRAPPED TO CODE AND PRIMED USING ELECTRONICALLY ACTUATED TRAP PRIMING DISTRIBUTION UNITS FOR TRAPPING MULTIPLE DRAINS. TRAP PRIMER UNITS SHALL BE PRECISION PLUMBING PRODUCTS INC. PT SERIES (OR EQUAL). PROVIDE 1/2" VALVED CONNECTION AND 120V POWER CONNECTION FOR TRAP PRIMING UNITS. LOCATE TRAP PRIMING EQUIPMENT IN A SERVICE ROOM LOCATOR AS CLOSE TO FLOOR DRAINS SERVED AS POSSIBLE. WHERE A SERVICE ROOM IS NOT AVAILABLE, INSTALL WALL RECESSED UNITS AND OBTAIN APPROVAL ON INSTALLATION LOCATION FROM ENGINEER PRIOR TO INSTALLATION. SUBMIT SHOP DRAWINGS FOR TRAP SEAL PRIMING UNIT INDICATING NUMBER OF FLOOR DRAINS SERVED AND PROPOSED LOCATION. COORDINATE WITH DIVISION 26 TO PROVIDE 120V POWER FROM NEAREST AVAILABLE CIRCUIT.
- ALL VISIBLE SUPPLY PIPING, DRAINAGE PIPING, AND TRAPS AT FIXTURES SHALL BE CHROME PLATED. P-TRAPS, DRAINS, AND DOMESTIC WATER SUPPLIES EXPOSED BELOW BARRIER FREE SINKS SHALL BE PROVIDED WITH PVC GUARDS DESIGNED TO FIT OFFSET DRAIN ASSEMBLIES AND WATER SUPPLIES.
- FLOOR CLEANOUTS SHALL BE INSTALLED WHERE REQUIRED AND AT SPACING REQUIRED BY ONTARIO BUILDING CODE. CLEANOUTS COVERS SHALL BE SELECTED TO SUIT FLOOR MATERIAL.
- ALL STAINLESS STEEL SINKS LOCATED IN KITCHENS, KITCHENETTES, STAFF ROOMS, BREAK ROOMS, ETC. SHALL BE PROVIDED WITH A CLEANOUT ON THE FIXTURE TRAP ARMS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
- ALL INSIDE AND OUTSIDE HOSE BIBBS SHALL BE PROVIDED WITH APPROVED BACKFLOW PREVENTERS. FOR ALL MECHANICAL EQUIPMENT CONNECTIONS, USE REDUCED PRESSURE TYPE BACKFLOW PREVENTERS. FOR ALL BACKFLOW PREVENTERS PROVIDE FUNNEL AND DRAIN PIPING FROM RELIEF OPENINGS AND EXTEND TO NEAREST FLOOR DRAIN.
- PROVIDE LEVER HANDLE QUARTER-TURN BALL VALVE FIXTURES STOP VALVES ON THE HOT AND COLD WATER SUPPLY TO EVERY FIXTURE ON THE JOB, IN ADDITION TO THE VALVE OR FAUCET ON THE FIXTURE ITSELF.
- ALL FIXTURES SHALL BE C/W NECESSARY TRIM, CARRIERS, TRAP SUPPLIES, STOPS, TAIL PIECES, TRAPS, GASKETS, ETC.

**DIVISION 23 - HEATING, VENTILATION, AND AIR-CONDITIONING**

- PROVIDE ALL HEATING, VENTILATION, AIR CONDITIONING, AIR HANDLING SYSTEMS AND EQUIPMENT AS SHOWN ON DRAWINGS.
- ARRANGE ALL PIPING, DUCTWORK, SYSTEMS AND EQUIPMENT TO ALLOW FOR EXPANSION AND CONTRACTION DUE TO HEATING AND COOLING. INSTALL FLEXIBLE CONNECTIONS WHERE NECESSARY AND INCLUDE FOR PIPE LOOPS, ANCHORS, GUIDES, AND HANGERS.
- PROVIDE 2 1/2" LIQUID-FILLED PRESSURE GAUGES WHERE SHOWN AND AT A MINIMUM CONNECTED TO PUMP SUCTION AND DISCHARGE ON SYSTEM SIDE OF SYSTEM FILL, AND ON THE INLET AND OUTLET SIDES OF HEAT EXCHANGERS. PRESSURE GAUGE SCALE TO BE CHOSEN TO READ IN BOTH PSI AND KPA BETWEEN HALF AND TWO THIRDS OF FULL SCALE WITH MIN. AND MAX. EXPECTED READING WITH THIS RANGE. STANDARD OF ACCEPTANCE TRERKE, WINTERS.
- PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL RESILIENTLY MOUNTED FANS AND WHERE REQUIRED TO STOP TRANSFER OF VIBRATION FROM EQUIPMENT TO DUCTWORK SYSTEMS.
- EXECUTE SYSTEM TESTING ADJUSTING AND BALANCING OF ALL AIR SYSTEMS. EQUIPMENT AND LIQUID SYSTEMS IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING TESTING, ADJUSTING AND BALANCING SPECIFICATIONS. INCLUDE FOR NECESSARY SPARE BELTS AND PULLEYS FOR FIELD ADJUSTMENT.
- TESTING, ADJUSTING, AND BALANCING (TAB) OF MECHANICAL SYSTEMS SHALL BE PERFORMED BY A QUALIFIED THIRD PARTY FIRM SPECIALIZING IN TAB. THE FIRM SHALL BE INDEPENDENT OF THE SUPPLIERS AND THE MECHANICAL CONTRACTOR AND SHALL BE AN ACCREDITED MEMBER OF EITHER THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB).
- THE TAB CONTRACTOR SHALL COOPERATE WITH THE MECHANICAL CONTRACTOR, WHO WILL OPERATE THE SYSTEMS AND UPON REQUEST FROM THE TAB CONTRACTOR, MAKE ANY REQUIRED ADJUSTMENTS TO THE SYSTEMS TO MEET THE SPECIFIED PERFORMANCE.
- ALL TESTING AND BALANCING WORK SHALL BE IN ACCORDANCE WITH THE CURRENT ISSUE OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC), NATIONAL STANDARDS FOR TAB. THE TAB CONTRACTOR SHALL INSTALL AND MAINTAIN TAB WORKING STANDARDS TABLES, PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, BALANCING OF ENVIRONMENTAL SYSTEMS, AND SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA), HVAC TAB HVAC SYSTEMS - TESTING, ADJUSTING AND BALANCING.
- BALANCE ALL HEATING RATES, COOLING RATES, AIR FLOWS, AND WATER FLOWS TO WITHIN 5% OF THEIR DESIGN VALUES.
- REVIEW ALL MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS, SHOP DRAWINGS, INTERFERENCE DRAWINGS AND OTHER DOCUMENTATION TO BECOME FULLY FAMILIAR WITH THE SYSTEMS AND THE SPECIFIED PERFORMANCE REQUIREMENTS.
- REPORT ANY OBJECTIONABLE NOISE OR VIBRATION TO THE MECHANICAL CONTRACTOR AND ENGINEER IMMEDIATELY.
- OPERATE, TEST AND BALANCE ALL EQUIPMENT OVER THEIR ENTIRE DESIGN RANGE OF OPERATION INCLUDING MIN. AND MAX. FRESH AIR, RETURN AIR AND SUPPLY AIR. FULLY SIMULATE BOTH HEATING AND COOLING CONDITIONS. RECORD SPECIFIC DATA TO VERIFY COMPLIANCE WITH DESIGN REQUIREMENTS.
- SUBMIT THE FOLLOWING DATA FOR EQUIPMENT:
  - MOTORS
    - MANUFACTURER
    - MODEL AND SERIAL NUMBER
    - RATED AMPERAGE AND VOLTAGE
    - RATED HORSEPOWER
    - RATED RPM
    - CORRECTED FULL LOAD AMPERAGE
    - MEASURED AMPERAGE AND VOLTAGE
    - CALCULATED BHP
    - MEASURED EFFICIENCY
    - SHEAVE SIZE, TYPE AND MANUFACTURER
  - FANS
    - MANUFACTURER
    - MODEL AND SERIAL NUMBER
    - RATED CFM
    - RATED RPM
    - RATED PRESSURES (SUCTION AND DISCHARGE)
    - MEASURED CFM
    - MEASURED RPM
    - MEASURED PRESSURES (SUCTION AND DISCHARGE)
    - PULLEY SIZE, TYPE AND MANUFACTURER
    - BELT SIZE AND QUANTITY
  - HRVS/ERVS
    - MANUFACTURER
    - MODEL AND SERIAL NUMBER
    - RATED SUPPLY AIR CFM
    - RATED EXHAUST AIR CFM
    - RATED SUPPLY AIR PRESSURE (SUCTION & DISCHARGE)
    - RATED EXHAUST AIR PRESSURE (SUCTION & DISCHARGE)
    - ACTUAL SUPPLY AIR CFM
    - ACTUAL EXHAUST AIR CFM
    - ACTUAL SUPPLY AIR PRESSURE (SUCTION & DISCHARGE)
    - ACTUAL EXHAUST AIR PRESSURE (SUCTION & DISCHARGE)
  - FURNACE
    - MANUFACTURER
    - MODEL AND SERIAL NUMBER
    - RATED HEATING CFM
    - RATED COOLING CFM
    - RATED HEATING ESP
    - RATED COOLING ESP
    - MEASURED HEATING CFM
    - MEASURED COOLING CFM
    - MEASURED HEATING ESP
    - MEASURED COOLING ESP
    - SPEED SETTING
- SUBMIT THE FOLLOWING DATA FOR AIR SYSTEM INLETS AND OUTLETS:
  - GRILLE OR DIFFUSER REFERENCE NUMBER AND MANUFACTURER
  - GRILLE, REGISTER OR DIFFUSER LOCATION
  - VELOCITY
  - DESIGN CFM
  - EFFECTIVE (OR FREE) AREA FACTOR AND SIZE
  - MEASURED VELOCITY
  - MEASURED CFM
- SUBMIT THE FOLLOWING DATA FOR WATER SYSTEM CIRCUIT BALANCING VALVES (CBV):
  - CBV REFERENCE NUMBER AND MANUFACTURER
  - CBV LOCATION
  - DESIGN FLOW GPM
  - MEASURED GPM
  - MEASURED PRESSURE DROP
  - FINAL VALVE SETTING (# OF TURNS)
- ON COMPLETION OF THE TESTING, ADJUSTING AND BALANCING OF ALL EQUIPMENT, SUBMIT AN ELECTRONIC (PDF) COPY OF A FULL REPORT ON ALL TESTS, ADJUSTMENTS, AND BALANCING PERFORMED TO THE ENGINEER, INCLUDING THE FOLLOWING:
  - SUMMARY OF AIR SYSTEMS
  - SUMMARY OF LIQUID SYSTEMS
  - TESTING METHODS AND INSTRUMENTATION DATA
  - AIR SYSTEMS TESTING AND BALANCING DATA
  - DIAGRAMS SHOWING ALL PILOT TRAVERSE POINTS
  - ATTACHMENTS INCLUDING SYSTEM SCHEMATICS WITH NUMBERED TERMINALS FOR REFERENCE TO DATA ABOVE
  - LIQUID SYSTEMS TESTING AND BALANCING DATA
- WITHIN 15 DAYS OF AWARD OF THIS CONTRACT, IDENTIFY AND NEATLY MARK THE SPECIFIC LOCATION OF ALL ADJUSTING, BALANCING AND PERMANENT MEASURING DEVICES ON A SET OF PLANS FOR APPROVAL BY THE ENGINEER, WITH THE SAME SUBMISSION, PROPOSE, FOR REVIEW BY THE ENGINEER, ADDITIONAL DEVICES DEEMED ADVISABLE FOR SATISFACTORY OPERATION AND COMPLETION OF THE MECHANICAL WORK.
- REPORT ANY DEFICIENCIES IN THE EQUIPMENT PERFORMANCE RESULTING IN DESIGN REQUIREMENTS BEING UNOBTAINABLE IMMEDIATELY TO THE ENGINEER PRIOR TO LEAVING SITE.

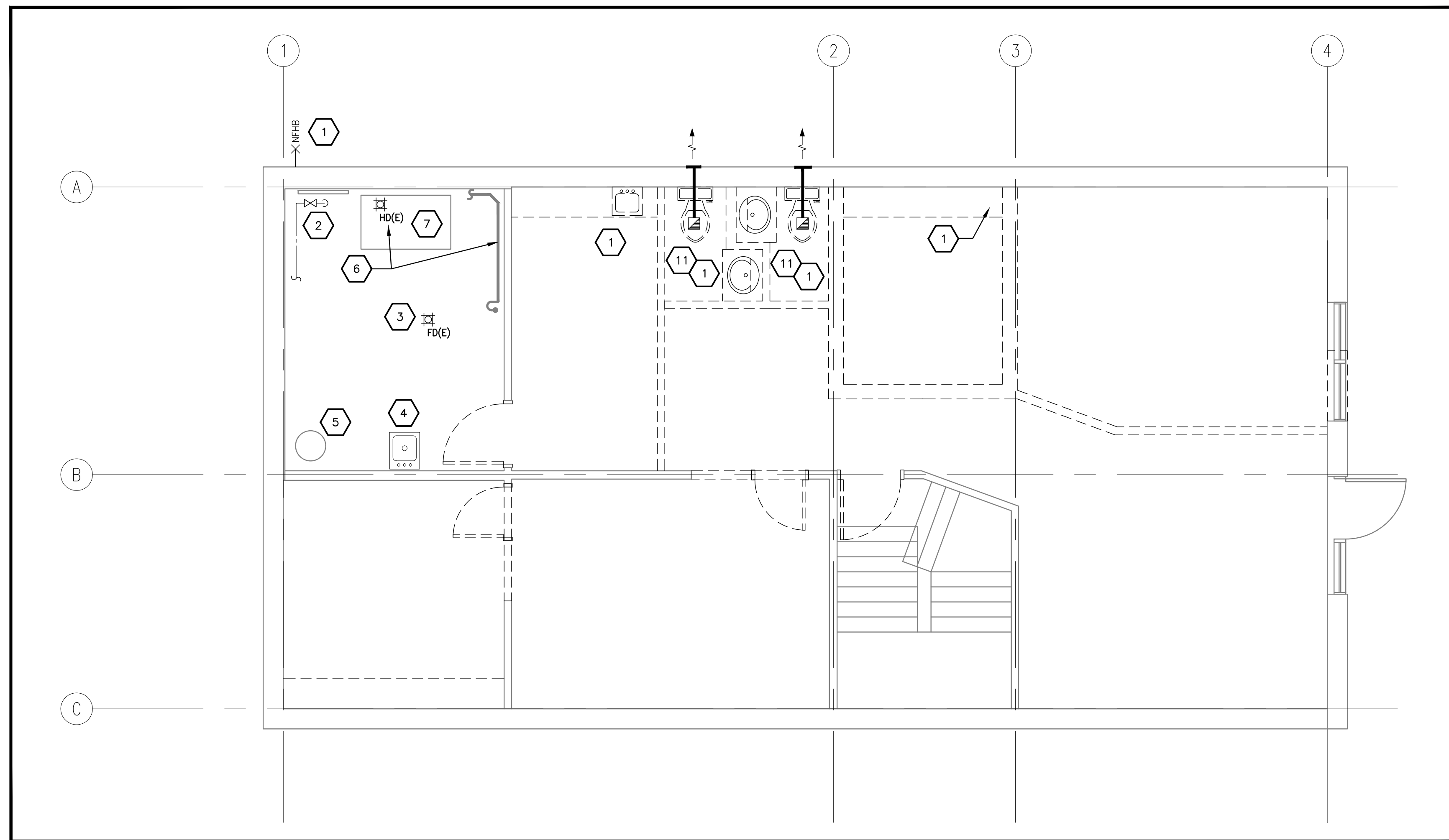
- DUCTWORK IN UNHEATED SPACES (ATTICS, CRAWLSPACES, ETC.) SHALL BE EXTERNALLY INSULATED WITH 2 LAYERS OF 2" - 1.5 LB./CU. FT. DUCT WRAP. INNER INSULATION LAYER SHALL BE PLAIN FACED; OUTER LAYER SHALL BE FACED WITH FSK. (TOTAL INSTALLED INSULATION VALUE R=12.8).
- EXHAUST DUCTWORK WITHIN 5 FEET OF A WALL OR ROOF AND ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE EXTERNALLY INSULATED WITH 1 LAYER OF 1 1/2", 0.75 LB./CU. FT. DUCT WRAP WITH FSK (TOTAL INSTALLED INSULATION VALUE R=4.2). IN EQUIPMENT ROOMS AND OTHER EXPOSED AREAS, FINISH WITH CANVAS AND LAGGING CEMENT. DUCT SILENCERS SHALL BE INSULATED SAME AS DUCTWORK.
- ALL DUCTWORK INSULATION AND JACKETING SHALL BE SUPPLIED AND INSTALLED ACCORDING TO THE THERMAL INSULATION ASSOCIATION OF CANADA STANDARDS. SEAL EDGES OF INSULATION TO ENSURE NO INSULATING MATERIAL IS UNPROTECTED BY THE VAPOUR BARRIER.
- FOR SYSTEMS OPERATING AT OR BELOW 140°F, PIPE INSULATION SHALL HAVE A MAX. 80-INSTALL @ 140°F MEAN TEMPERATURE. ISOLATE ALL HOT WATER PIPING, FITTINGS, AND VALVES UP TO 1 1/2" WITH 1" THICK FIBERGLASS STANDARD PIPE INSULATION c/w ASJ. PIPING FITTINGS AND VALVES 1 1/2" AND UP TO BE INSULATED WITH 1 1/2" THICK FIBERGLASS STANDARD PIPE INSULATION c/w ASJ.
- MITRE INSULATION AT ELBOWS. SEAL RAW ENDS OF INSULATION WITH VAPOUR RETARDER MASTIC. IN EXPOSED AREAS FINISH WITH P.V.C. JACKETING USING PRE-FORMED JACKETING FOR ELBOWS, FITTINGS, VALVES, ETC. INSULATION SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE THERMAL INSULATION ASSOCIATION OF CANADA STANDARDS.
- REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 3/4" THICK CLOSED-CELL FOAM INSULATION, WITH CEMENTED JOINTS. LIQUID LINES INSTALLED OUTDOORS SHALL ALSO BE SIMILARLY INSULATED. ALL EXTERIOR INSULATION SHALL BE PROVIDED WITH ALUMINUM PIPE JACKETING. STANDARD OF ACCEPTANCE ARMAFLEX, RUBATEX.
- INCLUDE FOR STARTUP, BALANCING AND COMMISSIONING OF ALL EQUIPMENT INSTALLED UNDER THIS SECTION.
- MAKE CONNECTIONS TO THE EXISTING NATURAL GAS SYSTEM. ENTIRE INSTALLATION SHALL BE AS STATED IN THE NATURAL GAS AND PROPANE INSTALLATION CODES CSA B149.1:20 & B149.2:20.
- PROVIDE ALL NECESSARY GAS PRESSURE REGULATORS WHERE REQUIRED BY EQUIPMENT. PROVIDE NECESSARY VENTS FROM GAS RELIEF VALVES AND TERMINATE TO ATMOSPHERE AS PER CSA B149.2:20 & B149.2:20.
- THE REFRIGERANT LINES SHALL BE SIZED IN ACCORDANCE WITH THE CONDENSING UNIT MANUFACTURER'S REQUIREMENTS. REFRIGERANT PIPE SHALL BE ACR ANNEALED PLENUM COPPER NITROGEN CHARGED FACTORY CLEANED AND SEALED. ACR GRADE COPPER WITH FORGED BUREN AND WROUGHT COPPER REFRIGERATION FITTINGS TO ANSI B16.22 STANDARD. ALL JOINTS SHALL BE BRAZED WITH SIL-FOS-15 PHOSPHOR-COPPER-SILVER ALLOY (15% SILVER SOLDER) TO AWS CLASSIFICATION BCuP (UNLESS REQUIRED OTHERWISE BY THE CONDENSING UNIT MANUFACTURER). SAE FLARED FITTINGS ARE NOT ACCEPTED, EXCEPT WHERE FACTORY-INSTALLED ON EQUIPMENT BY THE MANUFACTURER.
- SUPPORT REFRIGERANT LINES AT INTERVALS NOT MORE THAN 8 FEET AND ANCHOR WITHIN 3 FEET OF EACH ELBOW. PROVIDE RUBBER GROMMETS BETWEEN TUBING AND CLAMPS TO PREVENT LINE CHAFING. KEEP ELBOWS AND FITTINGS TO A MINIMUM. SPREAD PIPING MIN. 6" TO ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SIGHT GLASSES FOR ALL LIQUID LINES AND FILTER DRIERS WITH THREE WAY BYPASS HEAD OF EACH THERMOSTATIC EXPANSION VALVE. WHERE NECESSARY PROVIDE SOLENOID VALVES AHEAD OF EACH EXPANSION VALVE AND PROVIDE NECESSARY WIRING TO OPERATE CONDENSER AND DX SOLENOIDS. ARRANGE HOT GAS AND SUCTION LINES AND PROVIDE PROPERLY SIZED RISERS AS NECESSARY TO ALLOW THE RETURN OF OIL TO THE COMPRESSOR.
- PROVIDE DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST SMACNA STANDARDS. SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA CLASS "A" REQUIREMENTS.
- ALL ROUND DUCTWORK SHALL BE GALVANIZED SPIRAL WOUND TYPE. NEATLY SEAL ALL JOINTS WITH A BRUSH APPLIED SEALANT SUITABLE FOR PAINTING. DUCTWORK SHALL BE SATIN FINISH WHERE IT WILL BE EXPOSED IN THE CONDITIONED SPACE AND PAINTED.
- PROVIDE ACCESS DOORS IN DUCTS AND PLENUMS FOR SERVICING OF FIRE DAMPERS, BALANCING DAMPERS, ENTERING AND LEAVING SIDES OF COILS, AND FOR OTHER ITEMS NOT ACCESSIBLE FROM THE DUCTWORK. ACCESS DOORS IN DUCTWORK SHALL BE A MINIMUM OF 16" X 12" CLEAR, OR AS CLOSE TO THESE DIMENSIONS AS DUCT SIZE PERMITS, WITH EDGES OF DOOR FOLDED AND DUCT OPENING PROVIDED WITH A FRAME. DOOR SHALL BE SECURED WITH A MINIMUM OF 4 SASH FASTENERS. SHALL BE PROVIDED WITH 185°F SETTING WITH OPEN & CLOSED TIGHT. SASH LOCK FASTENERS SHALL BE EQUAL TO DURODYNE SL-1. ON INSULATED DUCTS ACCESS DOORS SHALL BE DOUBLE WALL CONSTRUCTION, WITH INSULATED VOID EQUIVALENT TO THE DUCT INSULATION. PRE-MANUFACTURED DOORS ARE ACCEPTABLE. SUBMIT SHOP DRAWINGS FOR ALL ACCESS DOORS TO BE USED ON THE PROJECT. ACCESS OPENING COVERS FASTENED WITH SHEET METAL SCREWS WILL NOT BE ACCEPTED.
- PROVIDE ULC LABELED FIRE DAMPERS AND FIRE STOP FLAPS SUITABLE FOR DYNAMIC SYSTEMS WHERE SHOWN AND WHERE REQUIRED. THESE SHALL BE INSTALLED IN ACCORDANCE WITH ULC APPROVED METHODS. FOR DUCTS LESS THAN 12" USE TYPE-B DAMPERS. DAMPERS IN ALUMINUM AND STAINLESS STEEL DUCT SHALL BE MANUFACTURED OF STAINLESS STEEL. REFER TO ARCHITECTURAL DRAWINGS FOR IN LOCATIONS AND RATINGS OF ALL FIRE SEPARATIONS WHEN AVAILABLE. OTHERWISE, IF NOT CLEARLY INDICATED ON DRAWINGS, OBTAIN FIRE RATINGS FOR EXISTING PARTITIONS FROM ENGINEER.
- PROVIDE COMBINATION FIRE AND SMOKE DAMPERS WHERE SHOWN ON DRAWINGS. COMBINATION DAMPERS SHALL BE ULC LISTED AND TESTED IN ACCORDANCE WITH UL555 AND APPROPRIATE PROVISIONS FOR CAN 4-S112-M AND CAN 4-S112-Z. DAMPERS SHALL BE CLASSIFIED FOR DYNAMIC LOADS AGAINST 4000 CFM ABELOW VELOCITY AND UP TO 8" W.G. PRESSURE. ACTUATORS SHALL BE ELECTRIC, TWO POSITION, FAIL CLOSED, RE-OPENABLE, FACTORY INSTALLED AND SHALL BE 120V OR BE COMPLETE WITH 120V TRANSFORMER. DAMPERS SHALL BE CONTROLLED THROUGH SLEEVES, DEVICES, ETC. AS NECESSARY FOR FIRE ALARM INTERFACE. DAMPER POSITION SWITCHES SHALL INDICATE "DAMPER OPEN" OR "DAMPER CLOSED" POSITION. STANDARD OF ACCEPTANCE - GREENHECK FSD-311 WITH RRL/OOI RESETTABLE LINK WITH BLADE INDICATOR, GTS-3 CONTROL PANEL, AND 877568 SMOKE DETECTOR KIT. EQUALS BY NALOR, EH PRICE, RUSKIN.
- PROVIDE MANUAL BALANCING DAMPERS IN SUPPLY, RETURN, AND EXHAUST DUCTWORK AT ALL BRANCH TAKEOFFS AND IN OTHER LOCATIONS WHERE NECESSARY FOR SYSTEM BALANCING. WHEN USE OF A BALANCING CONTRACTOR IS SPECIFIED, OBTAIN FINAL LOCATIONS OF ALL REQUIRED DAMPERS BEFORE COMMENCING DUCTWORK. IN INSTALLATION, COSTS FOR ADDITIONAL BALANCING CONTRACTOR SITE VISITS NECESSARY DUE TO MISSING OR IMPROPERLY LOCATED BALANCING DAMPERS WILL NOT BE PERMITTED.
- PROVIDE ALL MOTORIZED DAMPERS. AT EXTERIOR WALLS OR ROOFS, DAMPERS SHALL BE PARALLEL BLADE, INSULATED BLADE, THERMALLY BROKEN FRAME, WITH LOW TEMPERATURE SILICONE BLADE AND FRAME SEALS, AMCA CLASS 1A. LEAKAGE RATING. STANDARD OF ACCEPTANCE TAMCO SERIES 9000. UNLESS NOTED OTHERWISE OTHER MOTORIZED DAMPERS SHALL BE OPPOSED BLADE, AIRFOIL BLADE, EPDM BLADE SEALS, SILICONE FRAME SEALS, AMCAL 3.00 CFM/SQ. FT. AMCA CERTIFIED AIR LEAKAGE. STANDARD OF ACCEPTANCE TAMCO SERIES 1000, RUSKIN, NALOR.
- PROVIDE BACKDRIFT DAMPERS, EXTRUDED ALUMINUM CONSTRUCTION, SILICONE BLADE AND FRAME SEALS, 4.32 CFM/SQ. FT. AT 1" STATIC DIFFERENTIAL AMCA CERTIFIED AIR LEAKAGE. STANDARD OF ACCEPTANCE TAMCO SERIES 7000, NALOR, RUSKIN.
- FLEXIBLE DUCTWORK SHALL BE UL 181 CLASS 1 LISTED ALUMINUM ALLOY SPIRALLY WOUND AND MECHANICALLY JOINED WITH TRIPLE LOCK SEAM. MAXIMUM PERMITTED LENGTH IS 6 FEET. JOINTS AND CONNECTIONS TO COLLARS SHALL BE SCREWED AND SEALED WITH DUCT SEALANT TO SMACNA CLASS "A" REQUIREMENTS. DO NOT USE FLEXIBLE DUCT CONNECTORS ON RETURN OR EXHAUST SYSTEMS UNLESS SHOWN. DO NOT INSTALL FLEXIBLE DUCTWORK THROUGH FLOORS, PARTITIONS, OR MASONRY WALLS.
- PROVIDE ALL FANS AS SHOWN ON DRAWINGS AND LISTED IN SCHEDULES AND WHERE REQUIRED FOR PROPER SYSTEM OPERATION. BELT DRIVEN FANS SHALL BE PROVIDED WITH BELT GUARDS. DIRECT DRIVEN FANS SHALL BE PROVIDED WITH A MEANS OF BALANCING IN THE FORM OF A SOLID STATE SPEED CONTROLLER OR VARIABLE FREQUENCY DRIVE.
- SUPPLY ALL GRILLES AND DIFFUSERS WHERE SHOWN ON DRAWINGS AND LISTED IN SCHEDULES. COORDINATE EXACT LOCATIONS OF DIFFUSERS AND GRILLES WITH OTHER ELEMENTS IN CEILINGS, FLOORS, AND WALLS AND SELECT TRIM TO SUIT FINISHES AS NOTED IN ARCHITECTURAL DRAWINGS. WHEN ARCHITECTURAL DRAWINGS ARE NOT AVAILABLE, CONFORM FINISHES WITH ENGINEER.

- PROVIDE ALUMINUM LOUVERS WHERE SHOWN. 4" STORM-PROOF BLADE C/W FLANGE FRAME AND BIOSCREEN. STANDARD OF ACCEPTANCE VENTEX MODEL 2425, EH PRICE, NALOR. LOUVER COLOUR SHALL BE APPROVED BY ARCHITECT. BLANK OFF LOUVERS WHERE SHOWN. FASTEN 16 GAUGE GALVANIZED SHEET METAL TO UNHEATED LOUVERS AND UNHEATED PORTIONS OF LOUVERS AND SEAL ALL Joints TO PREVENT ENTRY OF AIR. EXTERNALLY INSULATE WITH 2 LAYERS OF 2", 3.0 LB./CU. FT. RIGID INSULATION. INNER INSULATION LAYER SHALL BE PLAIN FACED; OUTER LAYER SHALL BE FACED WITH FSK. (TOTAL INSULATION VALUE R=17.4). ALL INSULATION SHALL BE SUPPLIED AND INSTALLED ACCORDING TO THE THERMAL INSULATION ASSOCIATION OF CANADA STANDARDS. IN EQUIPMENT ROOMS AND OTHER EXPOSED AREAS, FINISH WITH CANVAS AND LAGGING CEMENT. SEAL EDGES OF INSULATION TO ENSURE NO INSULATING MATERIAL IS UNPROTECTED BY THE VAPOUR BARRIER.
- PROVIDE GAS VENTS AND COMBUSTION AIR INTAKE FOR ALL GAS FIRED EQUIPMENT PROVIDED BY THIS SECTION. MATERIALS SHALL MEET THE REQUIREMENTS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CSA B149.1:20.

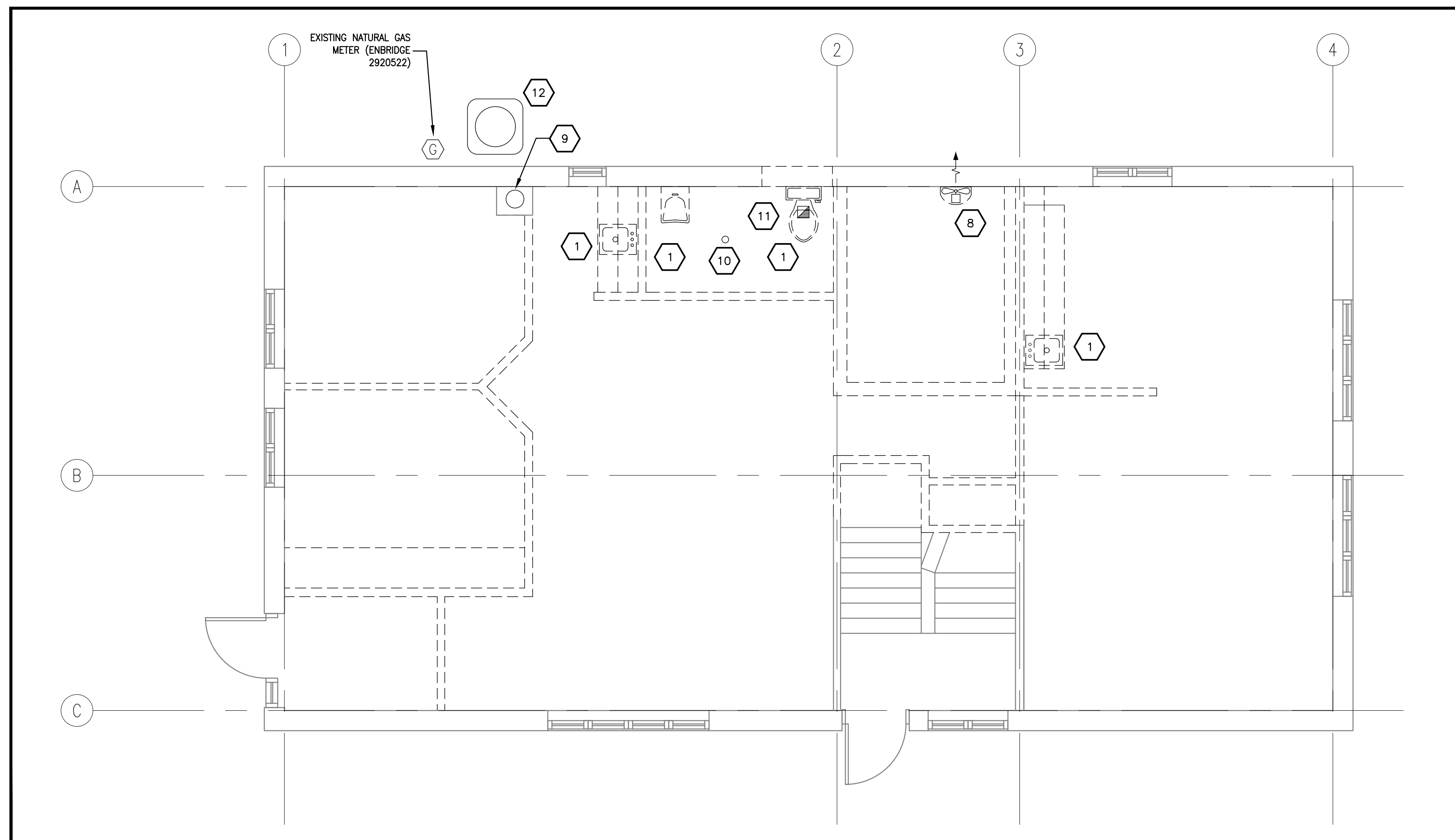
**DIVISION 25 - INTEGRATED AUTOMATION**

- WORK UNDER THIS SECTION SHALL BE CARRIED OUT BY THE INSTALLING MECHANICAL CONTRACTOR.
- SUPPLY ALL CONTROL TRANSFORMERS, RELAYS, OR CONTACTORS NECESSARY TO EXECUTE SEQUENCES OF OPERATIONS SPECIFIED ON THE DRAWINGS. TURN OVER TO DIVISION 26 FOR INSTALLATION AND LINE VOLTAGE WIRING. LOW-VOLTAGE WIRING SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. SIZE CONTROL TRANSFORMERS TO SUIT THE MAXIMUM EXPECTED FULL LOAD AMPERAGE OF ALL DEVICES CONNECTED TO THE LOAD SIDE OF THE TRANSFORMER.
- INSTALL THERMOSTATS SUPPLIED WITH MECHANICAL EQUIPMENT AS LISTED IN THE EQUIPMENT SCHEDULES. INSTALL THERMOSTATS WHERE SHOWN ON DRAWINGS, AND PROVIDE ALL WIRING NECESSARY TO EXECUTE THE MANUFACTURER'S STANDARD SEQUENCES OF OPERATION, OR THE SEQUENCE NOTED ON THE DRAWINGS.
- SUPPLY LINE VOLTAGE THERMOSTATS FOR HEAT, COOL, OR HEAT-COOL APPLICATIONS, AND TURN THEM OVER TO DIVISION 26 FOR INSTALLATION AND POWER CONNECTIONS. THERMOSTATS SHALL BE HEAVY DUTY LINE VOLTAGE THERMOSTATS WITH CONCEALED SENSING BULBS. STANDARD OF ACCEPTANCE HONEYWELL MODEL 16051A.
- MOTORIZED DAMPER ACTUATORS SHALL BE NORMALLY CLOSED, SPRING RETURN, ON-OFF, 120V. MANUFACTURER SHALL SELECT SPECIFIC ACTUATOR MODEL TO SUIT MOTORIZED DAMPER SIZE. STANDARD OF ACCEPTANCE BELIMO.

MECHANICAL LEGEND	
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RECIRCULATION
	HUNG SANITARY DRAIN
	BURIED SANITARY DRAIN
	VENT (PLUMBING)
	GAS LINE
	REFRIGERATION SUCTION
	REFRIGERATION LIQUID
	PIPE CUT
	CUT
	PIPE UP
	PIPE DOWN
	PIPE DOWN BELOW MAIN
	SANITARY ROUGH-IN
	UNION
	CAP OR PLUG
	SHUT-OFF VALVE
	CIRCUIT SETTER VALVE
	NON-RETURN VALVE (CHECK VALVE)
	PRESSURE REDUCING VALVE OR REGULATOR
	3-WAY VALVE
	RELIEF OR SAFETY VALVE
	DRAIN VALVE
	GAS VALVE
	THERMOMETER
	PRESSURE GAUGE
	FLOOR DRAIN
	TRAP
	CLEAN OUT
	CATCH BASIN
	PUMP (SCHEMATIC)
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER IN CABINET
	NEW SUPPLY DUCTWORK
	NEW RETURN DUCTWORK
	EXHAUST DUCTWORK
	SUPPLY DUCTWORK UP/DOWN
	RETURN/EXHAUST DUCTWORK UP/DOWN



**BASEMENT MECHANICAL REMOVALS PLAN**  
1/4"=1'-0"



**GROUND FLOOR MECHANICAL REMOVALS PLAN**  
1/4"=1'-0"

**MECHANICAL DEMOLITION NOTES:**

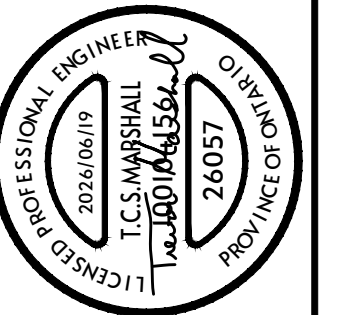
- 1. EXISTING PLUMBING FIXTURES TO BE REMOVED AND DISPOSED OF OFF-SITE. REMOVE ALL ASSOCIATED PLUMBING SERVICES.
- 2. EXISTING 3/4" INCOMING DOMESTIC WATER SERVICE. EXISTING SERVICE VALVE TO BE REPLACED WITH NEW BALL VALVE.
- 3. EXISTING FLOOR DRAIN TO REMAIN.
- 4. EXISTING LAUNDRY TUB TO REMAIN.
- 5. EXISTING ELECTRIC DOMESTIC HOT WATER TANK TO BE RE-USED. PROTECT DURING CONSTRUCTION AND RE-INSTALL.
- 6. EXISTING DRAINAGE PIPING WITHIN MECHANICAL/ELECTRICAL ROOM TO BE REMOVED. AND CUT BACK TO BURIED MAIN.
- 7. EXISTING NATURAL GAS FIRED FURNACE AND ALL ASSOCIATED DUCTWORK, HUMIDIFIER, VENTING, AND CONTROLS SHALL BE COMPLETELY REMOVED. CUT BACK EXISTING NATURAL GAS PIPING AND MAKE READY FOR CONNECTION TO NEW.
- 8. EXISTING THROUGH WALL EXHAUST FAN TO BE REMOVED AND DISPOSED OF OFF-SITE.
- 9. EXISTING ABANDONED B-VENT CHIMNEY TO BE COMPLETELY REMOVED. PATCHING OF ROOF BY GENERAL TRADES.
- 10. EXISTING SANITARY VENT TERMINAL TO BE RE-USED. CUT BACK ALL EXISTING VENT PIPING TO THIS POINT AND RE-USE ROOF TERMINAL.
- 11. EXISTING CEILING MOUNTED EXHAUST FAN TO BE COMPLETELY REMOVED AND DISPOSED OF OFF-SITE INCLUDING ALL ASSOCIATED DUCTWORK AND TERMINATION.
- 12. EXISTING CONDENSING UNIT TO BE COMPLETELY REMOVED AND DISPOSED OF OFF-SITE INCLUDING ALL ASSOCIATED REFRIGERATION PIPING, CONTROLS, AND CONCRETE PAD.

**GENERAL NOTES:**

- 1. EXISTING PLUMBING PIPING LAYOUT IS BASED ON OBSERVED SITE CONDITIONS NOT AS-BUILTS. BEFORE COMMENCING WORK:
  - 1.1. THE ENTIRE BURIED SANITARY SYSTEM SHOWN SHALL BE INSPECTED WITH A CAMERA. SUBMIT A FULL REPORT TO THE ENGINEER ON CONDITION OF PIPING, INCLUDING SKETCHES NOTING EXISTING LOCATIONS/ROUTING OF SERVICES.
- 2. EXISTING ABOVE GRADE PLUMBING SERVICES WILL NOT BE RE-USED. ALL EXISTING ABOVE GRADE PLUMBING SERVICES TO BE COMPLETELY REMOVED AND REPLACED WITH NEW. BURIED SERVICES TO BE REPLACED AS NOTED.
- 3. ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK SYSTEMS TO BE REMOVED AND DISPOSED OF OFF-SITE INCLUDING ASSOCIATED GRILLES, DIFFUSERS, AND EXHAUST FANS.

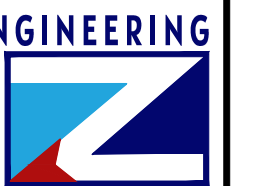
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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
**MECHANICAL REMOVAL PLANS**

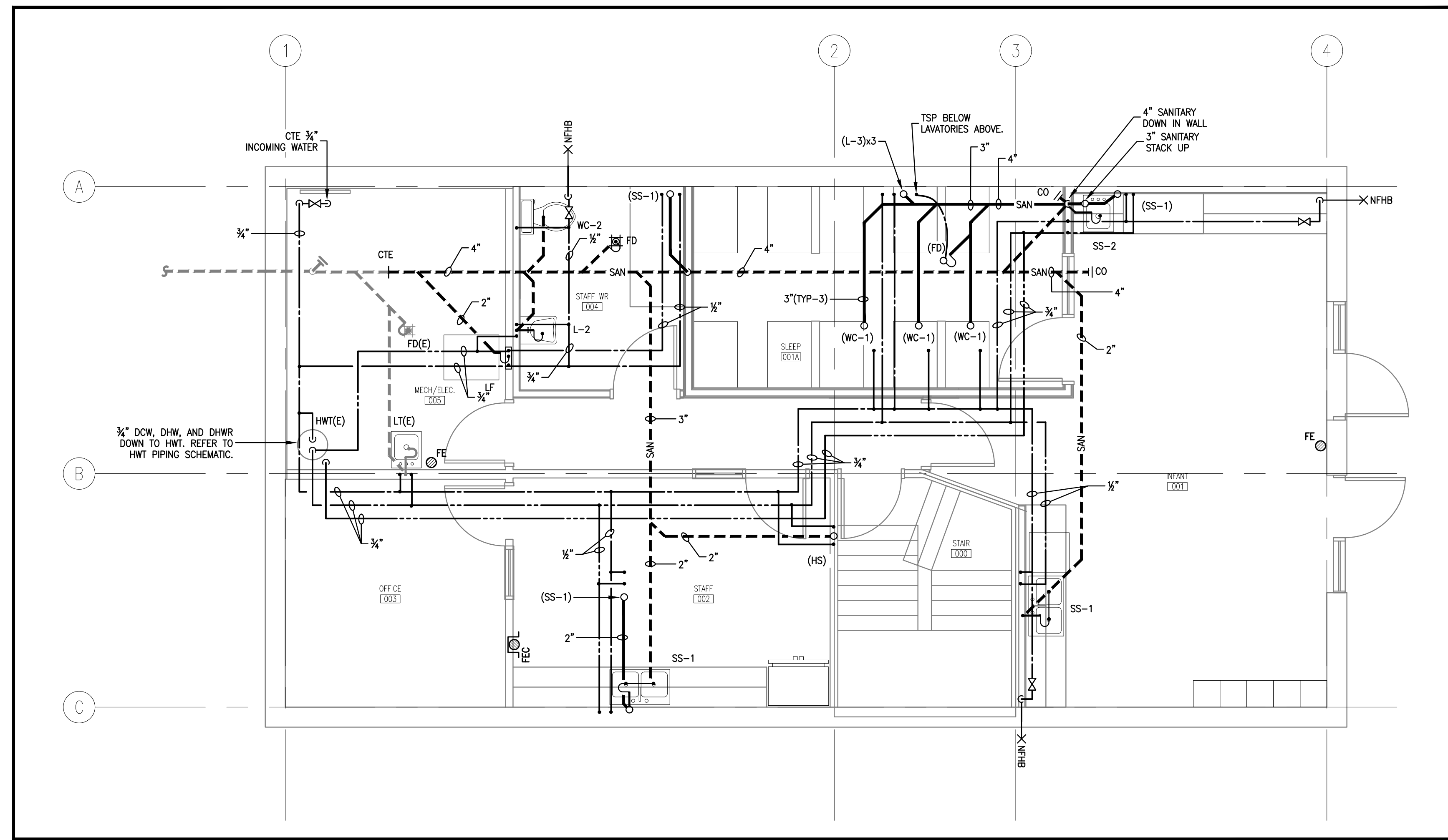
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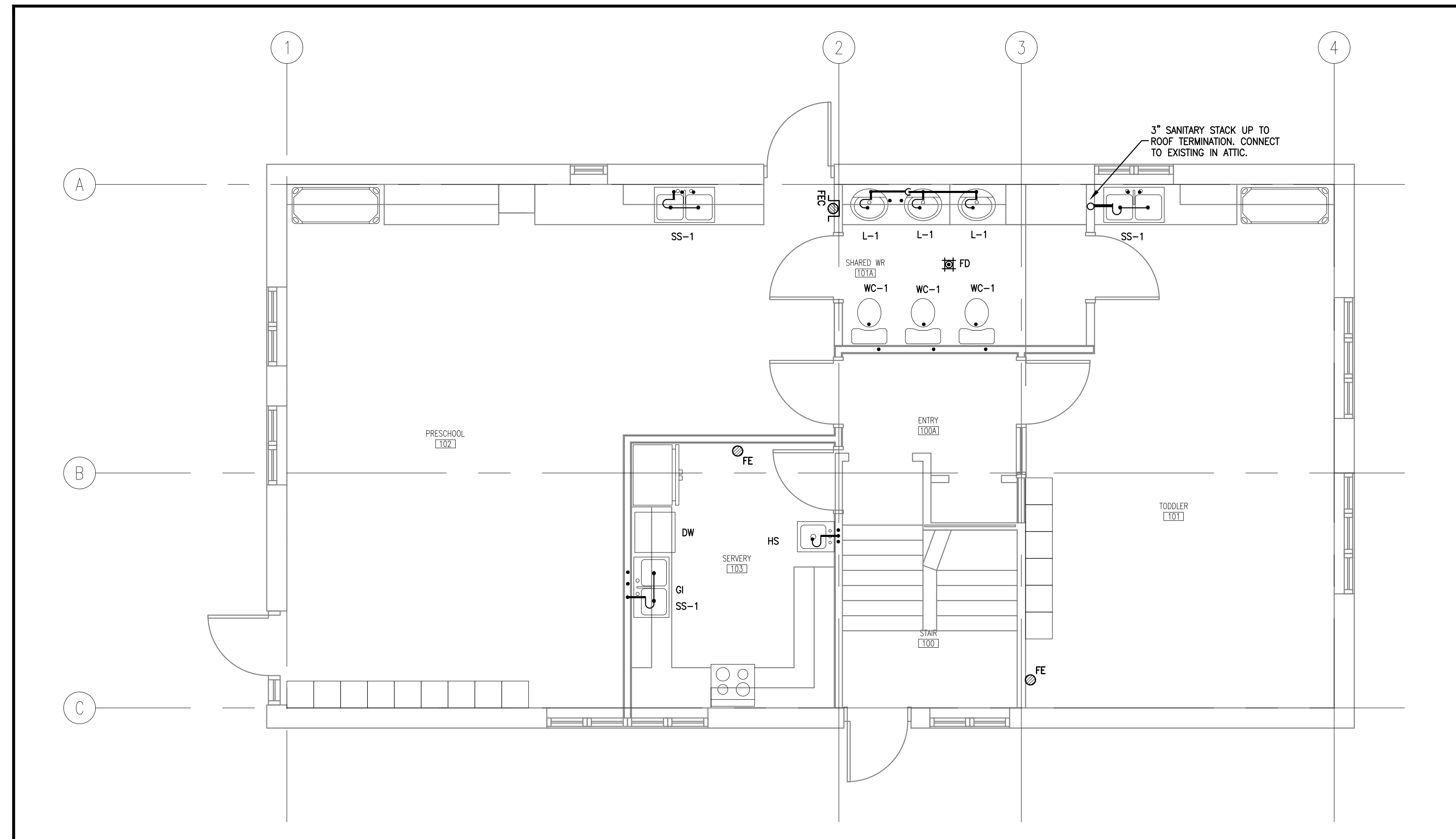
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Job: 26057

Sheet: M200



**BASEMENT PLUMBING PLAN**  
1/4"=1'-0"



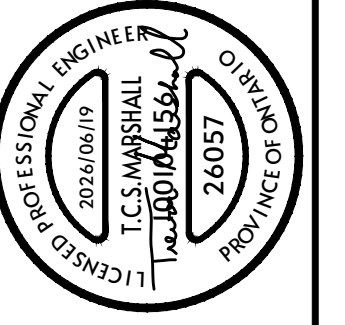
**GROUND FLOOR PLUMBING PLAN**  
1/4"=1'-0"

**PLUMBING FIXTURE CONNECTION SCHEDULE**

FIXTURE	DRAIN	HOT WATER	COLD WATER
WC	3"	-	1/2"
L	1 1/2"	1/2"	1/2"
SS	1 1/2"	1/2"	1/2"
LT	1 1/2"	1/2"	1/2"
LF	2"	1/2"	1/2"
NFHB	-	-	-
FD	3"	-	-

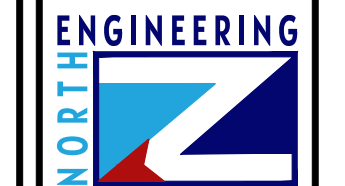
**MECHANICAL GENERAL NOTES:**

- EXISTING BURIED SANITARY LOCATION AND SIZE ARE UNKNOWN. CONTRACTOR TO CONFIRM ON-SITE PRIOR TO CONSTRUCTION AND REPORT CONDITION TO THE ENGINEER.



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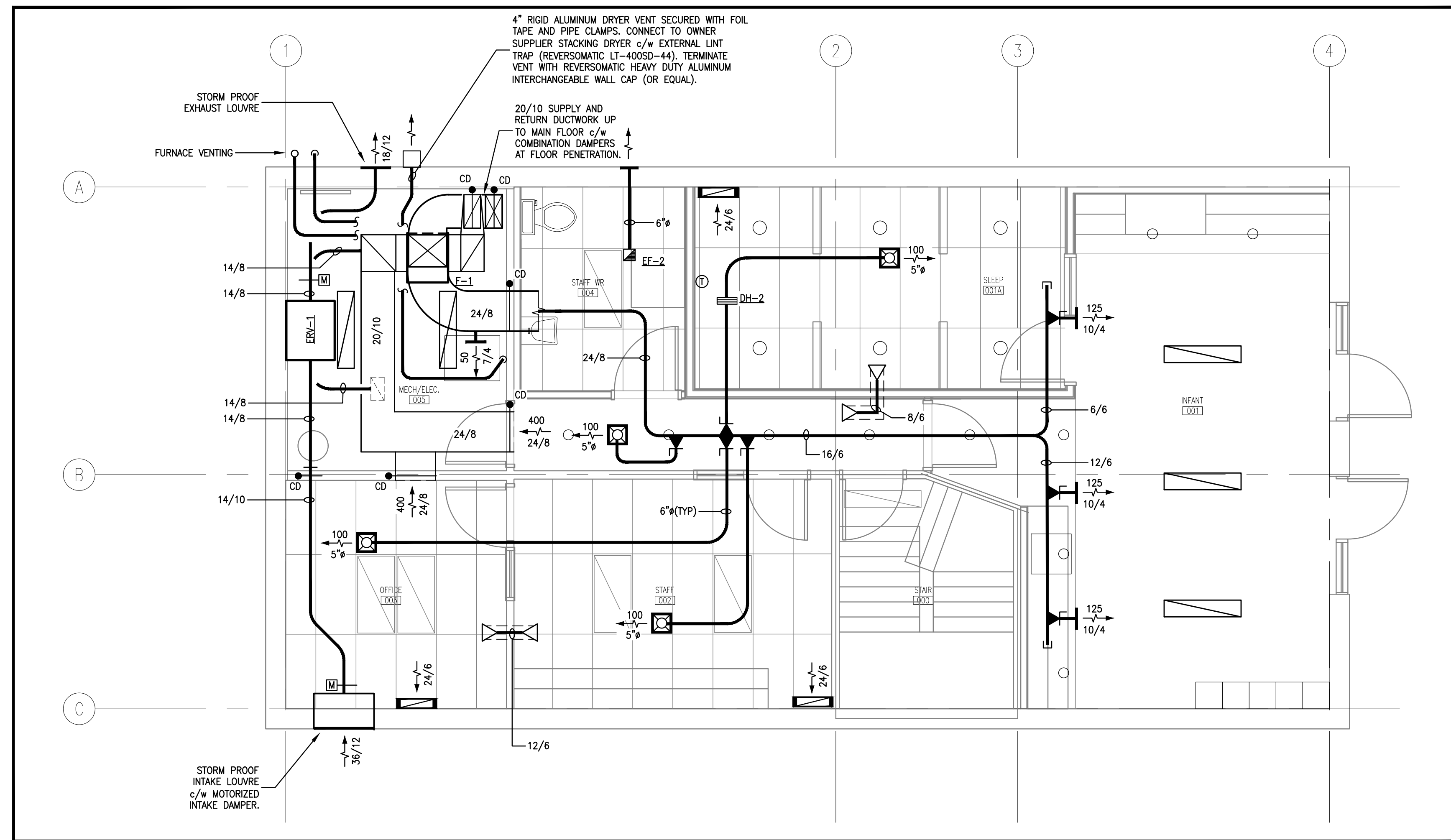
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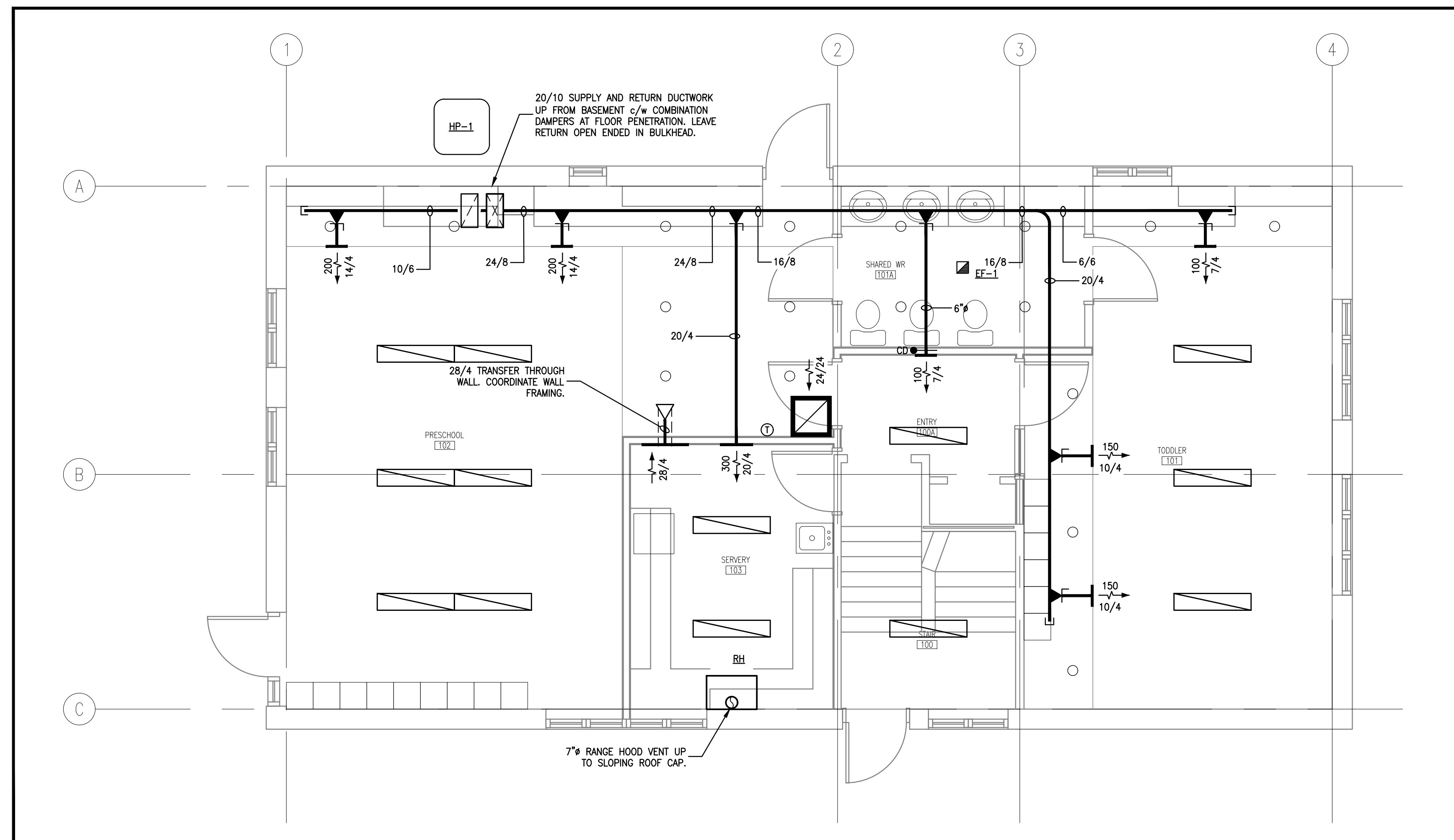
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
**PLUMBING PLANS**

Date: JUNE 19, 2026  
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Job: 26057  
Sheet: **M300**

DATE: 2026/06/19  
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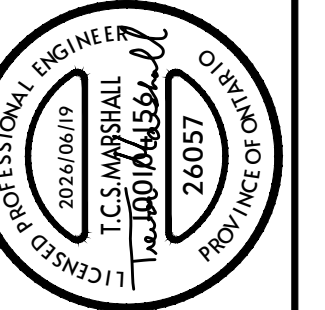
**BASEMENT HVAC PLAN**  
1/4"=1'-0"



**GROUND FLOOR HVAC PLAN**  
1/4"=1'-0"

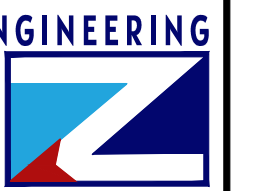
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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
388 RUTLAND AVENUE, WARREN ON  
HAVC PLANS

Date: JUNE 19, 2026

Scale: AS NOTED

Drawn: KAF Ck: TM

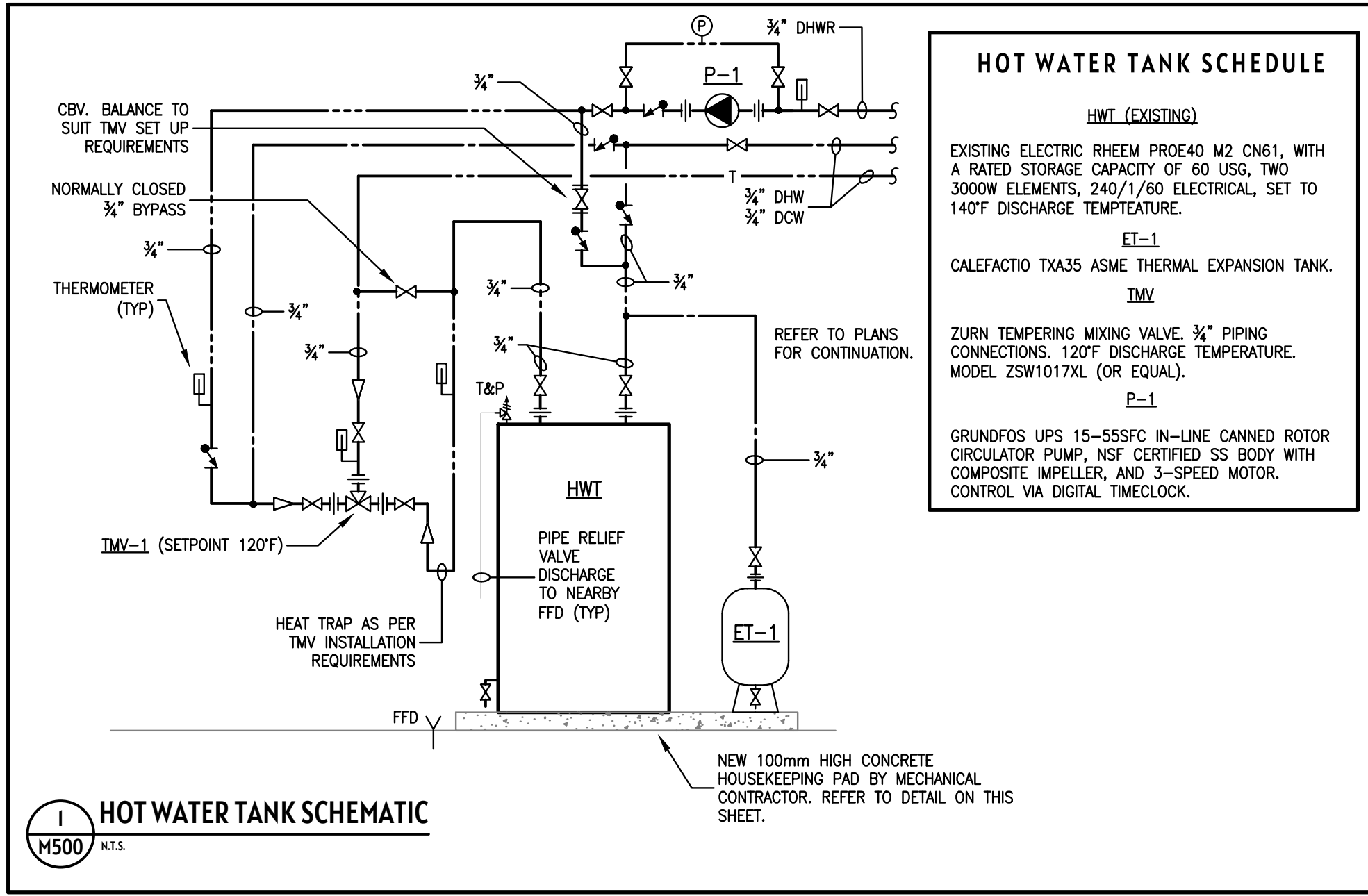
Job: 26057

Sheet: M400

PLUMBING FIXTURE SCHEDULE (REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS)			
TAG	TYPE	MAKE MODEL	DESCRIPTION
WC-1	FLUSH TANK WATER CLOSET	FIXTURE: AMERICAN STANDARD 215DB.104 SEAT: AMERICAN STANDARD 5320.110	VITREOUS CHINA, FLOOR MOUNTED 15" HIGH ROUNDED RIM BOWL, 1.28 GPF (4.8 LPF), WHITE SLOW CLOSE SEAT WITH LID, AND SUPPLY WITH STOP.
WC-2	FLUSH TANK WATER CLOSET (BARRIER FREE)	FIXTURE: ZURN Z5555-K-IN SEAT: ZURN Z5957SS-EL	VITREOUS CHINA, FLOOR MOUNTED 16 3/8" HIGH ELONGATED RIM BOWL, 1.28 GPF (4.8 LPF), INSULATED TANK, WHITE OPEN-FRONT SEAT WITH COVER WITH S.S. CHECK HINGE AND SUPPLY WITH STOP. ORDER FIXTURE WITH TRIP LEVER ON THE ACCESS SIDE OF THE FIXTURE. REFER TO FLOOR PLANS TO DETERMINE ACCESS SIDE.
L-1	COUNTERTOP LAVATORY	FIXTURE: ZURN Z5110 FAUCET: ZURN Z7440-XL-FC CARRIER: ZURN Z1231	20" X 17" COUNTERTOP OVAL VITREOUS CHINA LAVATORY, CHROME PLATED LEAD-FREE 4" (100mm) CENTRESET SINGLE LEVER CONTROL, 5" (127mm) INTEGRAL SPOUT, CERAMIC DISC, TEMPERATURE LIMIT STOP, AND 0.5 GPM VANDAL RESISTANT AERATOR, OPEN GRID STRAINER, WASTE ASSEMBLY, P-TRAP AND SUPPLIES WITH STOP.
L-2	WALL HUNG LAVATORY (BARRIER FREE)	FIXTURE: ZURN Z5324-PED FAUCET: ZURN Z7440-XL-FC CARRIER: ZURN Z1231	23" X 20 1/2" WALL HUNG ADA VITREOUS CHINA LAVATORY WITH VITREOUS CHINA HALF PEDESTAL, CHROME PLATED LEAD-FREE 4" (100mm) CENTRESET SINGLE LEVER CONTROL FAUCET w/ 5" (127mm) INTEGRAL SPOUT, CERAMIC DISC, TEMPERATURE LIMIT STOP, AND 0.5 GPM VANDAL RESISTANT AERATOR, CONCEALED FLOOR MOUNTED DRY WALL CARRIER, OPEN GRID STRAINER, WASTE ASSEMBLY, OFFSET P-TRAP AND SUPPLIES WITH STOP.
HS	WALL HUNG HAND SINK	FIXTURE: ZURN Z5344 FAUCET: ZURN Z6915-XL-F-TMV CARRIER: ZURN Z1231	20" X 18" WALL HUNG VITREOUS CHINA LAVATORY, CHROME PLATED LEAD-FREE 4" (100mm) CENTRESET SENSOR OPERATED, INTEGRAL SPOUT, 0.5 GPM VANDAL RESISTANT AERATOR, BATTERY POWERED, MIXING VALVE, CONCEALED FLOOR MOUNTED DRY WALL CARRIER, OPEN GRID STRAINER, WASTE ASSEMBLY, P-TRAP AND SUPPLY WITH STOP.
SS-1	STAINLESS STEEL SINK	FIXTURE: FRANKIE LBD6407-1/3 FAUCET: ZURN Z7870C-XL-VP	DOUBLE COMPARTMENT (16" X 14" X 7" EA.) LEDGEBACK SINK, TRIPLE CHROME PLATED 8" (200mm) CENTRESET SINGLE LEVER KITCHEN FAUCET w/ CERAMIC DISC CARTRIDGE, ZINC DIE-CAST HANDLE AND HOUSING, AND BRAZED COPPER AND BRASS WATERWAY, 2.2 GPM VANDAL RESISTANT AERATOR c/w WITH CRUMB CUPS, WASTE, TRAP, SUPPLIES WITH STOPS.
SS-2	STAINLESS STEEL SINK	FIXTURE: FRANKIE LBS4607-1/3 FAUCET: ZURN Z7870C-XL-VP	SINGLE COMPARTMENT (16" X 14" X 7") LEDGEBACK SINK, TRIPLE CHROME PLATED 8" (200mm) CENTRESET SINGLE LEVER KITCHEN FAUCET w/ CERAMIC DISC CARTRIDGE, ZINC DIE-CAST HANDLE AND HOUSING, AND BRAZED COPPER AND BRASS WATERWAY, 2.2 GPM VANDAL RESISTANT AERATOR c/w WITH CRUMB CUPS, WASTE, TRAP, SUPPLIES WITH STOPS.
NFBH	NON-FREEZE HOSE BIB - EXPOSED	FIXTURE: ZURN Z1310	EXPOSED AUTOMATIC DRAINING WALL HYDRANT c/w NON-FREEZE INTEGRAL BACKFLOW PREVENTER, BRONZE CASING, ALL BRONZE INTERIOR PARTS, NON-TURNING OPERATING ROD WITH FREE-FLOATING COMPRESSION CLOSURE VALVE, REPLACEABLE BRONZE SEAT AND SEAT WASHER, AND COMBINATION 3/4" FEMALE OR 1" MALE STRAIGHT IP INLET, 3/4" MALE HOSE CONNECTION, AND STAINLESS STEEL FACE WITH OPERATING KEY.
LF	LAUNDRY FITTING	FIXTURE: OATEY ELIMINATOR	RECESSED LAUNDRY FITTING WITH 1/2" HOT AND COLD WATER SUPPLIES c/w 1/2" TURN BRASS VALVES, AND 2" DRAIN AND INTERNAL STOPS.
DW	COMMERCIAL DISHWASHER	FIXTURE: BY OWNER	PROVIDE CONNECTION FOR DRAIN HOSE AND VALVED HOT WATER FROM ADJACENT SINK. PROVIDE WATER HAMMER ARRESTOR ON HOT WATER SUPPLY.
FE	FIRE EXTINGUISHER	FIXTURE: WILSON AND COUSINS ABC-050WH	5.5LB MULTI PURPOSE TYPE FIRE EXTINGUISHER COMPLETE WITH WALL HANGER BRACKET
FEC	FIRE EXTINGUISHER CABINET	FIXTURE: WILSON AND COUSINS IE-105R4 FIXTURE: WILSON AND COUSINS ABC-050WH	SEMI-RECESSED 8" X 17" X 5" DEEP (200 X 475 X 125) EXTINGUISHER CABINET, 1" TURNBACK ON COVER, DOOR GLASS c/w 5LB MULTI PURPOSE TYPE FIRE EXTINGUISHER.

**DRAINAGE PRODUCTS**  
(REFER TO ARCHITECTURAL ROOM FINISH SCHEDULE FOR AREAS WITH SHEET FLOORING PRODUCTS)

TAG	TYPE	FIXTURE	DESCRIPTION
CO	CLEAN OUT (AREAS WITHOUT SHEET FLOORING)	ZURN ZNX-1612-SP	EPOXY COATED CAST IRON BODY WITH NEOPRENE BODY SLEEVE, POLISHED NICKEL BRONZE ADJUSTABLE HEAD AND GASKETED, SECURED, SCORRIATED HEAVY-DUTY COVER WITH STAINLESS STEEL SCREWS, AND SEAL PLUG.
CO	CLEAN OUT (AREAS WITH SHEET FLOORING)	ZURN Z415-R6-ST	EPOXY COATED CAST IRON FLOOR CLEANOUT WITH ANCHOR FLANGE, 6" POLISHED NICKEL BRONZE SOLID TOP WITH STAINLESS STEEL SCREWS, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR, AND SEAL PLUG.
FD	FLOOR DRAIN (AREAS WITHOUT SHEET FLOORING)	ZURN ZN-211-B5	CAST IRON EPOXY COATED BODY, ADJUSTABLE 5" POLISHED NICKEL BRONZE STRAINER WITH STAINLESS STEEL SCREWS.
FD	FLOOR DRAIN (AREAS WITH SHEET FLOORING)	ZURN ZN-415-B5	CAST IRON EPOXY COATED BODY, 5" POLISHED NICKEL BRONZE STRAINER WITH STAINLESS STEEL SCREWS, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR.
FD	FLOOR DRAIN (TILED SHOWERS)	ZURN ZN-415S-DP	CAST IRON EPOXY COATED BODY, 5" 5/8" SQUARE POLISHED NICKEL BRONZE STRAINER WITH STAINLESS STEEL SCREWS, STAINLESS STEEL DECK PLATE AND ADJUSTABLE COLLAR.
FFD	FUNNEL FLOOR DRAIN (AREAS WITHOUT SHEET FLOORING)	ZURN ZN-211-BF	CAST IRON EPOXY COATED BODY, ADJUSTABLE 5" POLISHED NICKEL BRONZE STRAINER, 8" X 3 1/4" OPEN-THROAT OVAL FUNNEL, AND STAINLESS STEEL SCREWS.
FFD	FUNNEL FLOOR DRAIN (AREAS WITH SHEET FLOORING)	ZURN ZN-415-BF	CAST IRON EPOXY COATED BODY, 5" POLISHED NICKEL BRONZE STRAINER, 8" X 3 1/4" OPEN-THROAT OVAL FUNNEL, COMBINATION INVERTIBLE MEMBRANE CLAMP, STAINLESS STEEL SCREWS AND ADJUSTABLE COLLAR.
GI	GREASE INTERCEPTOR (1 OR 2 BASIN SINK)	ZURN GT2702-10	POLYETHYLENE GREASE INTERCEPTOR, 10 GPM, 20 LB. GREASE CAPACITY, 6 USG LIQUID HOLDING CAPACITY, GOOD FOR CONTINUOUS TEMPERATURE OF 212°F c/w NPT CONNECTIONS, REMOVABLE FLOW DIFFUSING Baffles AND EXTERNAL VENTED FLOW CONTROL DEVICE.



FURNACE SCHEDULE												
UNIT NO.	SERVICE	AIRFLOW (CFM)	ESP (IN. W.C.)	UNIT VOLTAGE & PHASE	MCA/MOCP	FAN HP	HEATING MBH INPUT	HEATING MBH OUTPUT	TONS (NOM.)	FRESH AIR CFM	MAKE - MODEL	REMARKS
F-1	HEATING AND COOLING	2000	0.5"	120/1/60	13.4/15	1.0	120.0	114.0	5.0	750	TRANE S9V2D120U5VSB8 CASCO COIL: TRANE SPXCD010AS3HAA	NATURAL GAS FIRED UPFLOW FURNACE c/w SS HEAT EXCHANGER, VARIABLE SPEED BLOWER, VARIABLE SPEED INDUCER, 97% AFUE, OUTDOOR TEMPERATURE SENSOR BAI5ENS0ATEMPA, TCONT302 THERMOSTAT, ELECTRO-AIR MEDIA AIR CLEANER RETURN AIR PLATFORM EAFB2843-M8.

HEAT PUMP SCHEDULE											
UNIT NO.	SERVICE	NOMINAL CAPACITY (TONS)	REFRIGERANT TYPE	COMPRESSOR QUANTITY - STAGES	UNIT VOLTAGE & PHASE	MCA	MOCP	OUTDOOR AMBIENT TEMPERATURE (°F)	SEER	WEIGHT (LBS)	MAKE - MODEL
HP-1	FURNACE F-1 OUTDOOR CONDENSING UNIT	5.0	R-454B	1 - MULTI	230/1/60	39	40	CLG 55°F TO 120°F HTG 0°F TO 66°F	17.1	231	TRANE 5TWR7060A1000A

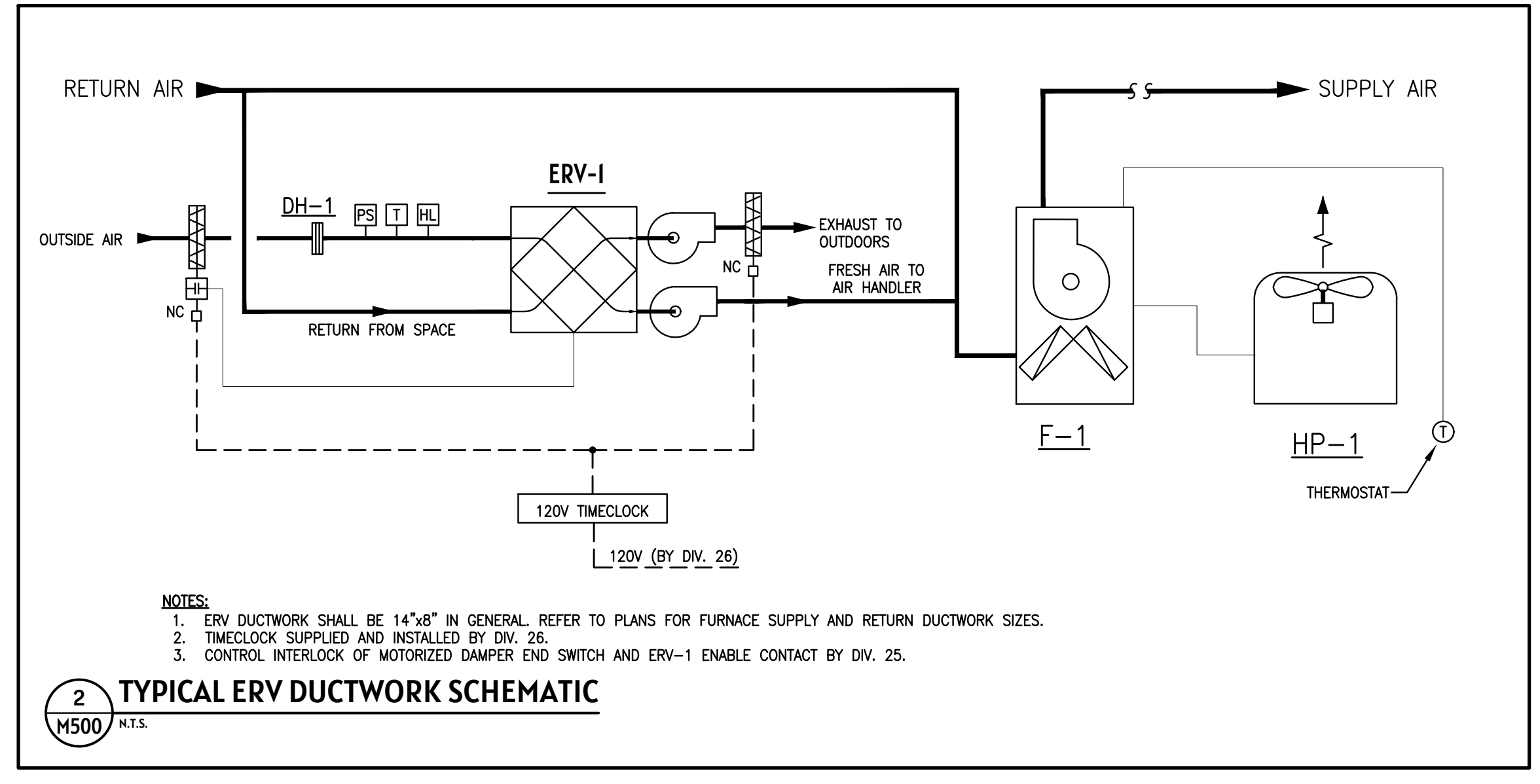
**NOTES:**  
1. UNITS CASING SHALL BE HEAVY GAUGE GALVANIZED, PRE-PAINTED WEATHER-RESISTANT POWDER COAT FINISH.  
2. UNITS SHALL COME COMPLETE WITH REFRIGERATION CONTROLS INCLUDING CONDENSER FAN, COMPRESSOR CONTACTOR, AND HIGH PRESSURE SWITCH.  
3. UNIT SHALL BE COMPLETE WITH FACTORY SUPPLIED LIQUID LINE DRIER.  
4. UNIT SHALL BE PROVIDED WITH A NEMA 4 SERVICE DISCONNECT.

ENERGY RECOVERY VENTILATOR SCHEDULE													
UNIT NO.	SERVICE	SUPPLY AIRFLOW (CFM)	SUPPLY ESP (IN. W.C.)	EXHAUST AIRFLOW (CFM)	EXHAUST ESP (IN. W.C.)	UNIT VOLTAGE & PHASE	POWER (WATTS)	MCA (A)	SENSIBLE EFFECTIVENESS TEMP. (°F) EFFECTIVENESS	WEIGHT (LBS)	DEFROST	MAKE - MODEL	
ERV-1	FRESH AIR ENERGY RECOVERY	750	0.3"	750	0.3"	120/1/60	570	9.5	-13.0	61.0%	310.0	EXHAUST ONLY	LIFEBREATH 730ERV-ECM

**NOTES:**  
1. UNITS CASING SHALL BE INSULATED 20 GA. GALVANIZED, PRE-PAINTED FINISH.  
2. UNITS SHALL COME COMPLETE WITH MERV 13 FILTERS.  
3. FANS SHALL BE 3-SPEED ECM SUPPLY AND EXHAUST FANS.  
4. ERV-1 SHALL OPERATE THROUGH A DIGITAL PROGRAMMABLE TIMECLOCK (WATTSTOPPER CAT# RT-200 SUPPLIED AND INSTALLED BY DIV. 26).

GRILLE & DIFFUSER SCHEDULE		
TYPE	MAKE MODEL	DESCRIPTION
CEILING SUPPLY DIFFUSER	E.H. PRICE 12x12/SPD/31/B12	12"x12" SQUARE PLAQUE (I.E. ARCHITECTURAL) DIFFUSER, WHITE POWDER COAT FINISH, NECK SIZE PER DRAWINGS.
SURFACE MOUNTED SUPPLY GRILLE	E.H. PRICE 520/F/S/A/B12	STEEL, SURFACE MOUNTED, DOUBLE DEFLECTION, 3/4" BLADE SPACING, 1 1/4" BORDER, FRONT BLADES PARALLEL TO SHORT DIMENSION, COUNTER SUNK SCREW FASTENING, WHITE POWDER COAT FINISH, SIZE PER DRAWINGS.
SURFACE MOUNTED RETURN GRILLE	E.H. PRICE 530/F/L/A/B12	STEEL, SURFACE MOUNTED, FIXED LOUVER GRILLE, 3/4" BLADE SPACING, 0" DEFLECTION, 1 1/4" BORDER, BLADES PARALLEL TO LONG DIMENSION, COUNTER SUNK SCREW FASTENING, WHITE POWDER COAT FINISH, SIZE PER DRAWINGS.
T-BAR CEILING RETURN GRILLE	E.H. PRICE 80/NF/B12	EGGCRATE FACE RETURN, 1/2"x1/2" ALUMINUM GRID CORE, NARROW FACE LAY-IN BORDER, WHITE POWDER COAT FINISH, SIZE PER DRAWINGS.

FAN SCHEDULE								
NO.	MODEL	LOCATION	CFM	ESP	POWER	UNIT VOLTAGE & PHASE	RPM	REMARKS
EF-1	GREENHECK SP-A200	SHARED WR 101A	210	0.250"	47	120/1/60	868	CEILING EXHAUST FAN c/w BDD, SLOPING ROOF TERMINATION. CONTROL VIA LIGHTING OCCUPANCY SENSOR (OCC SENSOR BY DIV. 26).
EF-2	GREENHECK SP-LP0810W	STAFF WR 004	100	0.125"	10	120/1/60	894	LOW PROFILE CEILING EXHAUST FAN c/w BDD, SLOPING ROOF TERMINATION. CONTROL VIA LIGHTING OCCUPANCY SENSOR (OCC SENSOR BY DIV. 26).
RH	BROAN BKDN130SS	SERVERY 103	300	0.40"	1.4A	120/1/60	1500	BROAN 30" STAINLESS STEEL RANGE HOOD, 3-SPEED FAN CONTROL, LED LIGHTS. TERMINATE WITH WALL BOX.



DATE: 20260619

REVISIONS:  
ISSUED FOR TENDER

**PROFESSIONAL ENGINEER**  
2026/06/19  
T.C.S. MASHALL  
1200 Kingsway  
26057  
PROV. REG. NO. 26057

The Professional Engineer of dimensions and report only. I do not take responsibility for the work. The Professional Engineer of dimensions and report only. I do not take responsibility for the work. The Professional Engineer of dimensions and report only. I do not take responsibility for the work.

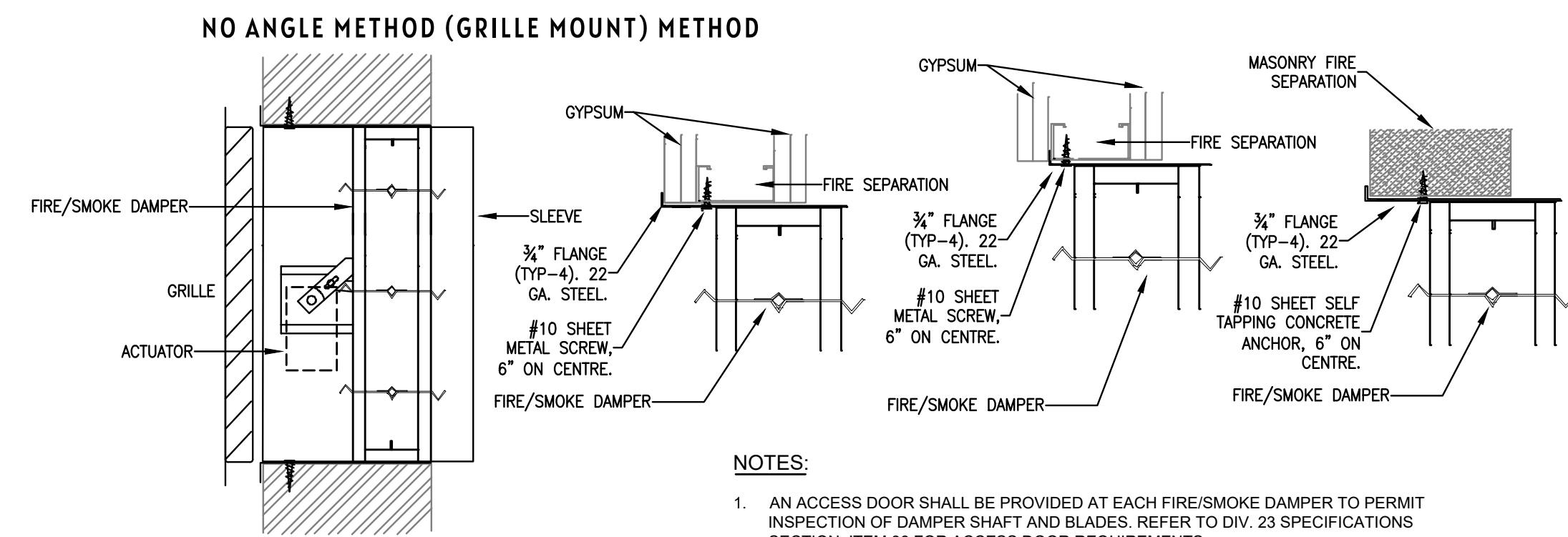
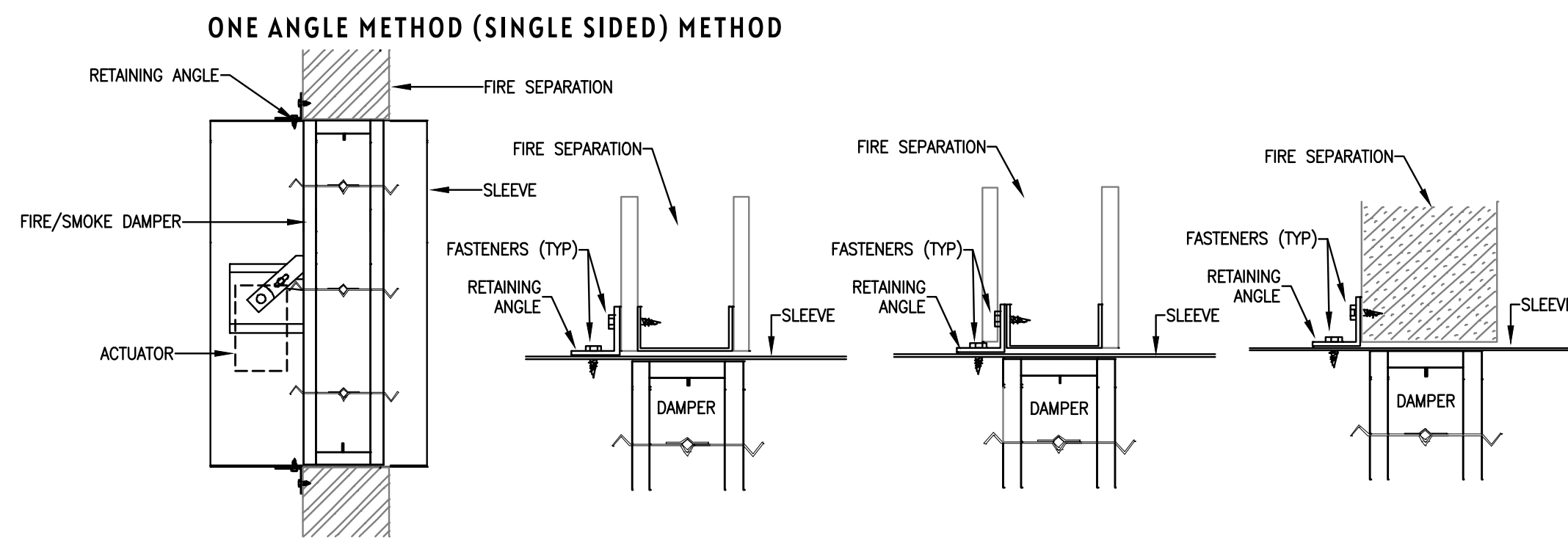
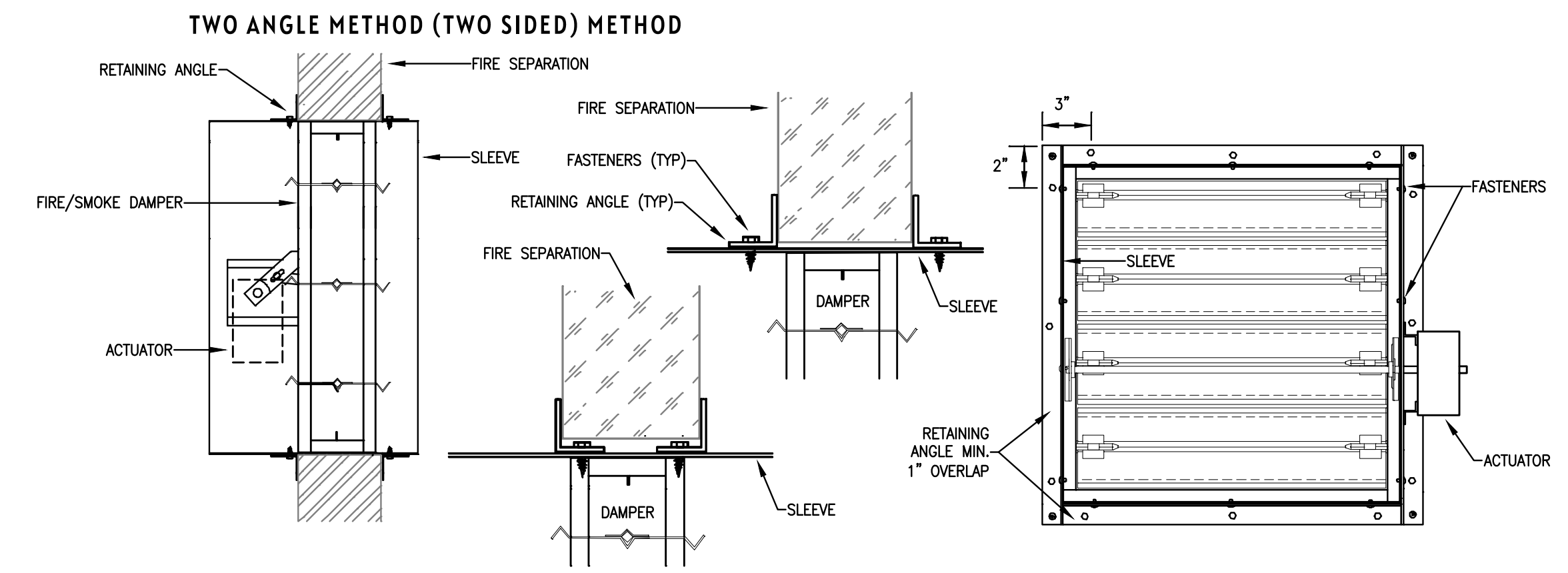
North Engineering Inc.  
1040 Lorne St., Unit 6  
Sudbury, Ontario  
P3C 4R9  
Phone: 705-885-1806

**NORTH ENGINEERING**

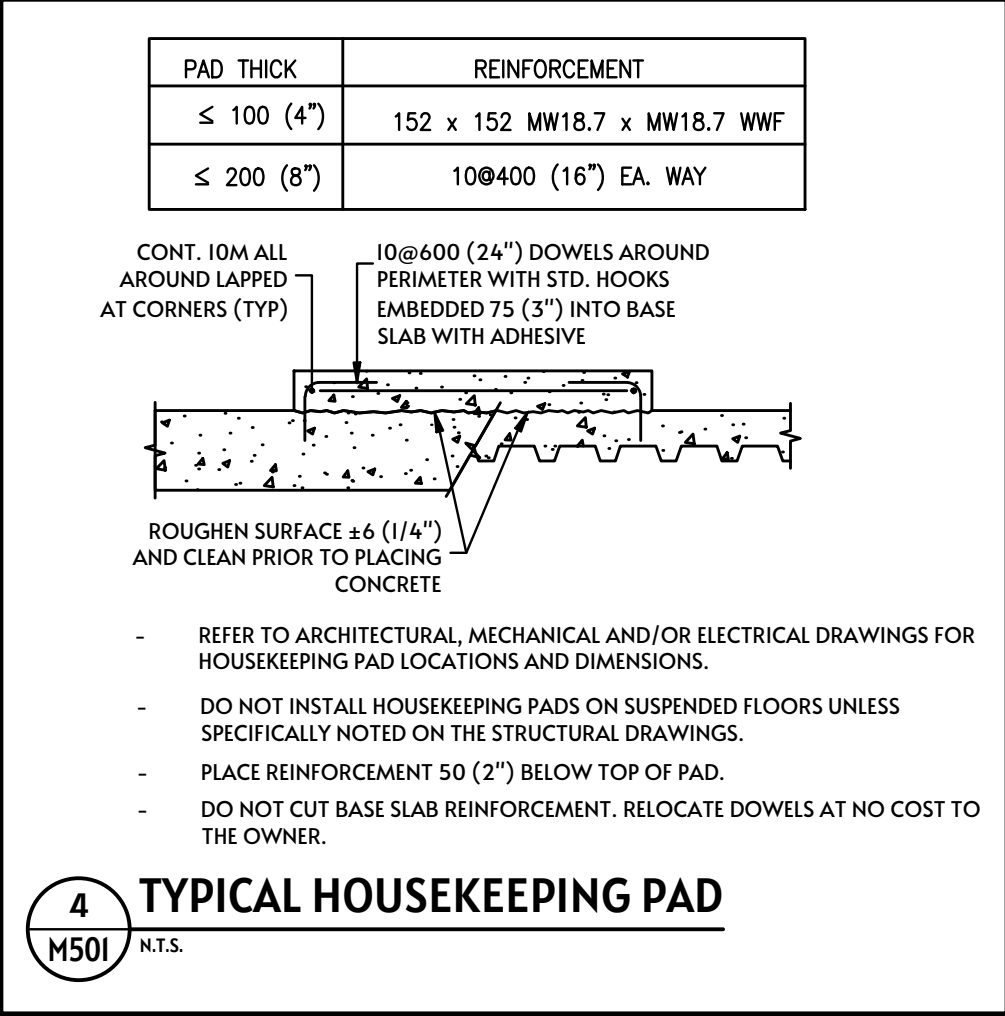
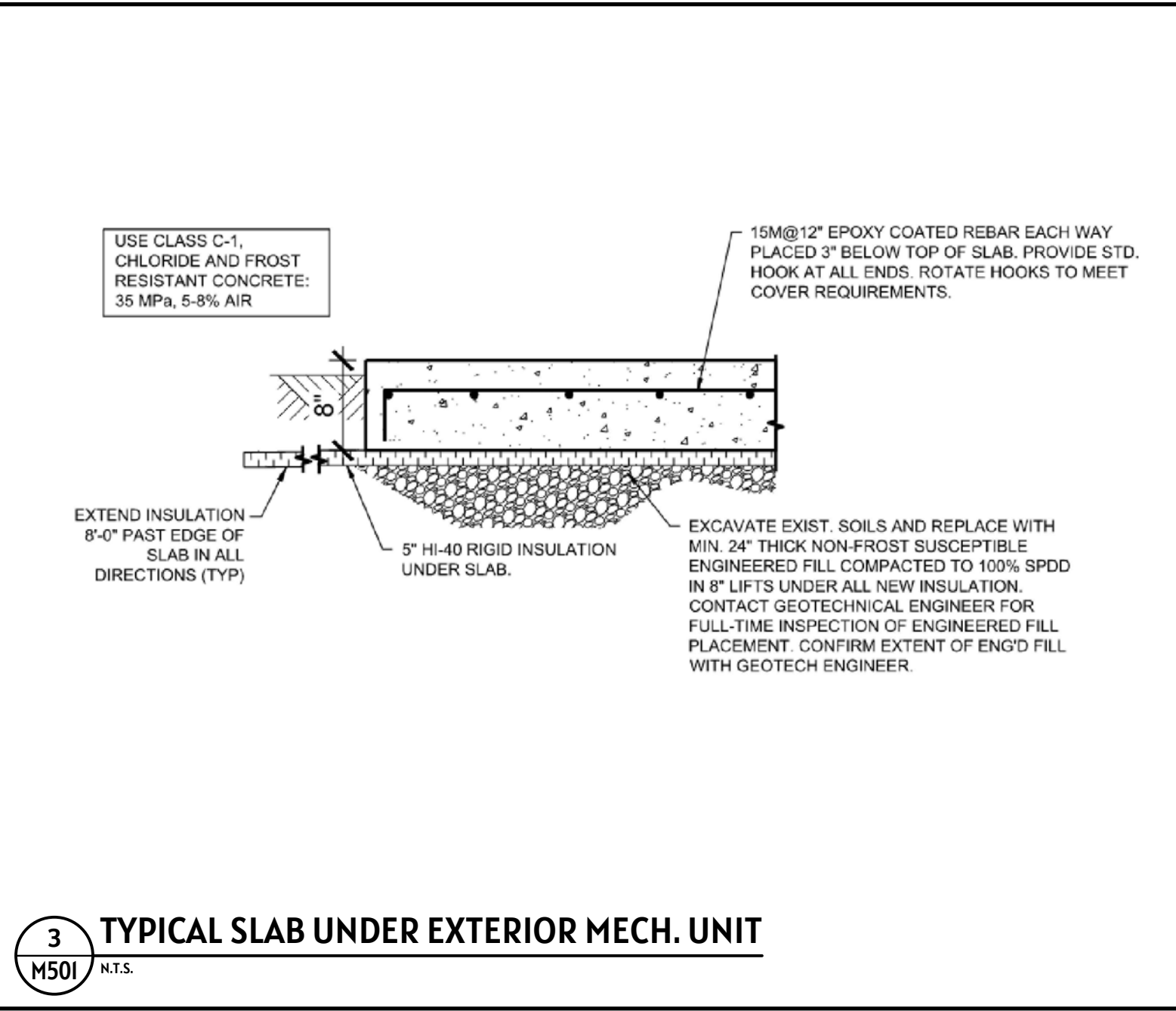
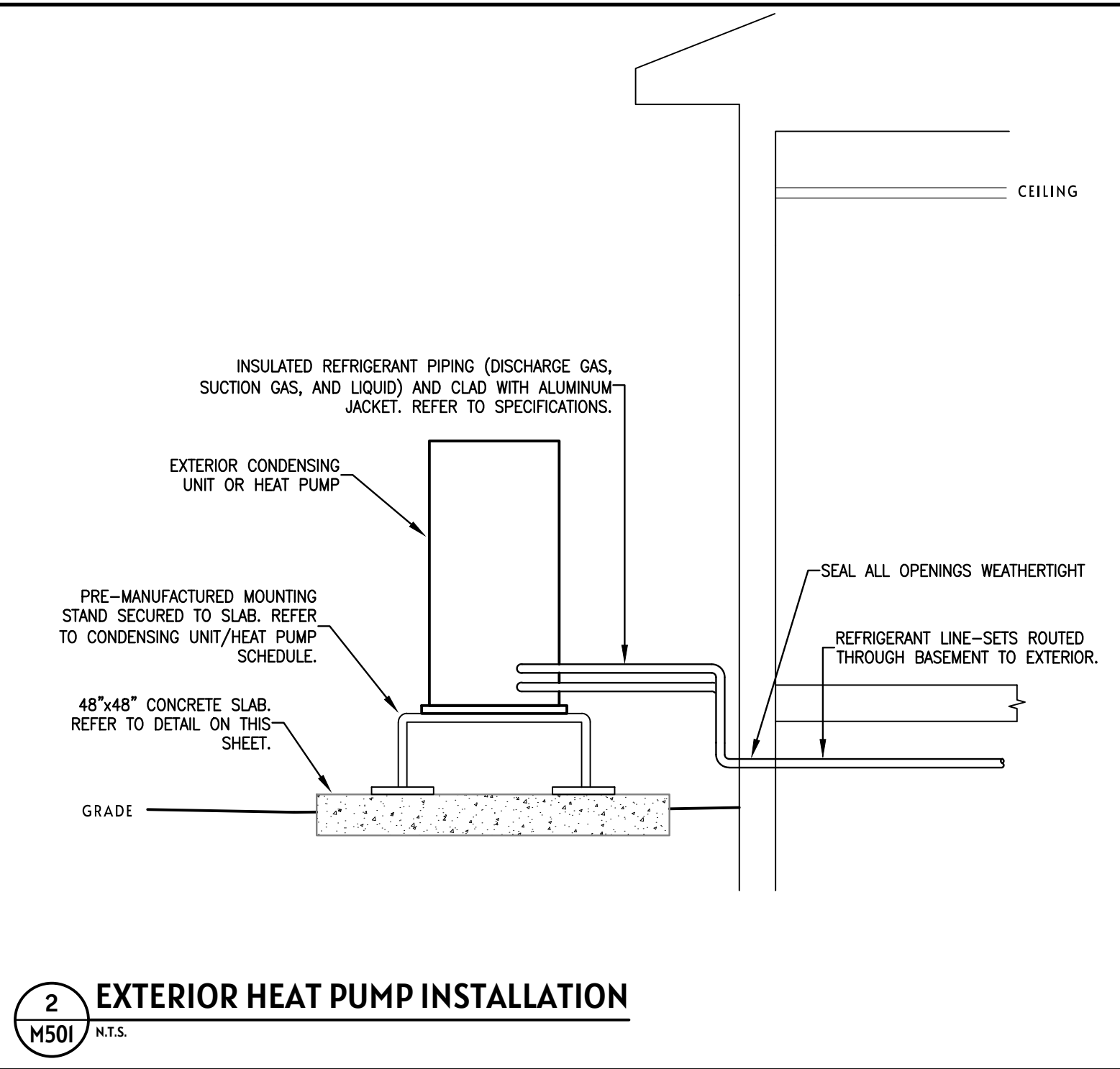
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON

MECHANICAL SCHEDULES & DETAILS

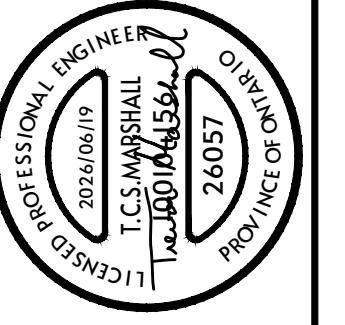
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**1 COMBINATION DAMPER INSTALLATION**  
M501 N.T.S.

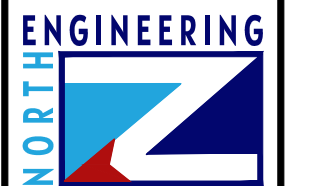


DATE: 20260619  
REVISIONS: ISSUED FOR TENDER



The Contractor shall verify all dimensions and report any discrepancies to the Architect before proceeding with the work. All measurements of services are the property of the Architect. Do not issue drawings.

North Engineering Inc.  
1000 Lorne St., Unit 6  
Sudbury, Ontario  
P3C 4R9  
Phone: 705-885-1806



**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
**MECHANICAL SCHEDULES & DETAILS**

Date: JUNE 19, 2026  
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**GENERAL PROVISIONS - ELECTRICAL SPECIFICATIONS - SECTION 26A**

- REQUIREMENTS SPECIFIED IN DIVISION 1, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, ALONG WITH DIVISION 26 AND ALL ITS SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS.
- PROVIDE ALL MATERIAL, EQUIPMENT, INCIDENTALS, AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION AND THE PROJECT. SHOULD ANY DISCREPANCY APPEAR ANYWHERE IN THE CONTRACT DOCUMENTS THAT MAY BE CONSTRUED AS AMBIGUOUS, OR MAY CAUSE DOUBT TO THE TRUE INTENT, CLARIFICATION SHALL BE OBTAINED FROM THE CONSULTANT. IF THIS IS NOT DONE, THE MOST EXPENSIVE ALTERNATE WILL BE INCLUDED IN THE PROJECT. ANY DIRECTION OR INTERPRETATION FROM THE CONSULTANT SHALL BE CONSIDERED FINAL AND WILL NOT BE CONTESTED.
- THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF THE BID SHALL INDICATE SUCH KNOWLEDGE.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT, AS SUPPLIED FITS IN THE ROOM OR SPACE SHOWN AND HAS ALL CLEARANCES REQUIRED. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS.
- UNTIL TIME OF INSTALLATION, THE CONSULTANT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION AND DIMENSIONS OF THE EQUIPMENT TO THE COST TO THE CONTRACT. ADDITIONALLY, THE OWNER SHALL HAVE TEMPORARY USE OF THE INSTALLATION PRIOR TO COMPLETION.
- THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- EXAMINE THE WORK OF OTHER TRADES INsofar AS THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES.
- COORDINATE ALL WORK WITH OTHER TRADES. RELOCATE OR REPLACE ANY MATERIALS OR EQUIPMENT WHICH INTERFERES WITH OTHER DIVISIONS WHICH RESULTS FROM A LACK OF COMMUNICATION AND COORDINATION.
- IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN THIS CONTRACTORS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE CONSULTANT SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. THE DECISION WILL BE FINAL.
- ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CONNECTIONS OR REQUIREMENTS AND INCLUDE SAME IN THE CONTRACT COST. DURING CONSTRUCTION CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO START OF WORK. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT UNLESS FURNISHED INTEGRAL WITH EQUIPMENT PACKAGE.
- IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB, ANY ERRORS OR OMISSIONS, REGARDLESS OF DIVISION, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS STARTED. THE OMISSION OR INCOMPLETE MENTION OF WORK DOES NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH WORK.
- THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THIS CONTRACTORS WORK. THE CONSULTANT SHALL BE RESPONSIBLE FOR INDICATING SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
- INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND CSA APPROVED. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS TO CODE REQUIREMENTS.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS, PLAN REVIEWS, AND CERTIFICATES OF INSPECTION, ON COMPLETION OF WORK, PRESENT COMPLETE CERTIFICATES OF APPROVAL.
- PROVIDE A SET OF PDF SHOP DRAWINGS AND DELIVERY DATAS FOR REVIEW BY THE CONSULTANTS. WHERE ALTERNATE EQUIPMENT HAS BEEN PERMITTED BY THE CONSULTANT, THE CONTRACTOR SHALL BEAR ALL COSTS FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING THE COST OF ALL OTHER TRADES AFFECTED.
- SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. ALL BURIED OR CONCEALED ELEMENTS SHALL BE DIMENSIONED FROM FIXED REFERENCE POINTS. DELIVER THE AS-BUILT DRAWINGS BEFORE FINAL CERTIFICATION OF COMPLETION IS ISSUED.
- PROVIDE TWO COMPLETE SETS OF CLOSE-OUT, OPERATING AND MAINTENANCE MANUALS COMPILED FROM INDIVIDUAL SUPPLIERS AND MANUFACTURERS. MANUALS SHALL INCLUDE SHOP DRAWINGS, AS-BUILT DRAWINGS, SUPPLIER CONTACT INFORMATION, WARRANTIES, WARRANTY LETTERS, AND ANY OTHER DOCUMENTS REQUIRED. MAKE ANY CHANGES TO THE MANUALS AS DIRECTED BY THE CONSULTANT.
- BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES OF ANY WORK BY OTHER TRADES. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT THEIR OWN EXPENSE, MAKE CHANGES IN THE WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE PROPER INSTALLATION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
- ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIAL, EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OF CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.
- SUPPLY AND INSTALL ALL LAMACOID NAMEPLATES ON THE EQUIPMENT CONNECTED BY THIS CONTRACTOR, WHETHER SUPPLIED BY THEM OR NOT.
- THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND LABOUR REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL EQUIPMENT OR DEVICE CALLED FOR ON THE PLANS.
- ALL SURFACE-MOUNTED EQUIPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PLYWOOD BACKBOARD. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 3.5" HIGH CONCRETE HOUSEKEEPING PAD.
- PROVIDE OWN TEMPORARY OFFICE, STORAGE, AND/OR WORKSHOP AS REQUIRED TO COMPLETE THE WORK. ANY LOSS OR DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL CUTTING, PATCHING, EXCAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROVIDING THE GLEVES, CHASSES AND OPENINGS NECESSARY FOR THE ELECTRICAL INSTALLATION AND FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ARCHITECT. ALL HOLES SHALL BE CORE DRILLED. PROVIDE FIRE STOP IN ALL OPENINGS CREATED THROUGH FIRE-RATED WALLS, FLOORS OR CEILINGS.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY FOR THIS WORK. COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.
- ALL WORK SHALL BE INSTALLED IN A PRACTICAL AND PROFESSIONAL MANNER, BY SKILLED TRADESPEOPLE TO THE SATISFACTION OF THE CONSULTANT. WORK NOT MEETING THE QUALITY EXPECTATIONS OF THE CONSULTANT SHALL BE REMEDIATED IN A TIMELY FASHION AT NO COST.
- ALL CABLES AND/OR CONDUCTORS SHALL BE RUN IN CONDUIT (OR CABLE TRAY AS PERMITTED) REGARDLESS OF VOLTAGE OR APPLICATION. IN ALL INSTANCES, WIRE CONNECTORS/JUNCTIONS SHALL BE MADE IN JUNCTION BOXES, REGARDLESS OF VOLTAGE OR APPLICATION.
- DAILY, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY THIS WORK AND LEAVE THE AREA OF OPERATION BROOM CLEAN.
- THIS CONTRACTOR SHALL GUARANTEE IN WRITING THE QUALITY OF WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE AND LEAVE THE WORK IN PERFECT ORDER AT THE COMPLETION. SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE REPAIRS CORRECTED AT THIS CONTRACTORS EXPENSE.
- THIS CONTRACTOR SHALL COMPLETE ALL LINE VOLTAGE WIRING FOR MECHANICAL EQUIPMENT. LINE VOLTAGE WIRING IS UNDERSTOOD TO BE GREATER THAN 99 VOLTS.

**LIGHTING SYSTEMS - SECTION 26B**

- THE LIGHTING SYSTEM SHALL BE FULLY FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS TO PROVIDE A COMPLETE AND OPERATIONAL LIGHTING SYSTEM.
- FIXTURES BY ACUTY, COOPER, HUBBELL, DECO, AND SIGNIFY ARE CONSIDERED EQUAL. FOR ANY EQUALS OR ALTERNATES, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE CONSULTANT A MINIMUM OF 6 BUSINESS DAYS BEFORE TENDER CLOSE.
- LIGHTING CONTROLS SHALL MATCH THE COLOR AND COVER PLATE TYPE OF THE RECEPTACLES LOCATED IN THE SAME ROOM. EACH ZONE OF CONTROL SHALL OCCUPY ONE PANEL. CONTROLS SHALL CONSIST OF THREE BUTTONS:
  - ON/OFF
  - RAISE
  - LOWER
- LIGHTING CONTROL DEVICES SHALL BE MOUNTED IN DEVICE BOXES AND SHALL HAVE CONDUIT TO THE ACCESSIBLE CEILING SPACE. FISHING CABLES OR FLOATING DEVICES ARE NOT PERMITTED.
- LUMINAIRES SHALL BE PROVIDED WITH A CONSISTENT COLOR TEMPERATURE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL REPLACE AT NO CHARGE ANY FIXTURES WHICH DO NOT MATCH THE COLOUR TEMPERATURE OF THE OF THE OTHER FIXTURES ON THE PROJECT, REGARDLESS OF THE LUMINAIRE FIXTURE SCHEDULE NOMENCLATURE OR DESCRIPTION.
- ALL LUMINAIRES SHALL BE FIRMLY SUPPORTED FROM BEAMS, JOISTS, OR OTHER STRUCTURAL ELEMENTS.
- ANY EXPOSED CABLING IN SUSPENDED FIXTURES SHALL INCLUDE THE CONTROL CABLING INTEGRAL TO THE LINE VOLTAGE CABLING TO AVOID UNSIGHTLY AND LOOSE CONTROL CABLING.
- THE INSTALLATION OF ALL LUMINAIRES SHALL BE COORDINATED WITH ALL TRADES TO PROVIDE THE INTENDED SPACING.
- FIXTURES SHALL NOT BE DAMAGED OR DIRTY DURING THE PROJECT. ANY FIXTURES SHOWING DAMAGE OR DIRTY SHALL BE CLEANED AND REPLACED.
- THE ELECTRICAL CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE TO ENSURE THAT ALL FIXTURES AND CONTROLS WORK TOGETHER SEAMLESSLY AND AS INTENDED BY THE CONSULTANT. THE CONTRACTOR SHALL REMEDIATE AT NO COST ANY LIGHTING SYSTEMS WHICH ARE DEEMED UNSATISFACTORY BY THE CONSULTANT.

**STRUCTURED CABLING - SECTION 26C**

- PROVIDE A COMPLETE STRUCTURED CABLING SYSTEM FOR OUTLETS AND DEVICES SHOWN ON DRAWINGS AND AS SPECIFIED HEREIN. PROVIDE ALL CABLE, TERMINATIONS, JACKS, COVER PLATES, CONDUIT, PATCH PANELS, RACKS, PATCH CABLES, AND TESTING REPORTS AS TO TURN OVER A FULLY FUNCTIONAL AND CERTIFIED SYSTEM TO THE OWNER.
- THE SYSTEM SHALL MEET THE REQUIREMENTS OF FTS CAT6, PROVIDED BY A SINGLE MANUFACTURER BEING PANDUIT, LEVITON, NORDEX, HUBBELL, COMMSCOPE OR SHALL MATCH THE EXISTING SYSTEM, IF PRESENT.
- ONLY QUALIFIED INSTALLERS WITH A MINIMUM OF 3 YEARS OF EXPERIENCE SHALL INSTALL THE SYSTEM. SHOP DRAWINGS FOR ALL COMPONENTS WILL BE PROVIDED TO THE CONSULTANT.
- STRUCTURED CABLING IS INTENDED FOR USE BY VOICE, DATA, WIFI, POE DEVICES, CCTV, DOOR ACCESS, ETC. THE CABLE JACKET COLOR SHALL BE DIFFERENT FOR EACH SEPARATE SERVICE. EACH CABLE SHALL BE LABELED ON THE OUTLETS AT EACH END WITH V01, V02, V03, ETC FOR VOICE; D01, D02, D03, ETC FOR DATA; AND OTHER SIMILAR NOMENCLATURE FOR THE BALANCE OF THE DIFFERENT SERVICES.
- OUTLET JACKS AND COVER PLATES SHALL MATCH THE COLOR OF THE OTHER ELECTRICAL DEVICES IN THE ROOM. THE JACKS SHALL BE MOUNTED IN A DECORATOR STYLE PLATE, AND STANDARD DECORATOR STYLE COVER PLATES MATCHING THE OTHERS IN THE ROOM SHALL BE PROVIDED - TYPICALLY STAINLESS STEEL.
- AT THE HEAD END, PROVIDE A WALL MOUNTED DATA RACK ALONG WITH 19" 24 PORT PATCH PANELS TO SUIT INCOMING CABLES. ALL STRUCTURED CABLING SHALL TERMINATE IN PATCH PANELS, REGARDLESS OF WHICH SERVICE THEY ARE INTENDED FOR.
- A J HOOK SYSTEM SHALL BE INSTALLED TO ROUTE THE STRUCTURED CABLING. THE CABLE TRAY SHALL CARRY THE BULK OF THE CABLING, WITH FINAL RUNS TO THE DEVICE BOXES VIA A MINIMUM 1" CONDUIT. THE CONDUIT SHALL BE CONTINUOUS BETWEEN THE DEVICE BOX AND THE J HOOK AND SHALL BE SECURED TO THE J HOOK SYSTEM.
- CABLES SHALL BE PROTECTED FROM ALL CONDUIT ENDS EITHER BY PLASTIC BUSHINGS OR NYLON INSULATED THROAT CONNECTORS.
- STRUCTURED CABLING SHALL NOT BE TIE-WRAPPED OR FASTENED TO MECHANICAL, STRUCTURAL OR ELECTRICAL ELEMENTS. CABLING SHALL BE IN CONDUIT OR CABLE TRAY IN ALL INSTANCES. CABLES SHALL NOT BE RUN "FREE-AIR", NOR SHALL THEY BE INSTALLED ON J-HOOKS OR ANY OTHER SYSTEM THAT IS NOT CONTINUOUS CONDUIT AND/OR CABLE TRAY.
- THE COMPLETE SYSTEM SHALL BE TESTED IN ACCORDANCE WITH IEEE AND TIA STANDARDS. ANY FAILURES SHALL BE CORRECTED AND RE-TESTED. RECORD TESTS SHALL BE SUBMITTED TO THE CONSULTANT.
- NO SPLICING OF ANY STRUCTURED CABLING IS PERMITTED.

**ELECTRICAL DISTRIBUTION - SECTION 26D**

- PANELBOARDS SHALL BE 200A, 42 CIRCUIT MINIMUM, ENCLOSED DEAD FRONT SAFETY TYPE WITH FEATURES AND RATINGS AS SCHEDULED ON DRAWINGS. MANUFACTURERS SHALL BE EATON (POWERLINE) AND SCHNEIDER (NO) ALL BUS BARS SHALL BE RECTANGULAR SOLID COPPER, A SEPARATE TUB AND CHASSIS SHALL BE PROVIDED. LOADCENTERS ARE NOT PERMITTED.
  - BREAKERS SHALL BE BOLT-ON TYPE WITH SUFFICIENT INTERRUPTING CAPACITY FOR THE AVAILABLE FAULT CURRENT. MAIN BREAKERS SHALL BE SEPARATE, CHASSIS MOUNTED MOLDED CASE DEVICES. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIPS. "DUPLEX", "TWIN", "MINI", OR SIMILAR SPACE SAVING BREAKERS ARE NOT PERMITTED.
  - PROVIDE LOCKING DEVICES FOR BREAKERS SUPPLYING FIRE ALARM SYSTEMS, EMERGENCY LIGHTING SYSTEMS, TIME CLOCKS, SUMP PUMPS, AND MECHANICAL CONTROLS.
  - A TYPED WRITTEN PANEL DIRECTORY SHALL BE INCLUDED WITH EACH PANELBOARD, MOUNTED IN A TRANSPARENT PLASTIC SLEEVE. HAND WRITING IS NOT PERMITTED. ALL LOADS SHALL BE BALANCED ACROSS ALL PHASES.
- SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH EXTERNAL PAD LOCKABLE OPERATING HANDLE. FUSIBLE SWITCHES SHALL BE PROVIDED WITH CLASS J, TIME DELAY, CURRENT LIMITING FUSES AND SHALL PROVIDE IEC TYPE 2 PROTECTION TO CONDUCTORS. MANUFACTURER SHALL BE EATON, SCHNEIDER, OR SIEMENS.
- GROUND/BOND ALL EQUIPMENT PER THE OESC AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL UTILITY. ADDITIONALLY, PERFORM THE FOLLOWING:
  - ALL CONDUITS SHALL CONTAIN AN INSULATED CODE SIZED GROUND WIRE SIZE PER OESC IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS.

**EXISTING CONDITIONS - SECTION 26E**

- THE DRAWINGS ARE PERFORMANCE DRAWINGS AND INDICATE THE GENERAL ARRANGEMENT OF WORK. THEY ARE DIAGRAMMATIC AND DO NOT SHOW ALL THE EXISTING DETAILS AND DEVICES. THE CONTRACTOR SHOULD VERIFY ON SITE ALL EXISTING CONDITIONS RELATED TO MEASUREMENTS, CLEARANCES, SIZES, STRUCTURAL ELEMENTS, FINISHES, AND AVAILABLE SPACE. NO ADDITIONAL COSTS WILL BE ENTERTAINED FOR ANY REQUIRED CHANGES OR MODIFICATIONS TO THE PROJECT WHICH MAY BE NEEDED IN ORDER TO CARRY OUT THE DESIGN INTENT.
- INCLUDE REASONABLE TIME AND MATERIAL IN THE TENDER PRICE TO MODIFY AND MAKE ALTERATIONS TO THE EXISTING BUILDING SYSTEMS. EXCEPT THAT EQUIPMENT, DEVICES AND RACEWAYS WILL REQUIRE RELOCATION, RE-FEEDING, AND/OR RE-ROUTING. ALLOW FOR THE RELOCATION OF CONDUITS AND CABLES WITHIN WALLS WHERE NEW OPENINGS ARE SHOWN. OBTAIN CONFIRMATION FROM THE OWNER BEFORE CARRYING OUT ANY WORK ON EXISTING BUILDING SYSTEMS.
- CONTRACTOR SHALL FAMILIARIZE THEMSELVES AND CHECK WITH OWNER'S REPRESENTATIVE REGARDING EXISTING BUILDING SYSTEMS, METHODS OPERATIONS AND EQUIPMENT INSTALLED. ANY NECESSARY WORK, DEVICES, OR EQUIPMENT REQUIRED TO INTERFERE WITH THE EXISTING BUILDING COMPONENTS SHALL BE INCLUDED IN THE TENDER PRICE.
- WHERE DEVICES ARE SHOWN IN EXISTING WALLS, THE DEVICE BOXES SHALL BE CUT INTO THE WALL. FISH CABLE INTO THE WALL CAVITY. CUTTING ACCESS POINTS AS REQUIRED TO OVERCOME OBSTACLES WITHIN THE WALL. WALLS MADE OF CONCRETE BLOCK SHALL BE FISHED WITH THE DEVICE BOX GROUDED INTO PLACE.
- INCLUDE IN THE TENDER PRICE ANY PREMIUM WORK AND FEES RESULTING FROM AFTER HOURS WORK, WEEKEND WORK, OR LIVE WORK, ETC. AS REQUIRED TO EITHER INTERFACE OR TIE-IN TO EXISTING BUILDING SYSTEMS.

**EXISTING CONDITIONS - SECTION 26E CONT'D**

- CIRCUIT NUMBERS SHOWN ON DRAWINGS ARE INTENDED FOR GROUPING PURPOSES ONLY. WHERE EXISTING DEVICES ARE TO BE REUSED, CHECK EXISTING CIRCUIT LOADINGS. USE SPARE BREAKERS AS AVAILABLE, AND PROVIDE ANY AND ALL ADDITIONAL BREAKERS REQUIRED. PROVIDE NEW TYPEWRITTEN PANEL SCHEDULES IN ALL PANELS WHICH HAVE BEEN MODIFIED.
- CLEAN AND MAKE GOOD ALL EXISTING LIGHTING FIXTURES AND EQUIPMENT TO BE REUSED. WHERE DEVICE LOCATIONS ARE SHOWN AS EXISTING/REUSED, NEW DEVICES AND COVER PLATES SHALL BE PROVIDED TO MATCH THE NEW DEVICES THROUGHOUT THE PROJECT.
- RELOCATE, REROUTE AND ADJUST WIRING AND CONDUITS TO MAINTAIN ACCESSIBILITY OF WHICH SUCH EXISTING ARE AFFECTED BY NEW WORK SUCH AS NEW PARTITIONS, MECHANICAL DUCTWORK, PIPING, EQUIPMENT AND NEW DRYWALL CEILINGS.
- PROVIDE FIRESTOP SYSTEMS THAT MEET OBC REQUIREMENTS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FIRE SEPARATION PLAN. IN EXISTING PARTITIONS, SEEK A RULING FROM THE CONSULTANT IF NO RATING IS SHOWN ON THE DRAWINGS. PROVIDE SHOP DRAWINGS FOR EACH FIRESTOP SYSTEM WHICH SHOW THE CONSTRUCTION CONDITIONS, RELATIONSHIPS TO ADJOINING CONSTRUCTION, DIMENSIONS, DESCRIPTION OF MATERIALS AND FINISHES, COMPONENT CONNECTIONS, ANCHORAGE METHODS, HARDWARE AND INSTALLATION PROCEDURES. PROVIDE PRODUCT CERTIFICATES AND TEST REPORTS.
- MAINTAIN A SET OF SHOP DRAWING/LITERATURE ON EACH ULG ASSEMBLY ON SITE FOR REFERENCE BY TRADES, INSPECTORS, OR CONSULTANTS AT ANY TIME DURING CONSTRUCTION
- PROVIDE FISH WIRES IN ALL EMPTY CONDUITS.
- IF OBJECTIONABLE NOISE EXISTS, MAKE CORRECTIONS AND CHANGES AS REQUIRED.
- SCHEDULE AND CO-ORDINATE ALL WORK WITH OTHER TRADES.
- UNLESS OTHERWISE SHOWN OR NOTED, HEIGHTS ABOVE FLOOR TO CENTRE LINE OF DEVICE SHALL MATCH EXISTING.
- WHERE DEVICES OR EQUIPMENT ARE SHOWN AS BEING REMOVED, THEIR ASSOCIATED BOXES, CONDUCTORS, CONDUITS, AND ASSOCIATED WORKS SHALL ALSO BE REMOVED BACK TO THE PANEL OR SOURCE. WHERE THE REMOVED ITEMS SHARE RACEWAYS OR CONDUIT, THE WORKS SHALL BE REMOVED TO THE NEAREST JUNCTION. CABLES AND CONDUCTORS SHALL BE REMOVED TO SOURCE IN ALL CASES.

**RACEWAYS, DEVICES, AND CONTROLS - SECTION 26F**

- PROVIDE A FULLY COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
  - ELECTRICAL SWITCHES AND RECEPTACLES SHALL BE HEAVY DUTY, SPECIFICATION GRADE, DECORATOR TYPE AND SHALL BE WHITE.
  - COVER PLATES SHALL BE STAINLESS STEEL.
  - CIRCUIT NUMBERING SHALL BE PROVIDED BY WAY OF LABEL MAKER WITH CLEAR RIBBON AND BLACK TYPE ON THE COVER PLATE.
  - DEVICES SHALL BE AS MANUFACTURED BY HUBBELL BELOW; WITH APPROVED EQUALS FROM LEVITON, EATON, OR PASS & SEYMOUR:
    - 15A 125V SINGLE POLE SWITCH DS115W
    - 15A 125V DUPLEX TR RECEPTACLE DR15TRW
    - 15/20A 125V DUPLEX TR RECEPTACLE DR20TRW
    - 15A 125V GFCI DUPLEX TR RECEPTACLE GF15WLLATR
    - 15/20A 125V GFCI DUPLEX TR RECEPTACLE GF20WLLATR
- WHERE DEVICES OR EQUIPMENT ARE SHOWN AS BEING REMOVED, REFER TO THE MILLWORK ELEVATIONS PRIOR TO REMOVAL. NO EXTRA WILL BE CONSIDERED FOR LACK OF COORDINATION. OTHERWISE, MOUNT DEVICES AT THE FOLLOWING HEIGHTS:
  - LIGHT SWITCHES/CONTROLS AND DOOR OPERATOR PUSH BUTTONS AT 42" AFF.
  - RECEPTACLES, VOICES/DATA, ETC. AT 18" AFF OR TOP OF 2ND COURSE OF MASONRY BLOCK; COUNTER TOP DEVICES SHALL BE EITHER MOUNTED 6" ABOVE COUNTER OR 42" AFF IF NO COUNTER IS PRESENT.
  - FIRE ALARM PULL STATIONS AT 47" AFF.
  - FIRE ALARM NOTIFICATION APPLIANCES AT 2530MM OR 150MM BELOW CEILING WHERE CEILING HEIGHT IS LESS THAN 2350MM.
- ALL CABLING/WIRE SHALL BE RUN IN RIGID, THREADED, GALVANIZED METAL CONDUIT OR GALVANIZED ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
- CONDUIT IN EXTERIOR WALLS, ON WALL SURFACES/EXPOSED, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED METAL CONDUIT.
- ALL CONDUIT SHALL BE CONCEALED IN WALLS, CEILINGS, AND BELOW FLOORS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE CONSULTANTS.
- ALL CONDUIT RUN OVERHEAD SHALL BE RUN AT THE BOTTOM OF THE FLOOR, ROOF STRUCTURE, OR LOWEST CHORD OF JOIST SPACE (AS APPLICABLE) ABOVE IN ORDER TO AVOID CONFLICTS WITH OTHER TRADES.
- USE A90 OR FLEXIBLE CONDUIT FOR THE FINAL CONNECTION TO RECEPTACLES AND LIGHTING FIXTURES (8' LENGTH MAXIMUM). USE LIQUID TIGHT CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
- INSTALL CONDUIT PERPENDICULAR TO THE WALLS AND STRUCTURAL MEMBERS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1' OF ALL CHANGES IN DIRECTION.
- CONDUIT SHALL BE PROPERLY SUPPORTED AND SECURELY FASTENED IN PLACE. IF A CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS WHICH USE "ALL-ROUND" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
- INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE/PULL ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.
- UNLESS OTHERWISE NOTED, PROVIDE 1" EMPTY CONDUIT FROM EACH STRUCTURED CABLING OUTLET TO THE NEAREST ACCESSIBLE CEILING SPACE.
- ALL CONDUIT TERMINATIONS WILL INCLUDE A PLASTIC BUSHING. IF EMT IS PERMITTED, COUPLINGS AND FITTINGS FOR EMT SHALL BE OF THE SET SCREW TYPE WITH NYLON INSULATED THROATS.
- INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH OESC UNLESS LARGER BOXES ARE INDICATED ON THE DRAWINGS.
- PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAUGE. HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE. FOR ABOVE GROUND WORK, FURNISH WEATHERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.
- RECESSED DEVICES BOXES SHALL BE MADE OF CODE GAUGE STEEL AND SHALL BE SINGLE OR MULTI GANG BOXES AS SHOWN ON PLAN. WHERE SHOWN BACK TO BACK ON A PARTITION, BOXES SHALL BE OFFSET IN STUD CAVITIES TO MINIMIZE SOUND TRANSMISSION AND FIRE SPREAD. FINISHED COVER PLATES OF ADJACENT DEVICES SHALL HAVE A MINIMUM OF 1" SPACE WITH MOUNTED SIDE BY SIDE OR ABOVE EACH OTHER.
- SURFACE MOUNT DEVICES, WHERE PERMITTED, SHALL BE OF CAST METAL CONSTRUCTION WITH NO KNOCK-OUTS. STAMPED "HAND-BOXES" WILL NOT BE ACCEPTED.
- CONDUCTORS #10 AND SMALLER SHALL HAVE CONTINUOUS INSULATION COLOR, AS LISTED ABOVE. CONDUCTORS #8 AND LARGER WHICH DO NOT HAVE CONTINUOUS INSULATION COLOR SHALL HAVE AT LEAST FOUR LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES.
- ALL CONDUCTORS SHALL BE RATED FOR 600 VOLTS. BRANCH CIRCUITS SHALL BE T90. FEEDERS SHALL BE RW90 IN DAMP/WET LOCATIONS AND RW90 OTHERWISE. ALUMINUM CONDUCTORS ARE NOT ALLOWED ON THIS PROJECT. MINIMUM SIZE OF CONDUCTORS SHALL BE #12 UNLESS OTHERWISE NOTED.
- CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE CONNECTORS, "MARRETTE" BY T&B. ALL WIRE CONNECTIONS, REGARDLESS OF USE OR VOLTAGE SHALL BE MADE IN JUNCTION BOXES OUR HOUSINGS. ALL WIRE CONNECTORS SHALL BE RATED 600V MINIMUM.
- CONNECT #8 AND LARGER WIRES WITH HYDRAULIC CRIMP COMPRESSION CONNECTORS AS MANUFACTURED BY BURNDY OR T&B.
- CLEANOUT EACH CONDUIT SYSTEM BEFORE PULLING WIRE AND PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS.
- FORM AND TIE ALL WIRING IN PANELBOARDS. ADDITIONALLY, THERE SHALL BE NO WIRENUT JOINTS OR SPLICES MADE INSIDE SWITCHBOARDS/PANELBOARDS.
- CONDUCTOR SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. FEEDERS AND BRANCH CIRCUITS SHALL BE EACH BE INSTALLED WITH WIRES OF SUFFICIENT SIZE TO LIMIT THEIR VOLTAGE DROP TO 2%.

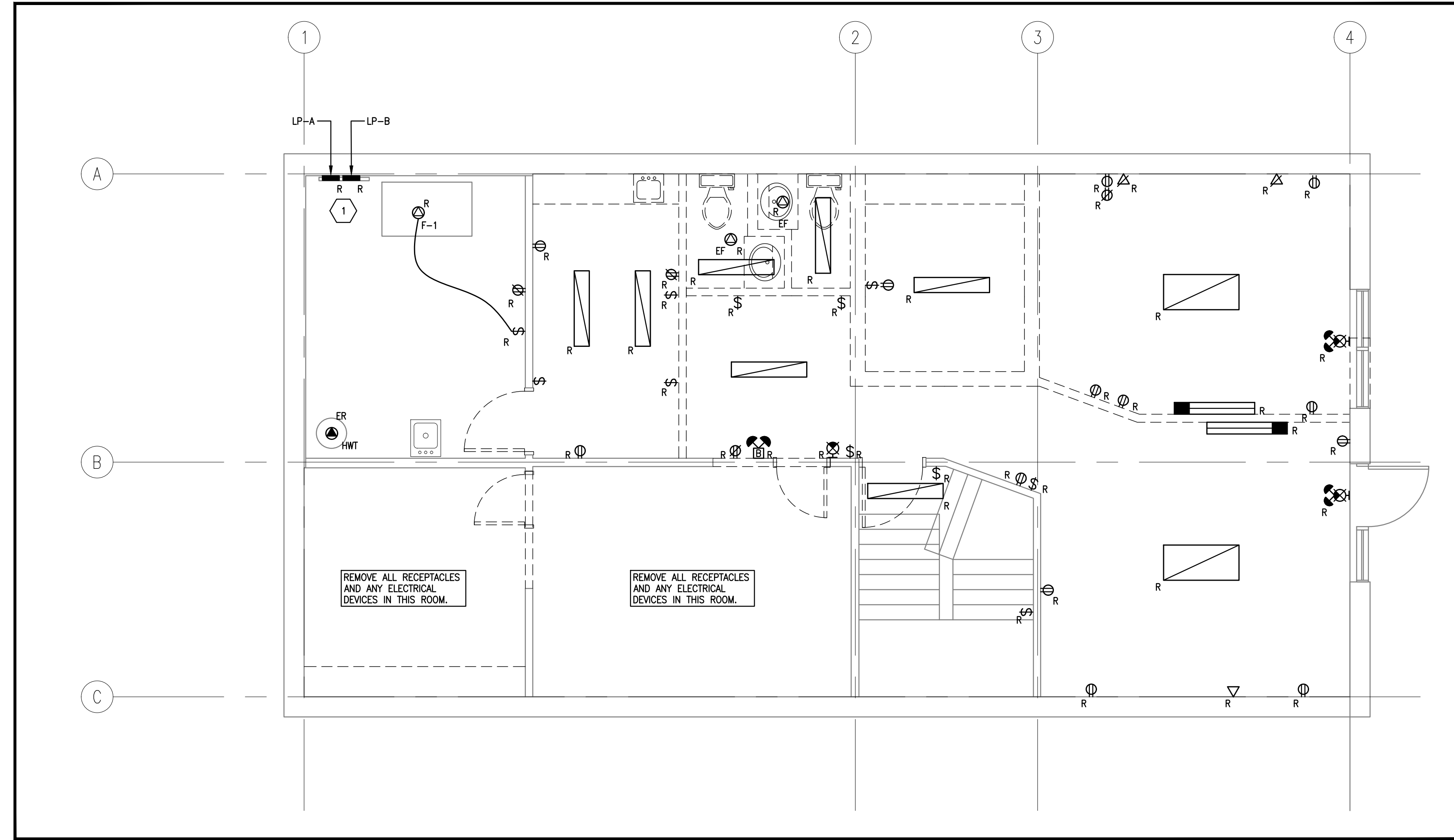
**FIRE ALARM SYSTEM - SECTION 28H**

- SUPPLY AND INSTALL ALL EQUIPMENT AND ACCESSORIES FOR A COMPLETE, ELECTRICALLY SUPERVISED, ZONED, NON CODED, SINGLE STAGE, ADDRESSABLE, FIRE ALARM SYSTEM AS DESCRIBED HEREIN.
  - PROVIDE CAN/ULC S561-2022 MONITORING FOR THE FIRE ALARM SYSTEM.
    - PROVIDE A NEW DEDICATED 15AMP, 120V CIRCUIT SEPARATE FROM THE FIRE ALARM SYSTEM FOR THE NEW MONITORING EQUIPMENT.
    - DEDICATED 15A 120V BREAKER SHALL BE RED IN COLOR EQUAL TO EATON CAT# BABF1015 AND SHALL INCLUDE A MECHANICAL LOCK-ON DEVICE IDENTIFIED WITH A LAMACOID LABEL HAVING THE WORDS "ULC F.A. MONITORING"
    - PROVIDE A PASSIVE, DUAL CHANNEL, COMMUNICATIONS LINK IN ACCORDANCE WITH CAN/ULC S561-13. DUAL CHANNEL COMMUNICATIONS SYSTEM SHALL CONSIST OF LAND LINE WITH AUTO DIALER AND A CELLULAR BACK-UP.
    - AT COMPLETION OF THE INSTALLATION, PROVIDE CAN/ULC-S561-2022 CERTIFICATE.
  - EQUIPMENT AND ACCESSORIES SHALL BE THE STANDARD PRODUCTS OF A SINGLE MANUFACTURER, EDWARDS CATALOGUE NUMBERS AND MODEL ARE SHOWN AND ARE INTENDED TO DESIGNATE DESIGN, QUALITY AND TYPE OF MATERIAL, AS WELL AS REQUIRED OPERATING CHARACTERISTICS. EQUIVALENT SYSTEMS BY, CHUBB, TROY LFS, NOTIFIER, OR MIRCOSM SHALL BE ACCEPTABLE.
  - MANUFACTURER SHALL HAVE A MAINTENANCE CONTRACTOR FULLY AUTHORIZED TO PROVIDE FULL SERVICE IN NORTHERN ONTARIO.
  - COMPLETE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE CAN/ULC S524 (LATEST EDITION) STANDARD FOR THE INSTALLED SYSTEMS WHERE THE REQUIREMENTS OF THIS SECTION EXCEED THE MINIMUM REQUIREMENTS OF THE ULC STANDARD, THESE SPECIFICATIONS SHALL GOVERN.
  - ALARM INITIATING DEVICES SHALL BE GROUPED IN ZONES. OPERATION OF ANY ALARM INITIATING DEVICE SHALL:
    - CAUSE NOTIFICATION APPLIANCES TO OPERATE THROUGHOUT THE BUILDING.
    - TRANSMIT AN ALARM SIGNAL TO THE MONITORING EQUIPMENT.
    - TURN ON A RED ALARM INDICATOR AT THE CONTROL PANEL.
    - DISPLAY AN EVENT TYPE, ALARM TIME, AND A LOCATION AT THE CONTROL PANEL AND REMOTE ANNUNCIATOR, AS APPLICABLE.
    - CAUSE ALL DOOR HOLD-OPEN DEVICES AND/OR ELECTROMAGNETIC LOCKS TO RELEASE.
    - CAUSE AIR HANDLING UNITS SERVING MORE THAN ONE FIRE COMPARTMENT OR FLOOR TO SHUTDOWN.
    - SIGNAL THE ELEVATOR CONTROLLER IS ACCORDANCE WITH THE REQUIREMENTS OF CSA 44-2019 AND ONTARIO REGULATION 209/01.
    - CAUSE NFPA HOODS TO SHUT DOWN
  - THE FIRE ALARM CONTROL PANEL SHALL BE WALL MOUNTED AND HAVE LOCKABLE FRONT HINGED DOOR. A VIEWING WINDOW SHALL PERMIT ALL INDICATORS, INFORMATION, AND CONTROLS TO BE SEEN. OPENING THE DOOR WILL PROVIDE ACCESS TO THE USER CONTROLS, BUT NO EXPOSED ELECTRICAL COMPONENTS WILL BE ACCESSIBLE.
    - CONTROL PANEL INPUT (ALARM INITIATING) CIRCUITS:
      - THE SYSTEM SHALL PROVIDE A CLASS A ADDRESSABLE INITIATING LOOP FOR DEVICES SUCH AS MANUAL STATIONS, HEAT DETECTORS AND SMOKE DETECTORS. SPRINKLER DEVICES SHALL BE WIRED IN A CLASS B OR CLASS A CONFIGURATION TO ADDRESSABLE MODULES.
      - THE FIELD WIRING OF THE CIRCUITS SHALL BE SUPERVISED. A FAULT IN THE FIELD WIRING OF ANY CIRCUIT WILL CAUSE AN ELECTRONIC LATCH TO LOCK IN THE TROUBLE STATE. LOG THE CONDITION AT THE C.P.U., TROUBLE SEQUENCE AND ILLUMINATE THE RESPECTIVE TROUBLE INDICATOR.
      - A GROUND FAULT CONDITION IN THE FIELD WIRING SHALL ACTIVATE THE COMMON TROUBLE SEQUENCE AND ILLUMINATE THE GROUND FAULT INDICATOR.
      - THE CONTROL PANEL SHALL FACILITATE TERMINATION OF ALL INPUT CIRCUIT WIRING.
      - THE SYSTEM SHALL PROVIDE A SUBSEQUENT TROUBLE FEATURE. A SUBSEQUENT ALARM AND TROUBLE FEATURE. A SUBSEQUENT TROUBLE FROM ANOTHER CIRCUIT WILL REACTIVATE THE ALARM SEQUENCE.
    - CONTROL PANEL OUTPUT CIRCUITS:
      - THE SYSTEM SHALL PROVIDE SIGNAL OUTPUT CIRCUITS FOR THE CONNECTION OF SIGNAL HORNS AND COMBINATION HORN/STROBES WHICH SHALL BE WIRED IN A CLASS "B" CONFIGURATION TO THE CONTROL PANEL.
      - THE FIELD WIRING OF THE SIGNAL OUTPUT CIRCUITS SHALL BE SUPERVISED FOR OPEN AND SHORT CIRCUIT CONDITIONS. AN OPEN OR SHORT FAULT CONDITION IN THE FIELD WIRING OF THE SIGNAL CIRCUIT SHALL CAUSE AN ELECTRONIC LATCH TO LOCK ON. LOG THE CONDITION AT THE C.P.U., ACTIVATE THE COMMON TROUBLE SEQUENCE AND ILLUMINATE THE RESPECTIVE TROUBLE INDICATOR. THE MAIN REMOTE INDICATOR AN AUXILIARY RELAYS SHALL BE PROGRAMMED TO BE P-ASSYED BY THE FIRE DEPT./COMMON CONTRACT DISCONNECT SWITCH.
      - THE ACTIVATION OF ANY SELECTOR SWITCH TO THE OFF-NORMAL POSITION SHALL ACTIVATE THE COMMON TROUBLE SEQUENCE.
    - ADDRESSABLE AUXILIARY CIRCUITS:
      - THE SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED SETS OF ALARM CONTACTS FOR THE CONTROL PANEL AND AUXILIARY CONTACTS SUCH AS FAN CONTROL, DOOR CONTROL, ALARM AND TROUBLE FEATURE, GENERATOR CONTROL RELAY, KITCHEN SUPPRESSION PANEL AND MAG LOCKS. FIELD WIRING CONNECTIONS SHALL BE MADE TO THE ADDRESSABLE RELAYS LOCATED IN THE FIELD.
      - AN AUTOMATIC/MANUAL SWITCH SHALL BE PROVIDED TO SELECT THE MODE OF OPERATION OF THE AUXILIARY CIRCUITS.
      - AN ALARM ON THE SYSTEM IN THE AUTOMATIC MODE SHALL CAUSE THE AUXILIARY RELAY CONTACTS TO REVERSE ON ANY ALARM AND, AS PROGRAMMED VIA (HARDWARE) PROGRAM CARD.
      - AN ALARM IN THE SYSTEM IN THE MANUAL MODE SHALL INHIBIT THE OPERATION OF THE AUXILIARY RELAYS. AN ALARM RELAYS SHALL BE PROGRAMMED TO BE P-ASSYED BY THE FIRE DEPT./COMMON CONTRACT DISCONNECT SWITCH.
      - THE ACTIVATION OF ANY SELECTOR SWITCH TO THE OFF-NORMAL POSITION SHALL ACTIVATE THE COMMON TROUBLE SEQUENCE.
  - THE FIRE ALARM CONTROL PANEL SHALL HAVE MAINTENANCE FREE BATTERIES WITH SUFFICIENT CAPACITY TO OPERATE THE SYSTEM UNDER SUPERVISORY CONDITIONS WITH AC POWER DISCONNECTED FOR 24 HOURS AND EMERGENCY POWER UNDER FULL LOAD FOR AT LEAST 2 HOURS THEREAFTER. THE BATTERIES SHALL BE ENCLOSED IN A STEEL HOUSING. A FULLY AUTOMATIC BATTERY CHARGER SHALL BE PROVIDED WHICH SHALL BE CAPABLE RECHARGING THE BATTERIES WITHIN 12 HOURS.
  - MANUAL FIRE ALARM STATIONS SHALL BE SINGLE ACTION, PULL LEVER TYPE, WITH CLEARLY VISIBLE BREAK GLASS AND SHALL HAVE RED ENAMEL FINISH WITH BILINGUAL, ALUMINUM MARKINGS, EDWARDS CAT. NO. SIGC-270B
  - HEAT DETECTORS SHALL OPERATE AT A NOMINAL FIXED TEMPERATURE OF 57 DEG. C AND AT A TEMPERATURE RISE AT OR EXCEEDING 8.3 DEG. C PER MINUTE. DETECTORS SHALL BE EDWARDS CAT NO. SIGA-HRS.
  - SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE, EDWARDS CAT NO.SIGA-PS
  - FIRE ALARM SIGNALS SHALL BE EDWARDS "GENESIS" HORN/STROBE SIGNAL DEVICES. STROBE INTENSITY SHALL BE FIELD SELECTABLE AS EDWARDS 64AVFR. SIGNAL DEVICES SHALL BE COMPLETE WITH FLUSH TRIM PLATE OR SURFACE BOX, EDWARDS #27193-11 IN MECHANICAL SPACES. FIRE ALARM SIGNAL DEVICES IN RESIDENTIAL SUITES SHALL BE MINI-HORN SIGNALS C/W SILENCE SWITCH AND RE-SOUND TIMER EDWARDS CAT NO. 684-1CRASP.
  - THE NORMAL POWER SUPPLY TO THE FIRE ALARM SYSTEM SHALL BE A DEDICATED 120 VOLTS, 60 HZ WITH SEPARATE NEUTRAL. THE OVER-CURRENT DEVICE SHALL BE RED PLASTIC IN COLOR, EQUAL TO EATON CAT# BABF1015. LOCK IN THE "ON" POSITION AND IDENTIFIED WITH LAMACOID LABEL HAVING THE WORDS "FIRE ALARM SYSTEM". NO RED PAINT/MARKER PERMITTED.
  - WIRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, BUT SHALL BE PROTECTED FROM MECHANICAL DAMAGE AND PROTECTIVE SUCH AS MOISTURE, EXCESSIVE HEAT OR CORROSIVE ACTION IN ACCORDANCE WITH CLASS 1 REQUIREMENTS. CONDUCTORS SHALL BE SOLID COPPER, SIZED TO SYSTEM MANUFACTURER'S REQUIREMENTS. ALL WIRING SHALL BE IN FACTORY PAINTED RED CONDUIT OR SHALL BE RED ARMoured SECUREX TYPE CABLE (FINAL RUNS ONLY) LISTED FOR USE IN FIRE ALARM SYSTEMS. PROVIDE ISOLATOR MODULES WHERE ADDRESSABLE LOOP WIRING PASSES BETWEEN FLOORS. EDWARDS CAT NO. SIGA-IM.
  - THE MANUFACTURER SHALL INSPECT THE FIRE ALARM SYSTEM, AND THE VERIFICATION MUST MEET CAN/ULC S537. OPEN FLAME IS NOT TO BE USED FOR TESTING.
  - THE CONNECTION TO THE CENTRAL MONITORING STATION THROUGH THE ULG LISTED PANEL SHALL BE VERIFIED.
  - THE MANUFACTURER SHALL SUPPLY REASONABLE AMOUNTS OF TECHNICAL ASSISTANCE WITH RESPECT TO ANY CHANGES NECESSARY TO CONFORM TO THE ABOVE. DURING THE PERIOD OF INSPECTION BY THE MANUFACTURER, MAKE AVAILABLE TO THE MANUFACTURER ELECTRICIANS AS DESIGNATED BY THE MANUFACTURER.
  - ON COMPLETION OF THE INSPECTION AND WHEN ALL OF THE ABOVE CONDITIONS ABOVE BEEN COMPLIED WITH, AND DEFICIENCIES INDICATED IN PRELIMINARY REPORT HAVE BEEN CORRECTED, THE MANUFACTURER SHALL ISSUE TO THE CONSULTANT:
    - A COPY OF THE INSPECTING TECHNICIAN'S REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.
    - A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETED IN CONFORMANCE WITH CAN/ULC S537 AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND CERTIFICATION HAVE BEEN RENDERED.
    - WHERE THE FIRE ALARM SYSTEM IS INTERCONNECTED WITH OTHER BUILDING LIFE SAFETY SYSTEMS (E.G., SPRINKLER SYSTEM, ELEVATOR RECALL, SMOKE CONTROL, EMERGENCY POWER, DOOR RELEASES, ETC), AN INTEGRATED SYSTEMS TESTING VERIFICATION REPORT SHALL BE PROVIDED IN ACCORDANCE WITH CAN/ULC S537. THE REPORT SHALL BE PROVIDED TO THE CONSULTANT AND THE LIFE SAFETY SYSTEMS. THE REPORT SHALL BE PREPARED AND CERTIFIED BY A QUALIFIED INTEGRATED TESTING COORDINATOR. PROOF OF LIABILITY INSURANCE FOR THE INSPECTION.
    - AN ELECTRONIC COPY OF THE EDWARDS SITE SPECIFIC PROGRAM (.SDU FILE) OR EQUIVALENT.
  - ALL COSTS INVOLVED IN THESE INSPECTIONS SHALL BE INCLUDED IN THE TENDER PRICE.
  - THE CONTRACTOR MUST MAINTAIN THE FIRE ALARM SYSTEM FULLY OPERATIONAL DURING DEMOLITION AND CONSTRUCTION IN ORDER TO PROTECT THE BUILDING OCCUPANTS. DURING CHANGES TO THE EXISTING FIRE ALARM SYSTEM ONLY ONE ZONE SHALL BE INTERRUPTED AT ANY ONE TIME. TIME AND DURATION OF INTERRUPTION SHALL BE APPROVED BY THE OWNER'S ENGINEER. AT NO TIME SHALL THE FIRE ALARM SYSTEM OR ANY ONE ZONE BE LEFT INOPERATIVE OVERNIGHT. PROVIDE ALL REQUIRED BYPASS WIRING AND TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN THE FIRE ALARM SYSTEM OPERATIVE DURING CONSTRUCTION AND ALTERATIONS. PROVIDE TEMPORARY MOUNTING OF EXISTING DEVICES WITHIN THE AREA OF CONSTRUCTION. NEW DEVICES SHALL BE INSTALLED AND VERIFIED PRIOR TO THE REMOVAL OF EXISTING DEVICES. ALLOW IN THE TENDER PRICE FOR ADDITIONAL SITE VISITS BY THE FIRE ALARM TECHNICIAN TO PERFORM PARTIAL VERIFICATIONS TO MEET THE REQUIREMENTS OF THE CONSTRUCTION PHASING.

ELECTRICAL LEGEND	
	ELECTRICAL PANEL, SURFACE OR RECESSED MOUNTED RESPECTIVELY.
	CEILING OR WALL MOUNTED LED LUMINAIRE. LETTER DENOTES FIXTURE TYPE PER SCHEDULE.
	CEILING MOUNTED LED LUMINAIRE SHOWN TO SCALE ON DRAWINGS. LETTER DENOTES FIXTURE TYPE PER SCHEDULE.
	LED STRIP LUMINAIRE LENGTH SHOWN TO SCALE ON DRAWINGS. LETTER DENOTES FIXTURE TYPE PER SCHEDULE.
	LED EXTERIOR BOLLARD
	CEILING OR WALL MOUNTED EXIT SIGN C/W FACES (FILLED IN PORTION(S)) AND ARROWS AS INDICATED.
	SINGLE OR DOUBLE HEAD EMERGENCY LIGHTING REMOTE FIXTURE
	EMERGENCY LIGHTING BATTERY UNIT C/W TWO INTEGRAL HEADS.
	120V SINGLE POLE TOGGLE SWITCH(ES) WITH ONE, TWO OR THREE-GANG COVER PLATE RESPECTIVELY.
	LIGHTING CONTROL STATION PER LIGHTING CONTROL DETAILS
	DIMMER SWITCH PER LIGHTING CONTROL DETAILS
	OCCUPANCY SENSOR PER LIGHTING CONTROL DETAILS
	TIMESWITCH PER LIGHTING CONTROL DETAILS
	WALL MOUNTED NEMA 5-15 OR NEMA 5-20 RECEPTACLE. SINGLE, DUPLEX, OR QUADRIPOLE RESPECTIVELY.
	WALL MOUNTED RECEPTACLE PER NEMA DESIGNATION
	RECEPTACLES AS ABOVE BUT MOUNTED AT 1070mm (42") AFF OR 155mm (6") ABOVE COUNTER BACKSPLASH.
	DATA OUTLET WALL MOUNTED, SINGLE GANG BOX, 2 CAT 6 CABLES, C/W 1" C TO ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
	OUTLETS AS ABOVE BUT MOUNTED AT 1070mm (42") AFF OR 155mm (6") ABOVE COUNTER BACKSPLASH.
	UNFUSED DISCONNECT SWITCH, SIZE AS NOTED.
	JUNCTION BOX.
	120V DIRECT CONNECTION FOR USE AS NOTED INCLUDE FINAL CONNECTION.
	SPECIAL DIRECT CONNECTION FOR USE AS NOTED INCLUDE FINAL CONNECTION.
	ELECTRIC BASEBOARD HEATER.
	ELECTRIC FORCED FLOW HEATER SURFACE OR RECESSED MOUNTED RESPECTIVELY.
	LINE VOLTAGE THERMOSTAT SUPPLIED BY DIV. 25, INSTALLED AND WIRED BY DIV. 26. COORDINATE MOUNTING HEIGHT WITH MECHANICAL.
	ELECTRIC HEATER TAG (A = TYPE 1, 1.0 = 1kW).
	FACP (FIRE ALARM CONTROL PANEL) OR ANNUNCIATOR PANEL SURFACE OR RECESSED MOUNTED RESPECTIVELY.
	FIRE ALARM SYSTEM MANUAL PULL STATION.

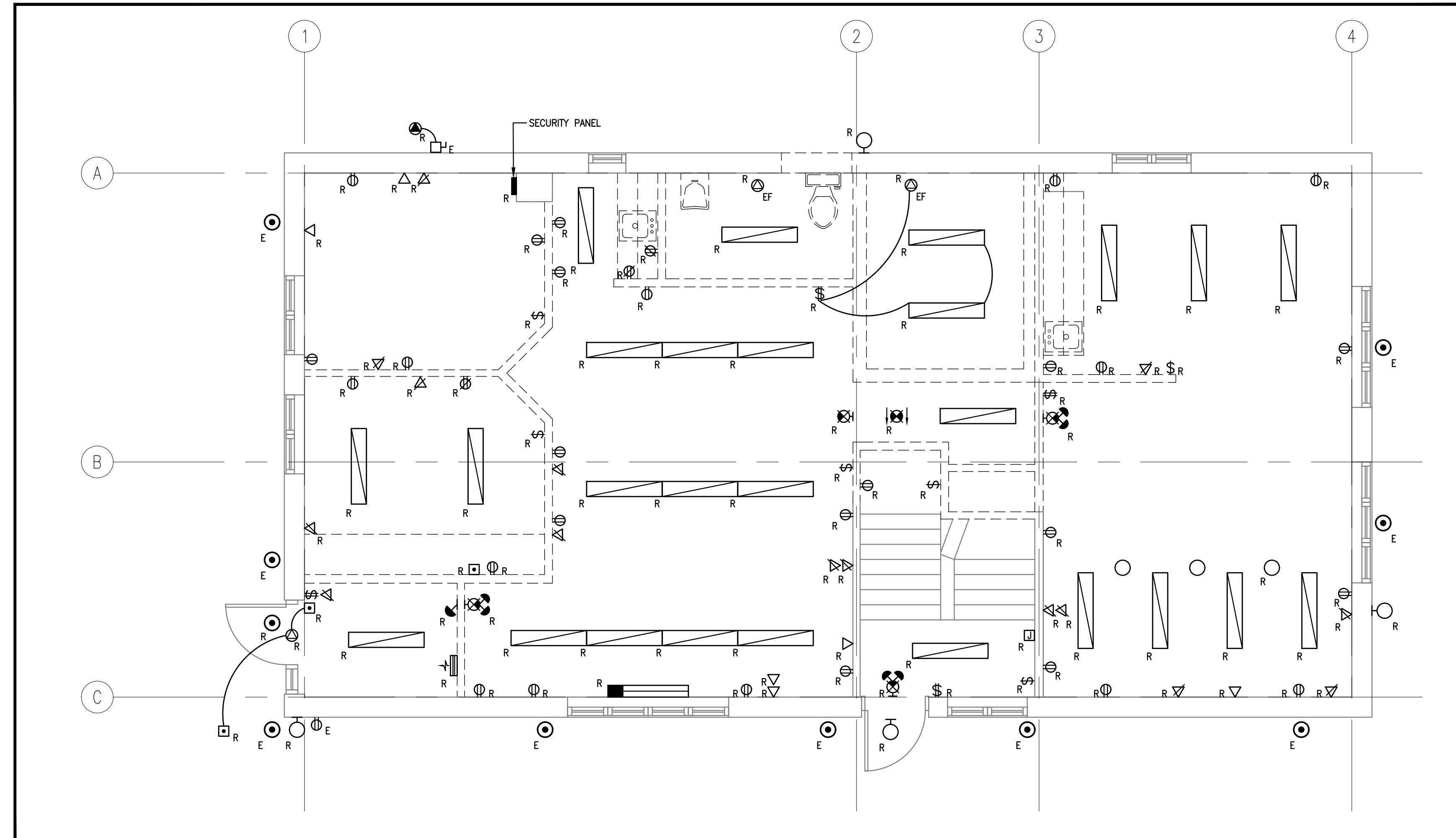
DEMOLITION NOTES:

- 1 REMOVE EXISTING PANELBOARDS AND PREPARE AREA FOR NEW.



**BASEMENT ELECTRICAL REMOVALS PLAN**

1/4"=1'-0"

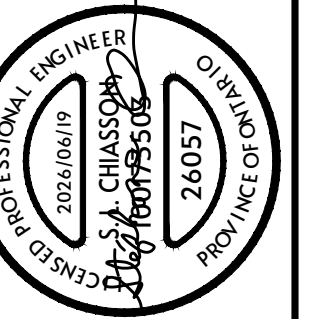


**GROUND FLOOR ELECTRICAL REMOVALS PLAN**

1/4"=1'-0"

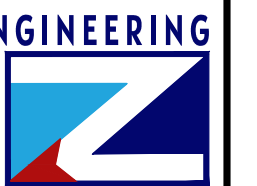
DATE:  
2026/06/19

REVISIONS:  
ISSUED FOR TENDER



The Client is advised that all dimensions and reports are for information only. The Client is responsible for providing all necessary information and drawings for the work. The Client is responsible for providing all necessary information and drawings for the work. Do not issue drawings.

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P3C 4R9  
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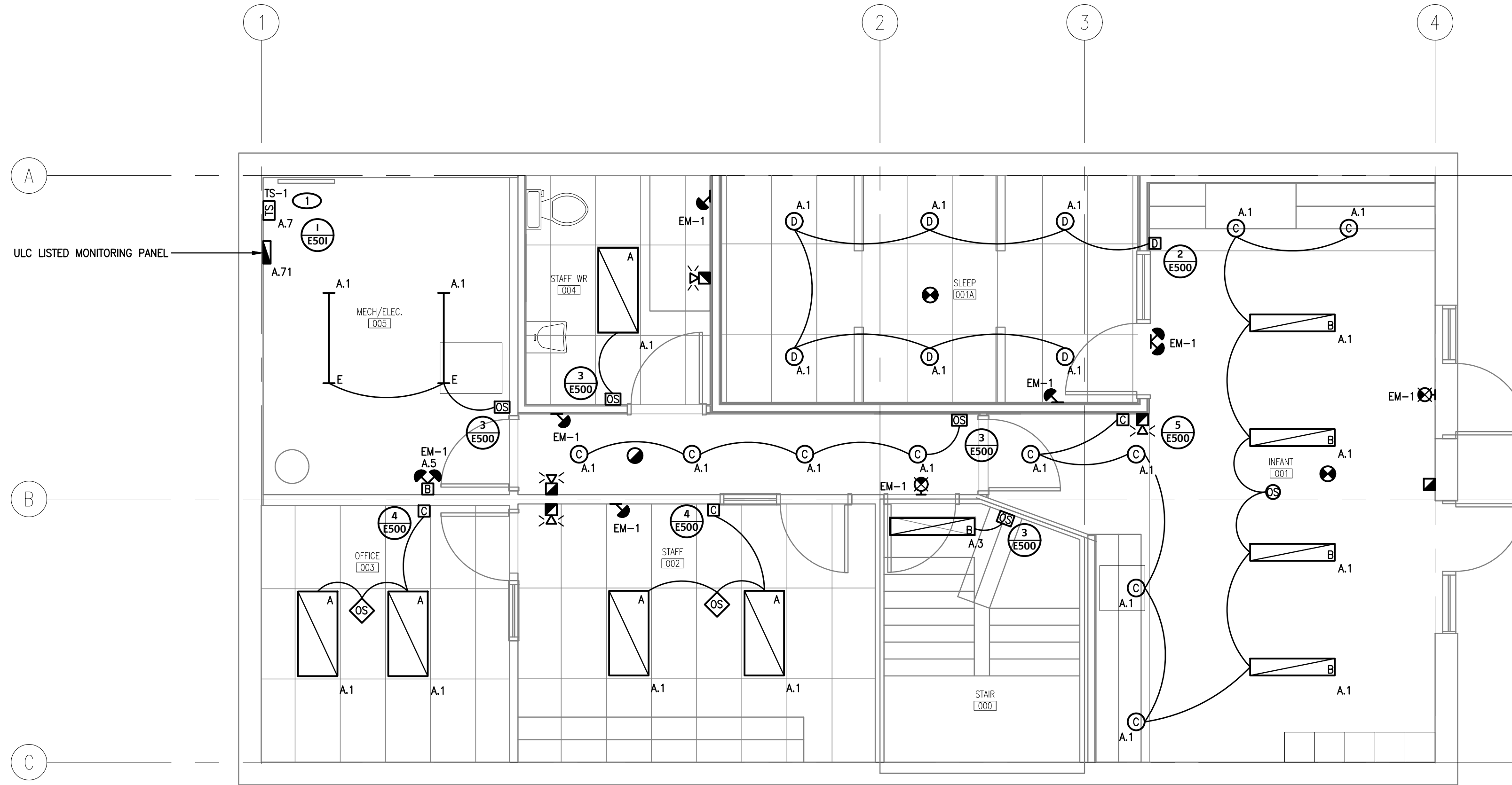
**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
**ELECTRICAL REMOVAL PLANS**

Date: JUNE 19, 2026  
Scale: AS NOTED  
Drawn: KH Ck: SC  
Job: 26057

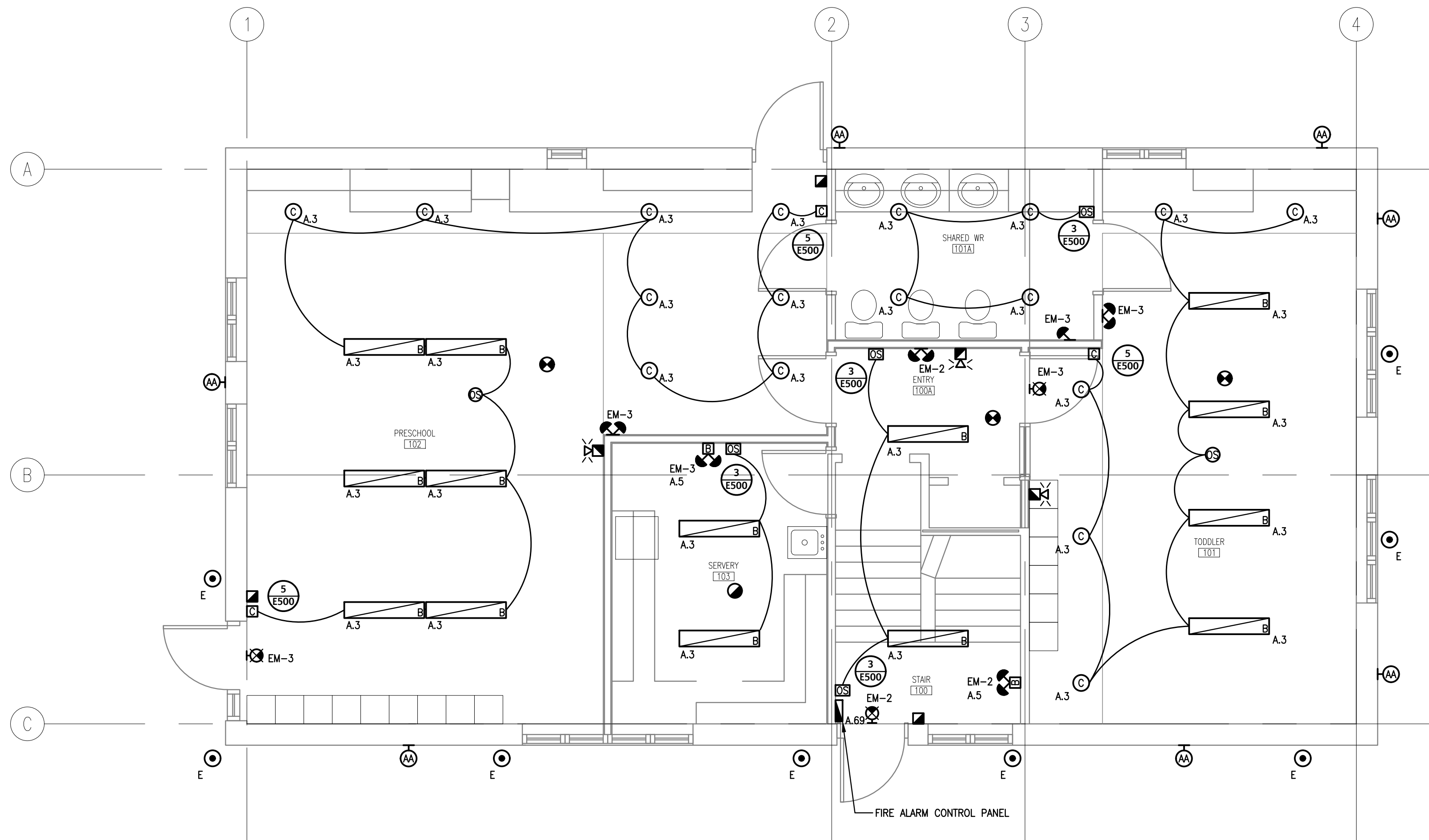
Sheet  
**E200**

**CONSTRUCTION NOTES:**

- ① ALL EXISTING AND NEW BUILDING MOUNTED EXTERIOR LIGHTING SHALL BE CONNECTED BACK TO ASTRONOMICAL TIMECLOCK (TS-1) LOCATED IN MECH/ELEC. ROOM. COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL.



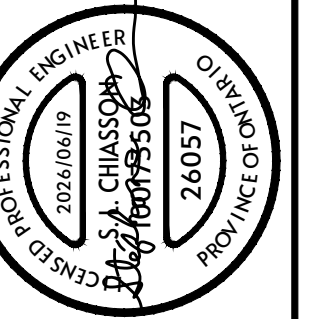
**BASEMENT LIGHTING PLAN**  
1/4"=1'-0"



**GROUND FLOOR LIGHTING PLAN**  
1/4"=1'-0"

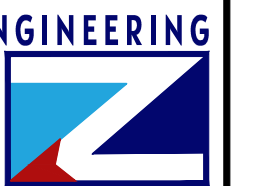
DATE:  
2026/06/19

REVISIONS:  
ISSUED FOR TENDER



The Professional Engineer of North Engineering Inc. is responsible for the design, construction and operation of the lighting system. The Professional Engineer is not responsible for the design, construction and operation of the building or any other systems. The Professional Engineer is not responsible for the design, construction and operation of the building or any other systems. Do not issue drawings.

North Engineering Inc.  
1040 Lorne St. Unit 6  
Sudbury, Ontario  
P3C 4R9  
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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
LIGHTING PLANS

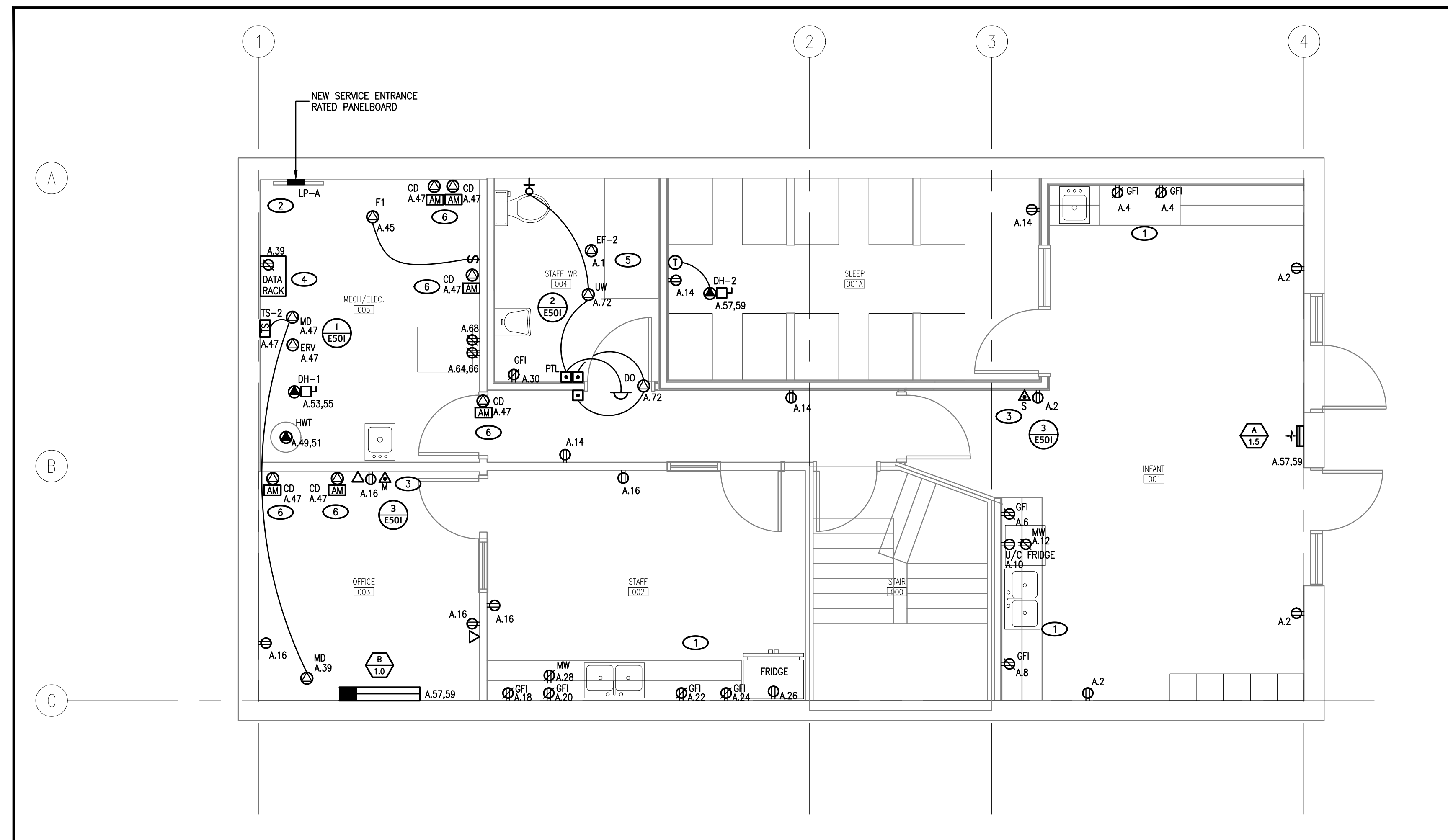
Date	JUNE 19, 2026
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Chk	SC
Job	26057
Sheet	<b>E300</b>

**GENERAL NOTES:**

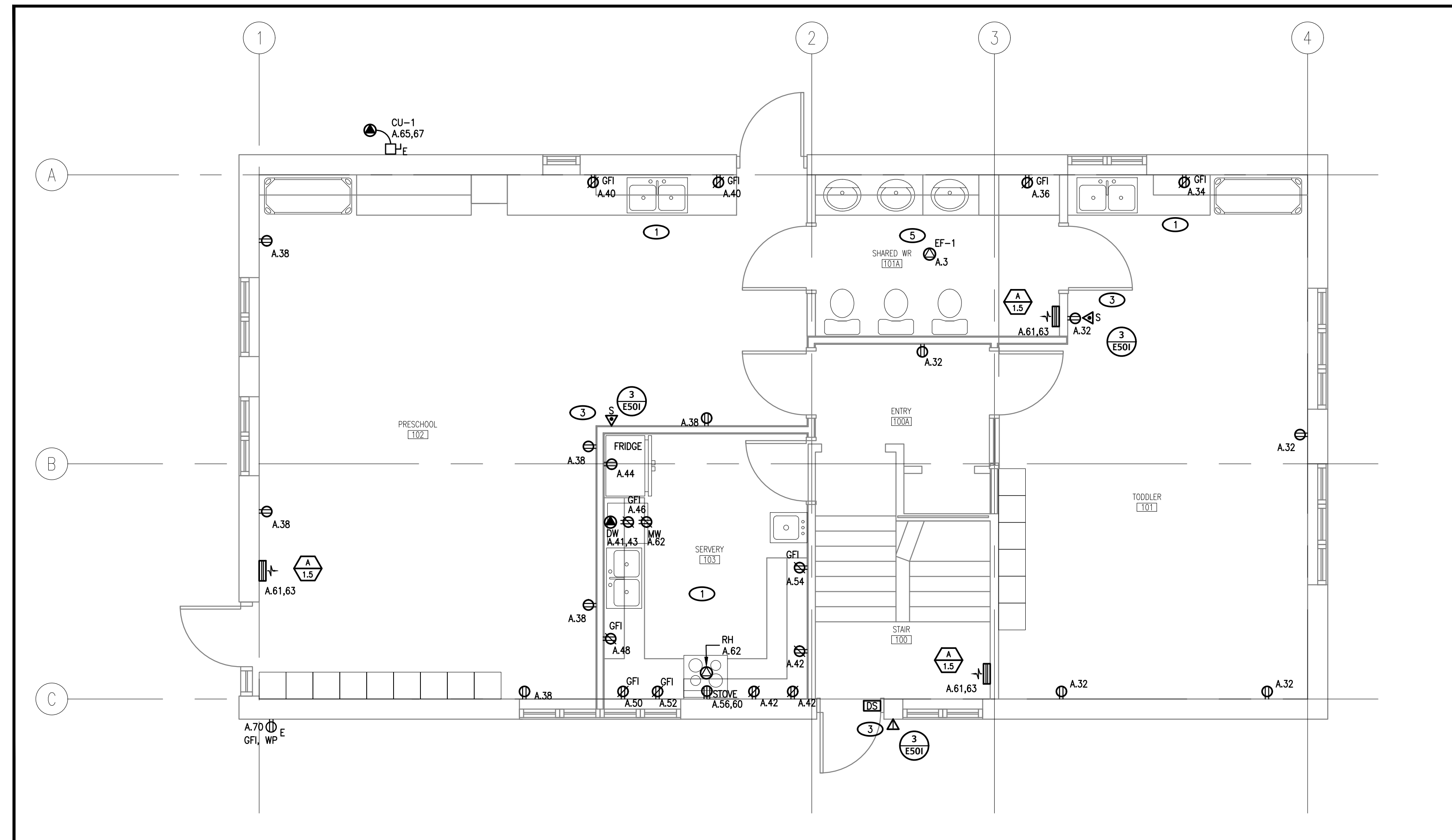
- REFER TO LATEST MILLWORK ELEVATIONS FOR ANY DEVICES MOUNTED IN MILLWORK.
- FOR MICROWAVE IN MILLWORK, COORDINATE WITH MILLWORK INSTALLER. MOUNT RECEPTACLE AND COVER PLATE FLUSH TO THE INSIDE PANEL OF MILLWORK.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT THROUGHOUT.

**CONSTRUCTION NOTES:**

- ALL RECEPTACLES TO BE 20A IN KITCHEN AREAS. COORDINATE LOCATIONS WITH FINAL KITCHEN LAYOUT.
- PROVIDE AND INSTALL NEW PANEL TO REPLACE LP-A. ALL HYDRO ONE COSTS ASSOCIATED WITH REMOVAL AND INSTALLATION TO BE ACCOUNTED FOR BY CONTRACTOR.
- SEE INTERCOM SYSTEM DETAIL ON E500.6 FOR ALL RELATED REQUIREMENTS.
- PROVIDE AND INSTALL NEW WALL MOUNTED DATA RACK SUITABLE IN SIZE FOR ALL REQUIRED SERVICES, MINIMUM 9U.
- EXHAUST FAN TO BE ON SAME CIRCUIT AS LIGHTING AND CONTROLLED BY LIGHT SWITCH IN THESE AREAS.
- COMBINATION DAMPERS TO BE INSTALLED IN THESE LOCATIONS. EACH COMBINATION DAMPER SHALL HAVE SMOKE DETECTORS INSTALLED ON BOTH SIDES OF THE OPENING FOR AIR-TRANSFERS (THIS REQUIRES TWO SPOT SMOKE DETECTORS INSTALLED A MAXIMUM OF 1.5m HORIZONTALLY FROM THE FIRE SEPARATION) OR IN THE DUCT DOWNSTREAM OF THE SMOKE DAMPER (THIS REQUIRES ONE DUCT SMOKE DETECTOR INSTALLED A MAXIMUM OF 1.5m HORIZONTALLY FROM THE FIRE SEPARATION). FIRE ALARM ADDRESSABLE MODULE SHALL BE USED TO ACTIVATE COMBINATION DAMPERS WHEN DETECTORS ARE TRIGGERED. COORDINATE ALL LOCATIONS WITH MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES.



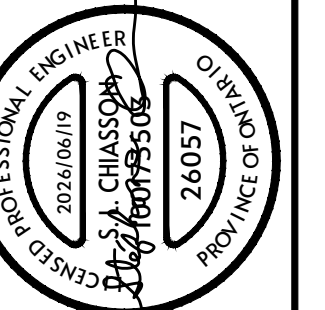
**BASEMENT POWER/COMMUNICATIONS PLAN**  
1/4"=1'-0"



**GROUND FLOOR POWER/COMMUNICATIONS PLAN**  
1/4"=1'-0"

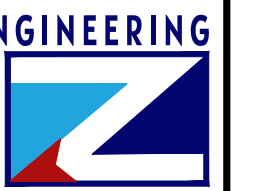
DATE:  
2026/06/19

REVISIONS:  
ISSUED FOR TENDER



The Client acknowledges all dimensions and report any errors or omissions in the drawings. The Client shall be responsible for providing all necessary information and approvals. Do not issue drawings.

North Engineering Inc.  
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**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
**POWER/COMMUNICATIONS PLANS**

Date: JUNE 19, 2026

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Sheet: E400

ELECTRIC HEATER SCHEDULE			
TYPE	VOLTAGE	DESCRIPTION	MANUFACTURER/CAT.#
A	240V 1PH	STEEL SURFACE WALL FAN HEATER, WHITE IN COLOUR AND BUILT-IN THERMOSTAT.	BASED ON OUELLET CAT. # OVS SERIES OR APPROVED EQUAL
B	240V 1PH	STEEL SLOPED TOP BASEBOARD HEATER, STANDARD WATT DENSITY 275W/FT, FRONT FRESH AIR INLET, WHITE IN COLOUR AND BUILT IN THERMOSTAT	BASED ON OUELLET CAT. # ODA SERIES OR APPROVED EQUAL

LIGHTING FIXTURE SCHEDULE			
TYPE	DESCRIPTION	MANUFACTURER/CAT.#	
AA	2000lm 120V 3000K	LED WALLPACK C/W CAST ALUMINUM HOUSING, BLACK FINISH, TYPE MEDIUM DISTRIBUTION, DARKSKY FRIENDLY, AND 120V DRIVER. MOUNT AT 12" BELOW SOFFIT	LITHONIA CAT.# DSXW1-LED-P2-30K-TFM-MVOLT-DBLXD SERIES OR APPROVED EQUAL
A	4000lm 32W 120V 4000K	2X4 RECESSED T-BAR FIXTURE WITH LOW PROFILE HOUSING AND CENTER BASKET LENS. C/W 0-10V DRIVER DOWN TO 10%.	BASED ON LITHONIA CAT. # ZBLT4-40L-ADP-GZ10-P840 SERIES OR APPROVED EQUAL
B	6000lm 53W 120V 4000K	4FT. LED SURFACE VOLUMETRIC FIXTURE WITH WHITE STEEL HOUSING, C/W 0-10V DIMMING DOWN TO 10%.	LITHONIA CAT. # STL4-60L-GZ10-LP840 SERIES OR APPROVED EQUAL
C	2000lm 28W 120V 4000K	13" DIA. SURFACE ROUND FIXTURE C/W WHITE ACCENTS, ACRYLIC DIFFUSER, LINE VOLTAGE DIMMING DOWN TO 10%.	LITHONIA CAT. # FMML-13-B-40 SERIES OR APPROVED EQUAL
D	2000lm 23W 120V 4000K	RECESSED 6" LED DOWNLIGHT C/W STEEL HOUSING, CLEAR TRIM, SEMI-SPECULAR REFLECTOR, C/W 0-10V DRIVER DOWN TO 1%.	LITHONIA CAT. # LDNG-40/20-L06-LSS-120-EZ1 SERIES OR APPROVED EQUAL
E	4300lm 36W 120V 4000K	4FT. LONG ECONOMY LED STRIP LIGHT C/W WHITE STEEL HOUSING, ROUNDED FROSTED LENS.	LITHONIA CAT. # CSS-L48-4000LM-MVOLT-40K-80CRI SERIES OR APPROVED EQUAL

EMERGENCY LIGHT BATTERY UNIT SCHEDULE					
UNIT	LOCATION	# HEADS (6 WATTS)	# SIGNS (2 WATTS)	LOAD (W)	CAPACITY (W)
EM-1	MECH/ELEC. - 005	8	2	52	72
EM-2	STAIR - 100	4	1	26	72
EM-3	SERVERY - 103	7	2	46	72

**EMERGENCY AND EXIT LIGHT SCHEDULE**

**BATTERY EMERGENCY LIGHTING**  
THE EMERGENCY LIGHTING SYSTEM SHALL CONSIST OF FULLY AUTOMATIC EQUIPMENT WITH 6W LED MR16 LIGHTING HEADS AS SHOWN ON DRAWINGS. THE UNIT SHALL BE RATED 12V AND 30 MINUTES OF EMERGENCY OPERATION WITH A CAPACITY NOTED IN THE SCHEDULE. THE CHARGER SHALL BE FACTORY SET WITH A CHARGING VOLTAGE TOLERANCE OF ± 1% FOR A 10 YEAR BATTERY LIFE. THE METAL CABINET SHALL BE MADE OF STEEL WITH ANTI-CORROSION UNDERCOATING. THE UNIT SHALL BE CSA 22.2 NO.141-15 CERTIFIED. THE UNIT SHALL HAVE AN AUTOMATIC SELF-DIAGNOSTIC TEST.

STANPRO CAT# 'SL' SERIES  
REMOTE HEADS  
REMOTE SURFACE MOUNTED HEADS SHALL BE 12V, 6W LED MR16, METAL DECORATIVE STYLE, COLOR SPECIFIED BY THE ARCHITECT. STANPRO CAT# 'M' SERIES

**EXIT SIGN**  
EXTRUDED ALUMINUM HOUSING WITH ALUMINUM FACEPLATES. EACH SIGN SHALL OPERATE WITH UNIVERSAL INPUT VOLTAGE RANGING FROM 120 TO 347VAC AND 6 TO 24VDC AT LESS THAN 2 WATTS. WHITE LEADS SHALL PROVIDE EVEN ILLUMINATION WITH NO IMAGING OR SHADOWING FROM WITHIN THE GREEN POLYCARBONATE PICTOGRAMS. SIGNAGE SHALL HAVE SINGLE OR DOUBLE FACES AND DISPLAY DIRECTION AS TO MATCH THE DRAWINGS.  
STANPRO CAT# RMV SERIES IN SHOP/GYM/DAMAGE PRONE AREAS  
STANPRO CAT# RMXL SERIES IN OTHER AREAS

EQUIPMENT OF EQUIVALENT SPECIFICATIONS MANUFACTURED BY AIMLITE, LUMACELL, EMERGLITE OR BELUCE SHALL BE CONSIDERED APPROVED EQUAL.

**NOTE:**

1. WIRING FOR EMERGENCY LIGHTING SHALL CONFORM TO SECTION 46 OF THE O.E.S.C.
2. WIRING SIZE SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS BUT IN ANY CASE SHALL NOT BE LESS THAN #10 AWG FOR LOW VOLTAGE WIRING.
3. WHERE BATTERY PACKS ARE SHOWN, A RECEPTACLE SHALL ALSO BE INSTALLED BESIDE THEM.
4. TEST ALL EMERGENCY LIGHTING INSTALLATIONS, NEW OR EXISTING AS SHOWN, AND SUBMIT EMERGENCY LIGHTING TESTING REPORT, RECORD EXACTLY HOW MANY MINUTES THE LIGHTING SYSTEM OPERATED BEFORE AUTOMATICALLY SHUTTING OFF.

1. ALL PARTS LISTED ARE BY RIGHT FROM ACUITY LIGHTING. CONTROLS BY EATON (DALI) SHALL BE CONSIDERED EQUAL. SUBMIT OTHER ALTERNATES TO CONSULTANTS 5 DAYS PRIOR TO CLOSE OF TENDER FOR REVIEW AND APPROVAL.
2. COMPONENTS AND THEIR INTERCONNECTIONS ARE SHOWN FOR ILLUSTRATIVE REPRESENTATIONS OF FUNCTIONALITY ONLY. PROVIDE ALL ADDITIONAL SENSORS AND SWITCHES SHOWN ON THE DRAWINGS WHERE REQUIRED BY LARGER AREAS. CONFIRM ALL REQUIRED PARTS WITH CONTROLS MANUFACTURER.
3. LOW VOLTAGE CABLING SHALL BE PROVIDED BY THE CONTROLS MANUFACTURER TO ENSURE COMPATIBILITY WITH THE SYSTEM.
4. CONTROL CABLES SHALL BE RUN IN 3/4" CONDUIT FROM WALL BOXES TO THE ACCESSIBLE CEILING SPACE.
5. TYPICAL PROGRAMMING SHALL BE SENSITIVITY SET TO MAX AND TIME DELAY SET TO 20 MINUTES.
6. PROVIDE PROGRAMMING & COMMISSIONING OF LIGHTING CONTROLS FROM MANUFACTURER.
7. CONTROL STATIONS SHALL BE COMPRISED OF 3 IDENTIFIED BUTTONS: ON/OFF, RAISE, AND LOWER. COLOR TO MATCH RECEPTACLES IN AREA.

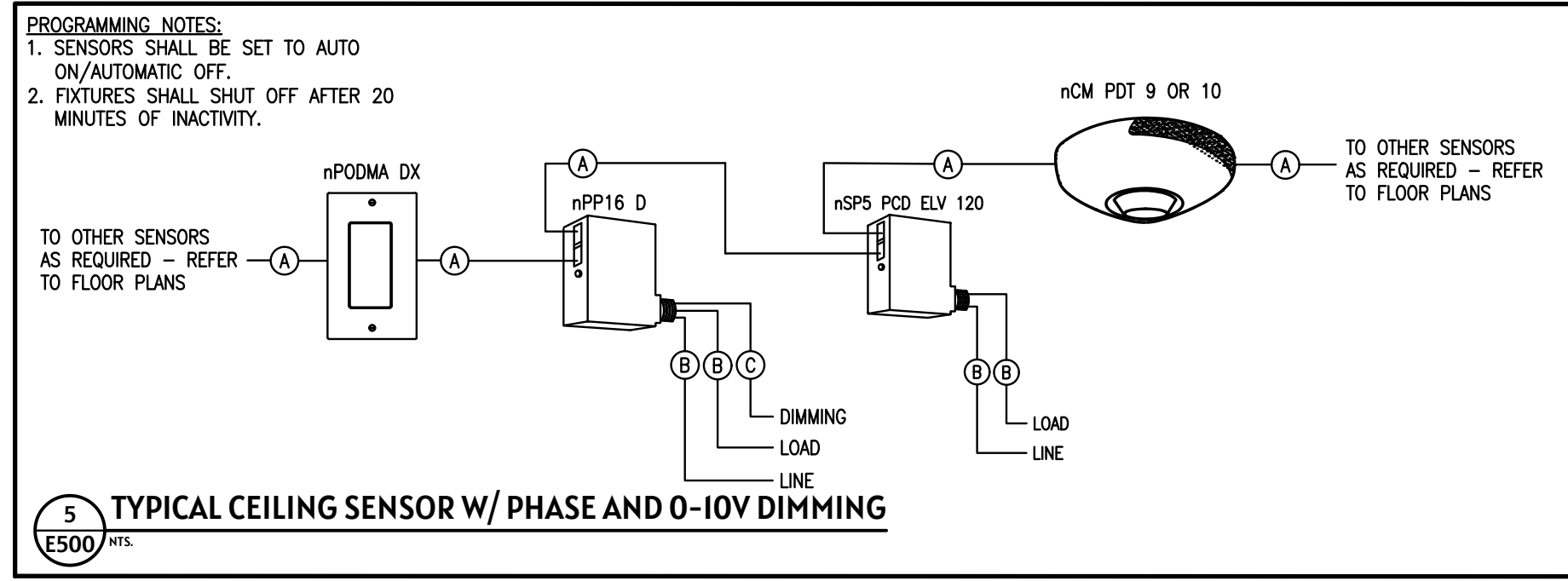
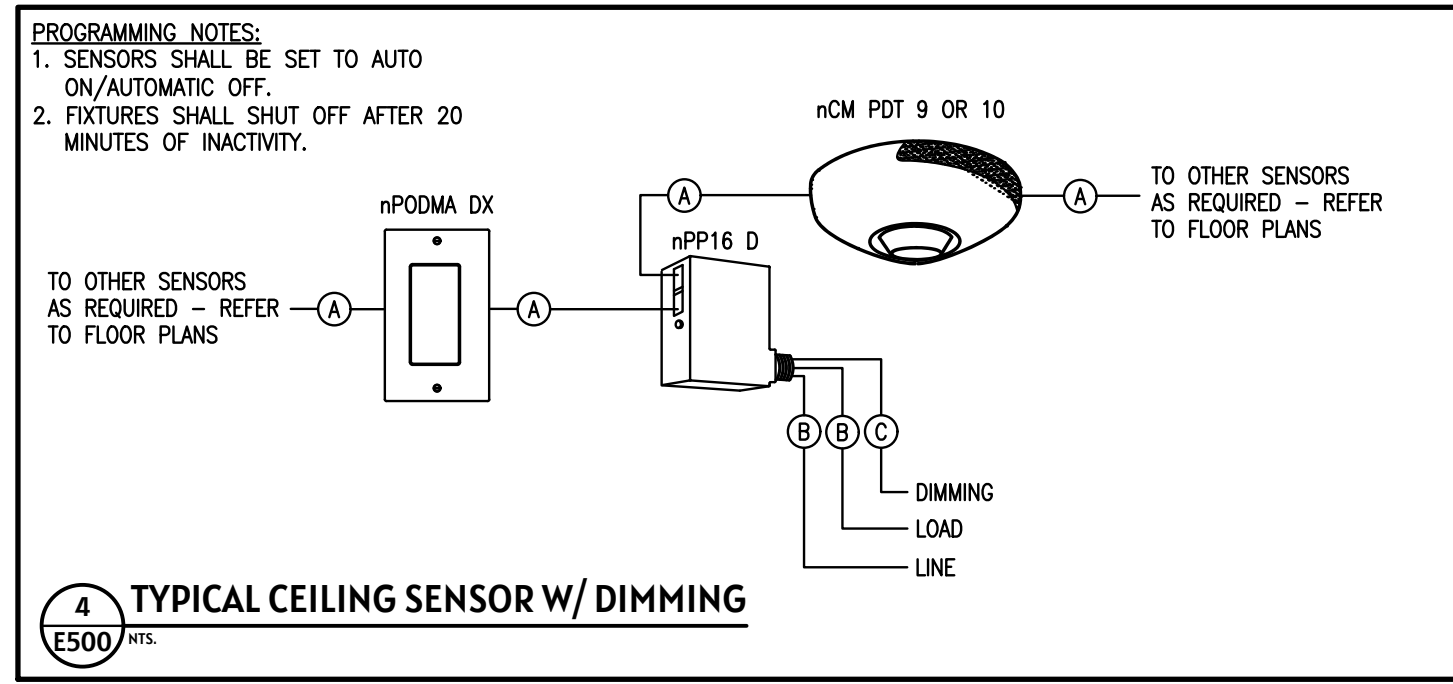
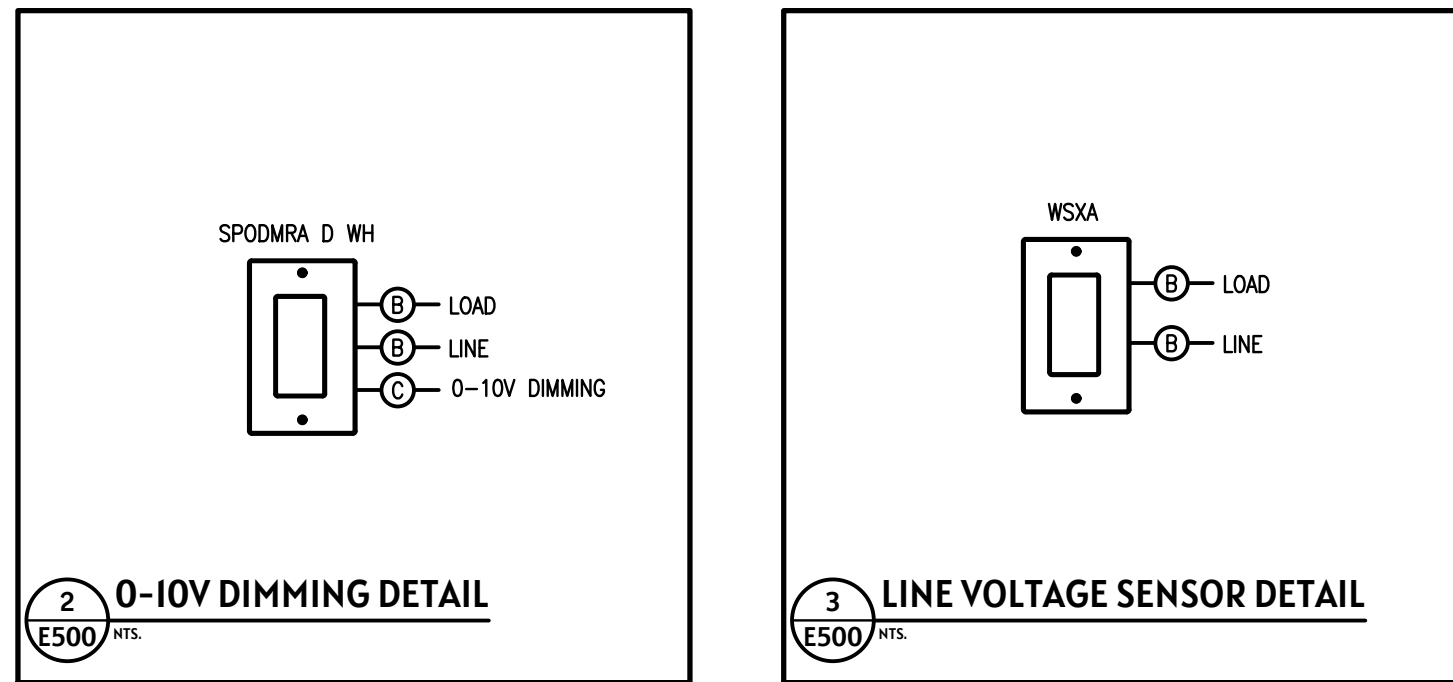
**WIRE LEGEND**

- Ⓐ CAT 5 (LOW VOLTAGE)
- Ⓑ CLASS 1 (LINE VOLTAGE)
- Ⓒ CLASS 2 (LOW VOLTAGE)

**OCCUPANCY SENSOR TYPES**

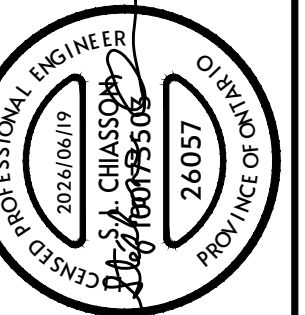
- Ⓔ nWSXA PDT LV
- Ⓢ nCM PDT 10
- Ⓣ nCM PDT 9

**1 LIGHTING CONTROL NOTES**  
E500



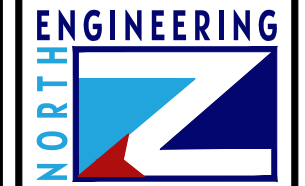
LP-A 120/240V, 1#, 3W		TYPE: MANS: MOUNTING:		PRL1 (SERVICE ENTR.) 200 AMPS SURFACE		LOCATION: MECH./ELEC. ROOM - 005	
LOAD	DESCRIPTION	BREAKER	200A, 2P MAIN BREAKER	BREAKER	DESCRIPTION	LOAD	
862	LIGHT. - 001/002/003/004/005	15A	1	2	15A	RECEPTACLES - 001	250
1268	LIGHT. - 000/100/101/102/103	15A	3	4	20A	RECEPTACLE - 001	250
112	EMERGENCY LIGHTING	15A	5	6	20A	RECEPTACLE - 001	250
500	OUTDOOR LIGHTING/TIME CLOCK	15A	7	8	20A	RECEPTACLE - 001	250
-	SPARE	15A	9	10	20A	U/C FRIDGE - 001	250
-	SPARE	15A	11	12	20A	MICROWAVE - 001	250
-	SPARE	15A	13	14	15A	RECEPTACLES - 001A	250
-	SPARE	20A	15	16	15A	RECEPTACLES - 002/003	250
-	SPARE	20A	17	18	20A	RECEPTACLE - 002	250
-	SPARE	20A	19	20	20A	RECEPTACLE - 002	250
-	SPARE	20A	21	22	20A	RECEPTACLE - 002	250
-	SPARE	20A	23	24	20A	RECEPTACLE - 002	250
-	SPARE	20A	25	26	20A	FRIDGE - 002	250
-	SPARE	20A	27	28	20A	MICROWAVE - 002	250
-	SPARE	20A	29	30	20A	RECEPTACLE - 004	250
-	SPARE	20A	31	32	15A	RECEPTACLES - 100A/101	250
-	SPARE	20A	33	34	20A	RECEPTACLE - 101	250
-	SPARE	20A	35	36	20A	RECEPTACLE - 101A	250
-	SPARE	20A	37	38	15A	RECEPTACLES - 102	250
100	DATA RACK - 005	15A	39	40	20A	RECEPTACLES - 102	250
7000	DISHWASHER - 103	40A	41	42	20A	RECEPTACLES - 103	250
			43	44	20A	FRIDGE - 103	250
1000	F-1 - 005	15A	45	46	20A	RECEPTACLE - 103	250
570	ERV - 005	15A	47	48	20A	RECEPTACLE - 103	250
3000	HWT - 005	30A	49	50	20A	RECEPTACLE - 103	250
			51	52	20A	RECEPTACLE - 103	250
12000	DUCT HEATER - 005	60A	53	54	20A	RECEPTACLE - 103	250
			55	56	50A	STOVE - 103	6000
3500	HEATERS - 001/001A/003	20A	57	58	20A	RANGE HOOD - 103	100
			59	60	20A	MICROWAVE - 103	250
4500	HEATERS - 100/101A/102	30A	61	62	20A	DRYER - 005	5000
			63	64	30A		
4800	CU-1	30A	65	66			
			67	68	15A	WASHER - 005	500
50	FIRE ALARM PANEL	15A	69	70	20A	OUTDOOR RECEPTACLE	250
50	ULC MONITORING PANEL	15A	71	72	15A	DO/UW - 004	100
TOTAL CONNECTED LOAD: 58.3 KVA							

DATE: 20260619  
REVISIONS: ISSUED FOR TENDER



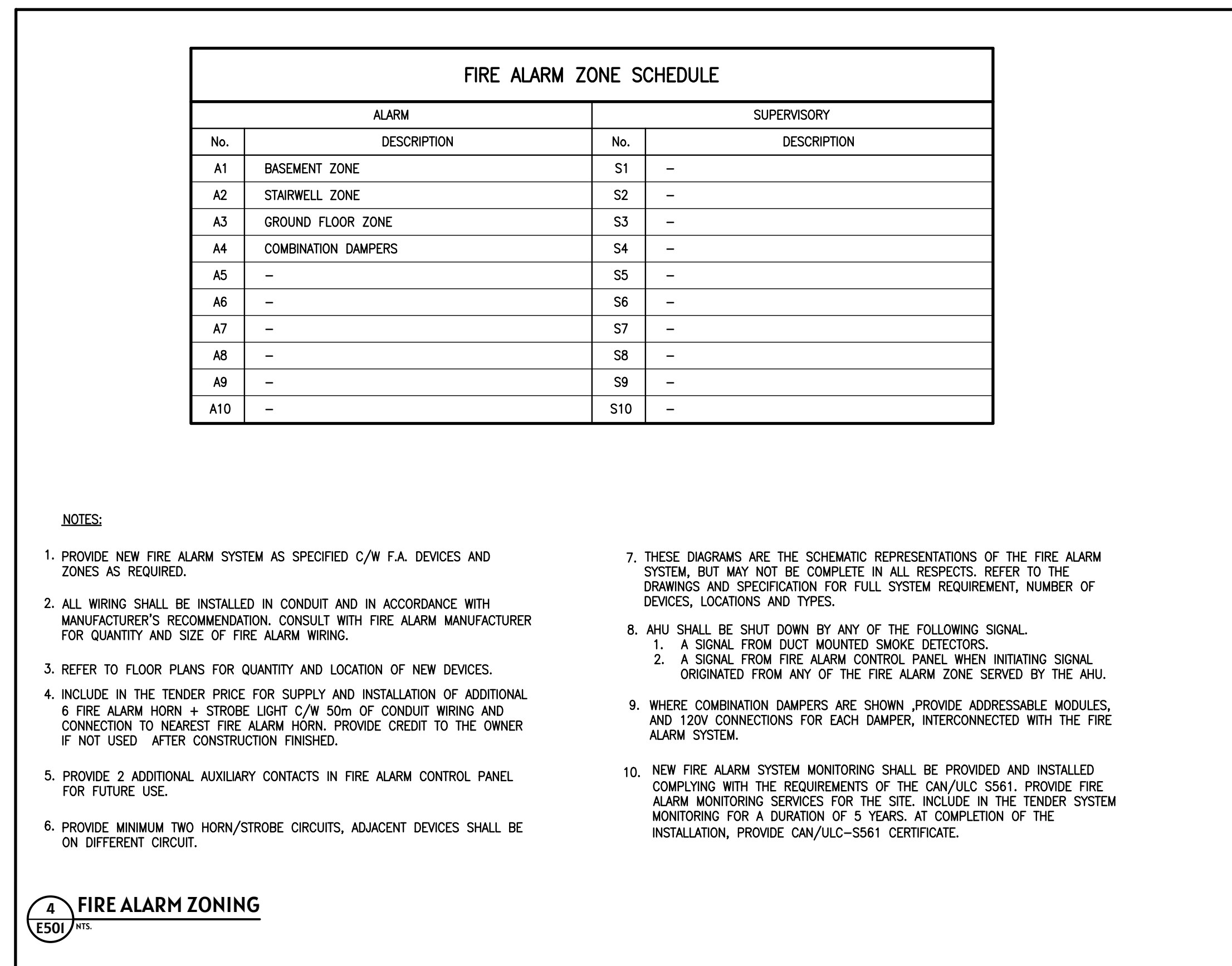
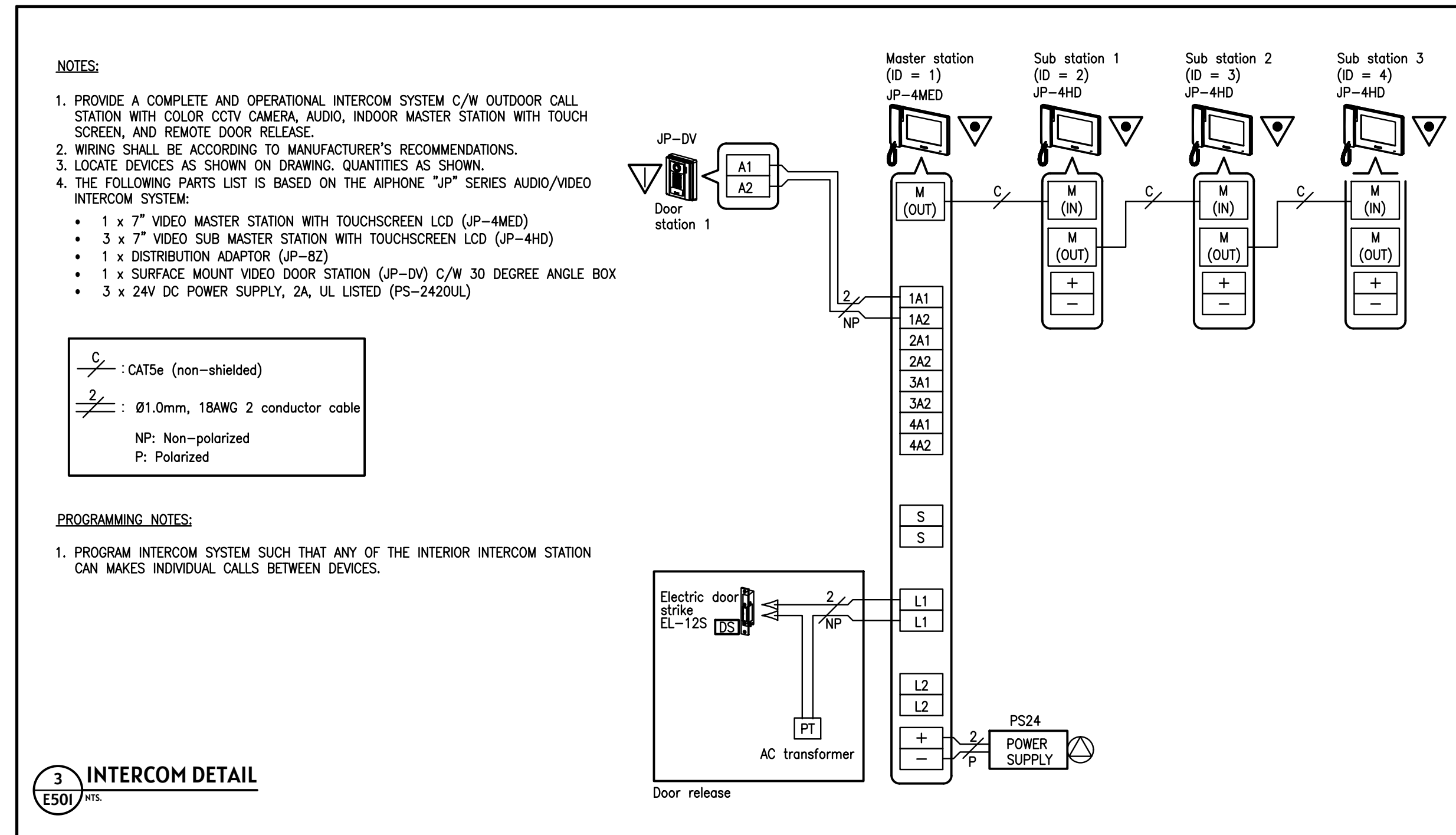
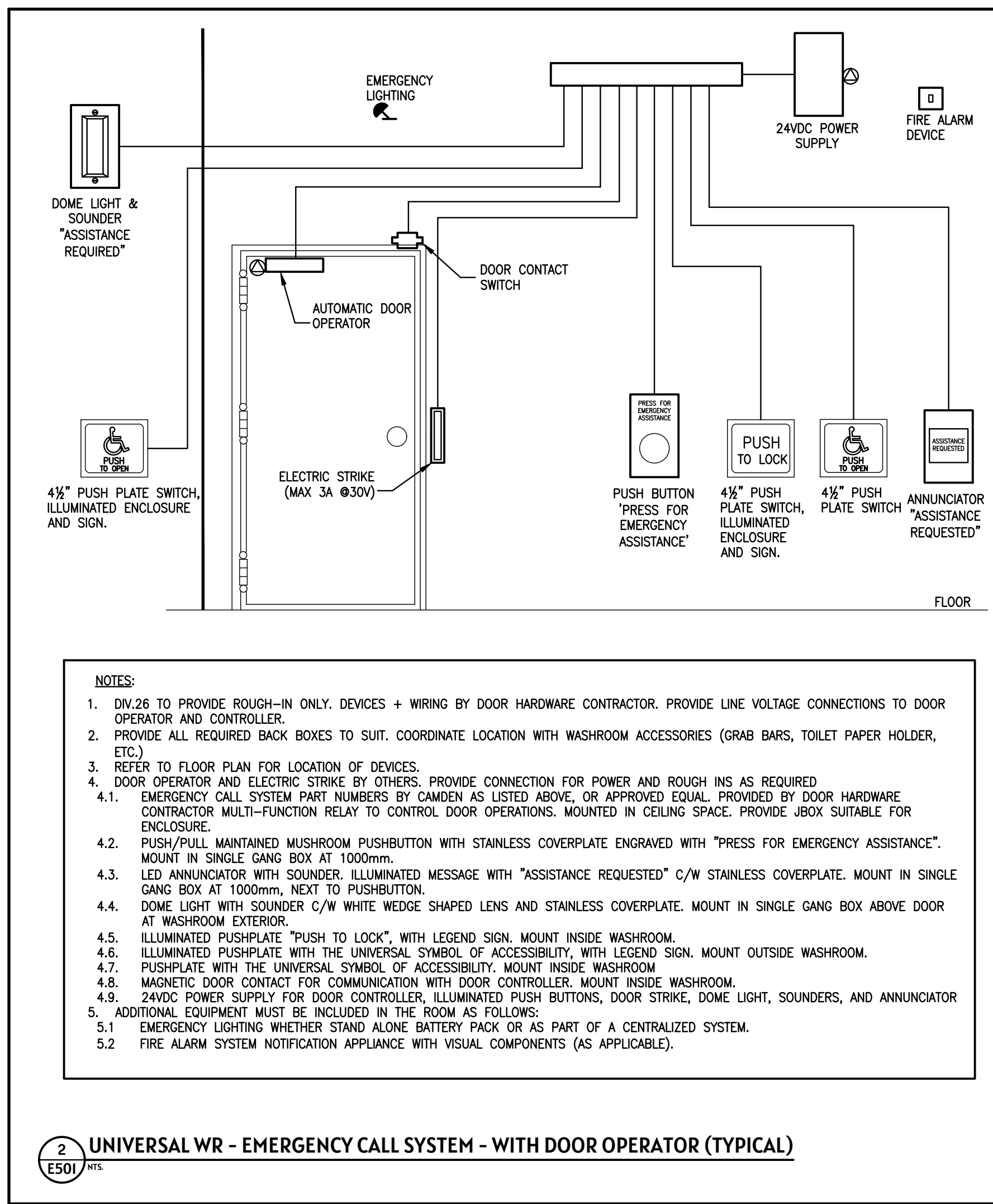
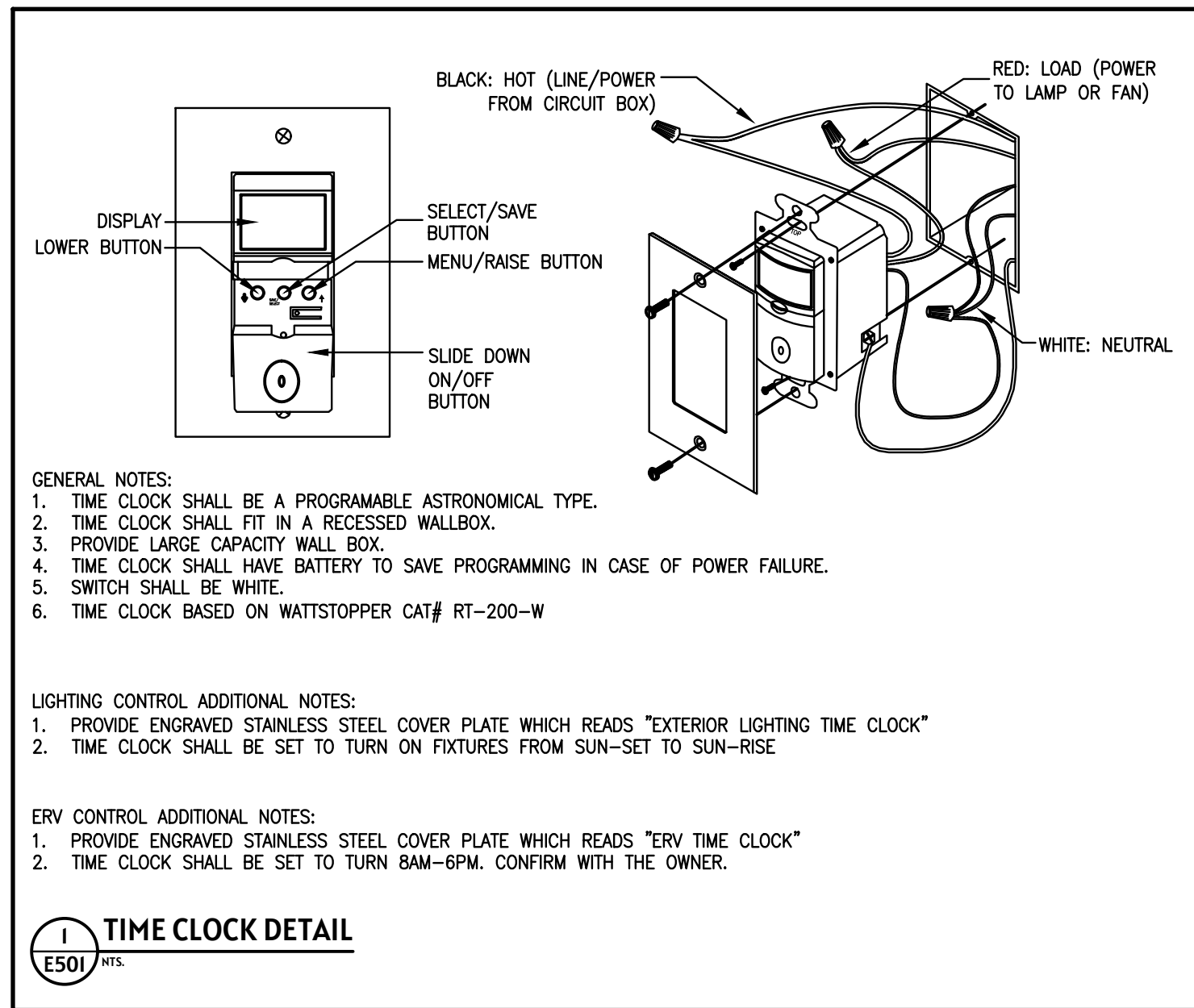
The Professional Engineer certifies that the dimensions and report were prepared by a Licensed Professional Engineer in accordance with the Engineering Act, R.S.O. 1990, Chapter 1904, and the regulations made thereunder. The Professional Engineer certifies that the dimensions and report were prepared by a Licensed Professional Engineer in accordance with the Engineering Act, R.S.O. 1990, Chapter 1904, and the regulations made thereunder. Do not issue drawings.

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P3C 4R9  
Phone: 705-885-1806



**OCOF WARREN DAYCARE**  
INTERIOR RENOVATION  
38 RUTLAND AVENUE, WARREN ON  
ELECTRICAL DETAILS

Date: JUNE 19, 2026  
Scale: AS NOTED  
Drawn: KH Ckx SC  
Job: 26057  
Sheet: E500



DATE: 20260619

REVISIONS: ISSUED FOR TENDER

PROFESSIONAL ENGINEER  
 20260619  
 CHASSIDOR  
 26057  
 26057

The Client hereby certifies that all dimensions and report are correct and that the contractor has proceeded with the work. The contractor shall be responsible for any errors or omissions in the drawings and shall be held liable for any damages or costs incurred by the Client as a result of such errors or omissions. Do not issue drawings.

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**ENGINEERING**

**OCOF WARREN DAYCARE**  
 INTERIOR RENOVATION  
 38 RUTLAND AVENUE, WARREN ON

**ELECTRICAL DETAILS**

Date: JUNE 19, 2026  
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 Drawn: KH Ck: SC  
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 Sheet: E501