

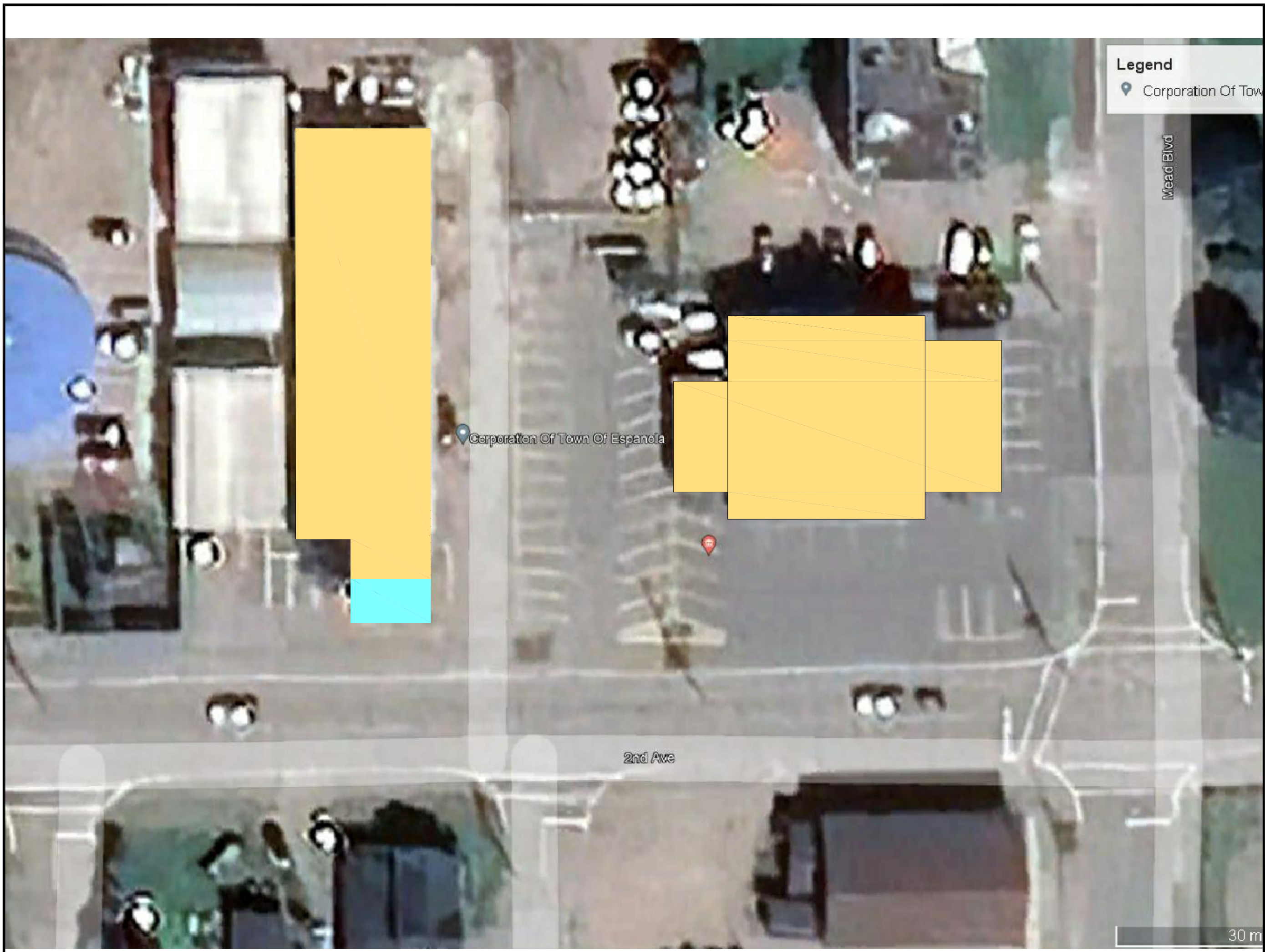


PUBLIC WORKS GARAGE ADDITION/RENOVATION

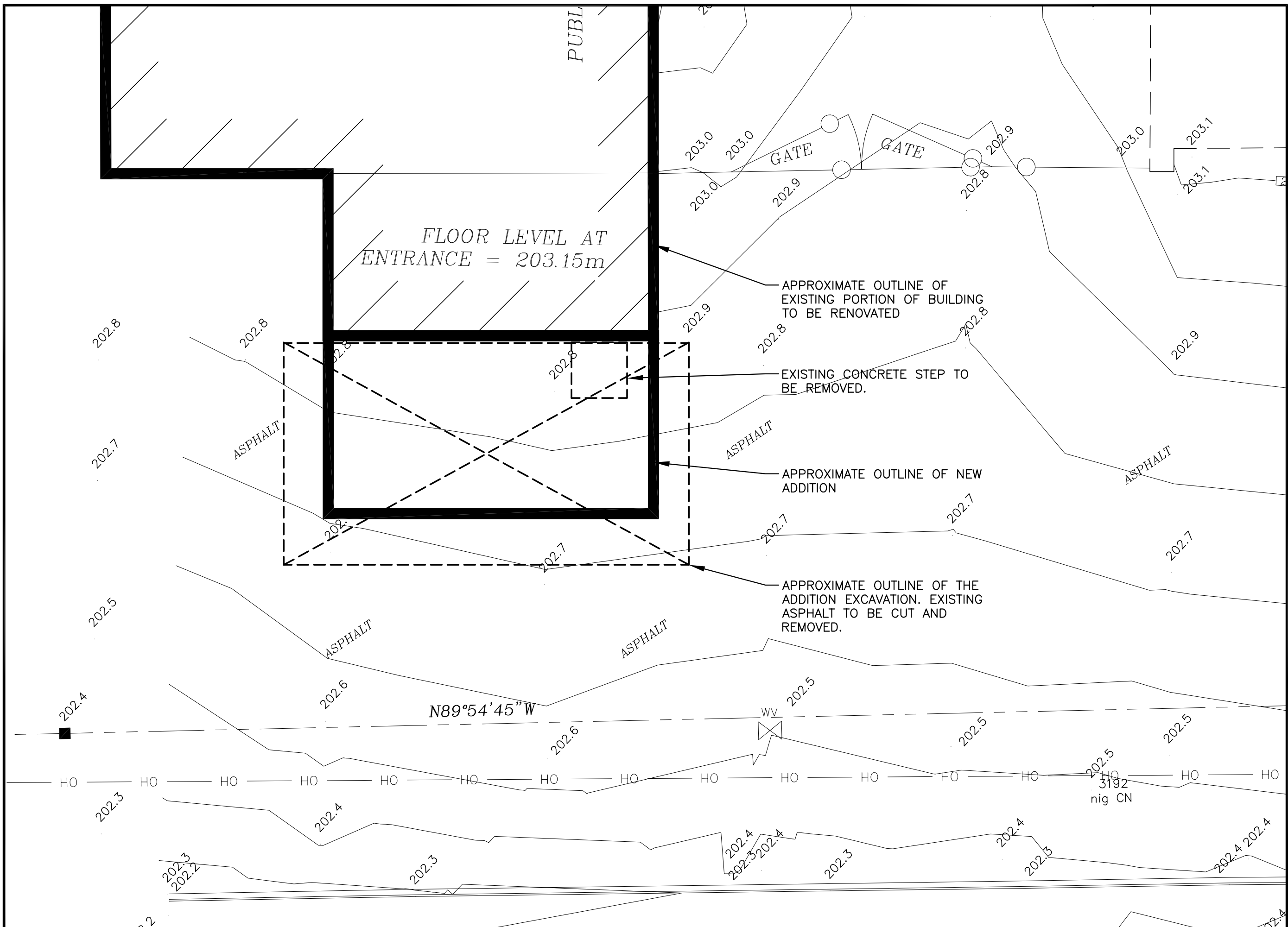
596 SECOND AVENUE
ESPANOLA, ONTARIO

2124

AUGUST 31, 2023
ISSUED FOR TENDER JANUARY 2, 2024



1 KEY SITE PLAN
A001 1/8"=1'-0"



2 PARTIAL SITE PLAN
A001 1/8"=1'-0"

ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HT.	REMARKS
				NORTH	EAST	SOUTH	WEST			
100	RECEPTION	MAT. FIN. SH. COL. F1,F2	CONC. SH. B1	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
101	WAITING AREA	MAT. FIN. SH. COL. F1,F2	CONC. SH. B1	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
102	SUPERINTENDENT OFFICE	MAT. FIN. SH. COL. F1,F2	CONC. SH. B1	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
103	SUPPORT SERVICES	MAT. FIN. SH. COL. F1,F2	CONC. SH. B1	EX.GYP. R.PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
104	OPEN OFFICE	MAT. FIN. SH. COL. F1,F2,F3	CONC. SH. B1	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
105	LUNCH ROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. C1	8'-0"	INSTALL WALL PROTECTION PANELS TO THE WALL SURFACES AND STAINLESS STEEL CORNER GUARDS TO ALL OUTSIDE CORNERS (5)
106	ELECTRICAL ROOM	MAT. FIN. EX. COL. -	CONC. EX. -	EX.GYP. R.PT. P1	EX.GYP. R.PT. P1	EX.GYP. R.PT. P1	EX.GYP. R.PT. P1	EX. EX. -	8'-0"	
107	ACCESSIBLE WASHROOM	MAT. FIN. SH. COL. F1,F2	CONC. SH. B1	GYP. PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
108	SHOWER ROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. P1,P2	GYP. PT. C1	8'-0"	
109	LOCKER ROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. C1	8'-0"	
110	WASHROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. C1	8'-0"	
111	WASHROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. C1	8'-0"	
112	LOCKER ROOM	MAT. FIN. EP. COL. F4,F5	CONC. EP. B2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	EX.GYP. R.PT. P1,P2	GYP. PT. C1	8'-0"	
113	GARAGE	MAT. FIN. EX. COL. -	CONC. EX. -	EX. EX. -	EX. EX. -	EX.GYP. R.PT. P1	EX. EX. -	EX. EX. -	18'-0"	INSTALL WALL PROTECTION PANELS TO THE GARAGE SIDE WALL SURFACES ALONG GRID LINE 4 AND STAINLESS STEEL CORNER GUARDS TO THE OUTSIDE CORNER (1)

ABBREVIATIONS

C.T. - MARBLE TILE
P.LAM - PLASTIC LAMINATE
PT. - PAINT FINISH
RPT. - REPAINT
GYP. - GYPSUM BOARD
ACT. - ACOUSTIC TILE ON T-BAR
EX. - EXISTING
STRUCT. - STRUCTURE
CONC. - CONCRETE WALL / SLAB
BLK. - CONCRETE BLOCK

WALL

P1 - PAINT COLOUR BY OWNER
P2 - PAINT COLOUR BY OWNER
P3 - MARBLE TILE TO MATCH EXISTING
P4 - MARBLE TILE TO MATCH EXISTING

FLOOR

F1 - RESILIENT SHEET FLOORING, COLOUR A
F2 - RESILIENT SHEET FLOORING, COLOUR B
F3 - RESILIENT SHEET FLOORING, COLOUR C
F4 - EPOXY FLOOR COATING, COLOUR A
F5 - EPOXY FLOOR COATING, COLOUR B

BASE

B1 - 4" FLOORING FLASH COVE BASE
B2 - 4" EPOXY COVE BASE

CEILING

C1 - FLAT CEILING PAINT ON NEW CEILING SURFACE (REFER TO SPECIFICATION)

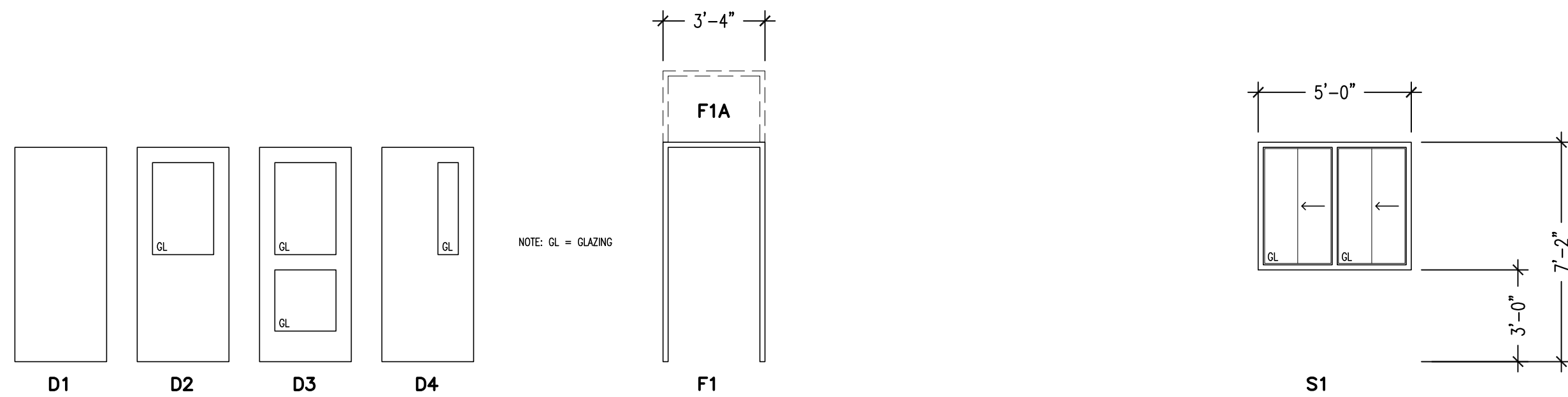
GENERAL NOTES

PATCH AND REPAIR ALL TO BE FINISHED / REFINISHED AND PREPARE SUBSTRATE AS REQUIRED FOR NEW FINISH.
MAKE GOOD ALL EXISTING SURFACES AFFECTED BY DEMOLITION, REMOVALS AND NEW SCOPE OF WORK.
SUPPLY AND INSTALL FLUSH TRANSITIONS BETWEEN FLOORING CHANGES MEETING B.F. REQUIREMENTS BETWEEN DIFFERENT FLOORING TYPES

DOOR SCHEDULE / WINDOW SCHEDULE

NO.	DOOR / WINDOW						FRAME		HARDWARE										FIRE RESISTANCE RATING IN HOURS	REMARKS
	TYPE	WIDTH	HEIGHT	MATERIAL	THICK	FINISH	MATERIAL	FINISH	TYPE	HEIGHT	THRESHOLD / SILL	CLOSER	POWER OPERATOR	CARD READER	ELECTRIC STRIKE	WEATHER STRIPPING	SMOKE SEAL AND SWEEP			
D100	D3	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	*	*	-	*	N/A	3, 4	
D101A	D3	3'-2"	7'-0"	AL.	1 3/4"	ANOD.	AL.	ANOD.	F1	7'-2"	*	-	*	-	-	*	-	N/A	1, 2, 3	
D101B	D3	3'-2"	7'-0"	AL.	1 3/4"	ANOD.	AL.	ANOD.	F1	7'-2"	-	-	*	*	*	*	-	N/A	2, 3	
D102	D3	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	-	-	-	-	-	*	N/A	3, 4	
D103	D3	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	-	-	-	*	N/A	3, 4	
D105	D4	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	*	*	-	*	1.5 HOUR	3, 4	
D106																			EXISTING DOOR ASSEMBLY TO REMAIN. RE PAINT DOOR AND FRAME	
D107	D1	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	-	-	-	-	N/A	3, 4,	
D108	D1	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	-	-	-	*	1.5 HOUR	3, 4,	
D109	D1	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	-	-	-	*	1.5 HOUR	3, 4,	
D111	D1	3'-2"	7'-0"	H.M.	1 3/4"	PT.	H.M.	PT.	F1	7'-2"	-	*	-	-	-	-	*	1.5 HOUR	3, 4,	
S101	-	5'-0"	4'-0"	GLASS	1/4"	-	H.M.	PT.	S1	-	-	-	-	-	-	-	-	N/A		
S102	-	5'-0"	4'-0"	GLASS	1/4"	-	H.M.	PT.	S1	-	-	-	-	-	-	-	-	N/A		

DOOR AND FRAME TYPES



DOOR TYPES

NOTE:
ALL INTERIOR GLAZING IN DOORS AND SCREENS SHALL BE 1/4" CLEAR TEMPERED

NOTE:
NEW ENTRANCE DOOR AND FRAMING SHALL BE EQUAL TO ALUMICOR, CANADIANA INSULDOOR, SERIES 600A INS

NOTE:
PROVIDE NEW EXTRUDED THERMALLY BROKEN ALUMINUM THRESHOLD AT ALL NEW EXTERIOR DOORS

NOTE:
PROVIDE NEW LOCKING HARDWARE CYLINDERS AS PER ESPANOLA STANDARD KEYING SYSTEM

NOTE:
PROVIDE ALL BACKER ROD AND SEALANT AS REQUIRED FOR THE COMPLETE INSTALLATION OF THE NEW WINDOWS AND DOORS

FRAME TYPES

REMARKS KEY NOTES:

ALL GLAZING IN INTERIOR DOORS SHALL BE 1/4" CLEAR TEMPERED AND 1" THERMAL UNITS IN EXTERIOR WINDOWS.

1 DOOR AND FRAME TO BE INSULATED AND THERMALLY BROKEN, SWEEP AND SEAL KIT. EXTRUDED ALUMINUM THRESHOLD TO SUIT OPENING.

2 INSTALL ACCESSIBLE POWER DOOR OPERATOR WITH ACTUATOR SWITCH TIED INTO EXTERIOR KEY PAD, ELECTRIC STRIKE RELEASE AND INTERIOR DOOR RELEASE SWITCH.

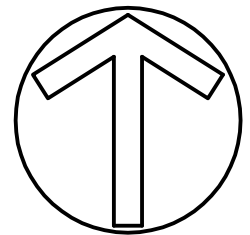
3 INSTALL HARDWARE AS PER OWNERS REQUIREMENTS

4 INSTALL STAINLESS STEEL KICK PLATES ON BOTH SIDES OF THE DOOR.

SCREEN S1 SHALL HAVE DOUBLE SLIDING OPERABLE SECTIONS WITH PULL KNOB

DATE:
JANUARY 2, 2024

REVISIONS:
DRAWING ISSUED FOR TENDER



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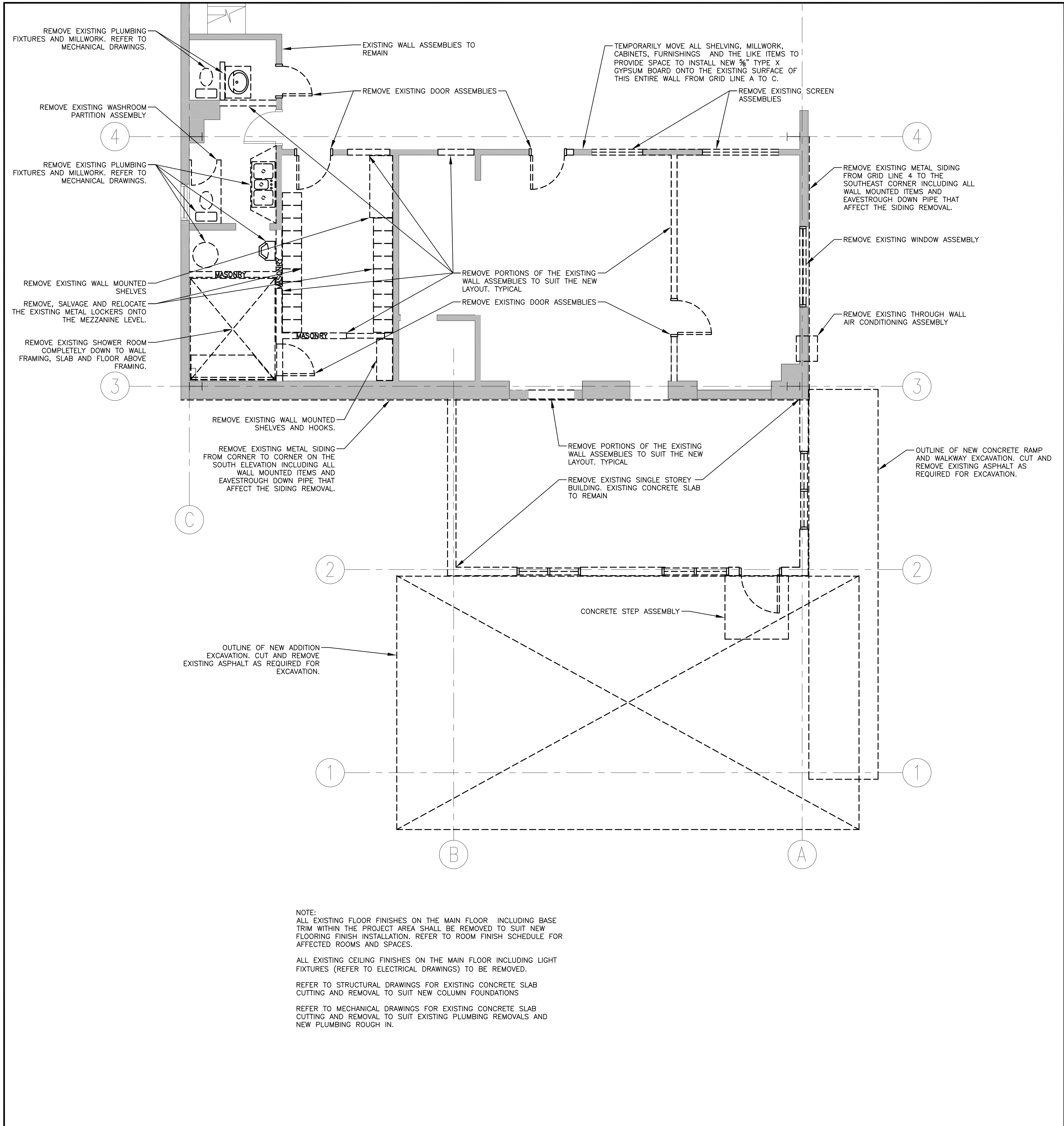
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ESPANOLA PUBLIC WORKS
ADDITION / RENOVATION

SCHEDULES AND NOTES

Date
AUGUST 31, 2023
Scale
AS NOTED
Drawn
DH CP
Job
2124
Contract
Sheet

A001



1 PARTIAL FLOOR PLAN OF WORK AREA - DEMOLITION
A100 1/4"=1'-0"

ONTARIO BUILDING CODE MATRIX

PART 3

PROJECT NAME:	TOWN OF ESPANOLA PUBLIC WORKS GARAGE
PROJECT NUMBER:	2124
REVIEWED BY:	CJP
DATE:	AUGUST 31, 2023
APPROVED BY:	CJP

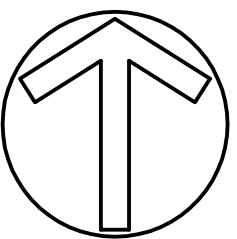
This checklist is intended to assist architects in a review of code requirements to be considered in the preparation and review of documents to support a permit application. A simple review of the checklist is not a substitute for a thorough review of the OBC. Modify the checklist to note applicable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

ITEM	DESCRIPTION	OBC REFERENCE
1	Project Description: <input type="checkbox"/> New <input checked="" type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Change of Use	
2	Major Occupancy(s): GROUP D AND GROUP F2	3.1.2.1(1)
3	Building Area (m ²): Existing 784m ² New 42m ² Total 826m ²	1.4.1.2
4	Gross Area (m ²): Existing 864m ² New 42m ² Total 906m ²	1.4.1.2
5	Number of Storeys: Above Grade: 2 Below Grade: 0	3.2.1.1 & 1.4.1.2
6	Height of Building(m): 2 Storey	1.4.1.2 3.2.2.10 & 3.2.5.5
7	Number of Streets/Access Routes: 3	3.2.2.10
8	Building Classification: Group F, DIVISION 2 Up to 2 Storeys	3.2.2.71
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	3.2.2.71 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.4
12	Water Service/Supply is Adequate: <input 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 Actual Construction: <input type="checkbox"/> Combustible <input type="checkbox"/> Non-combustible <input checked="" type="checkbox"/> Both	3.2.2.71
15	Mezzanine(s) Area (m ²): Existing 80m ² New 0m ²	3.2.1.1(3)-(8)
16	Occupancy Load Based: 26 <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) Horizontal Assemblies (FRR) Hours Floors: COMBUSTIBLE 45 MINUTES Roof: NON COMBUSTIBLE N/A Mezzanine: COMBUSTIBLE 45 MINUTES Supporting Members (FRR) Hours Floors: COMBUSTIBLE 45 MINUTES Roof: NON-COMBUSTIBLE N/A Mezzanine: COMBUSTIBLE 45 MINUTES	3.2.2.71
20	NOTES:	3.2.3

Item	Ontario Building Code Data Matrix Part 11	OBC Reference
1	Existing Building Existing Use: GROUP F2 / GROUP D Construction Index: — Renovation Proposed Use: GROUP F2 / GROUP D Hazard Index: — <input checked="" type="checkbox"/> Not Applicable (no change of major occupancy)	11.2.1 T 11.2.1.1.A T 11.2.1.1.B-N
2	Alteration Classification <input type="checkbox"/> Basic Renovation <input checked="" type="checkbox"/> Extensive Renovation	11.3.3.1 11.3.3.2
3	Reduction in Performance Level Structural: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Plumbing: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Sewage systems: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
4	Compensating Construction Structural: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — — Increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — — Change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — — Plumbing: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — — Sewage systems: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — —	11.4.3.2 11.4.3.3 11.4.3.4 11.4.3.5 11.4.3.6
5	Compliance Alternatives Proposed <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (give number(s)) — — —	11.5.1
6	Compliance Alternatives Proposed <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) — — —	11.5.2

DATE: JANUARY 2, 2024

REVISIONS: DRAWING ISSUED FOR TENDER



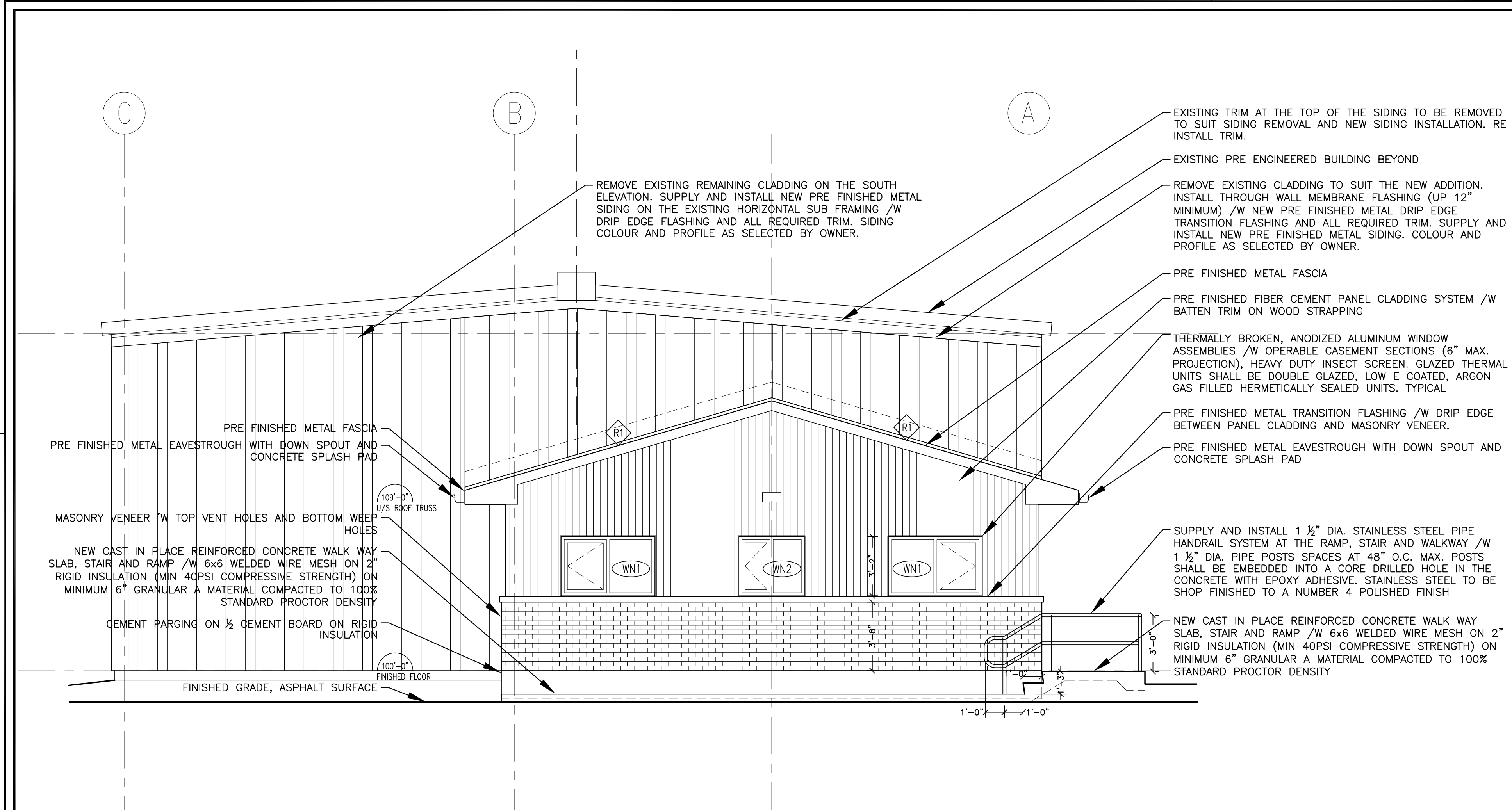
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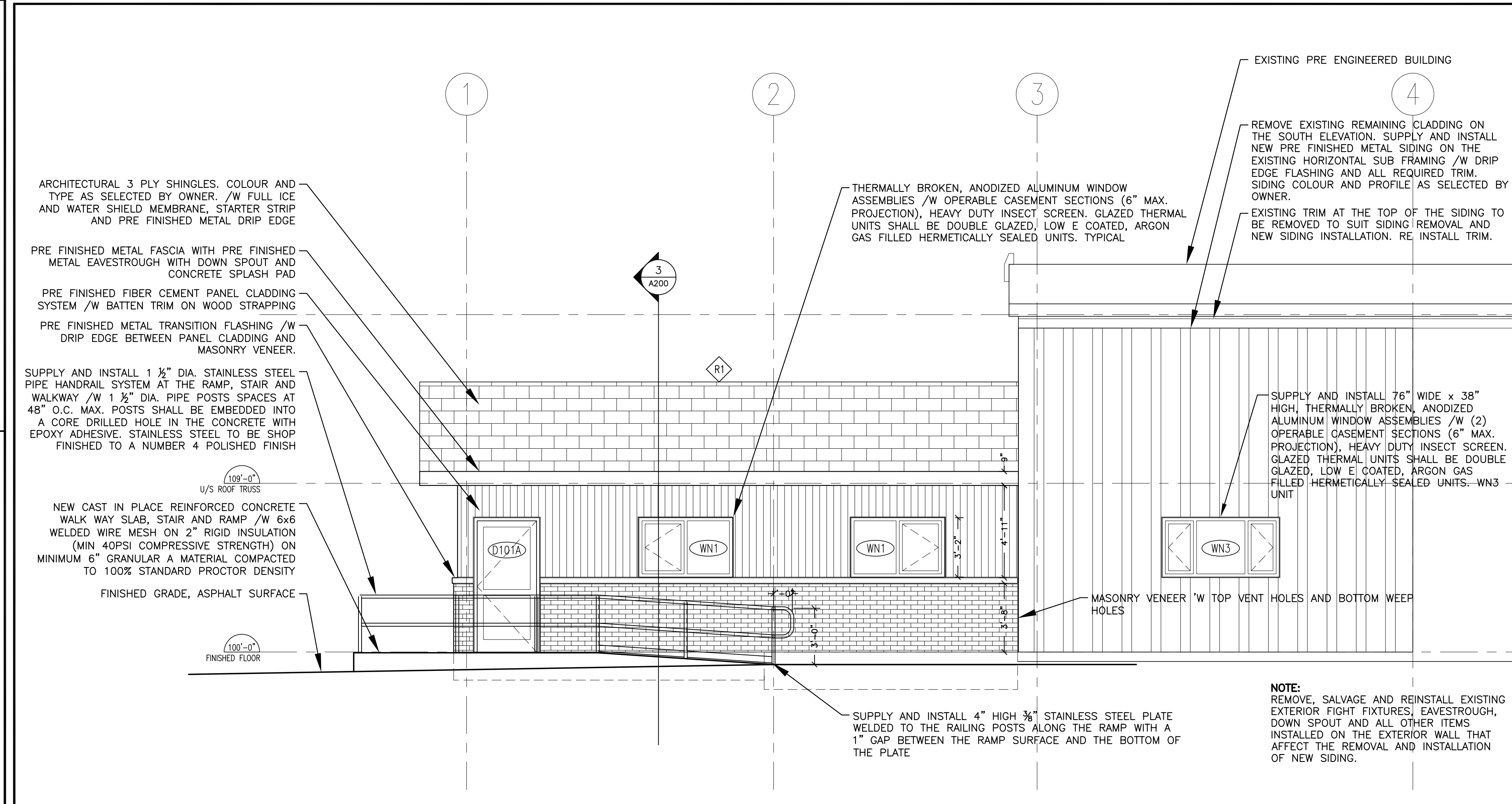
ESPANOLA PUBLIC WORKS
ADDITION / RENOVATION
DEMOLITION PLAN
ESPANOLA, ONTARIO

Date: AUGUST 31, 2023
Scale: AS NOTED
Drawn: DH CJP
Job: 2124
Contract: CP
Sheet:

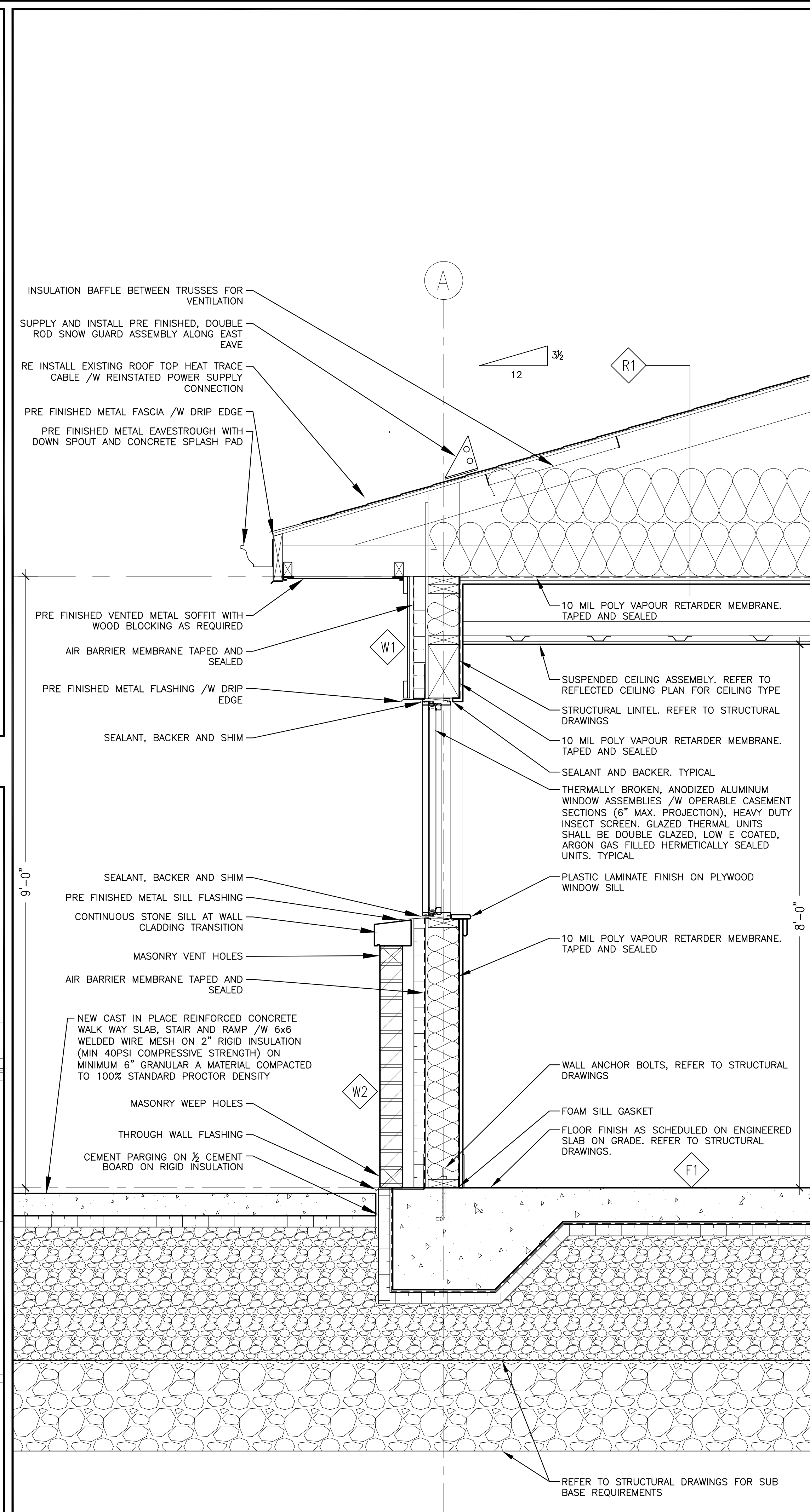
A100



1 SOUTH ELEVATION
A200 1/4"=1'-0"



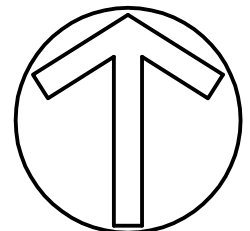
2 EAST ELEVATION
A200 1/4"=1'-0"



3 WALL SECTION
A200 1"=1'-0"

DATE:
JANUARY 2, 2024

REVISIONS:
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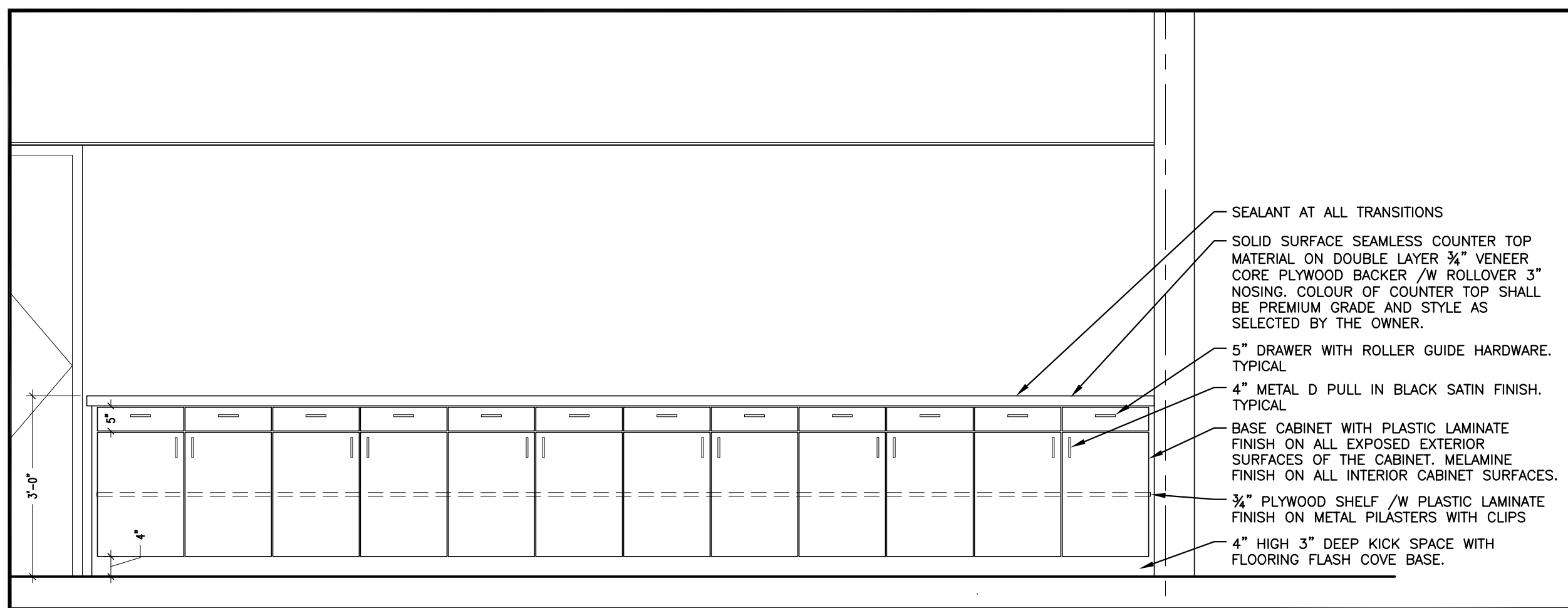
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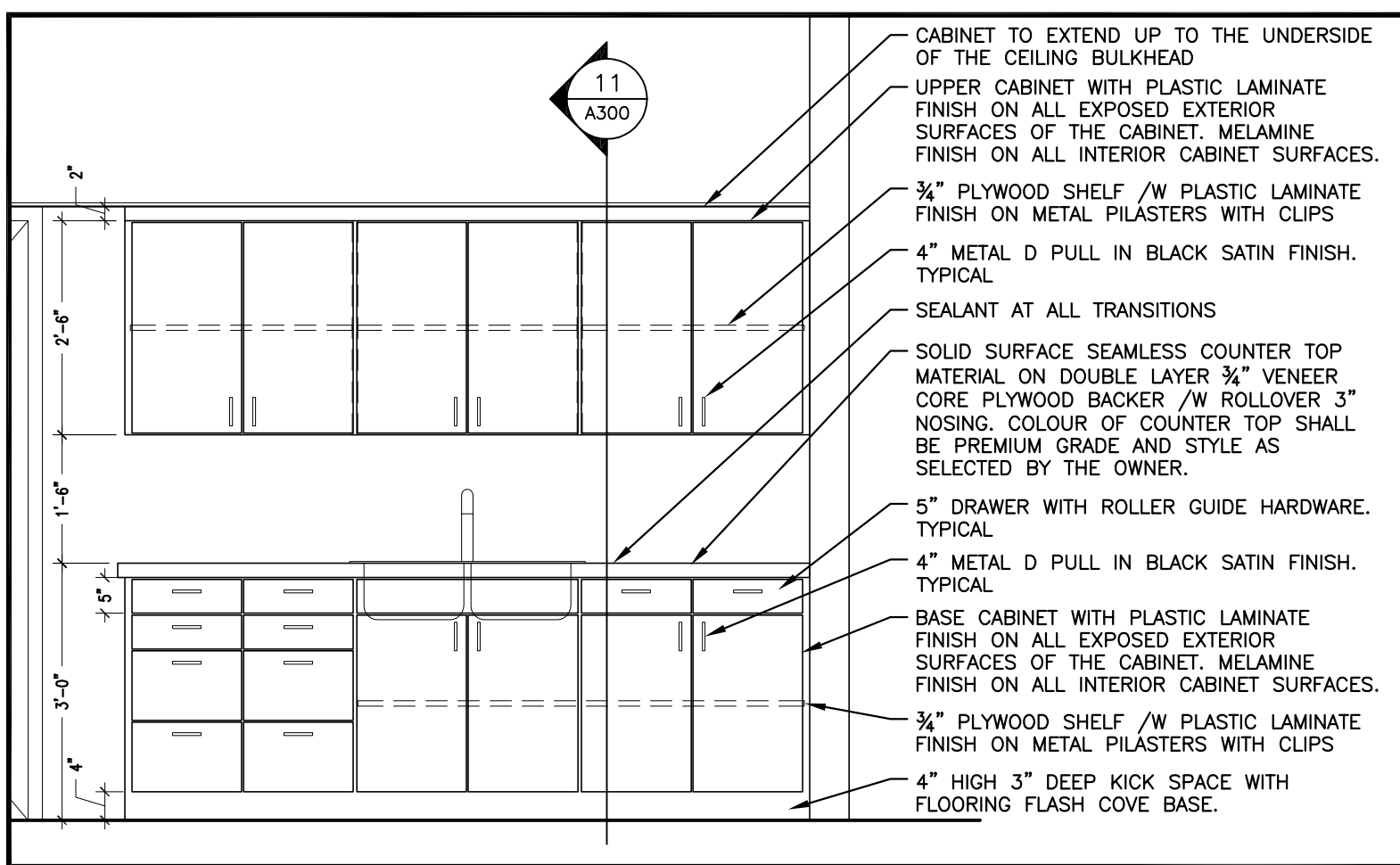
ESPANOLA PUBLIC WORKS
ADDITION / RENOVATION
ELEVATIONS

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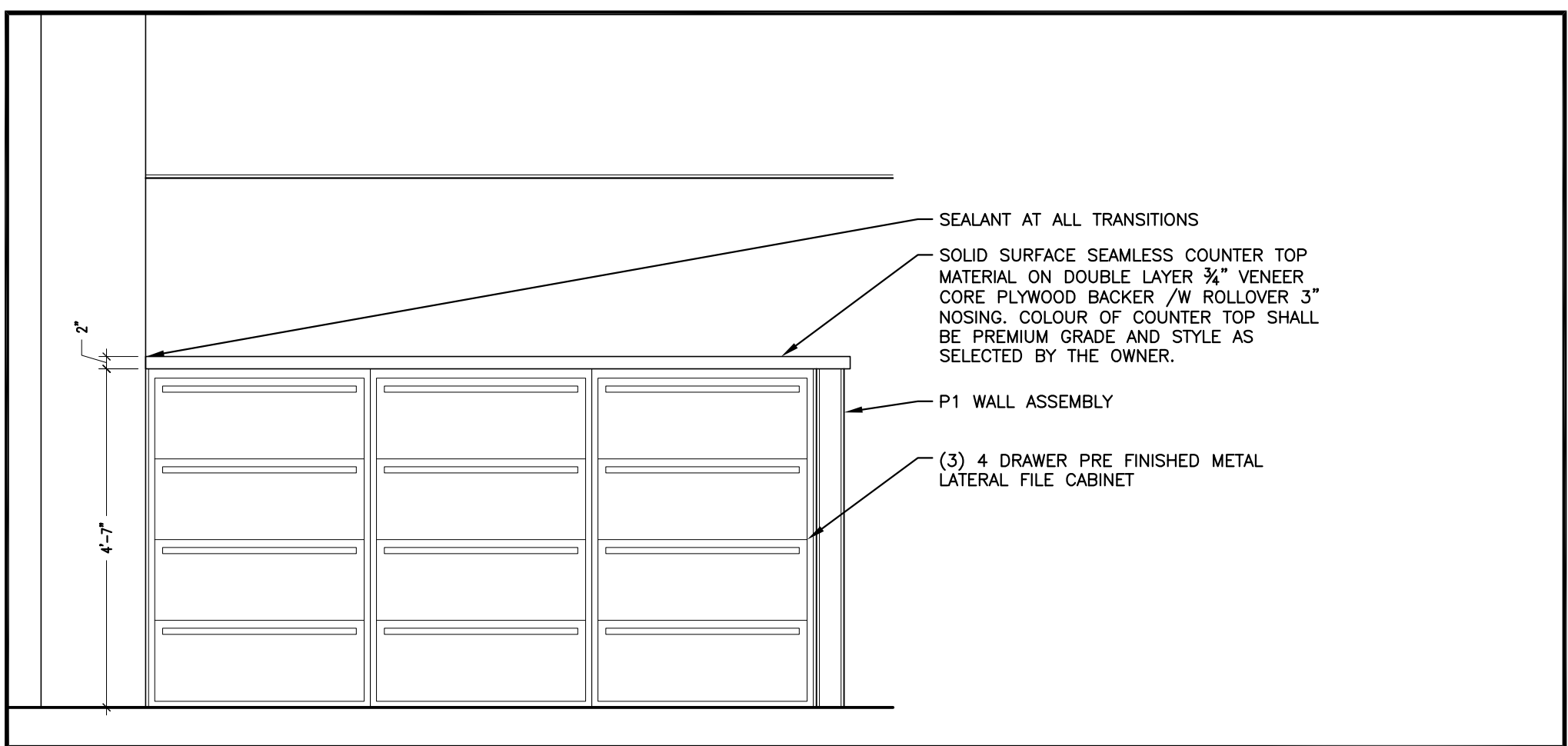
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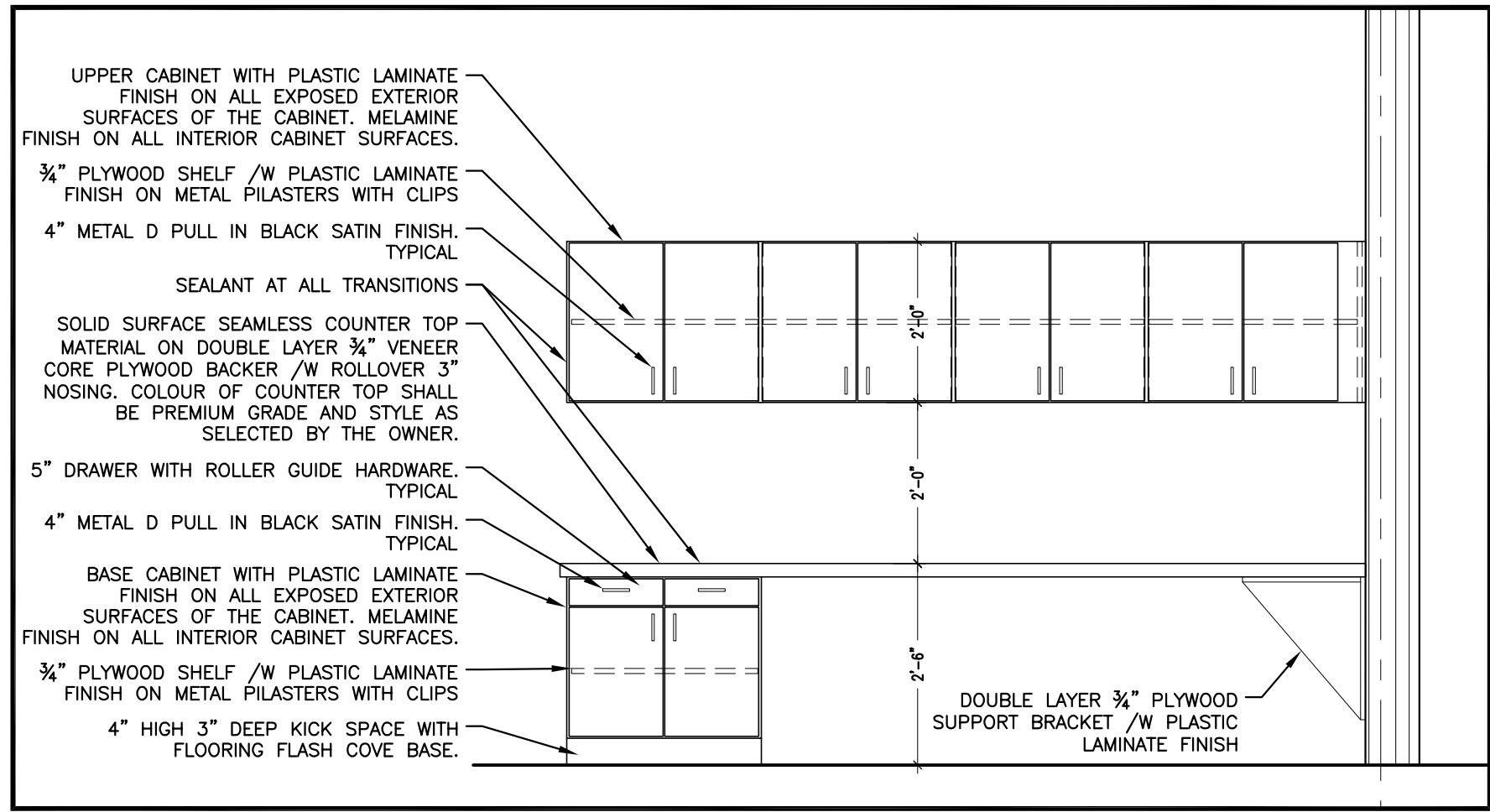
1 MILLWORK ELEVATION
A300 1/2"=1'-0"



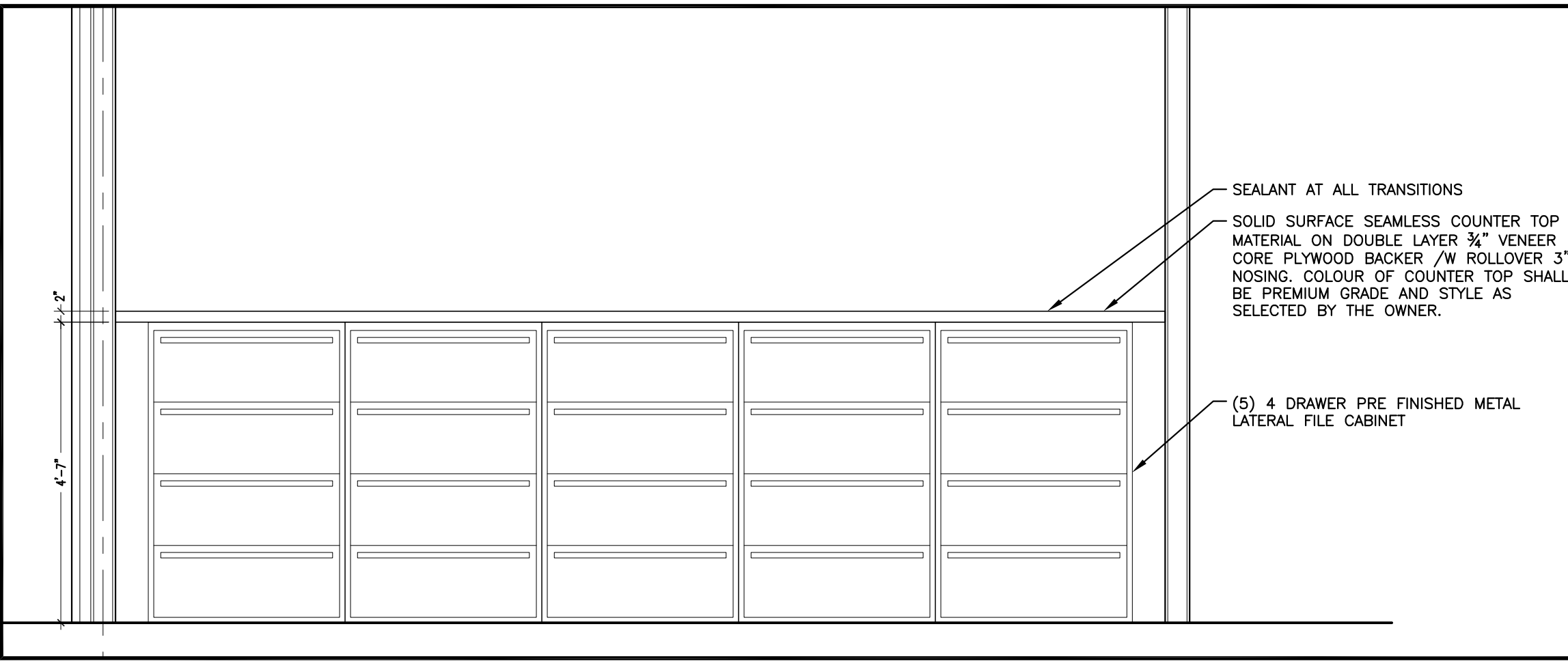
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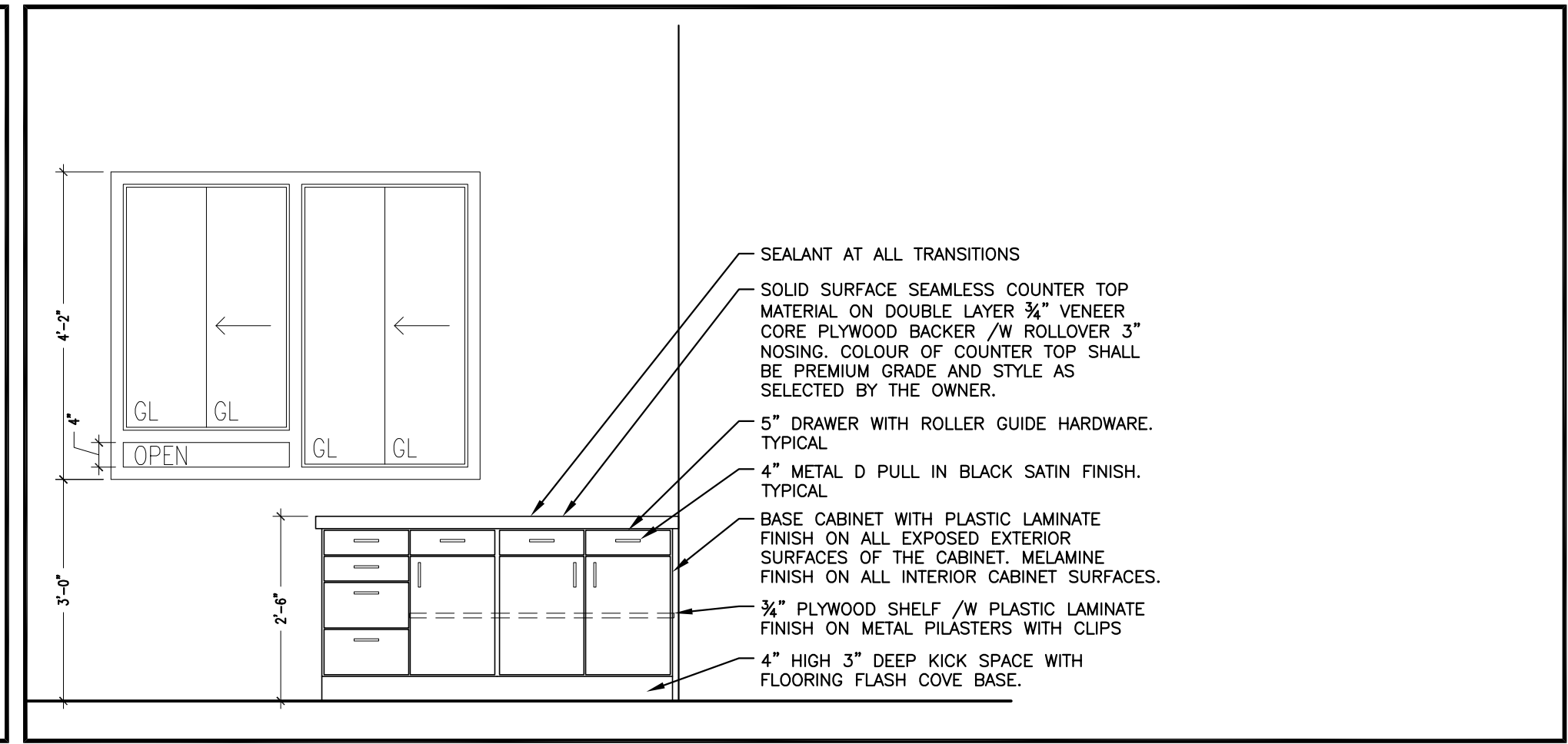
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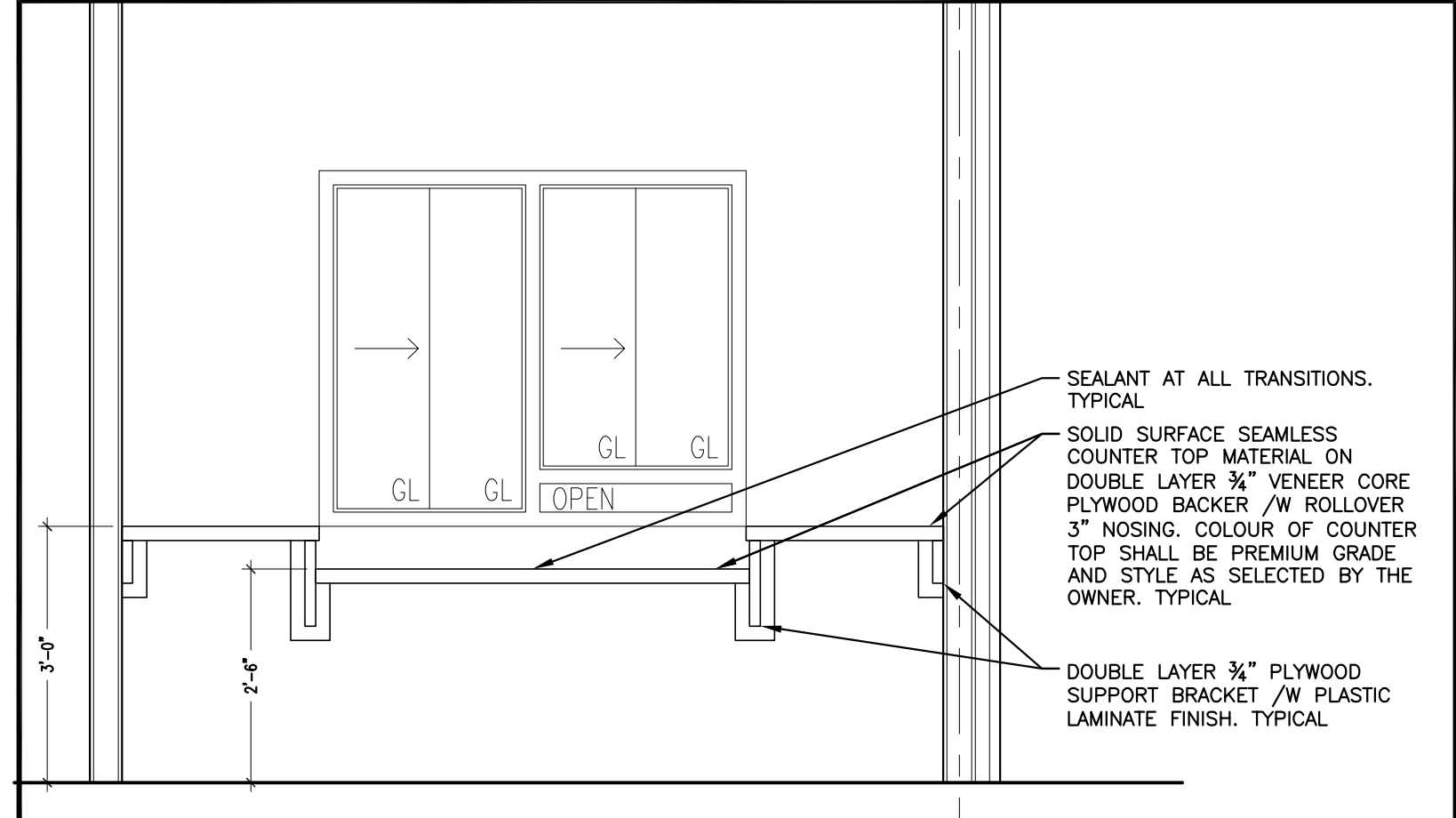
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A300 1/2"=1'-0"



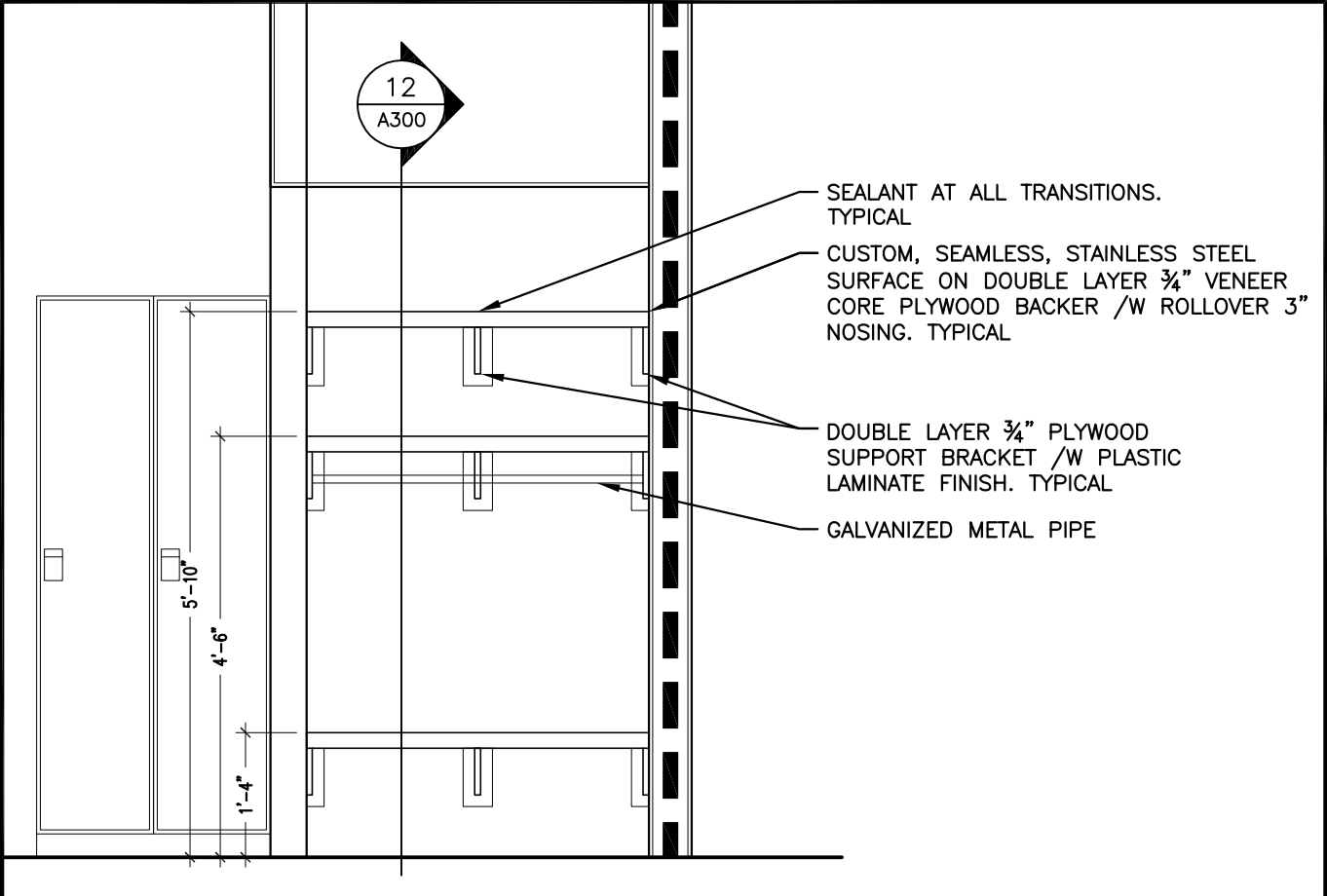
5 MILLWORK ELEVATION
A300 1/2"=1'-0"



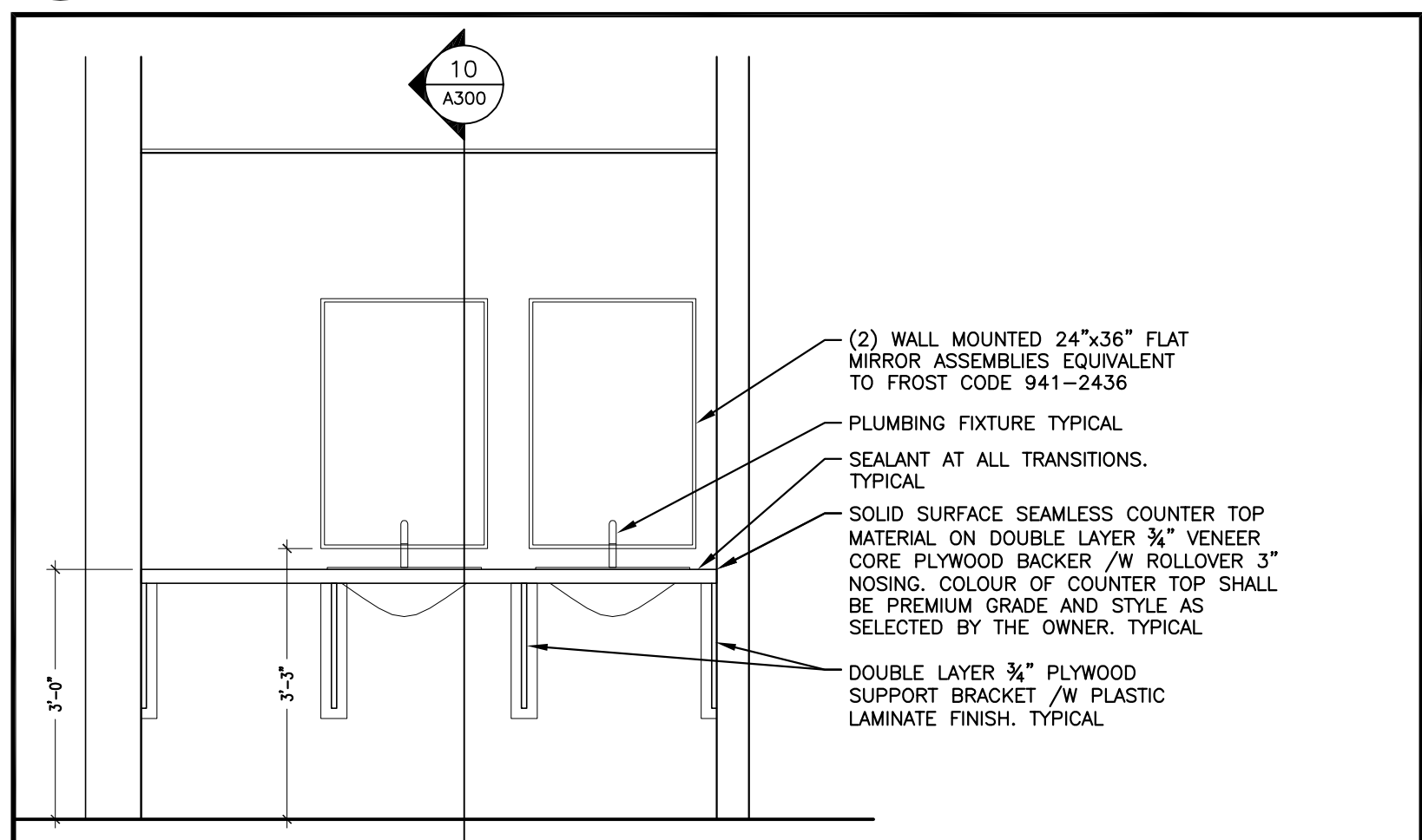
6 MILLWORK ELEVATION
A300 1/2"=1'-0"



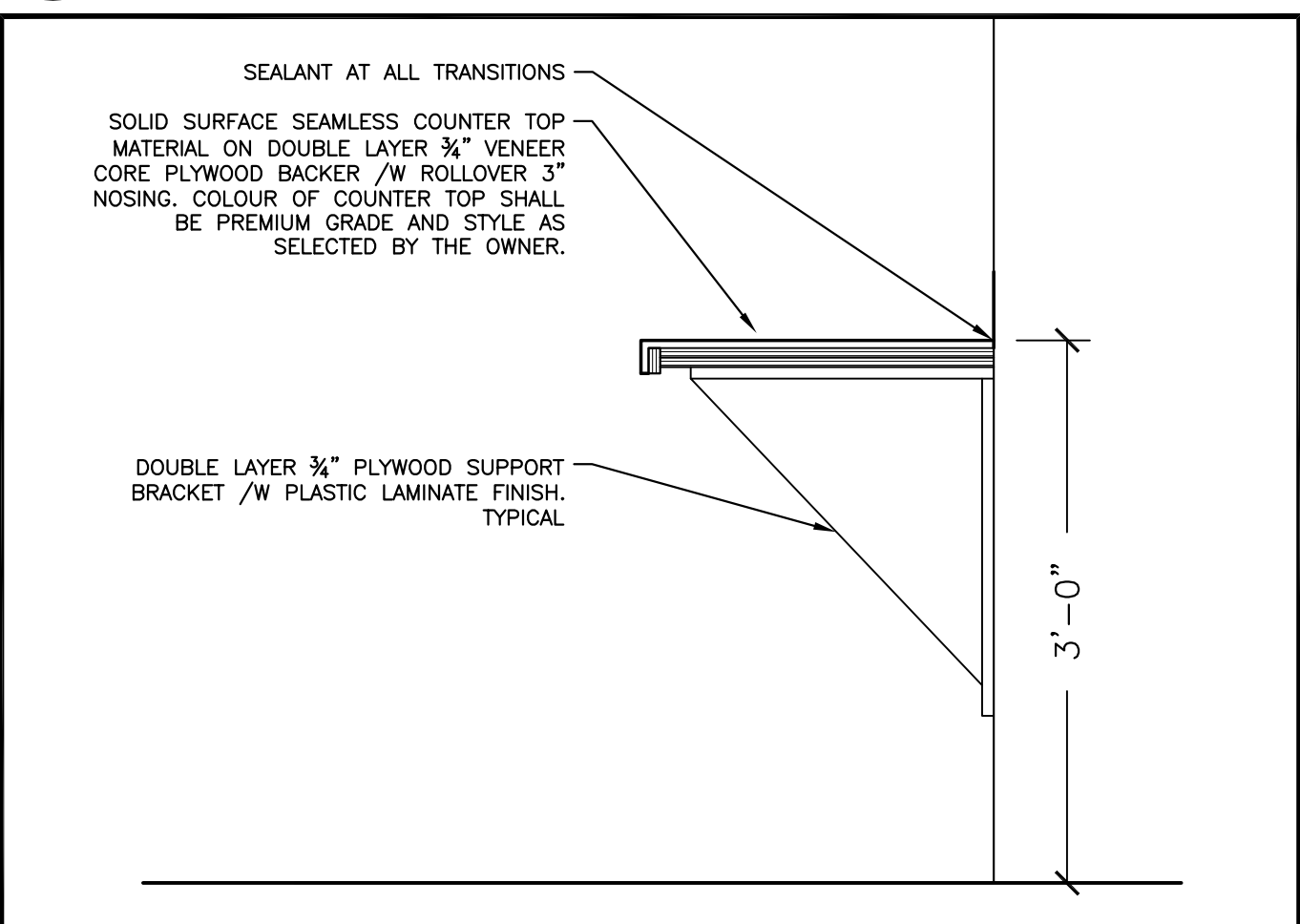
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A300 1/2"=1'-0"



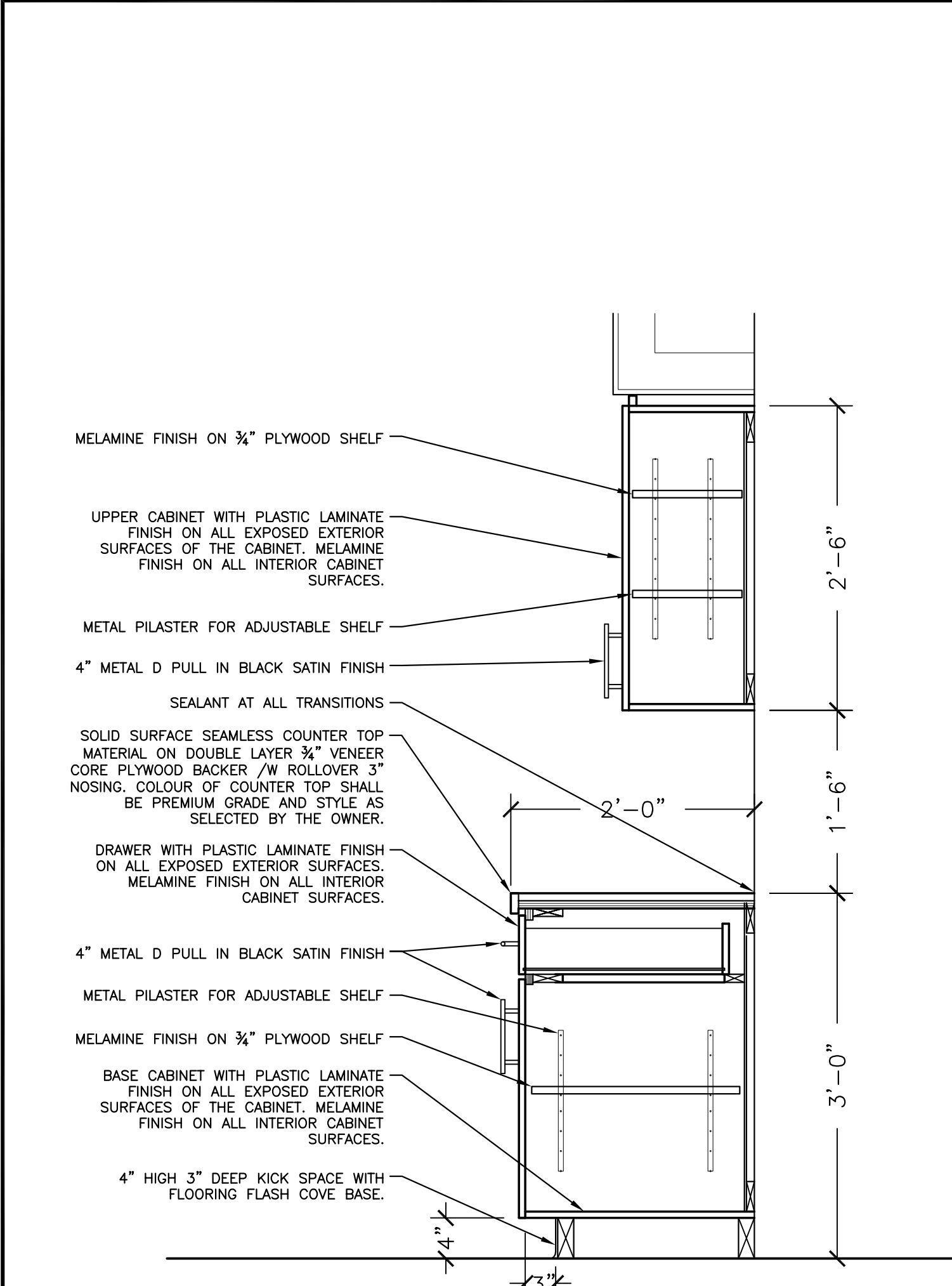
8 MILLWORK ELEVATION
A300 1/2"=1'-0"



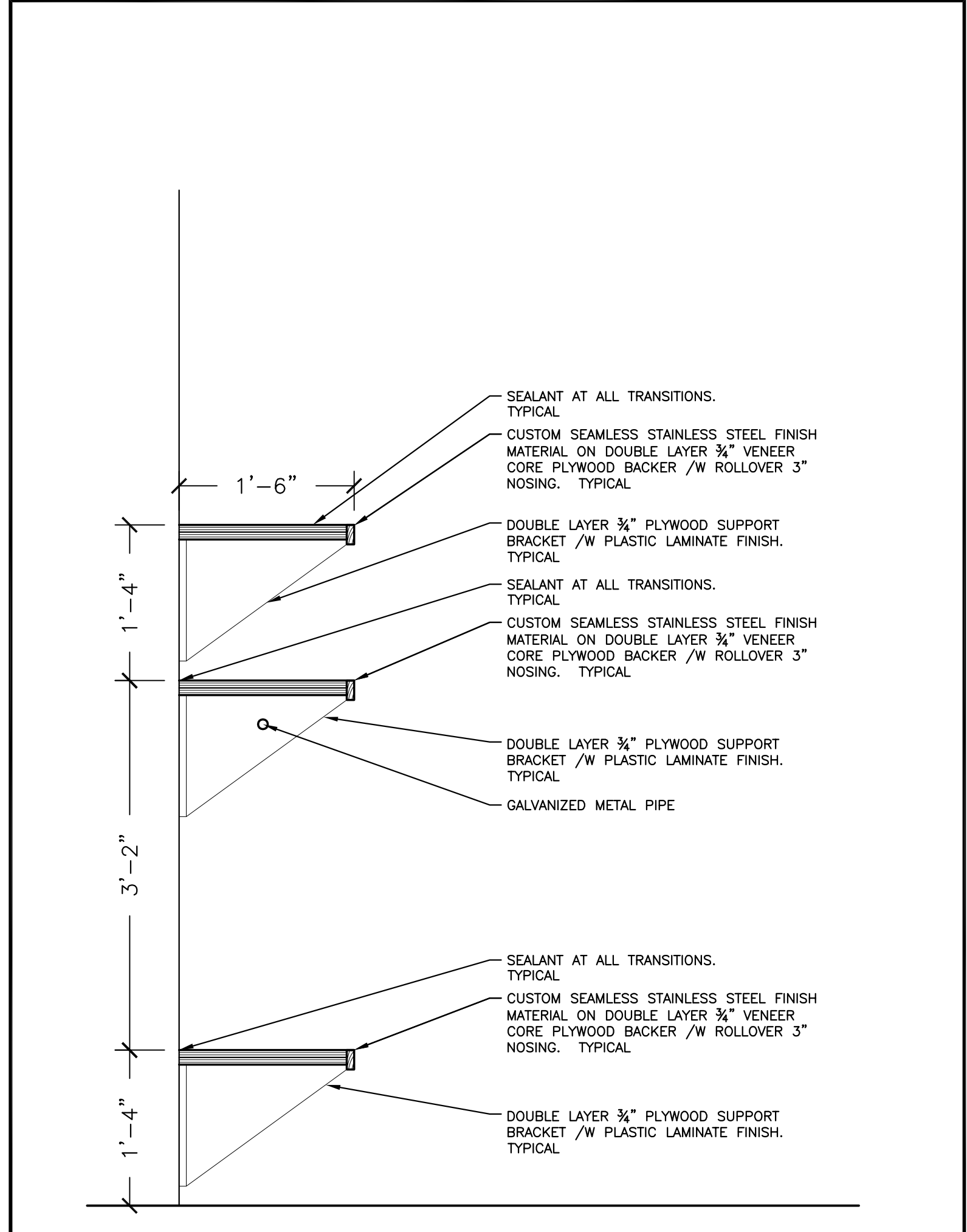
9 MILLWORK ELEVATION
A300 1/2"=1'-0"



10 MILLWORK SECTION
A300 1"=1'-0"



11 MILLWORK SECTION
A300 1"=1'-0"



12 MILLWORK SECTION
A300 1"=1'-0"

GENERAL REQUIREMENTS

- GENERAL CONTRACTOR & SUBCONTRACTOR SHALL EXAMINE THE SITE, VERIFY ALL DIMENSIONS, DRAWING DETAILS TO ASCERTAIN THE EXTENT AND NATURE OF WORK.
- ALL DISCREPANCIES, OMISSIONS, OR CONFLICTS SHALL BE REPORTED TO DESIGNER PRIOR TO WORK.
- CONTRACTOR IS NOT TO PROCEED WITH ANY CHANGES OR MODIFICATIONS TO THE DESIGN UNLESS REVISED AND APPROVED BY KOMRI ENGINEERING.
- GENERAL CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR REQUIRED.
- BREAKDOWN OF WORK IS NOT NECESSARILY COMPLETE AND IS FOR GUIDANCE ONLY.
- ALL SITE MEASUREMENTS MUST BE CONFIRMED BY CONTRACTOR PRIOR TO ORDERING MATERIAL OR BEGINNING THE WORK.

CODE AND STANDARDS

- GENERAL CONTRACTOR SHALL:
- COMPLY WITH THE ONTARIO BUILDING CODE REQUIREMENTS OR OTHER AUTHORITIES HAVING JURISDICTION, HEREAFTER REFERRED TO AS CODE.
 - MEET OR EXCEED REQUIREMENTS OF CONTRACTOR DOCUMENTS, SPECIFIED STANDARDS, CODES AND REFERENCED DOCUMENTS.
 - COMPLY WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT 1991 AND REGULATIONS FOR CONSTRUCTION PROJECTS.

PERMITS AND INSPECTIONS

- THE CONTRACTOR SHALL OBTAIN AND PAY FOR BUILDING PERMIT AND ASSOCIATED INSPECTIONS.

DESIGN DATA

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 SUPPLEMENTED BY THE USERS GUIDE - NBC 2015 STRUCTURAL COMMENTARIES (PART 4 OF DIVISION B).
- CLIMATIC LOCATION: ESPANOLA, ONTARIO

SUBMITTALS

- SUBMIT FOR REVIEW BEFORE STARTING WORK.
- SUBMIT SHOP DRAWINGS IN CONFORMANCE WITH THE SEQUENCE OF CONSTRUCTION.
- SHOP DRAWINGS MUST BE REVIEWED BY CONTRACTOR BEFORE SUBMISSION TO CONSULTANT.
- SHOP DRAWINGS WITHOUT CONTRACTOR STAMPS WILL BE RETURNED WITHOUT BEING REVIEWED.
- OUR REVIEW OF SHOP DRAWINGS DOES NOT INCLUDE DETAILED CHECKING OF DIMENSIONS OR CALCULATIONS OF ELEMENTS ENGINEERED BY OTHERS AND DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLETE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- BEFORE RESUBMITTING DRAWINGS ENSURE ALL CORRECTIONS REQUIRED BY PRIOR REVIEWS HAVE BEEN COMPLETED.
- DO NOT ADD DETAILS TO DRAWINGS WHICH HAVE NOT BEEN STAMPED AS NOTED.
- DO NOT BEGIN FABRICATION UNTIL ALL SHOP DRAWINGS HAVE BEEN EXAMINED.
- PROVIDE FINAL RECORD DRAWINGS AFTER ALL CORRECTIONS ARE MADE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP AND MAINTAIN A QUALITY CONTROL PLAN ASSOCIATED WITH THE STRUCTURAL WORK. THIS MUST BE PROVIDED TO THE CONSULTANT WHEN REQUESTED.
- THIS SHOULD INCLUDE:
 - COLD AND HOT WEATHER CONSTRUCTION PROCEDURES
 - THIRD-PARTY INSPECTION AND TESTING PROCEDURES

CONCRETE NOTES

- CONCRETE IS SPECIFIED AS PER THE "PERFORMANCE SPECIFICATION" ALTERNATIVE AS OUTLINED IN CSA A23.1, TABLE 5.
- THE CONTRACTOR AND CONCRETE SUPPLIER TO MEET ALL CERTIFICATION, DOCUMENTATION AND QUALITY CONTROL REQUIREMENTS.
- CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 25 MPa MINIMUM AT 28 DAYS - 4.7% AIR ENTRAINMENT.
- THE CONCRETE SUPPLIER TO BE CERTIFIED BY THE READY-MIXED CONCRETE ASSOCIATION OF ONTARIO.
- THE CONTRACTOR AND THE CONCRETE SUPPLIER ARE TO ENSURE THAT THE PLASTIC AND HARDENED MIX PROPERTIES MEET SITE REQUIREMENTS FOR PLACING, FINISHING AND THE OWNER'S PERFORMANCE REQUIREMENTS.
- CEMENT TO BE PORTLAND CEMENT TYPE GU UNLESS NOTED OTHERWISE OR REQUIRED BY EXPOSURE CLASS.
- PLACE CONCRETE AS CLOSE AS POSSIBLE TO FINAL LOCATION TO AVOID SEGREGATION. VIBRATE ALL CONCRETE FORM THE SIDES OF ALL STRUCTURAL CONCRETE MEMBERS.

TEMPORARY WORKS

- AS STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE, IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE, DESIGN AND ERECT ANY TEMPORARY WORKS REQUIRED TO COMPLETE THE WORK.
- LOADS INDICATED ON DRAWINGS MUST NOT BE EXCEEDED BY CONSTRUCTION LOADS.
- CONTRACTOR IS RESPONSIBLE TO ENSURE THE DESIGN AND REVIEW OF ALL TEMPORARY WORKS ARE CARRIED OUT BY A PROFESSIONAL ENGINEER LICENSED AND INSURED TO WORK IN ONTARIO.

EXISTING STRUCTURES

- PRIOR TO CONSTRUCTION VERIFY EXISTING CONDITIONS AND DIMENSIONS.
- TAKE ALL NECESSARY PRECAUTIONS TO ENSURE EXISTING STRUCTURES ARE PROTECTED DURING CONSTRUCTION.
- ENSURE ALL TEMPORARY SHORING AND BRACING ARE INSTALLED AND REMOVED TO ENSURE THE INTEGRITY OF EXISTING STRUCTURE.
- REPORT ANY VARIATIONS IN EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK.

WOOD NOTES

- ALL FRAMING TO COMPLY WITH THE PART 9 REQUIREMENTS OF THE ONTARIO BUILDING CODE.
- PRIOR TO STARTING CONSTRUCTION ENSURE ALL DIMENSIONS ARE FIELD VERIFIED.
- INSTALL ALL FRAMING AS PER DRAWINGS. SPACE ALL MEMBERS AS SPECIFIED. SECURELY BRACE MEMBERS IN PLACE TO ENSURE PLUMB UNTIL PERMANENTLY FIXED IN STRUCTURE.
- ALL MATERIALS SHALL BE PROTECTED FROM ENVIRONMENTAL DAMAGES, STORE OFF GROUND AND COVER WITH WATERPROOF TARPS.
- MATERIALS:
 - DIMENSIONAL LUMBER: SPF NO.1/NO.2
 - ORIENTED STRAND BOARD: CSA 0437
 - PLYWOOD: CSA 0151
 - NAILS: CSA B111-1974
 - CONNECTORS/HANGERS: SIMPSON STRONG-TIE

STRUCTURAL STEEL

- CONFORM TO CAN/CSA S16: "LIMIT STATES DESIGN OF STEEL STRUCTURES"
- FABRICATOR SHALL BE CERTIFIED BY THE CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1, DIVISION 1 OR 2.
- ALL FIELD WELDING TO BE INSPECTED BY CWB WELDING INSPECTOR LEVEL 2 OR 3.
- SUBMIT SHOP DRAWINGS INCLUDING ERECTION DRAWINGS AND SHOP DETAIL DRAWINGS.
- DESIGN CONNECTIONS TO CONFORM TO CAN/CSA S16 AND/OR CAN/CSA S136 TO RESIST THE REACTION RESULTING FROM THE ULTIMATE FACTORED MOMENT RESISTANCE OF THE MEMBER.
- DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
- APPLY 1 COATS OF ZINC-RICH PRIMER TO ALL STEELWORK EXPOSED TO THE ELEMENTS UNLESS OTHERWISE NOTED.
- PROVIDE ADEQUATE SHORING TO KEEP THE STRUCTURE STABLE DURING CONSTRUCTION.
- ALL MATERIALS SHALL BE AS FOLLOWS:
 - ALL STRUCTURAL STEEL SHALL BE PRODUCED IN CANADA, UNITED STATES OF AMERICA OR BY A MEMBER OF THE EUROPEAN UNION.
 - ANGLES: CSA G40.21 300W
 - PLATES AND BARS: CSA G40.21 300W
 - WIDE FLANGE SECTIONS: CSA G40.21 350W
 - HOLLOW STRUCTURAL SECTIONS: CSA G40.21 350W OR ASTM A 500 GRADE C
 - BOLTS: ASTM A325M C/W WASHERS AND NUTS

LINTEL SCHEDULE

IDENTITY	SIZE
L1	2-PLY 2x6 SPF NO.1/NO.2
L2	2-PLY 2x8 SPF NO.1/NO.2

FOOTING SCHEDULE

IDENTITY	SIZE
F1	1'-6" x 1'-6" THICKENED EDGE W/ 3-20M BARS TOP AND BOTTOM - CONTINUOUS AND 10M STIRRUPS @ 2'-0" O/C AS SHOWN
F2	3'-0"x3'-0"x0'-8" THICK C/W 3 - 15M REBAR E/W
F3	4'-0"x4'-0"x0'-10" THICK C/W 5 - 15M REBAR E/W

SYMBOL LEGEND

VIEW NAME 1:100 1 A-2.0	SECTION NUMBER, TITLE AND SCALE REFERENCE
VIEW NAME 1:100	TITLE AND SCALE REFERENCE
ROOM NAME 101	ROOM NAME AND NUMBER
FLOOR 0.0	ELEVATION REFERENCE TO LEVEL AS NOTED
1 A101 TYP	BUILDING SECTION REFERENCE ARROW SECTION NUMBER SHEET SECTION IS SHOWN
S01 01	ELEVATION REFERENCE DETAIL NUMBER SHEET SECTION IS SHOWN
NORTH	NORTH ARROW
W1	WALL IDENTIFICATION IN SCHEDULE
R1	ROOF IDENTIFICATION IN SCHEDULE
F1	FLOOR IDENTIFICATION IN SCHEDULE
FW1	FOUNDATION IDENTIFICATION IN SCHEDULE
L1	LINTEL IDENTIFICATION IN SCHEDULE
POST IDENTIFICATION IN SCHEDULE	
B1	BEAM IDENTIFICATION IN SCHEDULE

WALL PHASING

NEW/ WALLS(SEE WALL SCHEDULE)	
EXISTING WALLS	
DEMOLITION	

FLOOR ASSEMBLIES:

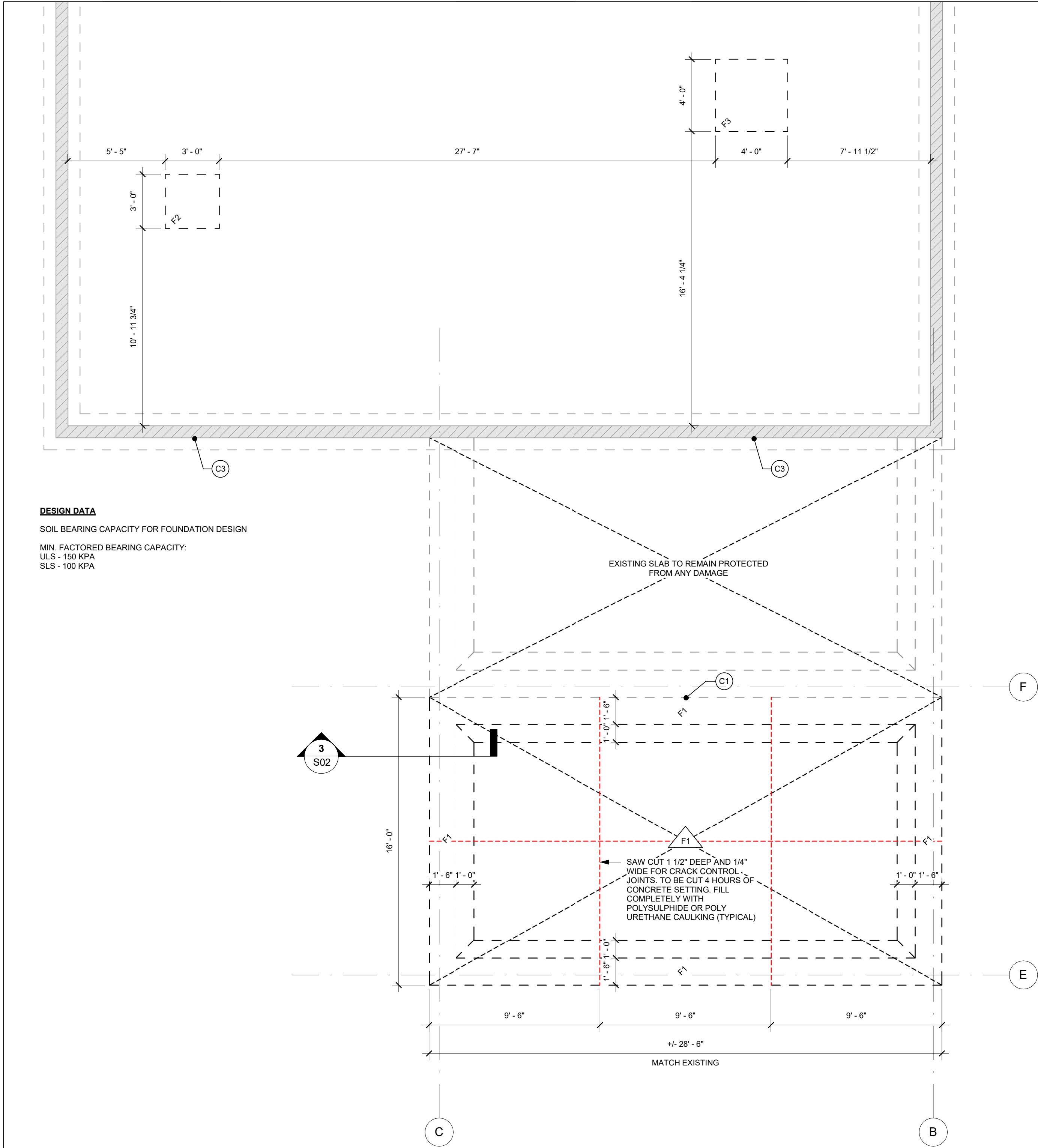
6" CONCRETE SLAB	
F1	6" CONCRETE SLAB ON GRADE C/W WWF 6X6 6.0/6.0 REFER TO ARCH FOR SLAB ASSEMBLY

FOUNDATION WALL ASSEMBLIES:

EXTERIOR BLOCK FOUNDATION WALL	
FW1	2 PLIES MIN. DAMP PROOFING FROM FINISHED GRADE DOWN TO COVE AND OVER CONCRETE FOOTING 1/4" MIN. CEMENT PARGING WITH COVE AT TOP OF POURED CONCRETE FOOTING 10 MIN. CONCRETE MASONRY UNIT BLOCKS REFER TO ARCH FOR WALL ASSEMBLY

CONSTRUCTION NOTES (TAGS):

- C1 FOR NEW TO EXISTING PINNING REFER TO TYPICAL FOOTING PINING DETAIL.
- C2 CONTRACTOR TO INFILL WALL, MATCH EXISTING ASSEMBLY WITH LIKEKIND AND QUALITY.
- C3 CONTRACTOR TO SITE VERIFY EXISTING FOUNDATION WALL IS PROVIDED. REVIEW SITE CONDITIONS WITH KOMRI ENGINEERING. CHANGE ORDER WILL BE ISSUED IF ADDITIONAL MODIFICATIONS ARE REQUIRED. IF NONE EXISTS- CONTACT KOMRI ENGINEERING FOR WRITTEN INSTRUCTION.
- C4 REFER TO TYPICAL TOP PLATE AND BASE PLATE DETAIL FOR HSS CONNECTIONS TO FOOTING AND BEAM



FOUNDATION PLAN
1/4" = 1'-0"

GENERAL

- ANY CHANGES DONE TO THE DESIGN DURING CONSTRUCTION SHALL BE APPROVED BY KOMRI ENGINEERING. APPROVAL WILL VOID KOMRI ENGINEERING'S INSURANCE COVERAGE.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH THE WORK.
- THESE DRAWINGS REMAIN THE PROPERTY OF KOMRI ENGINEERING AND SHALL NOT BE ALTERED IN ANY MANNER OR USED ON ANY OTHER PROJECT.
- DO NOT SCALE DRAWINGS

REVISIONS

NO.	REVISION	DATE
1	ISSUED FOR CONSTRUCTION	2023-06-05
2	ISSUED FOR REVISION - FOUNDATION	2023-11-01
3	ISSUED FOR TENDER	2024-01-02



PERRY AND PERRY ARCHITECTURE
590 2ND, ESPANOLA, ON
PROJECT NO. KSJ023-102

SPECIFICATIONS AND FOUNDATION PLANS

DRAWN	DL
CHECKED	KO
SCALE:	As indicated
SHEET	

S01

ISSUED FOR TENDER - JANUARY 2, 2023

C1	FOR NEW TO EXISTING PINNING REFER TO TYPICAL FOOTING PINNING DETAIL.
C2	CONTRACTOR TO INFILL WALL, MATCH EXISTING ASSEMBLY WITH LIKEKIND AND QUALITY.
C3	CONTRACTOR TO SITE VERIFY EXISTING FOUNDATION WALL IS PROVIDED. REVIEW SITE CONDITIONS WITH KOMRI ENGINEERING. CHANGE ORDER WILL BE ISSUED IF ADDITIONAL MODIFICATIONS ARE REQUIRED. IF NONE EXISTS- CONTACT KOMRI ENGINEERING FOR WRITTEN INSTRUCTION.
C4	REFER TO TYPICAL TOP PLATE AND BASE PLATE DETAIL FOR HSS CONNECTIONS TO FOOTING AND BEAM

W1

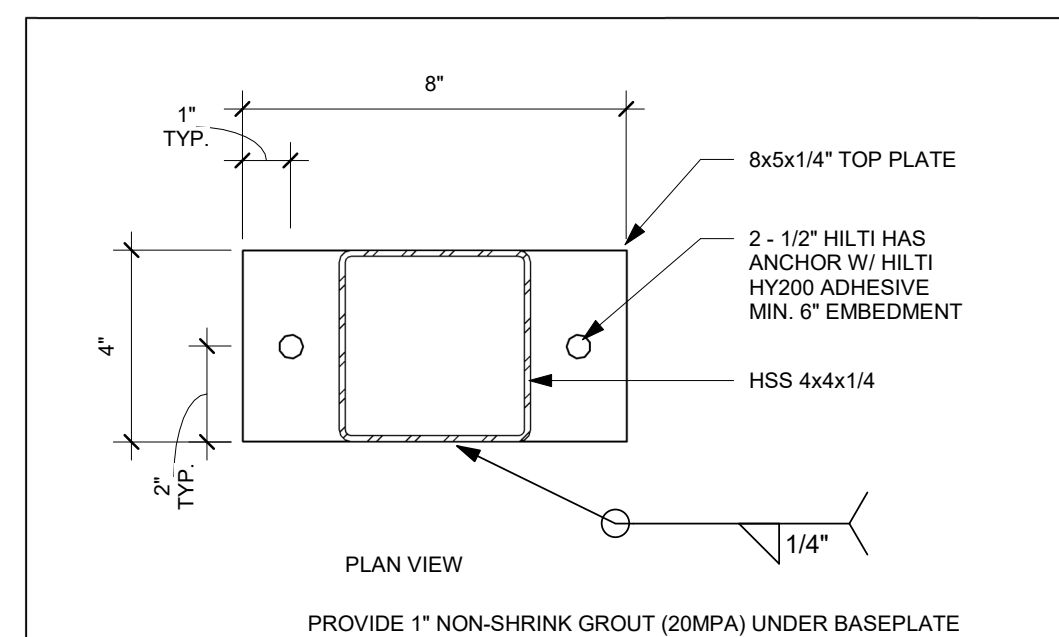
- REFER TO ARCH FOR WALL ASSEMBLY
- 2x6 SPF NO.1/ NO.2 STUD AT 16" O.C W/ 2X6 BLOCKING MID-HEIGHT (DOUBLE TOP PLATE)

PRE-ENGINEERED TRUSS

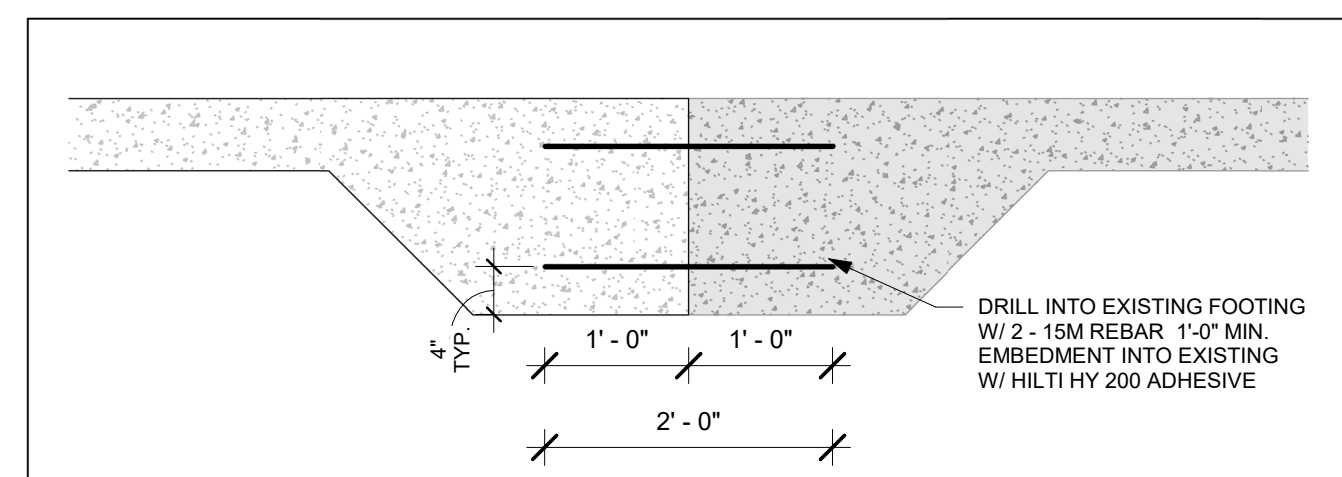
- REFER TO ARCH FLOOR ROOF ASSEMBLY
- 1/2" PLYWOOD SHEATHING C/W "H" CLIPS
- PRE-ENGINEERED ROOF TRUSSES BY OTHERS @ 24" O/C

IDENTITY	SIZE
L1	2-PLY 2x6 SPF NO.1/NO.2
L2	2-PLY 2x8 SPF NO.1/NO.2

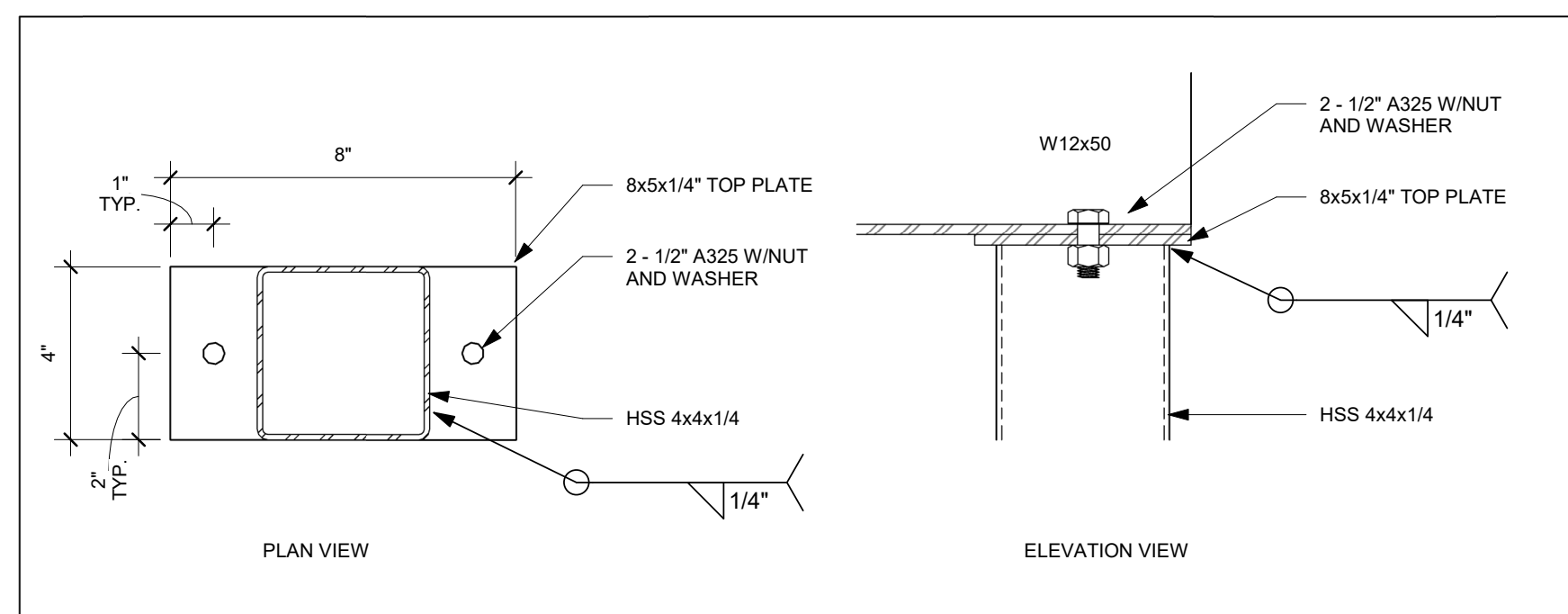
IDENTITY	SIZE
F1	1'-6" x 1'-6" THICKENED EDGE W/ 3-20M BARS TOP AND BOTTOM - CONTINUOUS AND 10M STIRRUPS @ 2'-0" O/C AS SHOWN
F2	3'-0"x3'-0"x0'-8" THICK/C/W 3 - 15M REBAR E/W
F3	4'-0"x4'-0"x0'-10" THICK C/W 5 - 15M REBAR E/W



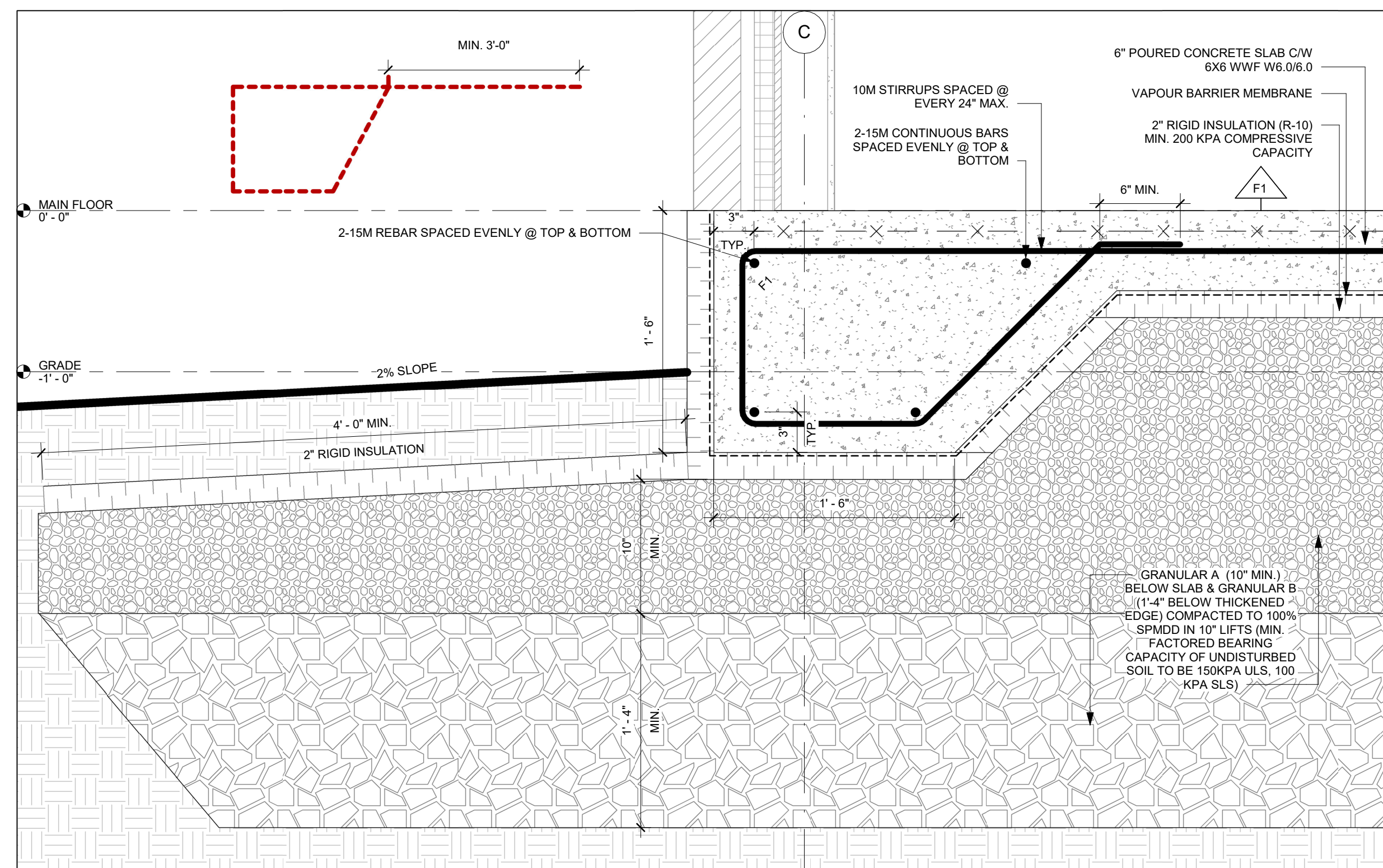
TYPICAL BASE PLATE DETAIL
3" = 1'-0"



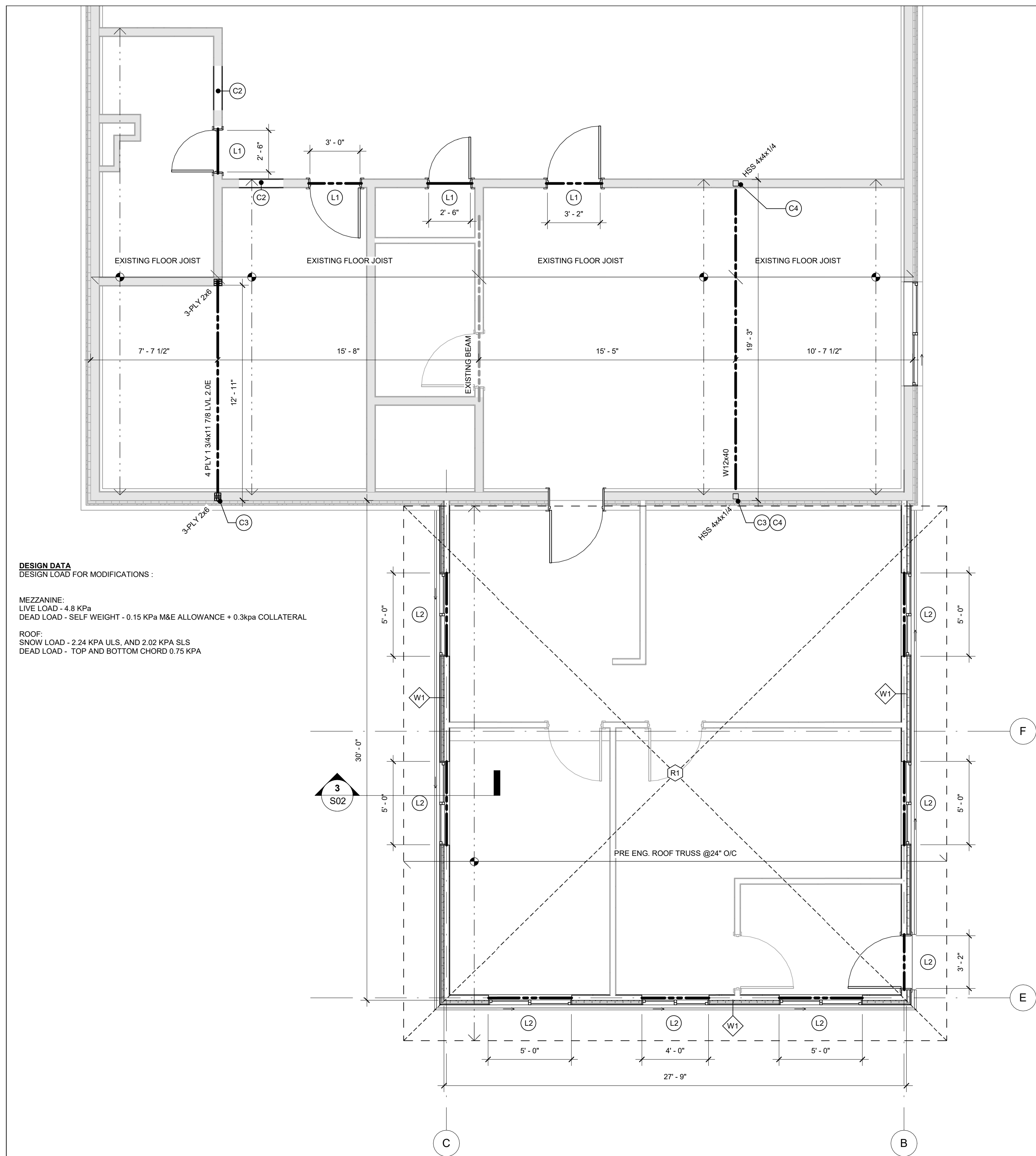
TYPICAL FOOTING PINING DETAIL
3/4" = 1'-0"



TYPICAL TOP PLATE DETAIL
3" = 1'-0"



TYPICAL THICKEN EDGE DETAIL 3
S01



MAIN FLOOR STRUCTURAL PLAN
1/4" = 1'-0"



DESIGN DATA
DESIGN LOAD FOR MODIFICATIONS :

MEZZANINE:
LIVE LOAD - 4.8 Kpa
DEAD LOAD - SELF WEIGHT - 0.15 Kpa M&E ALLOWANCE + 0.3kpa COLLATERAL

ROOF:
SNOW LOAD - 2.24 Kpa ULS, AND 2.02 KPA SLS
DEAD LOAD - TOP AND BOTTOM CHORD 0.75 Kpa

KLE 4252 PAPER SIZE: 36" x 24" = 914 x 610 mm at 1/8" = 3.175 mm

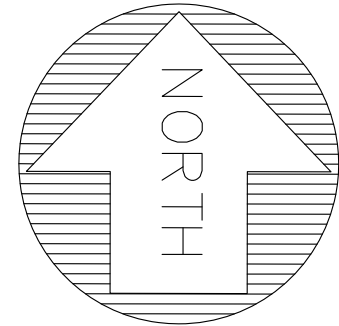
GENERAL REQUIREMENTS - MECHANICAL AND ELECTRICAL BUILDING SYSTEMS		DIVISION 15A - PLUMBING SYSTEMS	DIVISION 15B - HEATING, VENTILATION & AIR CONDITIONING SYSTEMS	15/16.C - FIRE STOPPING FOR MECHANICAL AND ELECTRICAL SYSTEMS	DIVISION 16 - ELECTRICAL SYSTEMS - continued	DRAWING LIST	
1.	GENERAL	15A.1 OUTLINE OF WORK	15B.1 OUTLINE OF WORK	15/16.C - FIRE STOPPING FOR MECHANICAL AND ELECTRICAL SYSTEMS	16.1 OUTLINE OF WORK		
1.1	THE DIVISION 15 MECHANICAL AND THE DIVISION 16 ELECTRICAL CONTRACTORS SHALL: 1. PERFORM ALL OF THE WORK AT THE PLACE OF THE WORK; 2. PROVIDE ALL OF THE PRODUCTS TO THE PLACE OF THE WORK; 3. PROVIDE ALL NECESSARY CONSTRUCTION MACHINERY AND EQUIPMENT "AT" AND "OFF" THE PLACE OF THE WORK; 4. PROVIDE ANY AND ALL INCIDENTAL ITEMS ESSENTIAL TO THE NECESSARY FOR THE COMPLETION OF THE WORK AND THE INSTALLATION OF THE PRODUCT, AS PER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND/OR AS HEREIN SPECIFIED.	15A.1.1 THIS SUBDIVISION SHALL: 1. PERFORM ALL OF THE WORK OF THIS DIVISION AT THE PLACE OF THE WORK. 2. PROVIDE ALL OF THE PRODUCTS TO THE PLACE OF THE WORK. 3. PROVIDE ALL OF THE NECESSARY CONSTRUCTION MACHINERY AND EQUIPMENT "AT" AND "OFF" THE PLACE OF WORK. 4. PROVIDE ANY AND ALL INCIDENTAL ITEMS ESSENTIAL TO AND NECESSARY FOR THE COMPLETION OF THE WORK AND INSTALLATION OF PRODUCTS, AS PER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND/OR AS HEREIN SPECIFIED.	15B.1.1 THIS SUBDIVISION SHALL: 1. PERFORM ALL OF THE WORK OF THIS DIVISION AT THE PLACE OF THE WORK. 2. PROVIDE ALL OF THE PRODUCTS TO THE PLACE OF THE WORK. 3. PROVIDE ALL OF THE NECESSARY CONSTRUCTION MACHINERY AND EQUIPMENT "AT" AND "OFF" THE PLACE OF WORK. 4. PROVIDE ANY AND ALL INCIDENTAL ITEMS ESSENTIAL TO AND NECESSARY FOR THE COMPLETION OF THE WORK AND INSTALLATION OF PRODUCTS, AS PER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND/OR AS HEREIN SPECIFIED.	FIRESTOPPING: MATERIAL OR COMBINATION OF MATERIALS USED TO RETAIN INTEGRITY OF FIRE-RATED CONSTRUCTION BY MAINTAINING AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FLAME, SMOKE, AND HOT GASES THROUGH PENETRATIONS IN FIRE RATED WALL AND FLOOR ASSEMBLIES.	16.1.1 THIS SUBDIVISION SHALL: 1. PERFORM ALL OF THE WORK OF THIS DIVISION AT THE PLACE OF THE WORK. 2. PROVIDE ALL OF THE PRODUCTS TO THE PLACE OF THE WORK. 3. PROVIDE ALL OF THE NECESSARY CONSTRUCTION MACHINERY AND EQUIPMENT "AT" AND "OFF" THE PLACE OF WORK. 4. PROVIDE ANY AND ALL INCIDENTAL ITEMS ESSENTIAL TO AND NECESSARY FOR THE COMPLETION OF THE WORK AND INSTALLATION OF PRODUCTS, AS PER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND/OR AS HEREIN SPECIFIED.	ME-1	MECHANICAL-ELECTRICAL SYSTEMS SPECIFICATION NOTES
2.	INCLUDE ALL LABOUR MATERIAL AND EQUIPMENT REQUIRED FOR THE INSTALLATION, TESTING AND PUTTING AND OPERATION COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS AS SHOWN ON THE PLANS AND AS SPECIFIED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS AND TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.	15A.1.2 THE PLUMBING CONTRACTOR, DIVISION 15A, SHALL PERFORM THE WORK REQUIRED AND NOT NECESSARILY LIMITED TO: 1. REMOVALS OF EXISTING SYSTEMS AS INDICATED 2. NEW SANITARY WASTE AND VENT PIPING SYSTEMS AS INDICATED 3. NEW DOMESTIC WATER PIPING SYSTEMS AS INDICATED 4. PLUMBING FIXTURES AND TRIM AS SCHEDULED 5. THERMAL INSULATION FOR WATER PIPING AS SCHEDULED. 6. AS-BUILT DRAWINGS, MANUALS AND INSTRUCTIONS TO OWNER. 7. FIRE STOPPING OF PLUMBING SYSTEMS THROUGH RATED BUILDING SYSTEMS.	15B.1.2 THE MECHANICAL CONTRACTOR, DIVISION 15B, SHALL PERFORM THE WORK REQUIRED AND NOT NECESSARILY LIMITED TO: 1. REMOVALS OF EXISTING SYSTEMS AS INDICATED. 2. NEW FURNACE AND AC SYSTEMS WITH DUCTING AS INDICATED. 3. WASHROOM EXHAUST SYSTEMS AS SCHEDULED 4. HRV VENTILATION SYSTEMS AS SCHEDULED 5. NATURAL GAS PIPING SYSTEMS FOR NEW FURNACE 6. LOW VOLTAGE CONTROL WIRING. 7. THERMAL INSULATION OF DUCTED SYSTEMS AS SCHEDULED. 8. AS-BUILT DRAWINGS, MANUALS AND DEMONSTRATION OF SYSTEMS TO OWNERS 9. FIRE STOPPING OF MECHANICAL SYSTEMS THROUGH RATED BUILDING SYSTEMS.	QUALITY ASSURANCE A. A MANUFACTURER'S DIRECT REPRESENTATIVE (NOT DISTRIBUTOR OR AGENT) TO BE ON-SITE DURING INITIAL INSTALLATION OF FIRESTOP SYSTEMS TO TRAIN APPROPRIATE CONTRACTOR PERSONNEL IN PROPER SELECTION AND INSTALLATION PROCEDURES. THIS WILL BE DONE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS PUBLISHED IN THEIR LITERATURE AND DRAWING DETAILS. B. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF CAN4-S115-M OR ULC S-115-M TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING AS SHOWN IN SECTION 2.03 CLAUSES L & M BELOW. C. PROPOSED FIRESTOP MATERIALS AND METHODS SHALL CONFORM TO APPLICABLE GOVERNING CODES HAVING LOCAL JURISDICTION. D. FIRESTOP SYSTEMS DO NOT REESTABLISH THE STRUCTURAL INTEGRITY OF LOAD BEARING PARTITIONS/ASSEMBLIES, OR SUPPORT LIVE LOADS AND TRAFFIC. INSTALLER SHALL CONSULT THE STRUCTURAL ENGINEER PRIOR TO PENETRATING ANY LOAD BEARING ASSEMBLY.	16.1.2 THE ELECTRICAL CONTRACTOR, DIVISION 16, SHALL PERFORM THE WORK REQUIRED AND NOT NECESSARILY LIMITED TO: 1. REMOVALS OF EXISTING SYSTEMS AS DESIGNATED 2. ALTERATIONS AND ADDITIONS TO ELECTRICAL DISTRIBUTION AS SCHEDULED 3. ELECTRICAL DEVICES AND BRANCH WIRING 4. NEW PANEL AND REPLACEMENT BREAKERS IN EXISTING PANEL 5. ELECTRICAL WIRING FOR MECHANICAL SYSTEMS AND OWNERS EQUIPMENT 6. INTERIOR LIGHTING SYSTEMS AND CONTROLS 7. THERMAL INSULATION OF DUCTED SYSTEMS AS SCHEDULED 8. CONDUIT SYSTEMS FOR VOICE DATA SYSTEMS 9. ROUGH-IN FOR SECURITY SYSTEMS 10. ASSISTANCE ALARM SYSTEMS FOR UNIVERSAL ACCESS WASHROOM 10. ELECTRIC HEATING SYSTEMS 11. CIRCUIT IDENTIFICATION FOR ELECTRICAL DEVICES 12. FIRE STOPPING OF ELECTRICAL CONDUIT/CABLE SYSTEMS AT FIRE SEPARATIONS. 13. COMMISSIONING OF ALL SYSTEMS. 14. MANUALS AND DEMONSTRATION OF SYSTEMS TO OWNERS	E-1	ELECTRICAL SYSTEMS
3.	CODES & FEES	15A.1.3 WORK BY OTHERS 1. LINE VOLTAGE WIRING - Div 16	15B.1.3 WORK BY OTHERS 1. LINE VOLTAGE WIRING BY DIVISION 16 CONTRACTOR.	INSTALLER QUALIFICATIONS A. ENGAGE AN EXPERIENCED INSTALLER WHO IS CERTIFIED, LICENSED, OR OTHERWISE QUALIFIED BY THE FIRESTOPPING MANUFACTURER AS HAVING BEEN PROVIDED THE NECESSARY TRAINING TO INSTALL MANUFACTURER'S PRODUCTS PER SPECIFIED REQUIREMENTS. A MANUFACTURER'S WILLINGNESS TO SELL ITS FIRESTOPPING PRODUCTS TO THE CONTRACTOR OR TO AN INSTALLER ENGAGED BY THE CONTRACTOR DOES NOT IN ITSELF CONFER QUALIFICATION ON THE BUYER.	16.1.3 WORK BY OTHERS 1. LOW VOLTAGE CONTROL WIRING - BY Div. 15B 2. VOICE AND DATA SYSTEMS CABLING AND DEVICES - BY OWNER 3. SECURITY SYSTEM CABLING AND DEVICES - BY OWNER	E-2	ELECTRICAL SYSTEM DETAILS
4.	PROVIDE ALL PERMITS, LICENSES AND CERTIFICATES REQUIRED FOR THE WORK. ARRANGE FOR INSPECTION OF ALL WORK BY THE AUTHORITIES HAVING JURISDICTION, ON COMPLETION OF THE WORK, FURNISH FINAL UNCONDITIONAL CERTIFICATES OF APPROVAL BY THE INSPECTION AUTHORITIES. COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE APPLICABLE CSA STANDARDS, THE REQUIREMENTS OF ALL FEDERAL, PROVINCIAL AND MUNICIPAL CODES, THE APPLICABLE STANDARDS OF THE UNDERWRITERS LABORATORY CANADA AND ALL OTHER AUTHORITIES HAVING JURISDICTION. THESE CODES AND REGULATIONS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. SUBMIT ALL REQUIRED DOCUMENTATION TO THE AUTHORITIES FOR THEIR APPROVAL AND COMMENTS BEFORE STARTING WITH ANY WORK. PROVIDE ALL ADDITIONAL DOCUMENTATION AS MAY BE REQUIRED. IMMEDIATELY INFORM THE CONSULTANTS IN WRITING IF MODIFICATIONS TO THE WORK ARE REQUESTED AS A RESULT OF THE AUTHORITIES REVIEW FOR ISSUING APPROVALS AND PERMITS.	15A.1.4 ALL WORK MUST BE SCHEDULED WITH THE PROJECT MANAGER AND THIS CONTRACTOR SHALL MAINTAIN A SUITABLE WORK FORCE AT THE SITE TO PERFORM THE WORK AS REQUIRED.	15B.1.4 ALL WORK MUST BE SCHEDULED WITH THE PROJECT MANAGER AND THIS CONTRACTOR SHALL MAINTAIN A SUITABLE WORK FORCE AT THE SITE TO PERFORM THE WORK AS REQUIRED.	SUBMITTALS A. SUBMIT PRODUCT DATA: MANUFACTURER'S SPECIFICATIONS AND TECHNICAL DATA FOR EACH MATERIAL INCLUDING THE COMPOSITION AND LIMITATIONS, DOCUMENTATION OF ULC OR CUL FIRESTOP SYSTEMS TO BE USED AND MANUFACTURER'S INSTALLATION INSTRUCTIONS TO COMPLY WITH SECTION 1300. B. MANUFACTURER'S ENGINEERING JUDGMENT IDENTIFICATION NUMBER AND DRAWING DETAILS WHEN NO ULC OR CUL SYSTEM IS AVAILABLE FOR AN APPLICATION, ENGINEER JUDGMENT MUST INCLUDE BOTH PROJECT NAME AND CONTRACTOR'S NAME WHO WILL INSTALL FIRESTOP SYSTEM AS DESCRIBED IN DRAWING.	16.1.4 ALL WORK MUST BE SCHEDULED WITH THE PROJECT MANAGER AND THIS CONTRACTOR SHALL MAINTAIN A SUITABLE WORK FORCE AT THE SITE TO PERFORM THE REQUIRED WORK AS REQUIRED.	E-3	LIGHTING SYSTEMS
5.	SUPERVISION-COORDINATION	15A.2 PLUMBING SYSTEMS	15B.3.1 REFERENCES 1. FANS: AMCA 99-1986, STANDARDS HANDBOOK 2. ALL DUCTWORK AND ACCESSORIES TO BE INSTALLED TO SMACNA, ASHRAE, CSA, ANSINPFA AND ULC STANDARDS.	16.1.5 ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE.	16.1.5 ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE.		
6.	OWNER'S EQUIPMENT	15A.2.1 CODES AND REGULATIONS ALL WORK IS TO CONFORM TO PART 7 OF THE ONTARIO BUILDING CODE AND THE ONTARIO PLUMBING CODE, COMPLY WITH LOCAL REGULATIONS.	15B.3.2 PRODUCTS 2.1 FANS GENERAL 1. CAPACITY: PRESSURE, REVOLUTIONS PER MINUTE, POWER, MODEL, SIZE, SOUND POWER DATA AND AS INDICATED ON SCHEDULE. 2. SOUND RATINGS: COMPLY WITH AMCA 301, TESTED TO AMCA 300. UNIT SHALL BEAR AMCA CERTIFIED SOUND RATING SEAL. 3. FANS: STATICALLY AND DYNAMICALLY BALANCED, CONSTRUCTED IN CONFORMITY WITH AMCA 301. 4. MOTORS: SIZES AS INDICATED. 5. VIBRATION ISOLATION: TO MANUFACTURER'S RECOMMENDATIONS. 2.2 DUCTWORK AND ACCESSORIES 1. SEALANT - SEALANT: OIL RESISTANT, POLYMER TYPE FLAME RESISTANT DUCT SEALANT. TEMPERATURE RANGE OF MINUS 30°C TO PLUS 93°C. 2. TAPE: TAPE: POLYVINYL TREATED, OPEN WEAVE FIBREGLASS TAPE, 50 MM WIDE. 3. DUCT LEAKAGE - IN ACCORDANCE WITH SMACNA HVAC DUCT LEAKAGE TEST MANUAL. 4. FITTINGS - FABRICATION: TO SMACNA. 5. GALVANIZED STEEL 1. LOCK TIGHTENING QUALITY: 290 ZINC COATING. 2. THICKNESS: TO ASHRAE AND SMACNA. 3. FABRICATION: TO ASHRAE AND SMACNA. 4. JOINTS: TO ASHRAE AND SMACNA OR PROPRIETARY MANUFACTURED DUCT JOINT. 5. HANGERS AND SUPPORTS 1. STRAP HANGERS: OF SAME MATERIAL AS DUCT BUT NEXT SHEET METAL THICKNESS HEAVIER THAN DUCT. 2. HANGER CONFIGURATION: TO ASHRAE AND SMACNA. 6. FLEXIBLE METALLIC INSULATED 1. TYPE 2: SPIRAL WOUND FLEXIBLE ALUMINUM WITH FACTORY APPLIED FLEXIBLE GLASS FIBRE INSULATION 7. FLEXIBLE DUCT CONNECTIONS 1. FRAME: GALVANIZED SHEET METAL FRAME WITH FABRIC CLENCHED BY MEANS OF DOUBLE LOCKED SEAMS. 2. MATERIAL: FIRE RESISTANT, SELF EXTINGUISHING, NEOPRENE COATED GLASS FABRIC, TEMPERATURE RATED AT MINUS 40°C TO PLUS 90°C, DENSITY OF 1.3 KG/M2. 8. ACCESS DOORS IN DUCTS 1. NON-INSULATED DUCTS: SANDWICH CONSTRUCTION OF SAME MATERIAL AS DUCT, ONE SHEET METAL THICKNESS HEAVIER, MINIMUM 0.6 MM THICK COMPLETE WITH SHEET METAL ANGLE FRAME. 9. TRIMMING VALVES 1. FACTORY OR SHOP FABRICATED SINGLE THICKNESS AND DOUBLE THICKNESS WITH TRAILING EDGE TO RECOMMENDATIONS OF SMACNA AND AS INDICATED. 10. FIRE DAMPERS 1. FIRE DAMPERS: LISTED AND BEAR LABEL OF ULC, MEET REQUIREMENTS OF AND FOR AUTHORITIES HAVING JURISDICTION. ALL FIRE DAMPERS ARE TO BE TYPE 'B'.	16.2 MATERIALS AND METHODS 16.2.1 CONDUIT RACEWAYS SHALL BE EMT CONDUIT ON EXPOSED CEILINGS AND WALLS, AND IN MASONRY CONSTRUCTION - AC90/BX IN STEEL STUD PARTITION WALLS AND ACCESSIBLE CEILING SPACES. 16.2.2 MINIMUM WIRE SIZE # 12 AWG COPPER, ALUMINUM CONDUCTORS NOT ACCEPTED. 16.2.3 USE GALVANIZED STEEL OUTLET BOXES TO SUIT WALL CONSTRUCTION. 16.2.4 ALL DEVICES AND EQUIPMENT TO BE CSA APPROVED. 16.2.5 COORDINATE WIRING FOR MECHANICAL EQUIPMENT WITH THE Div. 15 CONTRACTOR. 16.2.6 COORDINATE OWNER/DEVELOPER SUPPLIED SYSTEMS THROUGH THE PROJECT MANAGER. 16.2.7 WIRE AND CABLE FOR POWER DISTRIBUTION SHALL BE PROVIDED AND SIZED AS NOTED ON THE DRAWINGS, BASED ON USE OF 75°C RATED THERMOPLASTIC TYPE RW90 COPPER CONDUCTORS.	16.2 MATERIALS AND METHODS 16.2.1 CONDUIT RACEWAYS SHALL BE EMT CONDUIT ON EXPOSED CEILINGS AND WALLS, AND IN MASONRY CONSTRUCTION - AC90/BX IN STEEL STUD PARTITION WALLS AND ACCESSIBLE CEILING SPACES. 16.2.2 MINIMUM WIRE SIZE # 12 AWG COPPER, ALUMINUM CONDUCTORS NOT ACCEPTED. 16.2.3 USE GALVANIZED STEEL OUTLET BOXES TO SUIT WALL CONSTRUCTION. 16.2.4 ALL DEVICES AND EQUIPMENT TO BE CSA APPROVED. 16.2.5 COORDINATE WIRING FOR MECHANICAL EQUIPMENT WITH THE Div. 15 CONTRACTOR. 16.2.6 COORDINATE OWNER/DEVELOPER SUPPLIED SYSTEMS THROUGH THE PROJECT MANAGER. 16.2.7 WIRE AND CABLE FOR POWER DISTRIBUTION SHALL BE PROVIDED AND SIZED AS NOTED ON THE DRAWINGS, BASED ON USE OF 75°C RATED THERMOPLASTIC TYPE RW90 COPPER CONDUCTORS.		
7.	INSPECTION, CERTIFICATION AND REVIEW	15A.2.2 METHODS AND MATERIALS 1. SANITARY PIPING SYSTEMS - BELOW FLOOR - TYPE SDR 35 PVC DRAINAGE PIPE WITH CSA APPROVED PLASTIC SOLVENT WELD JOINTS. 2. SANITARY PIPING SYSTEMS - ABOVE FLOOR 1. IPEX SYSTEM 15 PIPING SYSTEMS IN WRITING PIPE WITH CSA APPROVED PLASTIC SOLVENT WELD JOINTS 3. SANITARY VENT PIPING SYSTEMS IN HVAC PLENUM SPACES - IPEX TYPE XFR 4. WATER PIPING SYSTEMS MAINS - TYPE 1 COPPER WITH LEAD FREE SOLDER JOINTS BRANCHES - PEX PIPING SYSTEMS IN PARTITION WALLS 5. PLUMBING ISOLATION VALVES TO BE CSA APPROVED LEAD FREE BALL TYPE. 15A.2.3 PLUMBING FIXTURES 1. AS SCHEDULED.	15B.3.3 FURNACE AND AC SYSTEMS - AS SCHEDULED	16.3 DEVICES 16.3.1 ALL DEVICES TO BE COMMERCIAL GRADE. 16.3.2 ALL RECEPTACLES IN SHOP AREAS ARE TO BE 20A-T RECEPTACLES. 16.3.2 PROVIDE GFCI DEVICES WHERE INDICATED AND REQUIRED BY CODE.	16.3 DEVICES 16.3.1 ALL DEVICES TO BE COMMERCIAL GRADE. 16.3.2 ALL RECEPTACLES IN SHOP AREAS ARE TO BE 20A-T RECEPTACLES. 16.3.2 PROVIDE GFCI DEVICES WHERE INDICATED AND REQUIRED BY CODE.		
8.	ELECTRICAL WIRING FOR MECHANICAL SYSTEMS	15A.3 THERMAL INSULATION FOR PLUMBING SYSTEMS P-1 FORMED MINERAL FIBRE TO 200 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC HOT WATER PIPING SYSTEMS 2. MATERIALS: CGSB 51-GP-10M, RIGID MINERAL FIBRE SLEEVING FOR PIPING 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE TO ASTM C335. 4. THICKNESS: 1" ON DOMESTIC WATER LINES. P-2 FORMED MINERAL FIBRE WITH VAPOUR BARRIER TO 85 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC COLD WATER SYSTEMS. 2. MATERIAL: CGSB 51-GP-6M, RIGID MINERAL FIBRE SLEEVING FOR PIPING AND CGSB 51-GP-62M VAPOUR BARRIER JACKET AND FACING MATERIAL. 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE WITH ASTM C335. 4. THICKNESS: ALL PIPING IS TO BE INSULATED WITH 1" INSULATION.	15B.3.4 HRV UNITS AND EXHAUST FANS/TERMINATION - AS SCHEDULED - SEE DRAWINGS.	16.4 SERVICE ENTRANCE EQUIPMENT & DISTRIBUTION 16.4.1 EXISTING - SEE SITE CONDITIONS	16.4 SERVICE ENTRANCE EQUIPMENT & DISTRIBUTION 16.4.1 EXISTING - SEE SITE CONDITIONS		
9.	SHOP DRAWINGS	15A.3.1 THERMAL INSULATION FOR PLUMBING SYSTEMS P-1 FORMED MINERAL FIBRE TO 200 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC HOT WATER PIPING SYSTEMS 2. MATERIALS: CGSB 51-GP-10M, RIGID MINERAL FIBRE SLEEVING FOR PIPING 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE TO ASTM C335. 4. THICKNESS: 1" ON DOMESTIC WATER LINES. P-2 FORMED MINERAL FIBRE WITH VAPOUR BARRIER TO 85 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC COLD WATER SYSTEMS. 2. MATERIAL: CGSB 51-GP-6M, RIGID MINERAL FIBRE SLEEVING FOR PIPING AND CGSB 51-GP-62M VAPOUR BARRIER JACKET AND FACING MATERIAL. 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE WITH ASTM C335. 4. THICKNESS: ALL PIPING IS TO BE INSULATED WITH 1" INSULATION.	15B.3.5 - EXECUTION 5.1 GENERAL 1. DO WORK IN ACCORDANCE WITH ASHRAE, CSA B228.1 AND SMACNA. 2. INSTALL BREAKAWAY JOINTS IN DUCTWORK ON EACH SIDE OF FIRE SEPARATION. 5.2 DUCTWORK 1. GENERAL 1. INSTALL FANS AS INDICATED, COMPLETE WITH RESILIENT MOUNTINGS AS RECOMMENDED BY THE MANUFACTURER. 2. INSTALL FANS WITH 100 MM FLEXIBLE CONNECTION ON INLET DUCTWORK AND ON DISCHARGE DUCTWORK. ENSURE METAL BANDS OF CONNECTORS ARE PARALLEL WITH MINIMUM 75 MM FLEX BETWEEN DUCTWORK AND FAN DURING RUNNING. 3. ACCESS DOOR INSTALLATION 1. SIZE: 12" x 12" - FIRE RATED FOR SERVICING ENTRY. 2. LOCATION: AT FIRE AND SMOKE DAMPERS. 4. FIRE DAMPER INSTALLATION 1. INSTALL AS INDICATED AND IN ACCORDANCE WITH NFPA 90A AND IN ACCORDANCE WITH CONDITIONS OF ULC LISTING. 2. MAINTAIN INTEGRITY OF FIRE SEPARATION. 3. REVIEW FIRE SEPARATION RATINGS OF WALLS AND CEILINGS ON ARCHITECTURAL DRAWINGS AND PROVIDE THE REQUIRED RATINGS FOR DEVICES.	16.5 LIGHTING SYSTEMS 16.5.1 LIGHTING FIXTURES TO BE CSA APPROVED AND COMPLETE WITH LAMPS. 16.5.2 SEE FIXTURE SCHEDULE ON THE DRAWINGS 16.5.3 COORDINATE FIXTURE INSTALLATION WITH DUCT SYSTEMS AND STRUCTURE 16.5.4 PROVIDE EXIT LIGHTING SYSTEMS AS INDICATED 16.5.5 PROVIDE EMERGENCY LIGHTING SYSTEMS AS SCHEDULED	16.5 LIGHTING SYSTEMS 16.5.1 LIGHTING FIXTURES TO BE CSA APPROVED AND COMPLETE WITH LAMPS. 16.5.2 SEE FIXTURE SCHEDULE ON THE DRAWINGS 16.5.3 COORDINATE FIXTURE INSTALLATION WITH DUCT SYSTEMS AND STRUCTURE 16.5.4 PROVIDE EXIT LIGHTING SYSTEMS AS INDICATED 16.5.5 PROVIDE EMERGENCY LIGHTING SYSTEMS AS SCHEDULED		
10.	COORDINATE WITH PROJECT MANAGER AND PROVIDE CERTIFIED ULC APPROVED FIRESTOPPING FOR ALL SERVICE PIPING SYSTEMS, DUCTED SYSTEMS AND ELECTRICAL WIRING SYSTEMS THAT PASS THROUGH RATED WALLS AND FLOORS.	15A.3.2 THERMAL INSULATION FOR PLUMBING SYSTEMS P-1 FORMED MINERAL FIBRE TO 200 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC HOT WATER PIPING SYSTEMS 2. MATERIALS: CGSB 51-GP-10M, RIGID MINERAL FIBRE SLEEVING FOR PIPING 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE TO ASTM C335. 4. THICKNESS: 1" ON DOMESTIC WATER LINES. P-2 FORMED MINERAL FIBRE WITH VAPOUR BARRIER TO 85 C 1. APPLICATION FOR PIPING AND FITTINGS ON: 1. DOMESTIC COLD WATER SYSTEMS. 2. MATERIAL: CGSB 51-GP-6M, RIGID MINERAL FIBRE SLEEVING FOR PIPING AND CGSB 51-GP-62M VAPOUR BARRIER JACKET AND FACING MATERIAL. 3. THERMAL CONDUCTIVITY "K" SHALL NOT EXCEED 0.034 W/M AT 24 C MEAN TEMPERATURE WHEN TESTED IN ACCORDANCE WITH ASTM C335. 4. THICKNESS: ALL PIPING IS TO BE INSULATED WITH 1" INSULATION.	15B.3.5 - EXECUTION 5.1 GENERAL 1. DO WORK IN ACCORDANCE WITH ASHRAE, CSA B228.1 AND SMACNA. 2. INSTALL BREAKAWAY JOINTS IN DUCTWORK ON EACH SIDE OF FIRE SEPARATION. 5.2 DUCTWORK 1. GENERAL 1. INSTALL FANS AS INDICATED, COMPLETE WITH RESILIENT MOUNTINGS AS RECOMMENDED BY THE MANUFACTURER. 2. INSTALL FANS WITH 100 MM FLEXIBLE CONNECTION ON INLET DUCTWORK AND ON DISCHARGE DUCTWORK. ENSURE METAL BANDS OF CONNECTORS ARE PARALLEL WITH MINIMUM 75 MM FLEX BETWEEN DUCTWORK AND FAN DURING RUNNING. 3. ACCESS DOOR INSTALLATION 1. SIZE: 12" x 12" - FIRE RATED FOR SERVICING ENTRY. 2. LOCATION: AT FIRE AND SMOKE DAMPERS. 4. FIRE DAMPER INSTALLATION 1. INSTALL AS INDICATED AND IN ACCORDANCE WITH NFPA 90A AND IN ACCORDANCE WITH CONDITIONS OF ULC LISTING. 2. MAINTAIN INTEGRITY OF FIRE SEPARATION. 3. REVIEW FIRE SEPARATION RATINGS OF WALLS AND CEILINGS ON ARCHITECTURAL DRAWINGS AND PROVIDE THE REQUIRED RATINGS FOR DEVICES.	16.6 SECURITY SYSTEMS 16.6.1 SECURITY SYSTEMS BY OWNER. 16.6.2 PROVIDE OUTLET BOXES AND CONDUITS TO CEILING PLENUM FOR BUILDING SECURITY SYSTEM AND DATA SYSTEMS. 16.8 VOICE/DATA CONDUIT SYSTEMS 16.8.1 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR VOICE AND DATA SYSTEMS. 16.8.2 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR CABLE TV SYSTEMS. 16.9 CCTV CONDUIT SYSTEMS 16.9.1 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR OWNERS' CCTV SYSTEMS. 16.10 FIRESTOPPING 16.10.1 SEE SPECIFICATION SECTION 15/16 C THIS DRAWING	16.6 SECURITY SYSTEMS 16.6.1 SECURITY SYSTEMS BY OWNER. 16.6.2 PROVIDE OUTLET BOXES AND CONDUITS TO CEILING PLENUM FOR BUILDING SECURITY SYSTEM AND DATA SYSTEMS. 16.8 VOICE/DATA CONDUIT SYSTEMS 16.8.1 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR VOICE AND DATA SYSTEMS. 16.8.2 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR CABLE TV SYSTEMS. 16.9 CCTV CONDUIT SYSTEMS 16.9.1 ROUGH-IN OUTLET BOXES AND CONDUIT SYSTEMS TO CEILING PLENUM FOR OWNERS' CCTV SYSTEMS. 16.10 FIRESTOPPING 16.10.1 SEE SPECIFICATION SECTION 15/16 C THIS DRAWING		

DRAWINGS ARE NOT TO BE SCALED.		No.: Revision / Version:	Date:	Drawing North:	Professional Stamp:	2022 OFFICE ADDITION ESPANOLA PUBLIC WORKS BUILDING 596 2nd Avenue, Espanola, Ontario		Date: November 2022 Scale: As Noted Drawn by: M.A. Checked by: K.L. Kle Project No.: 4252
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO ARCHITECTS BEFORE PROCEEDING WITH THE WORK.		0 Issued for Review	December 5, 2023			 MECHANICAL & ELECTRICAL ENGINEERS		 K. LANG ENGINEERING LTD. 4050 Ristimaki Road Sudbury, Ontario P3G 1M4 Tel. (705) 522-8110 E-Mail lang@bellnet.ca
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KLE 4002 PAPER SIZE: 36" x 24" = Plot at 1/8" = 1'-0"

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0	ISSUED FOR REVIEW AND COMMENTS	December 5, 2023
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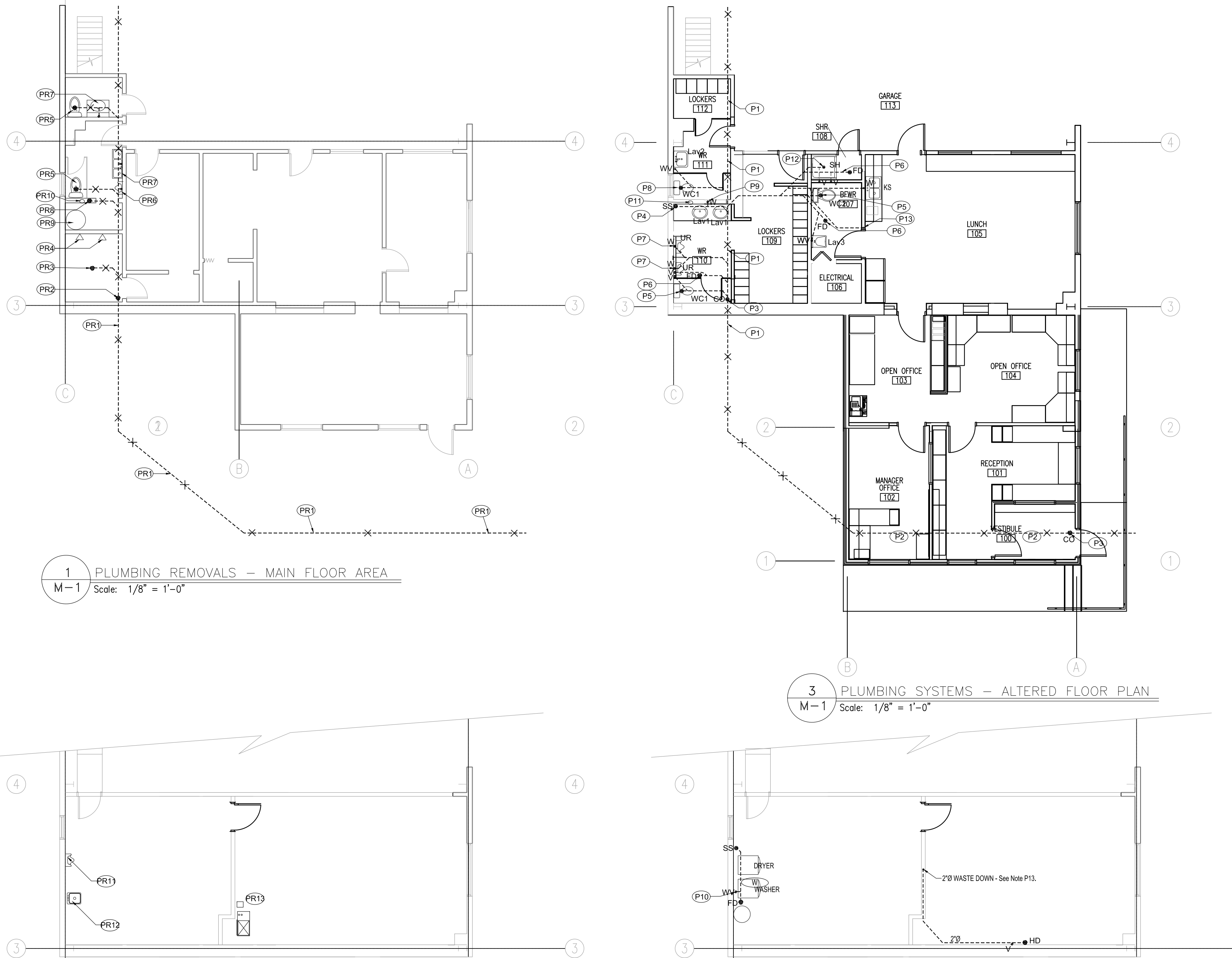
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2022 OFFICE ADDITION
ESPANOLA PUBLIC WORKS BUILDING
596 2nd Avenue, Espanola, Ontario

PLUMBING SYSTEMS

Date: November 2022
Scale: As Noted
Drawn by: M.A., Checked by: K.L.
Project No.: 4252
Drawing No.: **M-1** Rev.1



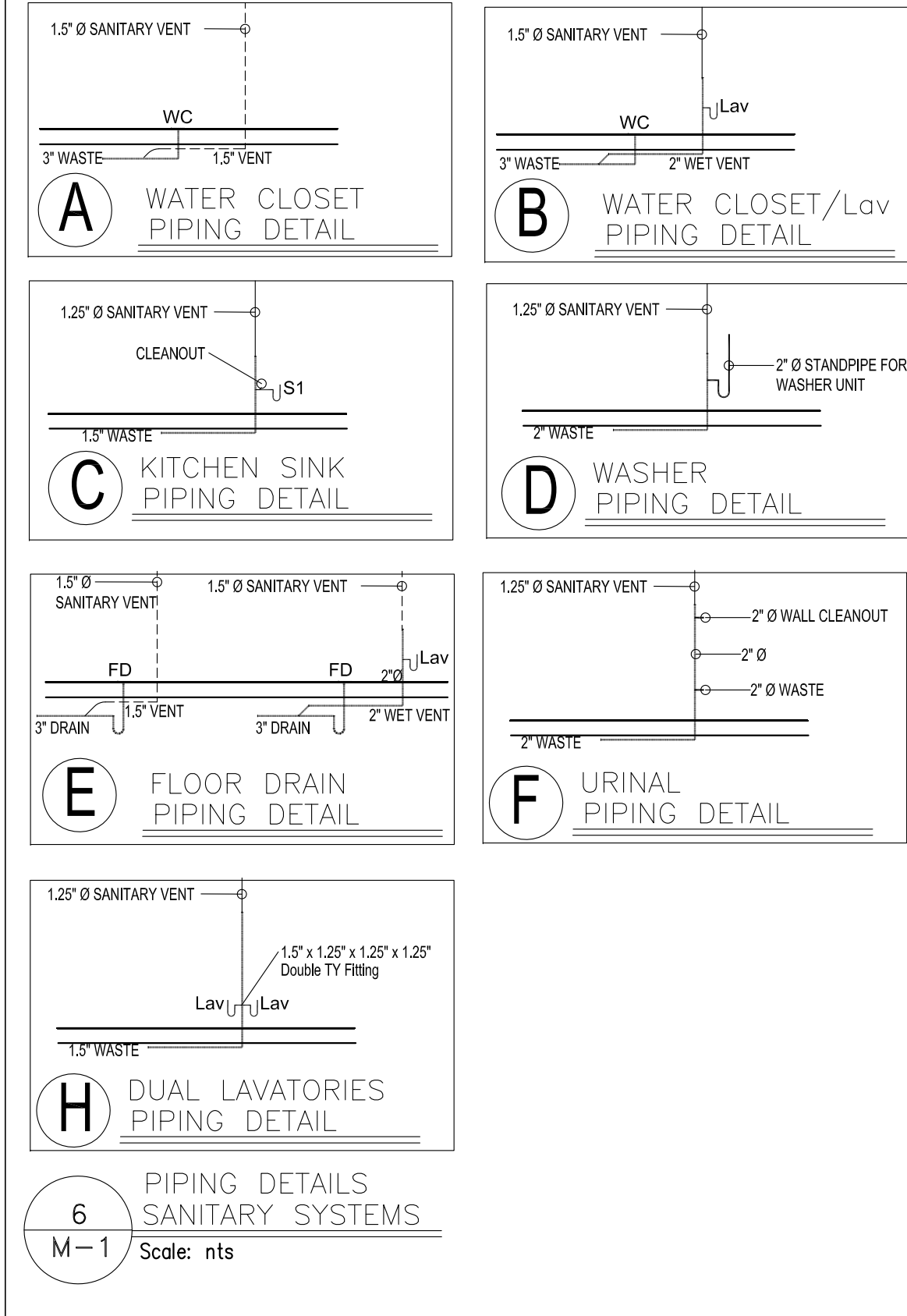
LEGEND	FIXTURE	WASTE	VENT	CW	HW
WC	WATER CLOSET	3"Ø	1.5"Ø	0.5"Ø	
UR	URINAL	2"Ø	1.5"Ø	0.5"Ø	
LAV	LAVATORY	1.25"Ø	1.25"Ø	0.5"Ø	0.5"Ø
SH	SHOWER	2"Ø	1.5"Ø	0.75"Ø	0.75"Ø
S	SINK	1.5"Ø	1.25"Ø	0.5"Ø	0.5"Ø
W	WASHER	2"Ø	1.5"Ø	0.5"Ø	0.5"Ø
FD	FLOOR DRAIN	3"Ø	1.5"Ø	TSP ①	
HD	HUB DRAIN	2"Ø	1.5"Ø		

NOTES: ① COLD WATER FROM TRAP SEAL PRIMER.

5 CONNECTION SCHEDULE
M-1 Scale: NTS

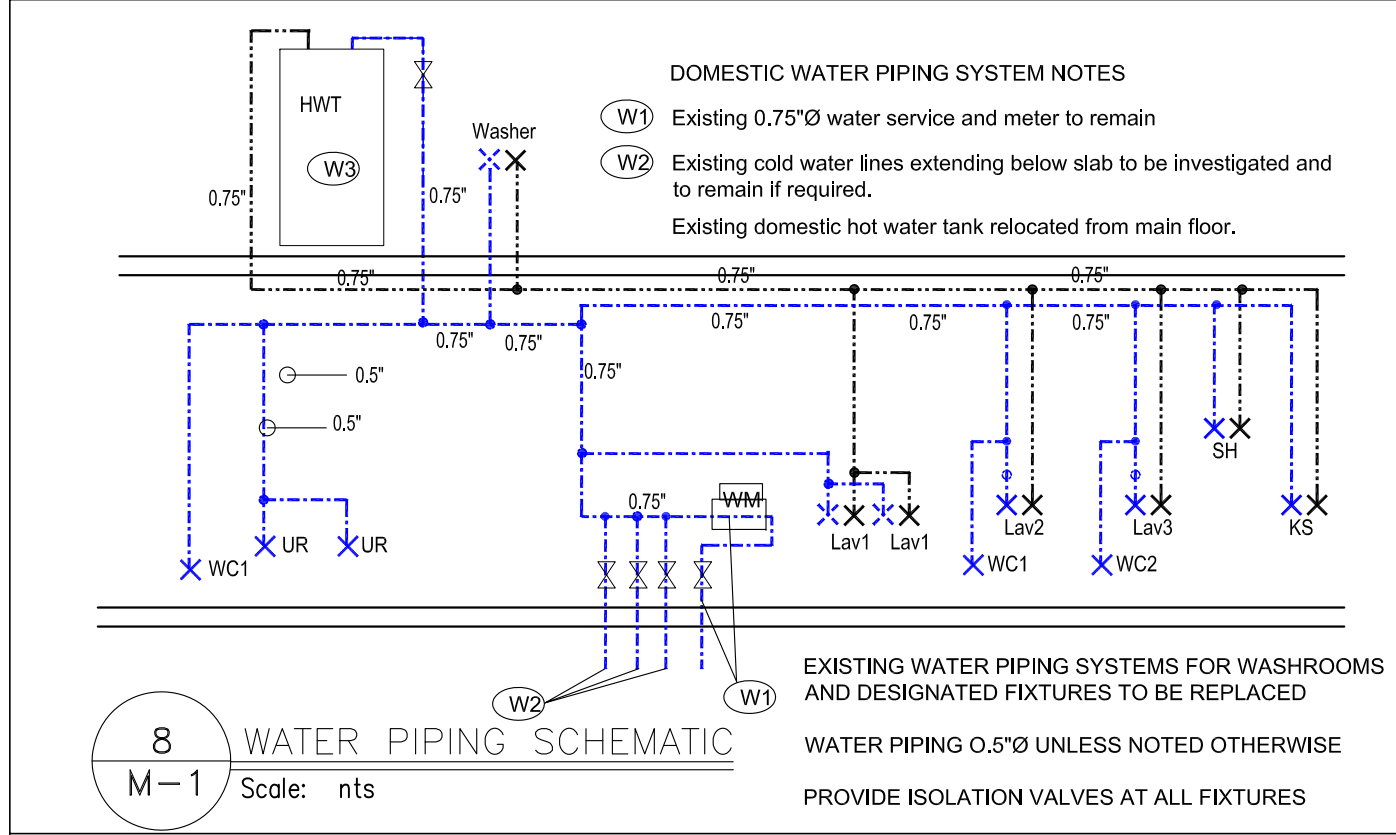
PIPING LEGEND	
--X-----X--	EXISTING SANITARY SEWER PIPING - BELOW SLAB
-----	SANITARY SEWER PIPING - BELOW SLAB
-----	SANITARY SEWER PIPING - ABOVE SLAB
-----	SANITARY VENT PIPING
-----	WATER SERVICE PIPING - BELOW SLAB
-----	DOMESTIC COLD WATER PIPING
-----	DOMESTIC HOT WATER PIPING

SS SANITARY STACK WITH BASE CLEANOUT
W SANITARY WASTE RISER
WV SANITARY WET VENT RISER
V SANITARY VENT RISER
WC Water Closet
UR Urinal
Lav Lavatory
SH Shower
S Sink
WS Washer
FD Floor Drain
CO Floor Cleanout
HWT Hot Water Tank

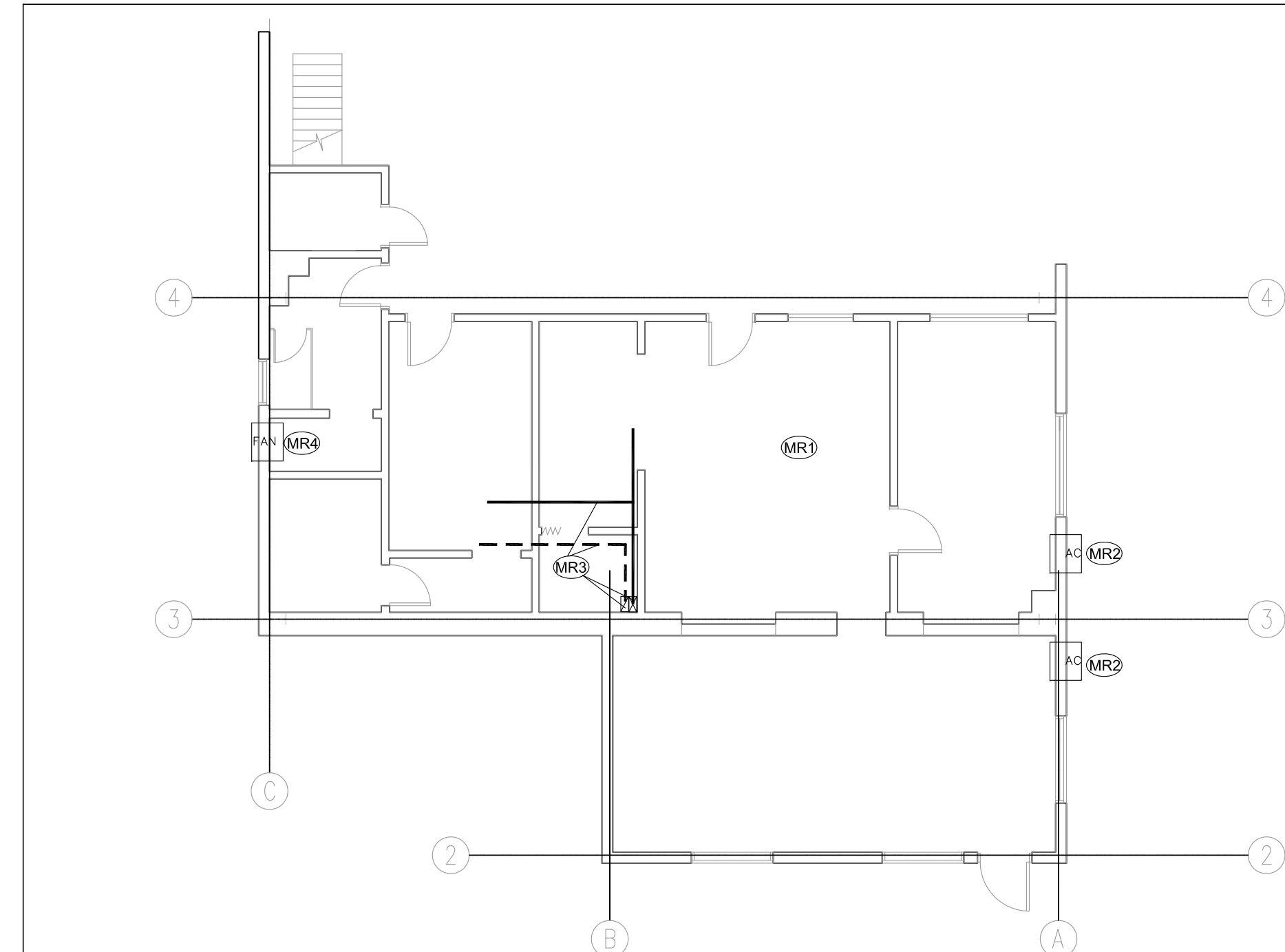


PLUMBING FIXTURE SCHEDULE	
FIXTURES AND TRIM TO BE EQUAL TO THE STANDARD OF ACCEPTANCE LISTED HEREIN. PRODUCTS OF EQUIVALENT CAPACITY AND PERFORMANCE FROM RECOGNIZED MANUFACTURERS WILL BE CONSIDERED AS EQUALS	
WC1	FLOOR MOUNTED WATER CLOSET COMBINATION WITH ELONGATED BOWL, PRESSURE ASSISTED FLUSH ACTION, SECURED TANK COVER AND BLACK OPEN FRONT SEAT LESS COVER (6.0LFP) FIXTURE: ZURN # Z-5570-VL SEAT: ZURN # Z-5950-BK-STS SUPPLIES: MCGUIRE # LFH172BV
WC2	FLOOR MOUNTED WATER CLOSET COMBINATION WITH ADA ELONGATED BOWL, PRESSURE ASSISTED FLUSH ACTION, SECURED TANK COVER AND AND WHITE OPEN FRONT SEAT WITH COVER (6.0LFP) FIXTURE: ZURN # Z-5957-SS-EL-STS SUPPLIES: MCGUIRE # LFH172BV
UR	WALL MOUNTED URINAL WITH HANDS FREE FLUSH VALVE AND CARRIER FIXTURE: Equal to: Zurn # Z-5114 FLUSH VALVE: Equal to: Zurn # ZTR-1203-W/S1+HW WITH P6900-ACABA POWER SUPPLY CARRIER: Equal to: Zurn # Z-1222 SERIES CLEANOUT: CP 2" Cleanout
Lav1	COUNTER MOUNTED CHINA LAVATORY WITH 4" CENTRESET SINGLE LEVER FAUCET, OPEN GRID DRAIN AND CP P-TRAP FIXTURE: EQUAL TO Zurn # Z-5114 FAUCET: EQUAL TO Zurn # Z7440-XL-VP WASTE: EQUAL TO Zurn # Z-6743-PC
Lav2	WALL MOUNTED CHINA LAVATORY WITH WALL CARRIER, 4" CENTRESET SINGLE LEVER FAUCET, OPEN GRID DRAIN AND CP P-TRAP FIXTURE: EQUAL TO Zurn # Z-5364 CARRIER: EQUAL TO ZURN # Z1251 FAUCET: EQUAL TO Zurn # Z7440-XL-VP WASTE: EQUAL TO Zurn # Z-6743-PC
Lav3	WALL MOUNTED CHINA LAVATORY DRILLED FOR CONCEALED ARM CARRIER, 4" CENTRE SINGLE LEVER FAUCET, OPEN GRID OFFSET WASTE AND CARRIER INSTALL TO BARRIER FREE ACCESS REQUIREMENTS COMPLETE WITH WASTE, TRAP AND SUPPLY INSULATION PACKAGE. FIXTURE: ZURN # Z-5324 FAUCET: ZURN # Z-7443-XL-BA CARRIER: ZURN # Z-1231 OFFSET WASTE: MCGUIRE # 1550WC INSULATION: MCGUIRE # PW2000WC
KS	DOUBLE COMPARTMENT STAINLESS STEEL COUNTER SINK WITH 12" x 10" x 8" DEEP BOWLS - 8" SINGLE LEVER DECK FAUCET FIXTURE: EQUAL TO NOVANNI # 2031A1- 3H FAUCET: ZURN # Z7679-XL
SH	36"x36"x74" ACRYLIC- REINFORCED FIBREGLASS ONE PIECE SHOWER UNIT WITH CENTRE DRAIN AND PRESSURE BALANCED SHOWER FAUCET WITH FIXED SHOWER HEAD. SHOWER: MAAX Jasmin F30 Model # 101161 FAUCET: DELTA COMMERCIAL R1000-UNWS ROUGH-IN, T19H33 SHOWER TRIM CURTAIN: HEAVY DUTY VINYL CURTAIN WITH ROD
W	WASHING MACHINE OUTLET BOX EQUAL TO OATLEY # 38530
FD	3"Ø FLOOR DRAIN WITH NICKEL BRONZE STRAINER AND PRIMER TAPPING. EQUAL TO ZURN # ZN-211-B-3" SERIES
CO	FLOOR CLEANOUT EQUAL TO ZURN # ZN-1400-3 SERIES
TSP	TRAP SEAL PRIMER EQUAL TO PRECISION PLUMBING # P2-500 SERIES
HWT	EXISTING ELECTRIC HOT WATER TANK - RE-USED IN NEW LOCATION

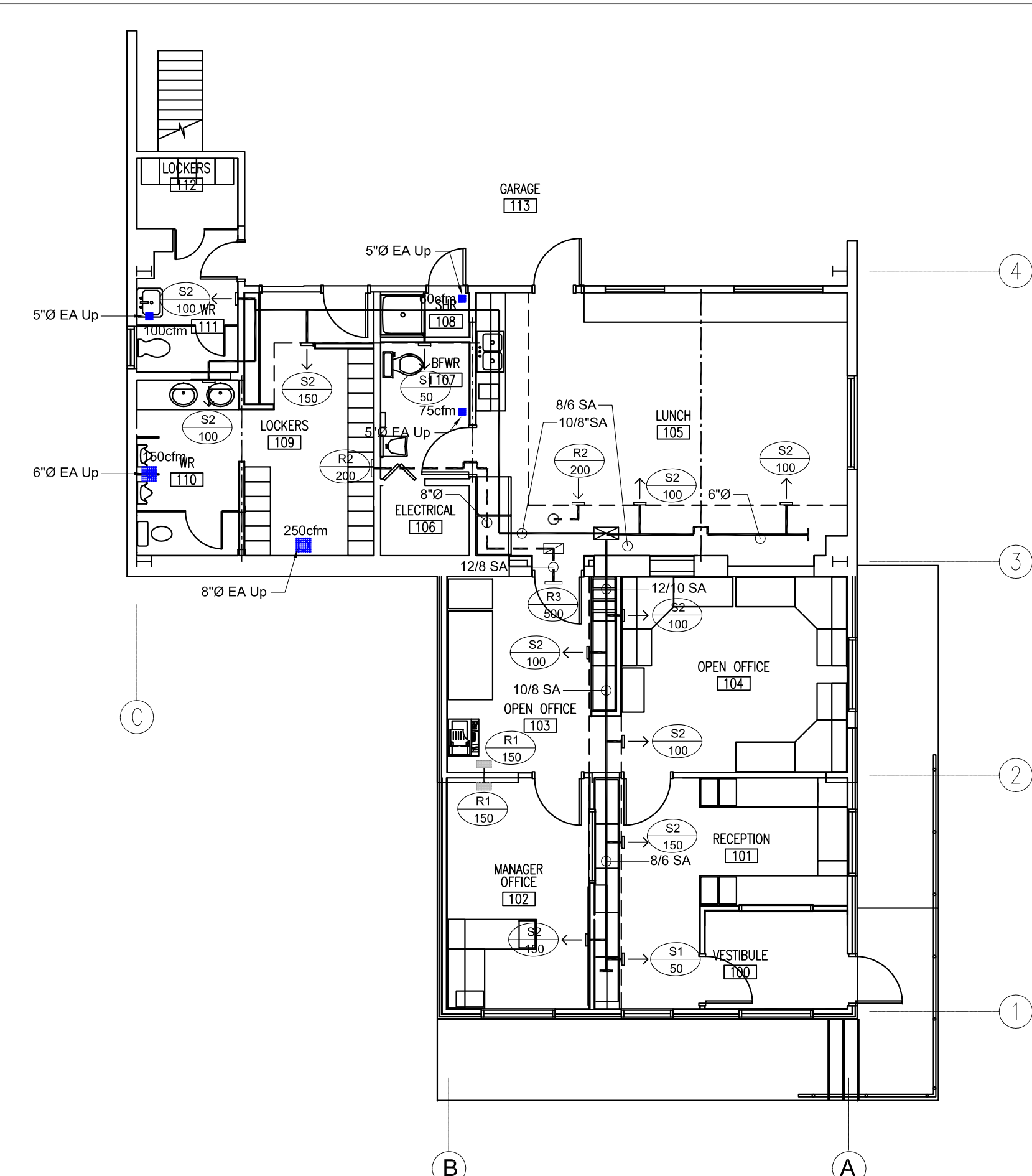
7 PLUMBING FIXTURE SCHEDULE	
M-1	Scale: NTS



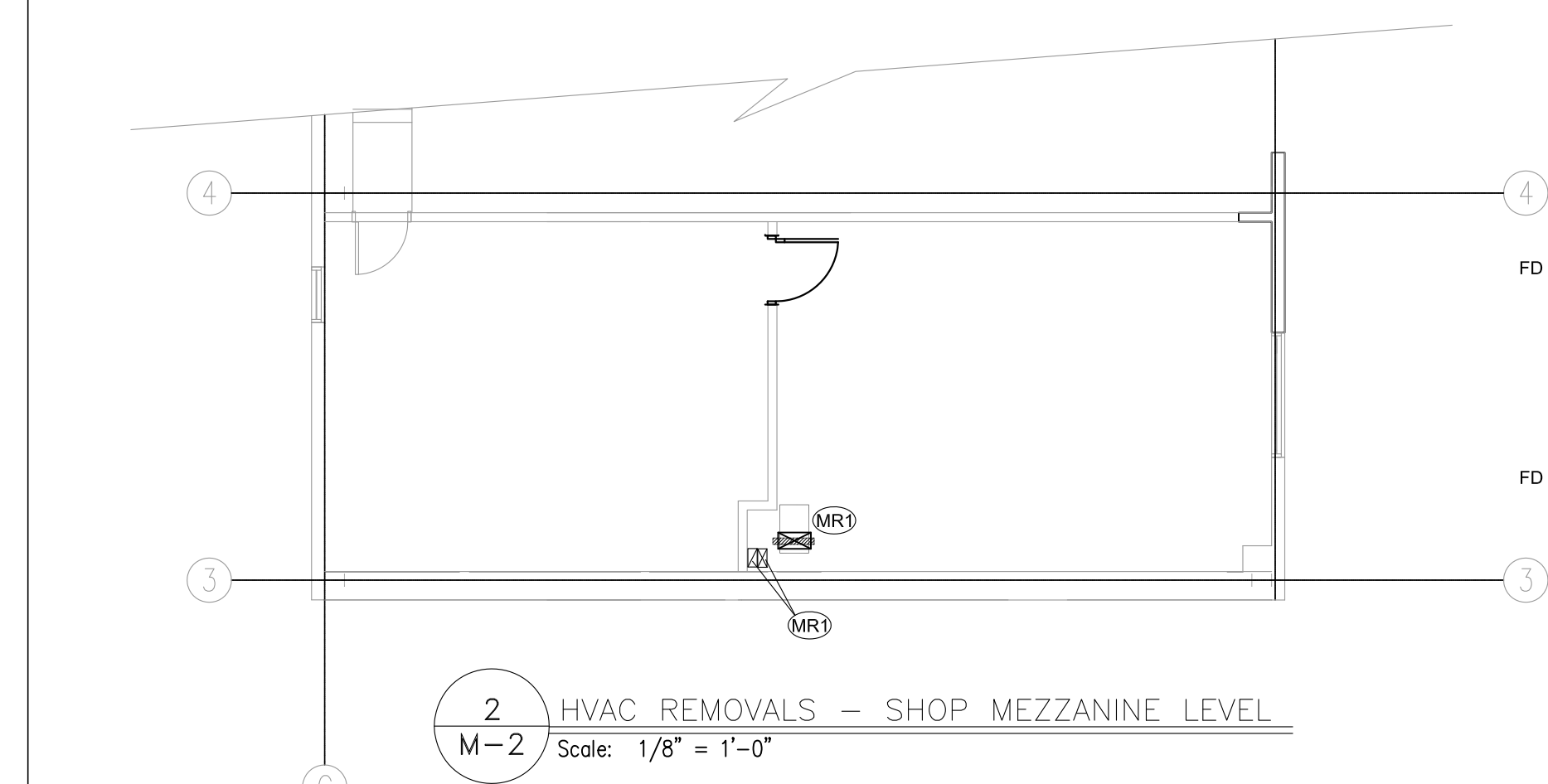
8 WATER PIPING SCHEMATIC	
M-1	Scale: nts



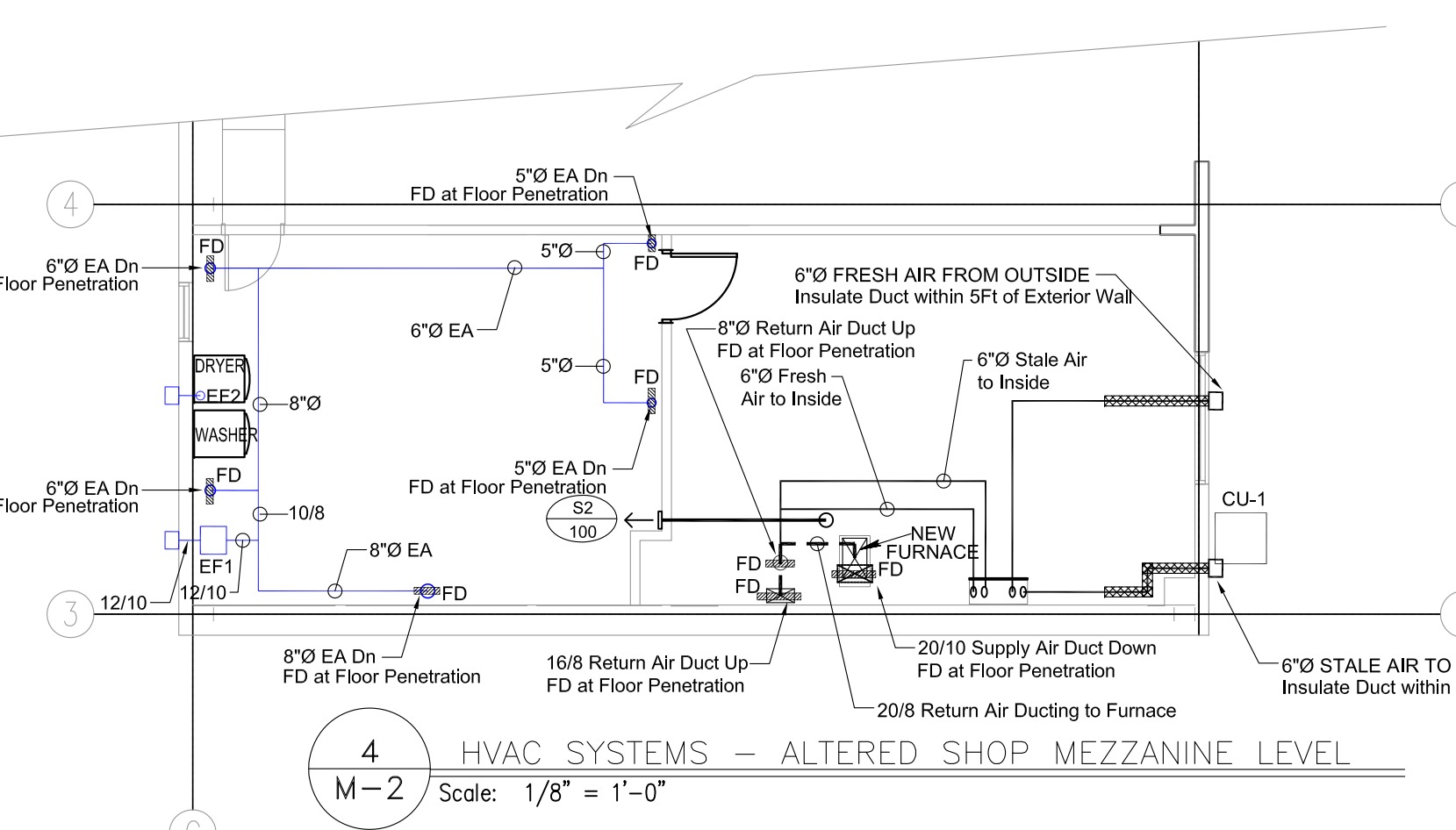
1 HVAC REMOVALS - MAIN FLOOR AREA
M-2 Scale: 1/8" = 1'-0"



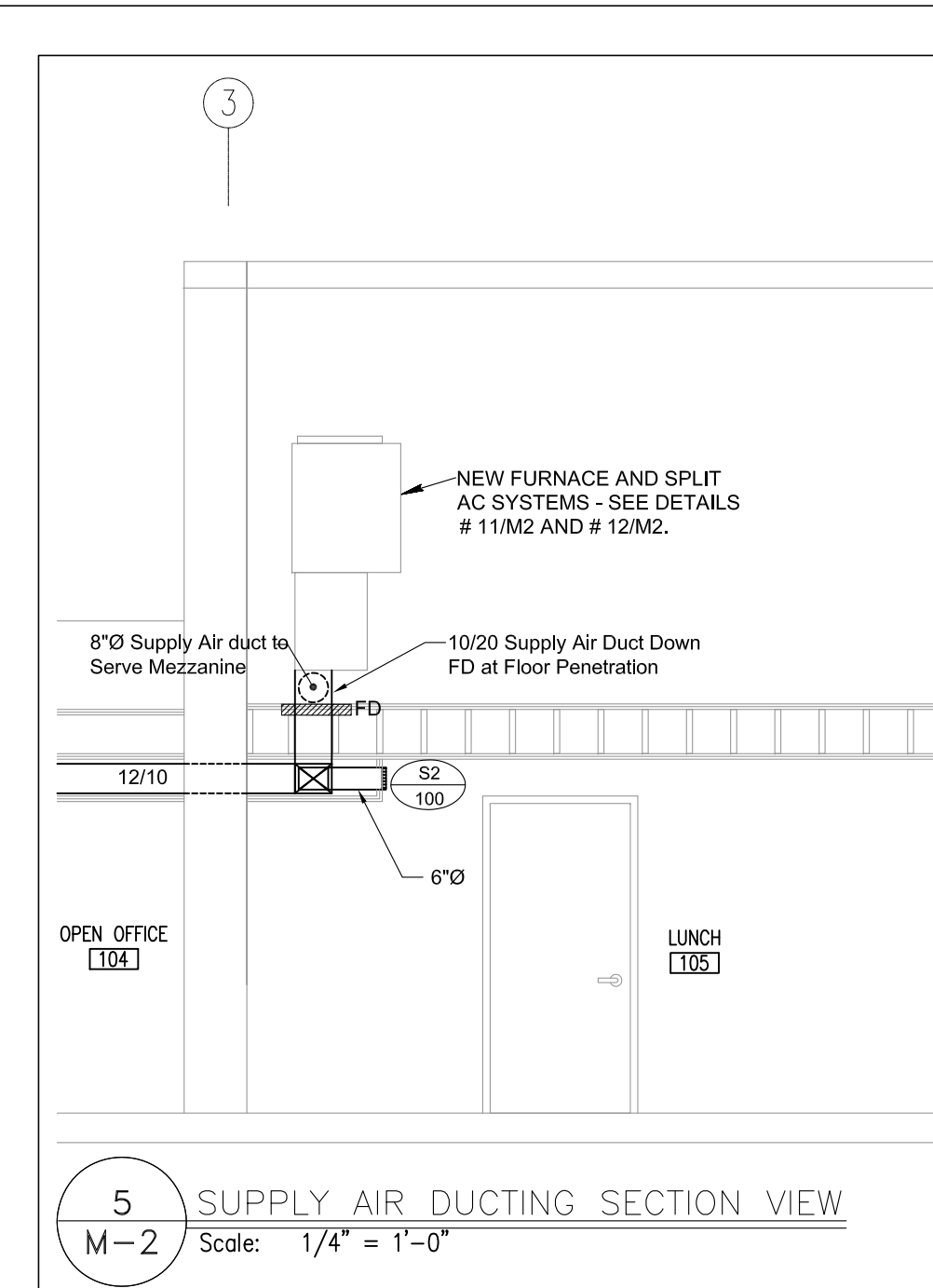
3 HVAC SYSTEMS - ALTERED FLOOR PLAN
M-2 Scale: 1/8" = 1'-0"



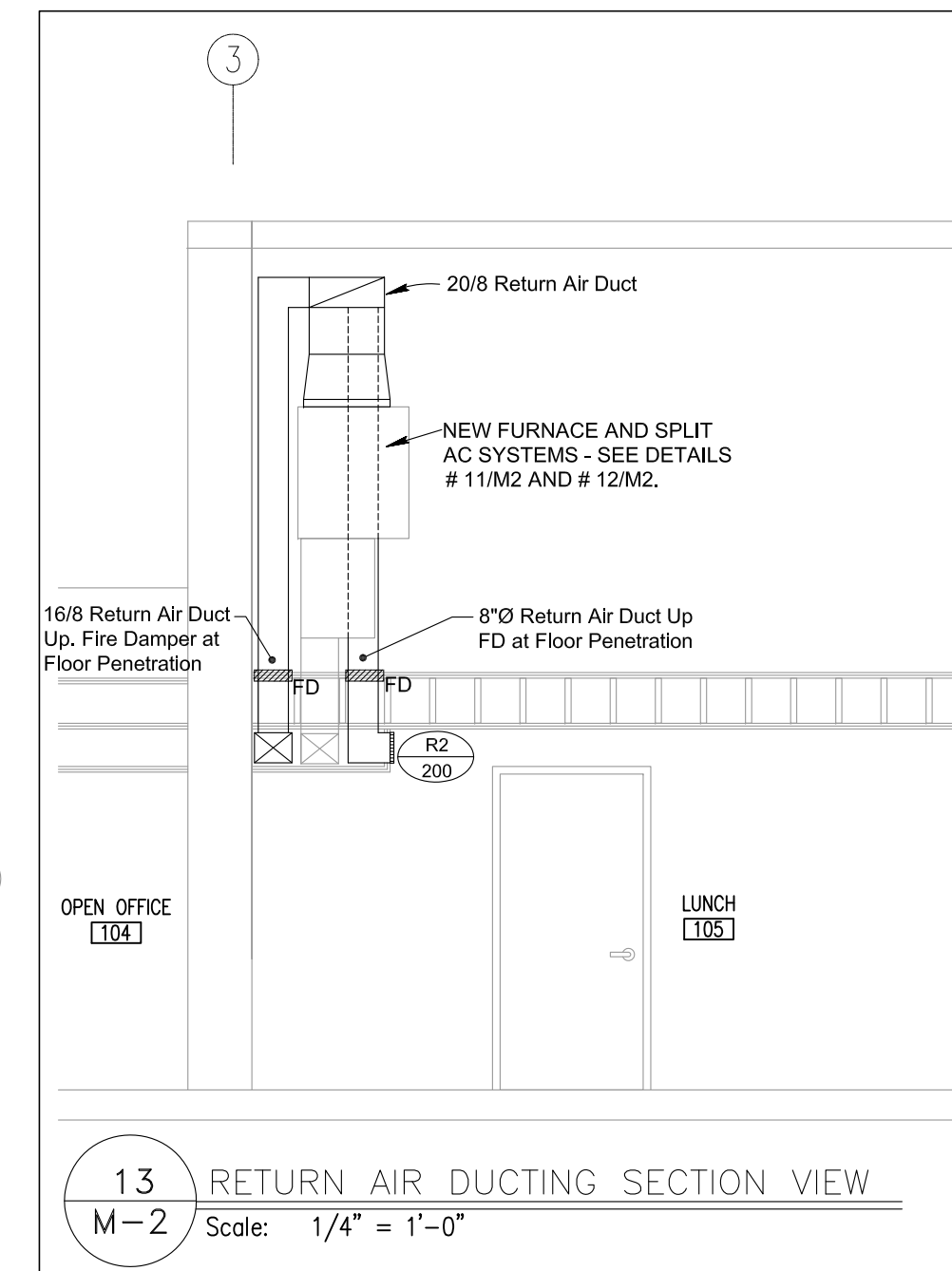
2 HVAC REMOVALS - SHOP MEZZANINE LEVEL
M-2 Scale: 1/8" = 1'-0"



4 HVAC SYSTEMS - ALTERED SHOP MEZZANINE LEVEL
M-2 Scale: 1/8" = 1'-0"



5 SUPPLY AIR DUCTING SECTION VIEW
M-2 Scale: 1/4" = 1'-0"



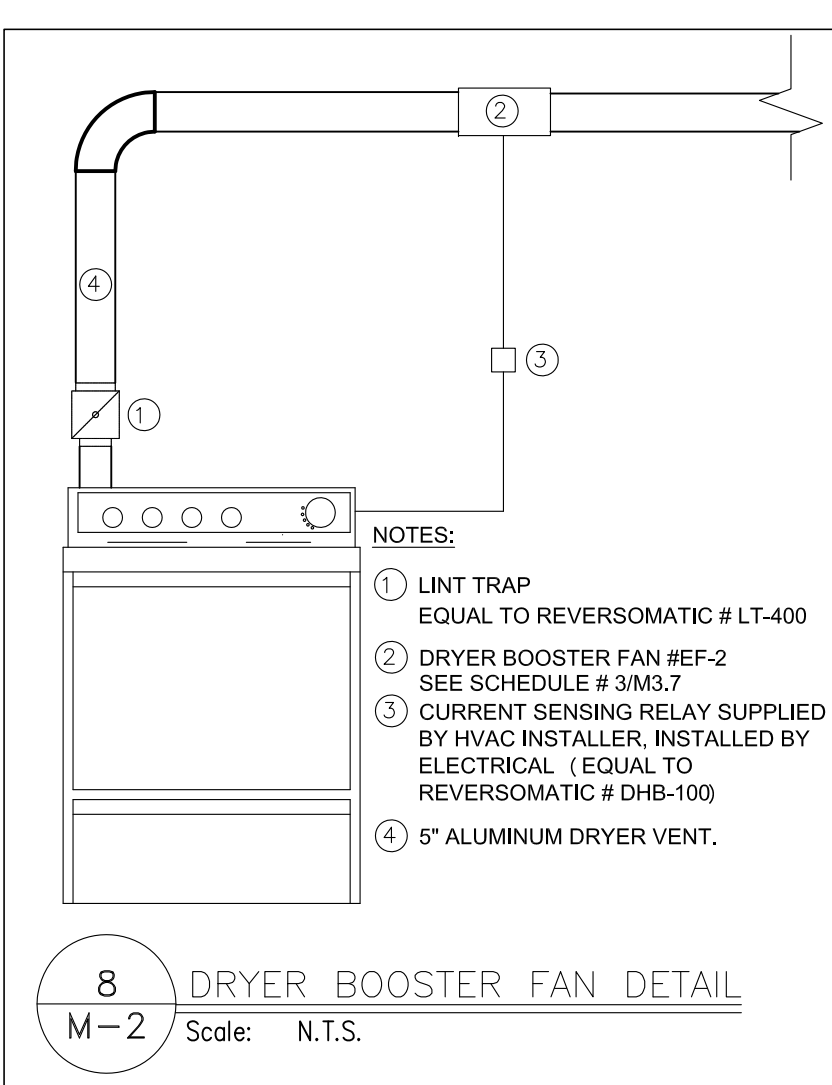
13 RETURN AIR DUCTING SECTION VIEW
M-2 Scale: 1/4" = 1'-0"

LEGEND

—	SUPPLY AIR DUCTING
- - -	RETURN AIR DUCTING
—	EXHAUST AIR DUCTING
—	HRV UNIT OUTSIDE AIR DUCTING
—	HRV UNIT F/A/E/A DUCTING
—	NATURAL GAS PIPING
- - -	Bulkhead Outline

SA SUPPLY AIR
RA RETURN AIR
EA EXHAUST AIR
EF EXHAUST FAN
HRV HEAT RECOVERY VENTILATION UNIT
T SPACE THERMOSTAT

CU AC CONDENSING UNIT
AC EXISTING WALL MOUNT AC UNIT
FD FIRE DAMPER
F GAS FURNACE



- NOTES:
- ① LINT TRAP EQUAL TO REVERSOMATIC # LT-400
 - ② DRYER BOOSTER FAN #EF-2 SEE SCHEDULE # 3/M3.7
 - ③ CURRENT SENSING RELAY SUPPLIED BY HVAC INSTALLER, INSTALLED BY ELECTRICAL (EQUAL TO REVERSOMATIC # DHB-100)
 - ④ 5" ALUMINUM DRYER VENT.

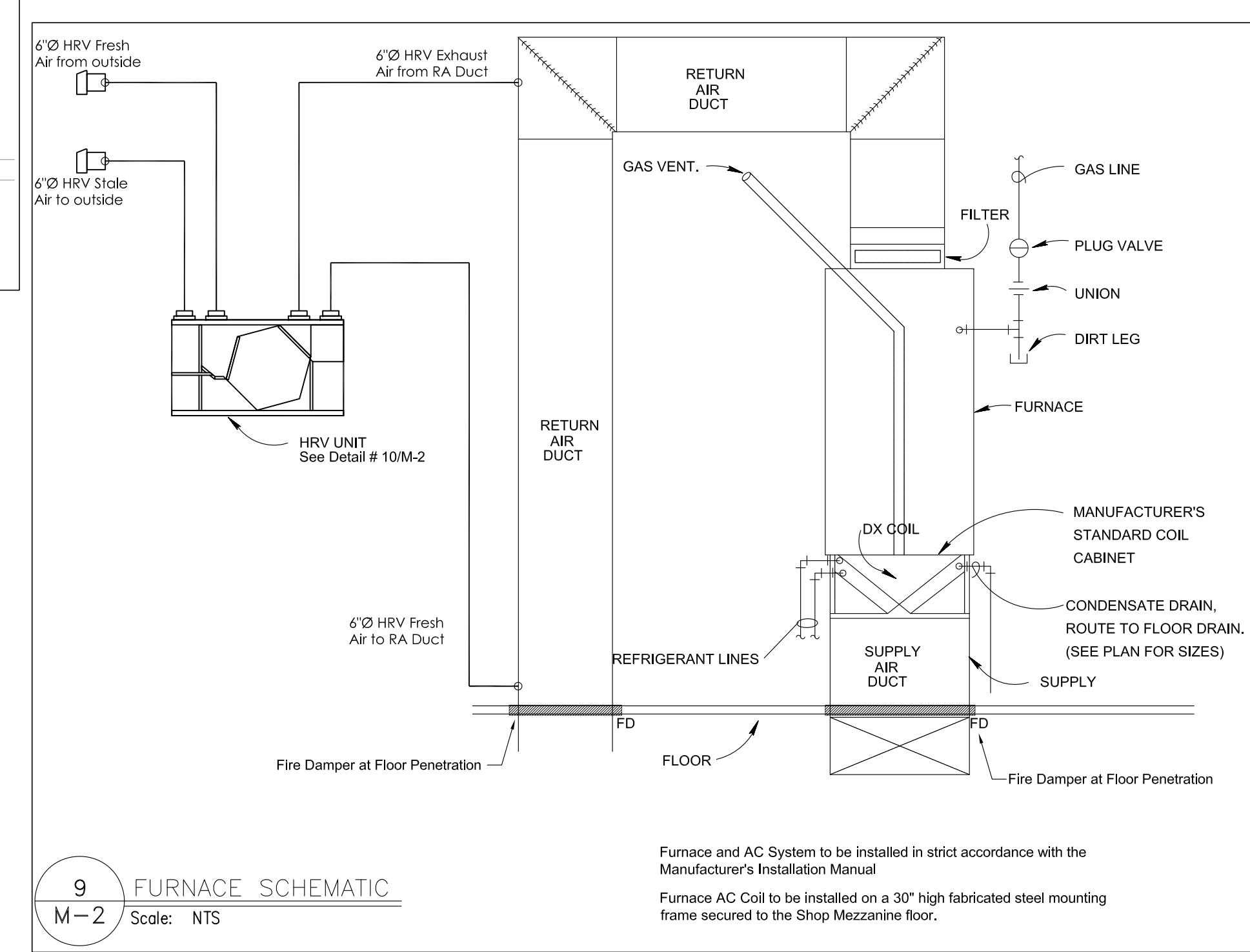
8 DRYER BOOSTER FAN DETAIL
M-2 Scale: N.T.S.

HVAC GRILLE & DIFFUSER SCHEDULE

REF.	TYPE	MOUNTING	FINISH	AIR FLOW (CFM)	INTEGRAL DAMPER	NECK SIZE	NOTES	BASED ON E.H. PRICE LTD. MODEL NUMBERS UNLESS NOTED OTHERWISE
S1	SG	SIDEWALL	WH	< 75			⑧	8" x 4"/520D/F/L/A/B12
S2	SD	SIDEWALL	WH	75 - 150			⑧	8" x 6"/520D/F/L/A/B12
E1	RG-EC	G8	WH	60 - 150				6" x 6"/80/F/A/B12
E2	RG-EC	G8	WH	175 - 300				8" x 8"/80/F/A/B12
R1	RG-EC	G8	WH	150				6" x 6"/80/F/A/B12
R2	RG-EC	SIDEWALL	WH	< 250			⑧	12" x 8"/530/F/L/A/B12
R3	RG-EC	SIDEWALL	WH	< 600			⑧	32" x 8"/530/F/L/A/B12

- NOTES:
- ① 12" x 12" DIFFUSER PANEL
 - ② 24" x 24" DIFFUSER PANEL
 - ③ WITH PLASTER/DRYWALL MOUNTING FRAME
 - ④ TYPE 'A' SCREW FASTENING
 - ⑤ INTEGRAL VAV THERMOSTATS
 - ⑥ 3 CONE DIFFUSER
 - ⑦ 4 CONE DIFFUSER
 - ⑧ FRONT BLADES PARALLEL TO LONG DIMENSION
 - ⑨ FRONT BLADES PARALLEL TO SHORT DIMENSION
 - ⑩ EQUALIZING GRID IN DIFFUSER NECK
- LEGEND
- SD - SUPPLY DIFFUSER
 - SG - SUPPLY GRILLE
 - SGDD - SUPPLY GRILLE-DOUBLE DEFLECTION
 - VAV - SUPPLY GRILLE-VAV
 - RG-SD - RETURN GRILLE-SINGLE DEFLECTION
 - RG-EC - RETURN GRILLE-EGGCRATE
 - SAT - SUSPENDED ACOUSTICAL TILE CEILING (2' x 4' TEE BAY GRID)
 - G8 - GYPSUM BOARD
 - MB - MASONRY BLOCK
 - WH - APPLIANCE WHITE
 - AL - ALUMINUM BAKED ENAMEL
 - PC - PRIME COAT ONLY FOR FIELD PAINTING
 - OCB - OPPOSED BLADE DAMPER
 - ROBD - RADIAL OPPOSED BLADE DAMPER
 - ED - EXPOSED DUCT
- LEGEND
- GRILLE/DIFFUSER TYPE
 - AIR FLOW IN CFM

7 GRILLE & DIFFUSER SCHEDULE
M-2 Scale: NTS



9 FURNACE SCHEMATIC
M-2 Scale: NTS

SUITE HRV UNIT # HRV

COUNTER-FLOW HEAT RECOVERY UNIT WITH WASHABLE FILTERS AND FAN DEFROST SYSTEM. 250 CFM at 0.5"ESP. ELECTRICAL - 44 WATTS AT 120V. EQUAL TO LIFE BREATH # 267 MAX

HRV UNITS COMPLETE WITH: LIFE BREATH WEATHERHOOD # 99-186. LIFESTYLE MAX DIGITAL CONTROL # 99-DXPL02

HRV UNIT TO BE SUPPLIED AND INSTALLED BY HVAC CONTRACTOR. CONDENSATE DRAIN BY PLUMBING CONTRACTOR. 120V POWER BY ELECTRICAL CONTRACTOR. LOW VOLTAGE CONTROL WIRING BY HVAC CONTRACTOR.

10 HRV UNIT SCHEDULE
M-2 Scale: NTS

EXHAUST FAN SCHEDULE

FAN NO.	SERVICE AND LABEL	MANUFACTURER	MODEL NO.	SONES NO.	VOLUME FLOW (CFM)	S.P. "W.G."	MOTOR hp	W	V	NOTES
EF-1	WASHROOMS/LOCKERS	GREENHECK	SO95-D-1/8	8.7	650	.25"	1/8 hp	208/1/60		⑦ ④
EF-2	DRYER BOOSTER FAN	REVERSOMATIC	PWS-200		150	.3"	113	120/1/60		⑧ ⑨

NOTES:

- ① WITH SOLID STATE SPEED CONTROLLER
- ② WITH COMBINATION FAN/LIGHT OCCUPANCY SWITCH LEVITON #ODS06-10W
- ③ INTEGRATE WITH CO DETECTION SYSTEM
- ④ VIBRATION ISOLATION
- ⑤ WALL LOUVRE & GRAVITY BACK DRAFT DAMPER
- ⑥ c/w 24 HOUR DAY TIME CLOCK
- ⑦ c/w EXHAUST DUCT, BD DAMPER & WALL LOUVRE. SEE FLOOR PLANS.
- ⑧ c/w EXHAUST DUCT, BD DAMPER & WALL LOUVRE. SEE FLOOR PLANS.
- ⑨ c/w #LT-400 LINT TRAP AND #DHB-100 HEAT SENSOR.

6 EXHAUST FAN SCHEDULE
M-2 Scale: NTS

FURNACE # F-1

Natural Gas Input:	80,000 BTU/H
Heating Output:	76,000 BTU/H
AFUE:	95%
Air Flow Rate:	1200 CFM at 0.5" ESP
Motor:	15A - 120V
Furnace Equal to:	NAPOLION # WXP080S3AA-N

Condensing Natural Gas furnace:
System Complete with:
Return with MERV-4 Filter
Two sets of filters.
Programmable thermostat
Concentric Horizontal Venting Kit
Inline Condensate Trap Kit -

11 FURNACE SCHEDULE
M-2 Scale: NTS

AREA SERVED:

Tag Name:	CU-1
Capacity:	36,000 BTU/H
Condensing Unit Equal to:	NAPOLION # NT14A036B
SEER:	14
Refrigeration:	HS Klt, TXV, R-410A, 3" CHATLEFF Cxn
Electrical:	30A at 240/1/60
DX Coil Equal to:	Vertical - Downflow NAPOLION - TO SUIT FURNACE
R-410A Refrigeration Refrigerant Lines and System Charge per Manufacturer's Installation Manual	
Wall Mounting Bracket for outdoor condensing unit	

12 SPLIT AC SYSTEM SCHEDULE
M-2 Scale: NTS

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No.: Revision / Version:

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER

4252

K.G. LANG

January 2, 2024

K. LANG ENGINEERING LTD.

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Tel. (705) 522-8110

E-Mail lang@bellnet.ca

2022 OFFICE ADDITION

ESPANOLA PUBLIC WORKS BUILDING

596 2nd Avenue, Espanola, Ontario

HVAC SYSTEMS

Date: November 2022

Scale: As Noted

Drawn by: M.A. Checked by: K.L.

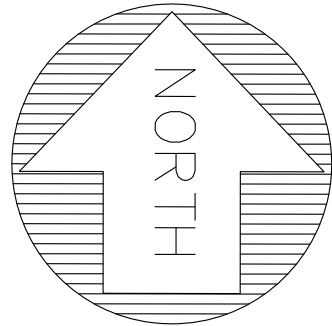
Project No.: 4252

Drawing No.: M-2 Rev.1

KLE 4252 PAPER SIZE: 36" x 24" = P01, 41 1/8" x 11" = 1'-0"

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0	ISSUED FOR REVIEW AND COMMENTS	December 5, 2023
1	Issued for Tender	January 2, 2024



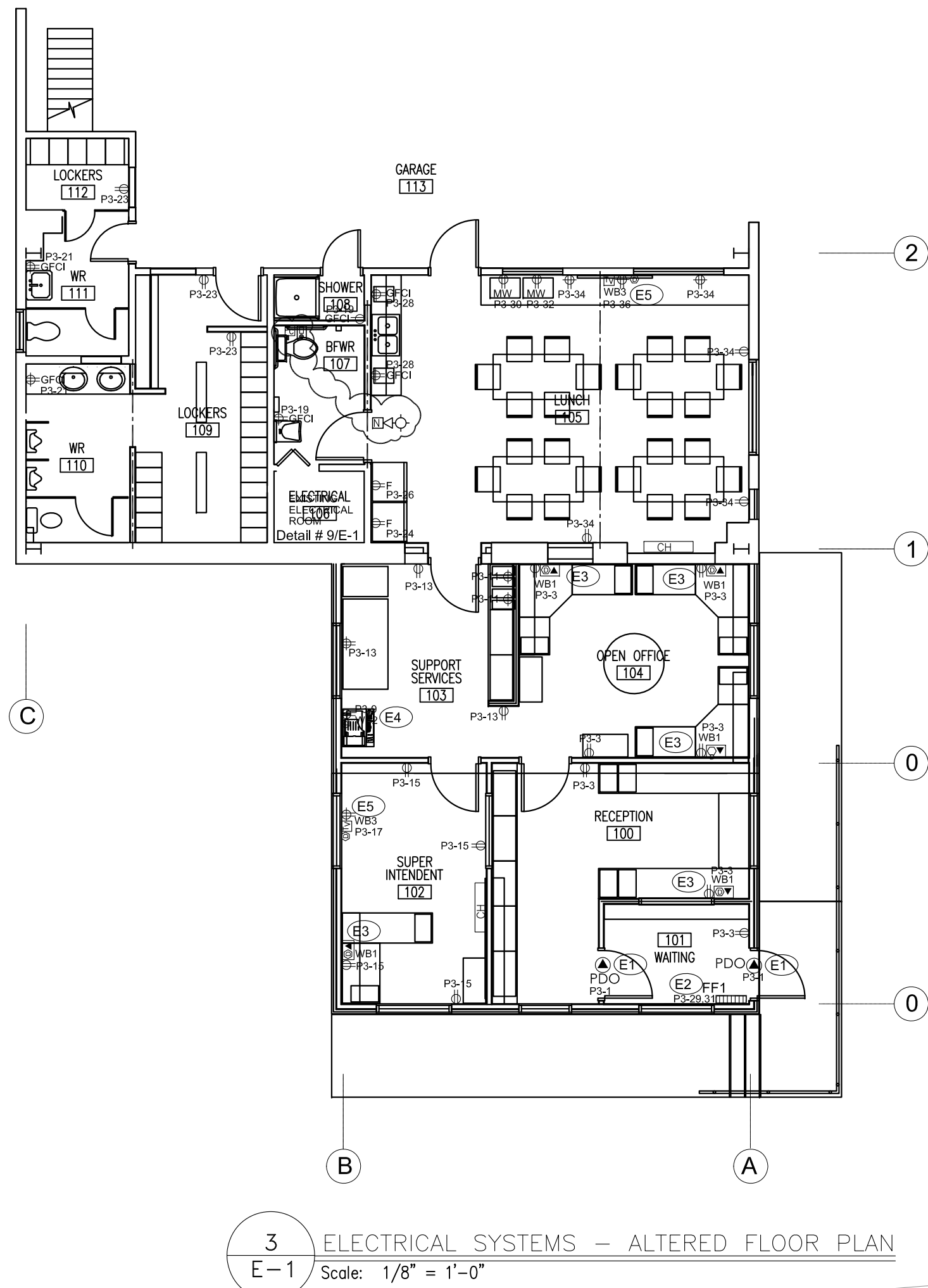
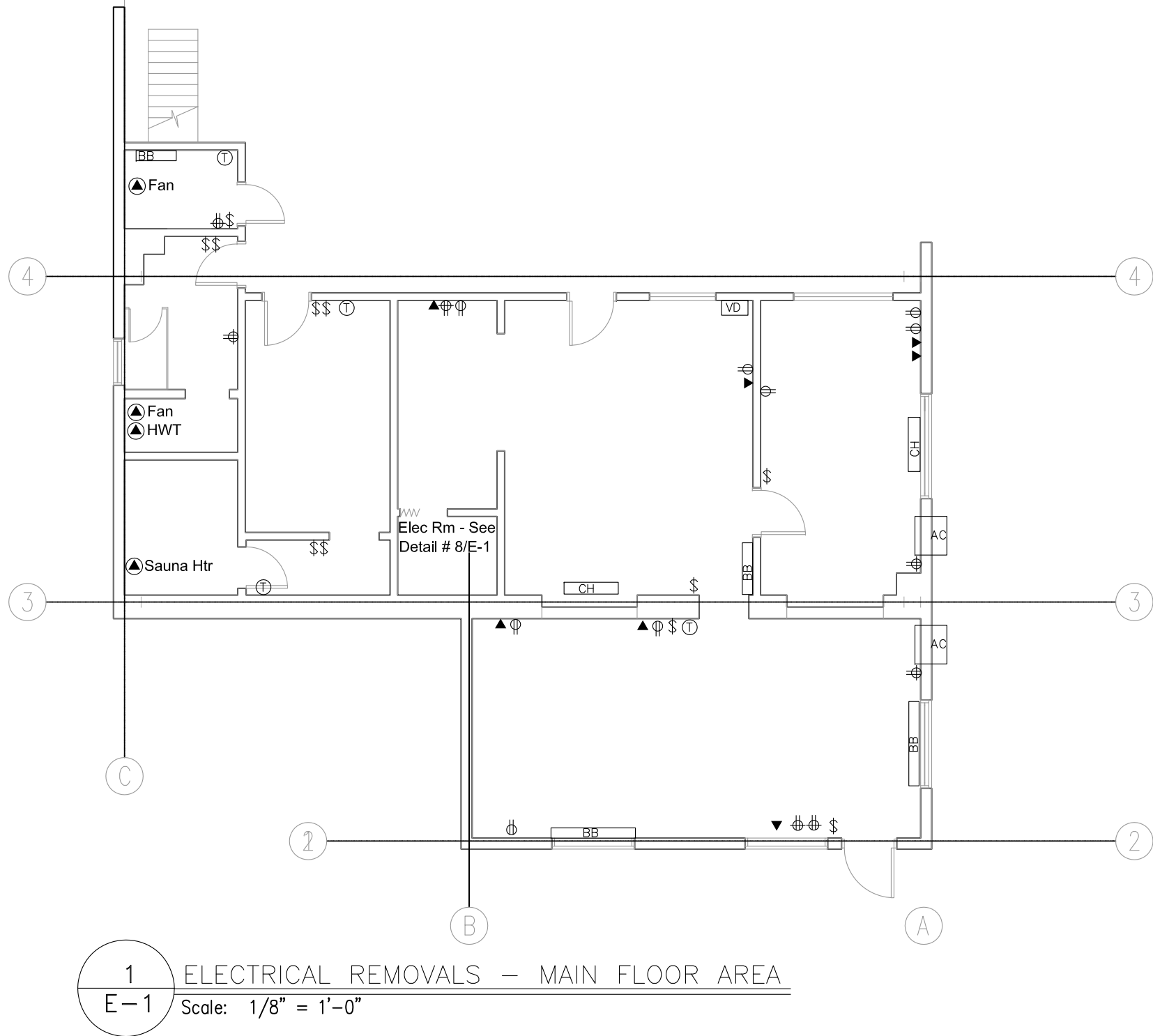
kle

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2022 OFFICE ADDITION ESPANOLA PUBLIC WORKS BUILDING 596 2nd Avenue, Espanola, Ontario

ELECTRICAL SYSTEMS

Date: November 2022
Scale: As Noted
Drawn by:M.A., Checked by:K.L.
Project No.: 4252
Drawing No.: **E-1** Rev.1



EXISTING PANEL 'P2'			
PANEL RATING — 225 AMPS.		<input checked="" type="checkbox"/> 120/240 V— 1 PH—3W <input type="checkbox"/> 120/208 V— 3 PH—4W <input type="checkbox"/> 600/347 V — 3PH—4W	
DESCRIPTION	BKR	CCT	CCT BKR DESCRIPTION
North Wall Exhaust Fan	15A-1P	1	2 15A-1P Lunchroom Lighting
Fuel Pump Recept. Dr. Door	15A-1P	3	4 15A-1P Bay Lighting
Heating — Supt.'s Office	20A-2P	5	6 15A-1P Bay Lighting
Heating — General Office	20A-2P	7	8 15A-1P Bay Lighting
Range — General Office	40A-2P	9	10 15A-1P Outside Lighting
South End Welder Plug	40A-2P	13	12 15A-1P Outside Lighting
North End Welder Plug	40A-2P	15	14 15A-1P Wall Plugs — South End
Bench Grinder	20A-1P	17	16 15A-1P West Wall Plugs
Tool Rm./Genral Office Plugs	15A-1P	21	18 15A-1P Tool Rm., Washrm., ChangeRm. Lights
Outside Receptacle	15A-1P	23	20 15A-1P Supt.'s Office Plugs
Outside Receptacle	15A-1P	25	22 15A-1P Exhaust Fan — Washrm., ChangeRm.
Large Welder Plug	100A-2P	27	24 15A-1P Pitt Fan — Light
Air Compressor	40A-2P	29	26 15A-1P Washrm., ChangeRm. Furnace
Unit Heater Above Office	15A-1P	31	28 15A-2P Main Garage Furnace
			30 15A-1P Hot Water Tank
			32 15A-1P Fridge Plug
			34 15A-1P Lunchrm. Counter Plugs
			36 15A-1P Garage Fans
			38 15A-1P Garage Fans

5 EXISTING PANEL 'P2' CIRCUITRY
E-1 Scale: NTS

EXISTING PANEL 'P3'			
PANEL RATING — 225 AMPS.		<input checked="" type="checkbox"/> 120/240 V— 1 PH—3W <input type="checkbox"/> 120/208 V— 3 PH—4W <input type="checkbox"/> 600/347 V — 3PH—4W	
DESCRIPTION	BKR	CCT	CCT BKR DESCRIPTION
Fax Plug	15A-1P	1	2 15A-1P Lunchroom Lighting
Spare	15A-1P	3	4 15A-1P Bay Lighting
Office Heat	20A-2P	5	6 15A-1P Bay Lighting
Office Lights	20A-2P	7	8 15A-1P Bay Lighting
Office Plugs	15A-1P	11	10 15A-1P Outside Lighting
?	15A-1P	13	12 15A-1P Outside Lighting
?	15A-1P	15	14 15A-1P Wall Plugs — South End
?	15A-1P	17	16 15A-1P West Wall Plugs
Kitchen Plug	15A-1P	19	18 15A-1P Tool Rm., Washrm., ChangeRm. Lights
?	15A-1P	21	20 15A-1P Supt.'s Office Plugs
Microwave Plug	15A-1P	23	22 15A-1P Exhaust Fan — Washrm., ChangeRm.
			24 15A-1P Pitt Fan — Light

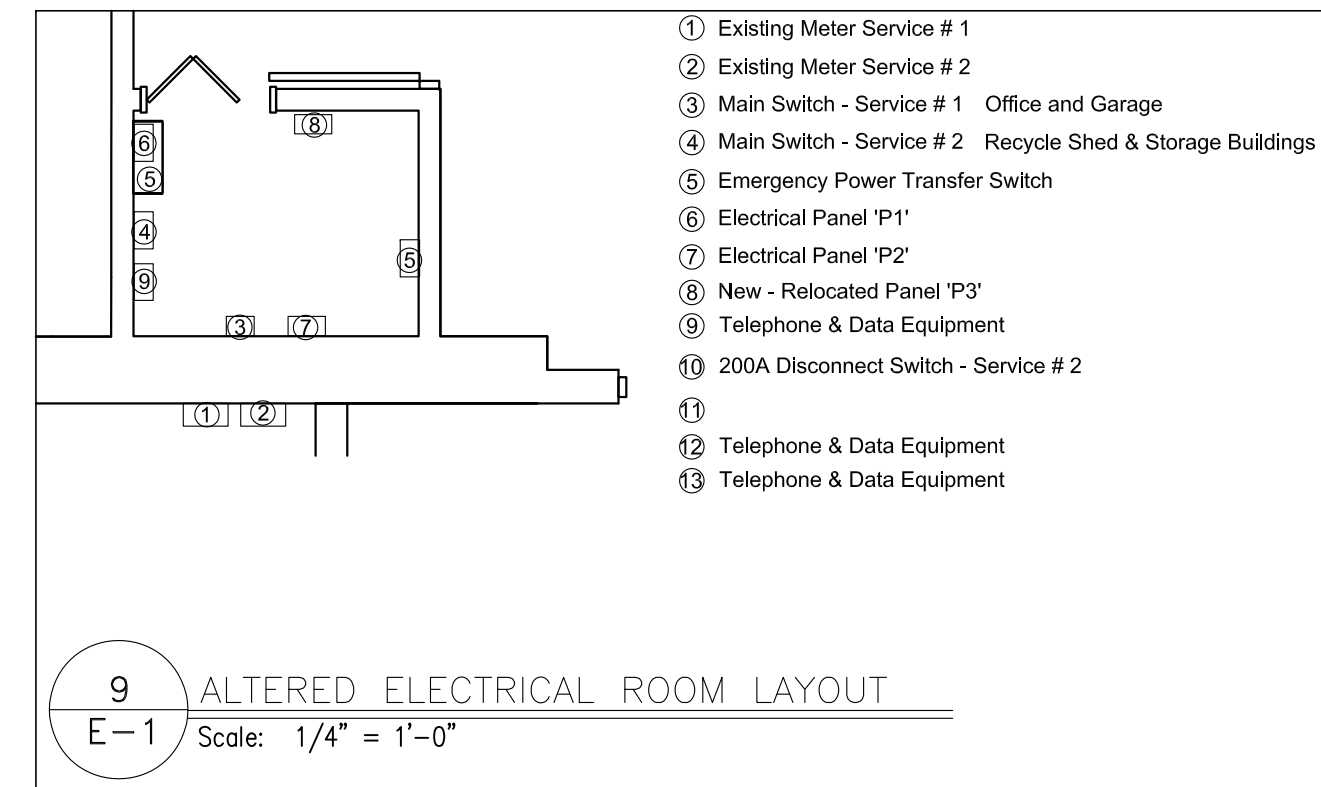
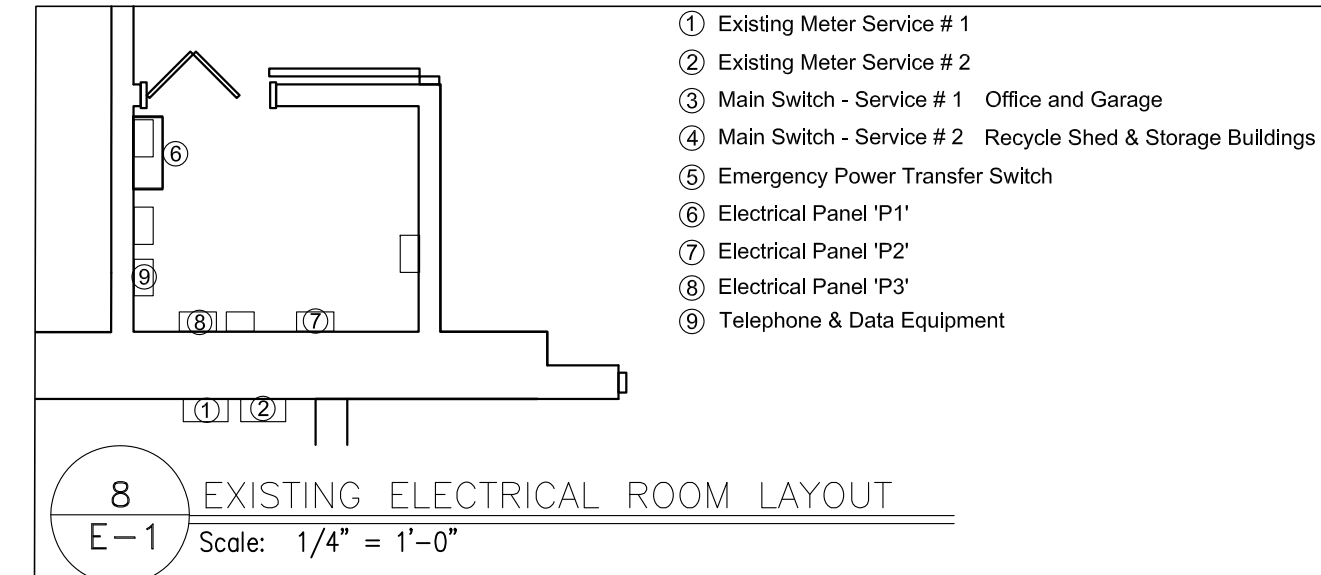
6 EXISTING PANEL 'P3' CIRCUITRY
E-1 Scale: NTS

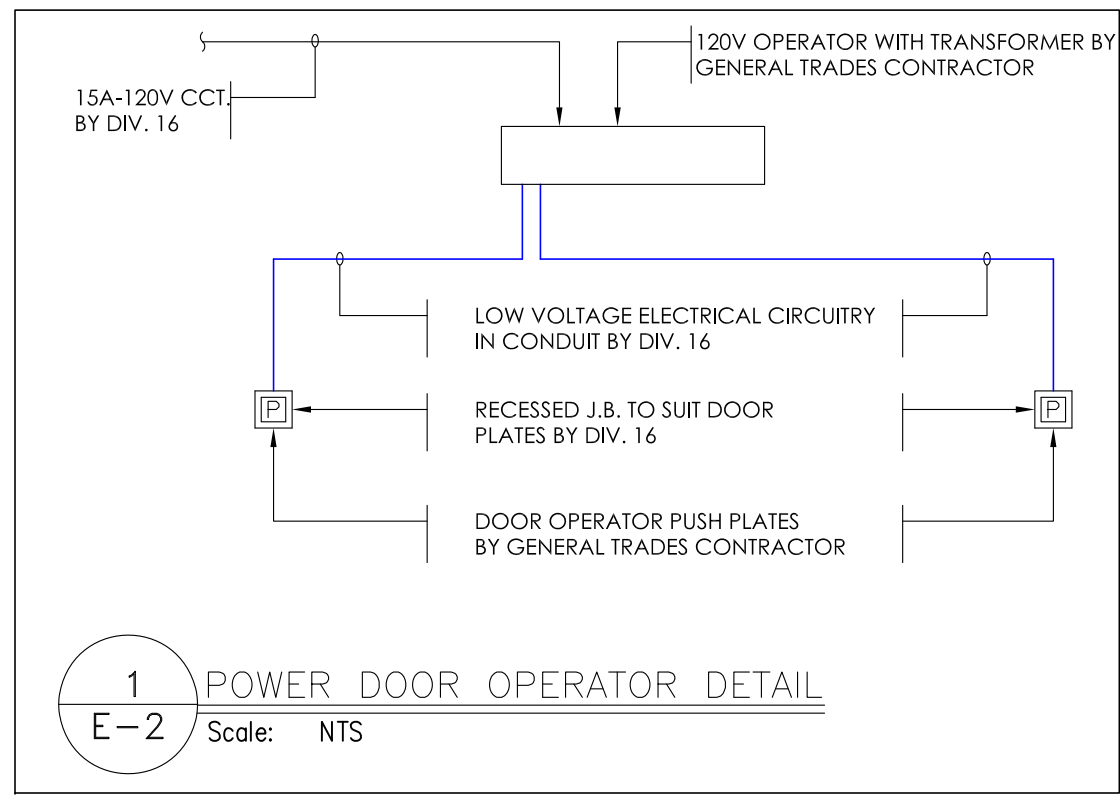
REPLACEMENT PANEL 'P3'			
PANEL RATING — 225 AMPS.		<input checked="" type="checkbox"/> 120/240 V— 1 PH—3W <input type="checkbox"/> 120/208 V— 3 PH—4W <input type="checkbox"/> 600/347 V — 3PH—4W	
DESCRIPTION	BKR	CCT	CCT BKR DESCRIPTION
N Power Door Operator 'PDO'	15A-1P	1	2 15A-1P Furnace F-1
N Receptacles Rms.101 & 104	15A-1P	3	4 15A-1P HRV Unit HRV-1
X Office Heat	20A-2P	5	6 15A-1P Washer 'W'
N WB2 Box Receptacle Rm.103	20A-1P	9	8 15A-1P Lunchroom Lighting
N Rm.103 Above Cntr Radio Recepts	15A-1P	11	10 15A-1P Bay Lighting
N Rms.103,104 Duplex Recepts	15A-1P	13	12 15A-1P Bay Lighting
N Rm.102 Receptacles	15A-1P	15	14 15A-1P Bay Lighting
N Rm.102 WB3 Receptacle	15A-1P	17	16 15A-1P Outside Lighting
N Rms.108,107 GFCI Recepts	15A-1P	19	18 15A-1P Outside Lighting
N Rms.110,111 GFCI Recepts	15A-1P	21	20 15A-2P Dryer 'D'
N Rms.109,112 Duplex Recepts	15A-1P	23	22 15A-1P Rm.105 Refrigerator
N Rms.100,101,104,102,103 Lighting	15A-1P	25	24 15A-1P Rm.105 Refrigerator
N Rms.107,109,105,110,111,112 Lig	15A-1P	27	26 15A-1P Rm.105 Above Cntr GFCI Recepts
N Rm.100 FF1 Heater	20A-2P	29	30 15A-1P Rm.105 Microwave
N Rm.107 Assistance Alarm Systems	15A-1P	31	32 15A-1P Rm.105 Microwave
N Exhaust Fan EF-1	15A-1P	33	34 15A-1P Rm.105 Duplex Recepts
X Hot Water Tank	40A-2P	35	36 15A-1P Rm.105 WB3 Receptacle
			38 15A-1P Dryer Booster Exhaust Fan EF-2
			40 15A-1P Dryer Booster Exhaust Fan EF-2
			42 15A-1P Dryer Booster Exhaust Fan EF-2

7 REPLACEMENT PANEL 'P3' CIRCUITRY
E-1 Scale: NTS

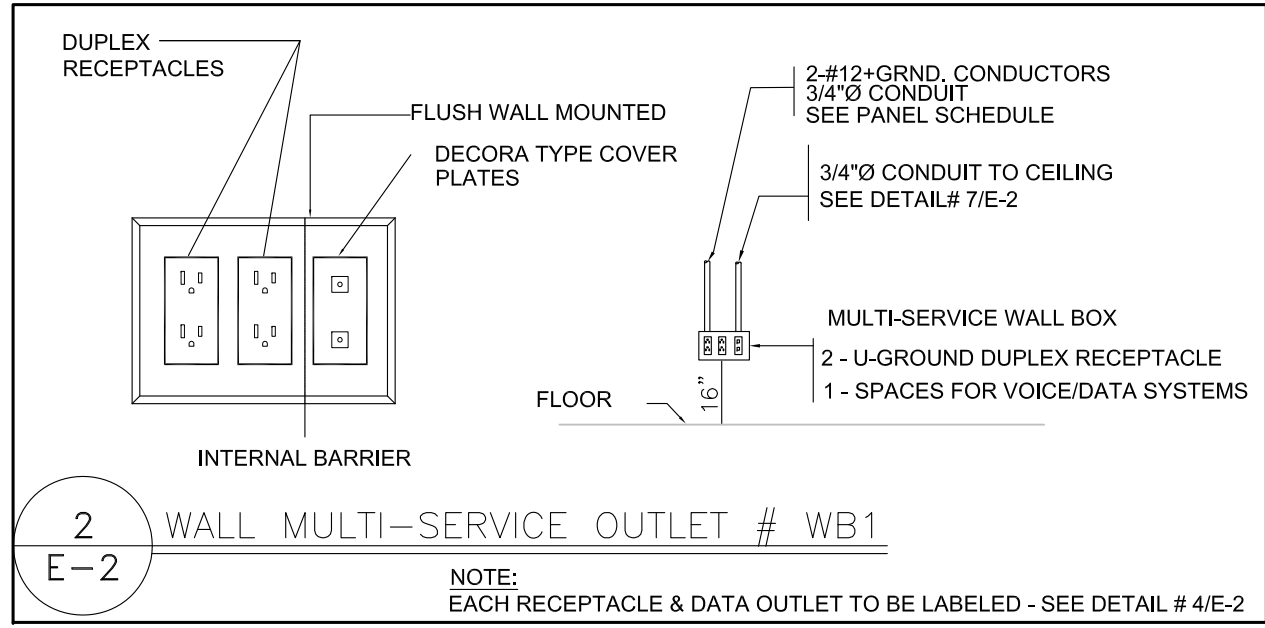
N - NEW DEVICE
X - EXISTING CIRCUIT TO BE RELOCATED TO NEW PANEL

ELECTRICAL LEGEND			
\$	SINGLE POLE LIGHT SWITCH	◀	TELEPHONE OUTLET
\$3	THREE WAY SWITCH	Ⓢ	POWER/COMMUNICATIONS WALL PAC
\$F	FAN-LIGHT SWITCH	ⓈFP	POWER/COMMUNICATIONS FLOOR PAC
Ⓢ	DUPLEX RECEPTACLE	Ⓢ	THERMOSTAT
Ⓢ	ABOVE COUNTER RECEPTACLE	Ⓢ	CABLE TV OUTLET
ⓈGFCI	GROUND FAULT RECEPTACLE	Ⓢ	DATA OUTLET
20A	20A-T RECEPTACLE	Ⓢ	ELECTRICAL PANEL
ⓈFLR	FLOOR DUPLEX RECEPTACLE	ⓈTC	TIME CLOCK
ⓈFAN	FAN CONNECTION	WP	DEVICE TO BE WATERPROOF
Ⓢ	SPECIAL RECEPTACLE AS INDICATED	WG	DEVICE TO BE COMPLETE WITH WIREGUARD
BB	Baseboard Heater	PDO	POWER DOOR OPERATOR
CH	Convection Heater		
VD	Voice — Data JB		

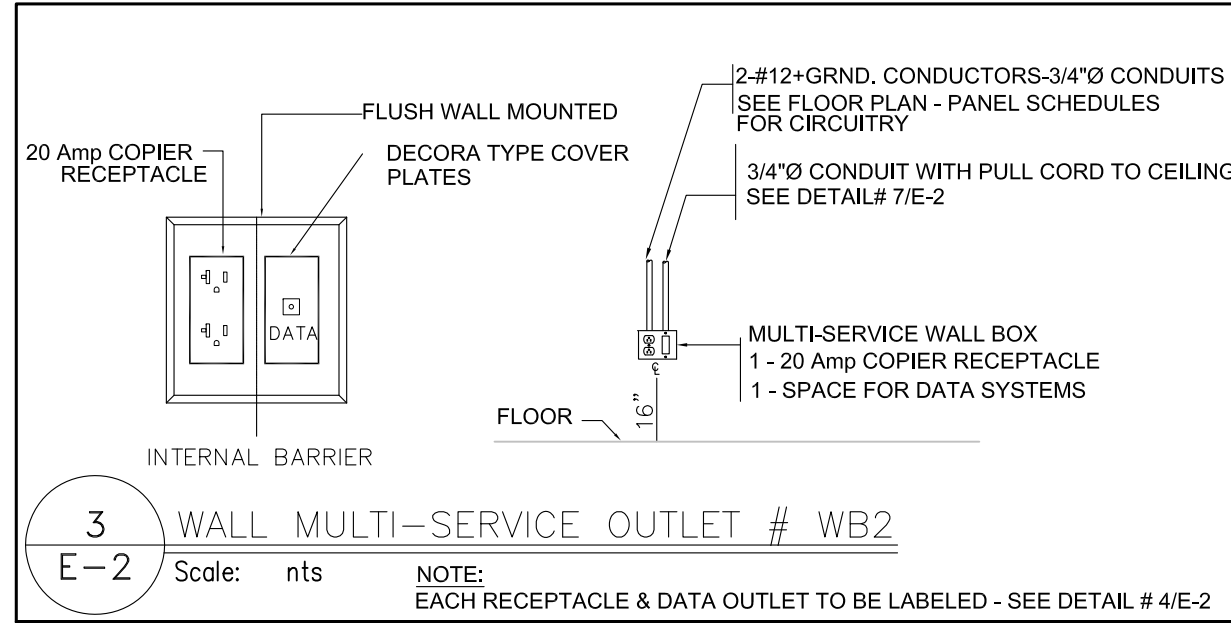




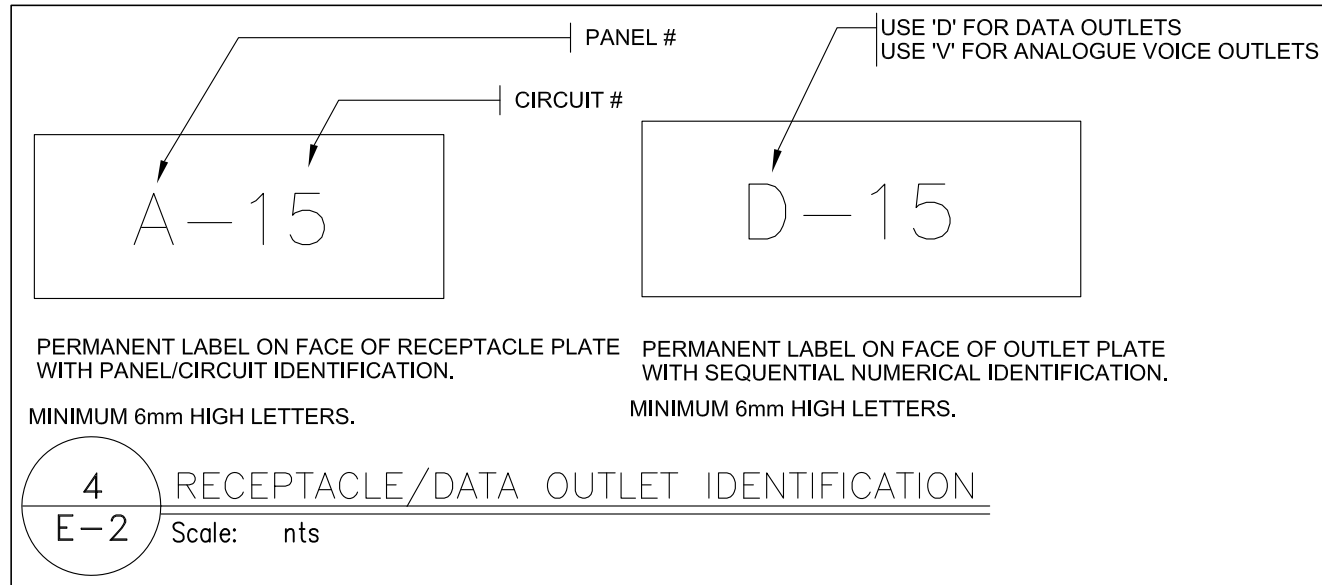
1 POWER DOOR OPERATOR DETAIL
E-2 Scale: NTS



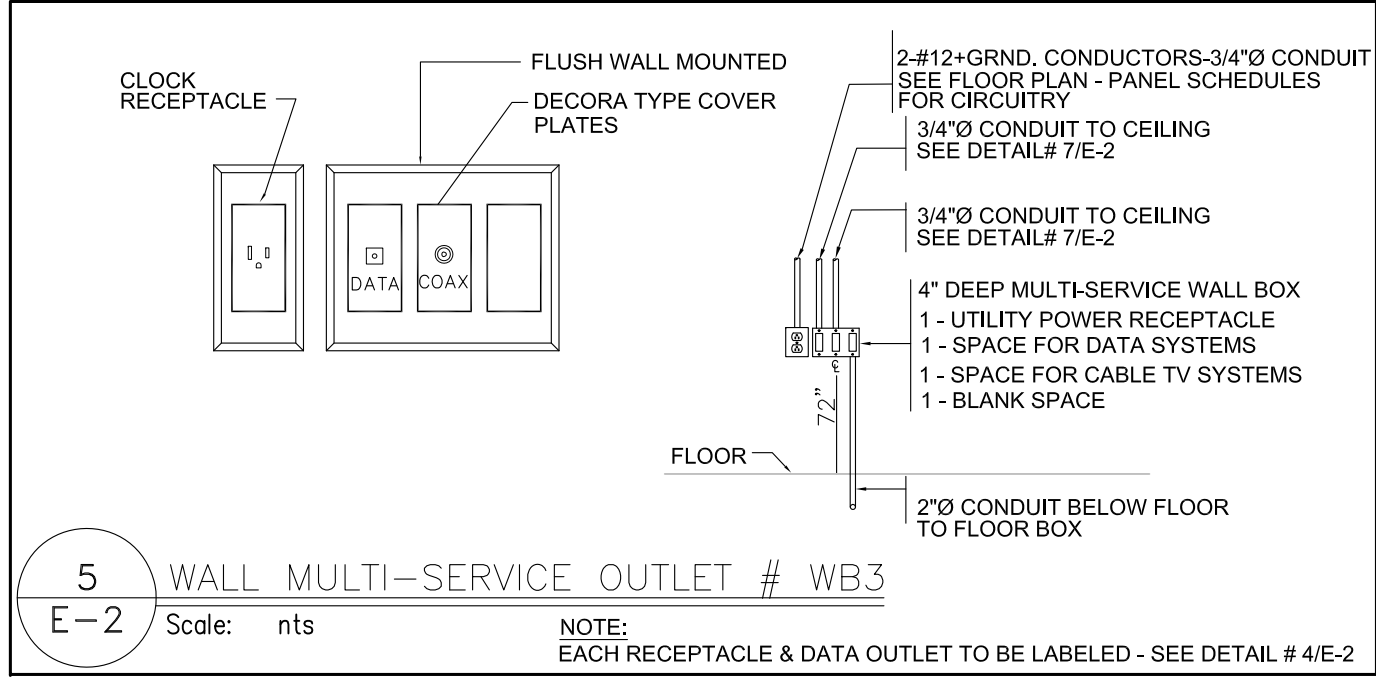
2 WALL MULTI-SERVICE OUTLET # WB1
E-2 Scale: NTS
NOTE: EACH RECEPTACLE & DATA OUTLET TO BE LABELED - SEE DETAIL # 4/E-2



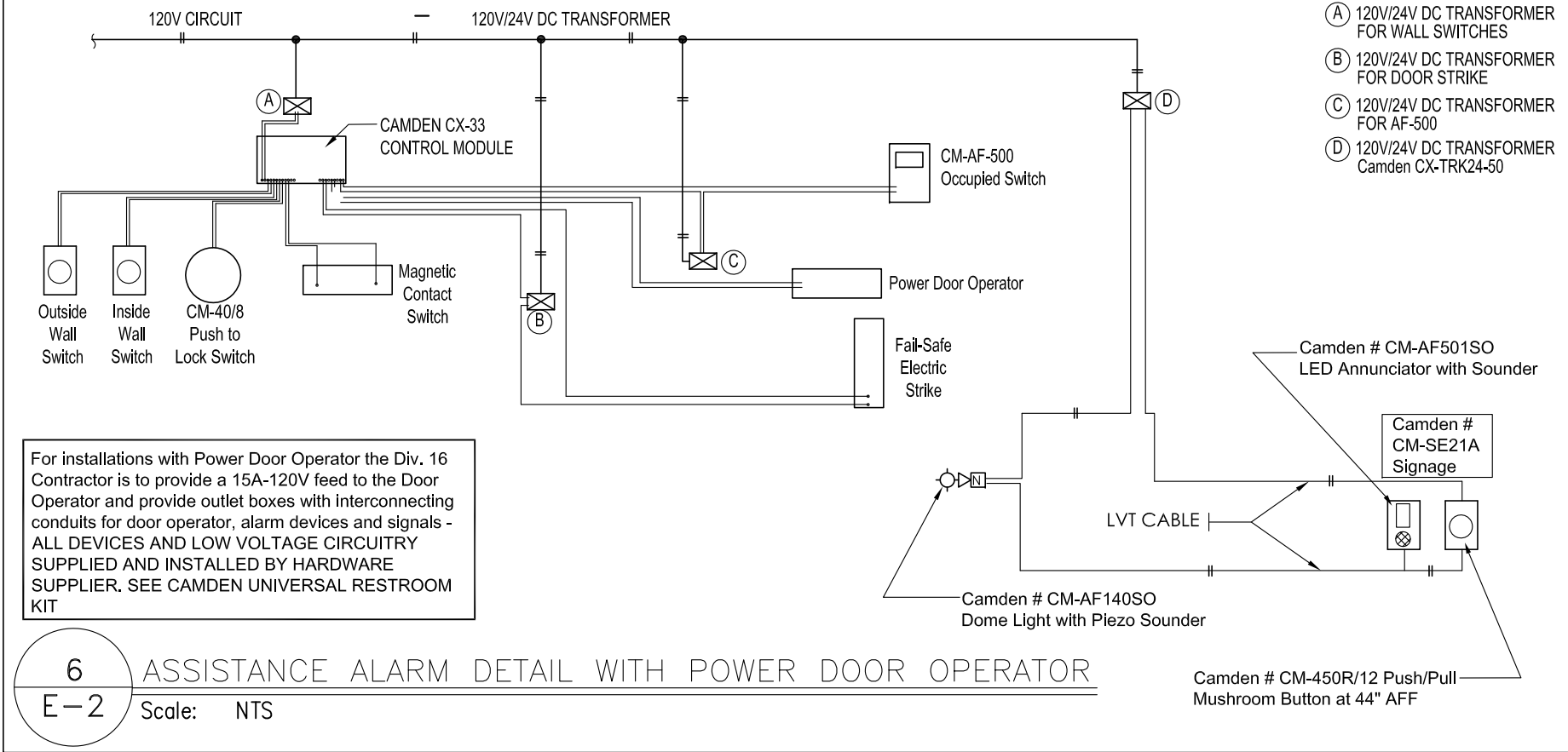
3 WALL MULTI-SERVICE OUTLET # WB2
E-2 Scale: nts
NOTE: EACH RECEPTACLE & DATA OUTLET TO BE LABELED - SEE DETAIL # 4/E-2



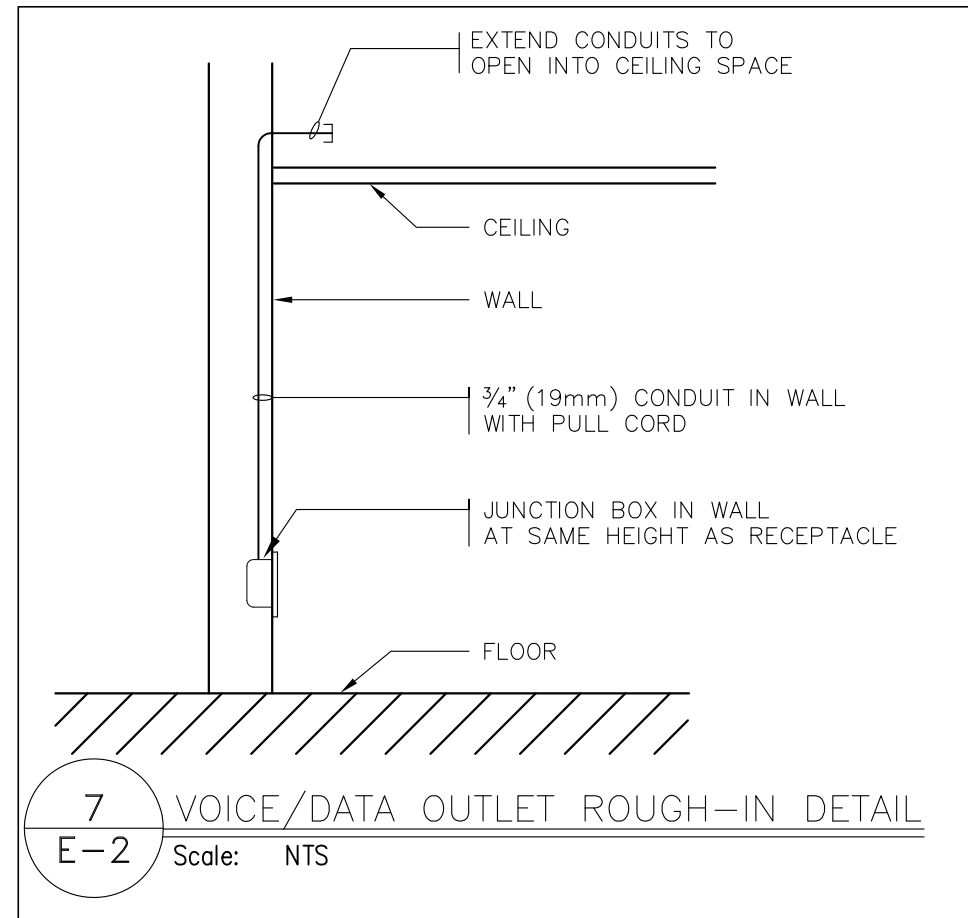
4 RECEPTACLE/DATA OUTLET IDENTIFICATION
E-2 Scale: nts



5 WALL MULTI-SERVICE OUTLET # WB3
E-2 Scale: nts
NOTE: EACH RECEPTACLE & DATA OUTLET TO BE LABELED - SEE DETAIL # 4/E-2



6 ASSISTANCE ALARM DETAIL WITH POWER DOOR OPERATOR
E-2 Scale: NTS



7 VOICE/DATA OUTLET ROUGH-IN DETAIL
E-2 Scale: NTS

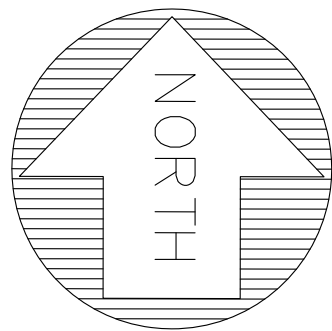
ELECTRIC HEATER SCHEDULE						
REF. #	TYPE	SIZE	MOUNTING	ELECTRICAL	STANDARD OF ACCEPTANCE	REMARKS
FF-1	FAN FORCED	23" High 16" Wide 4.5" Deep	WALL SURFACE	3000 W @ 208/1/60	OUTLET # OAC03000 OAC-BS1 Mounting Box Built in Thermostat	

8 ELECTRIC HEATER SCHEDULE
E-2 Scale: NTS

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1 Issued for Tender

Date:
December 5, 2023
January 2, 2024



PROFESSIONAL STAMP
REGISTERED PROFESSIONAL ENGINEER
4252
K.G. LANG
January 2, 2024

kle

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2022 OFFICE ADDITION
ESPANOLA PUBLIC WORKS BUILDING
596 2nd Avenue, Espanola, Ontario
ELECTRICAL SYSTEM DETAILS

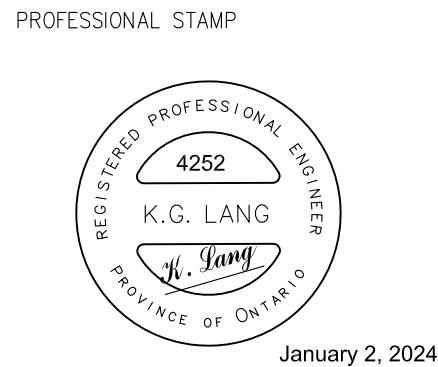
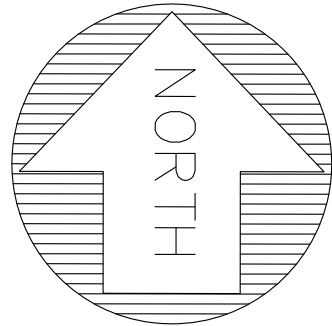
Date: November 2022
Scale: As Noted
Drawn by: M.A. Checked by: K.L.
Project No.: 4252
Drawing No.: E-2

Rev.1

KLE 4252 PAPER SIZE: 36" x 24" = P01, 1/8" = 1'-0"

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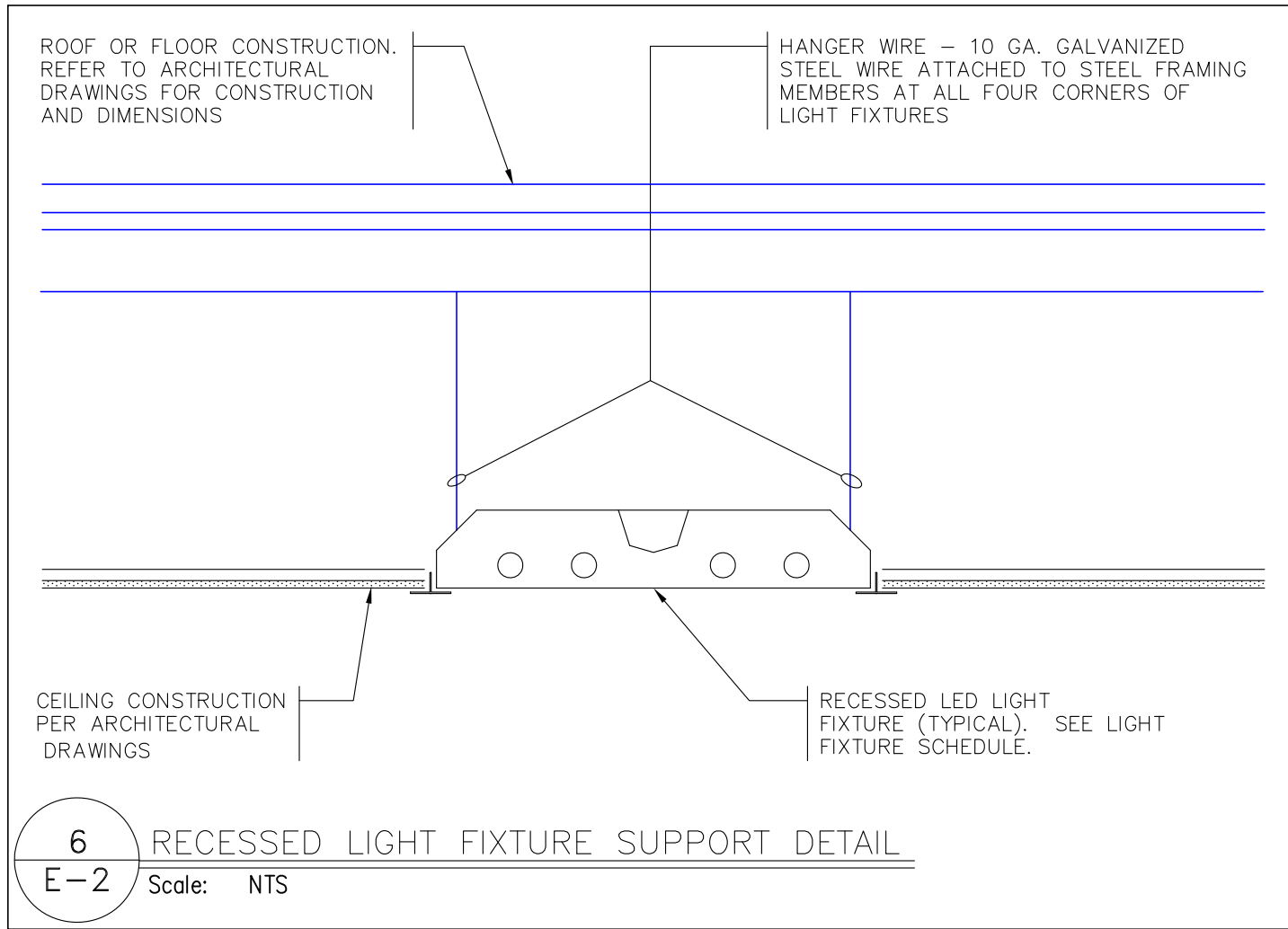
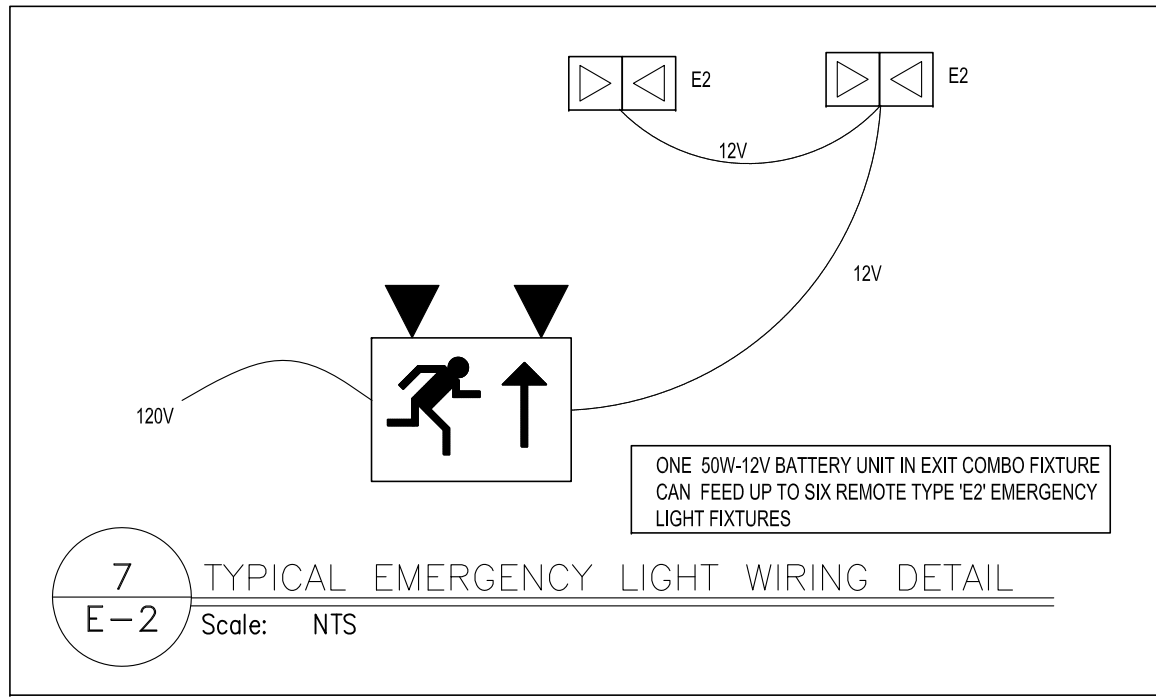
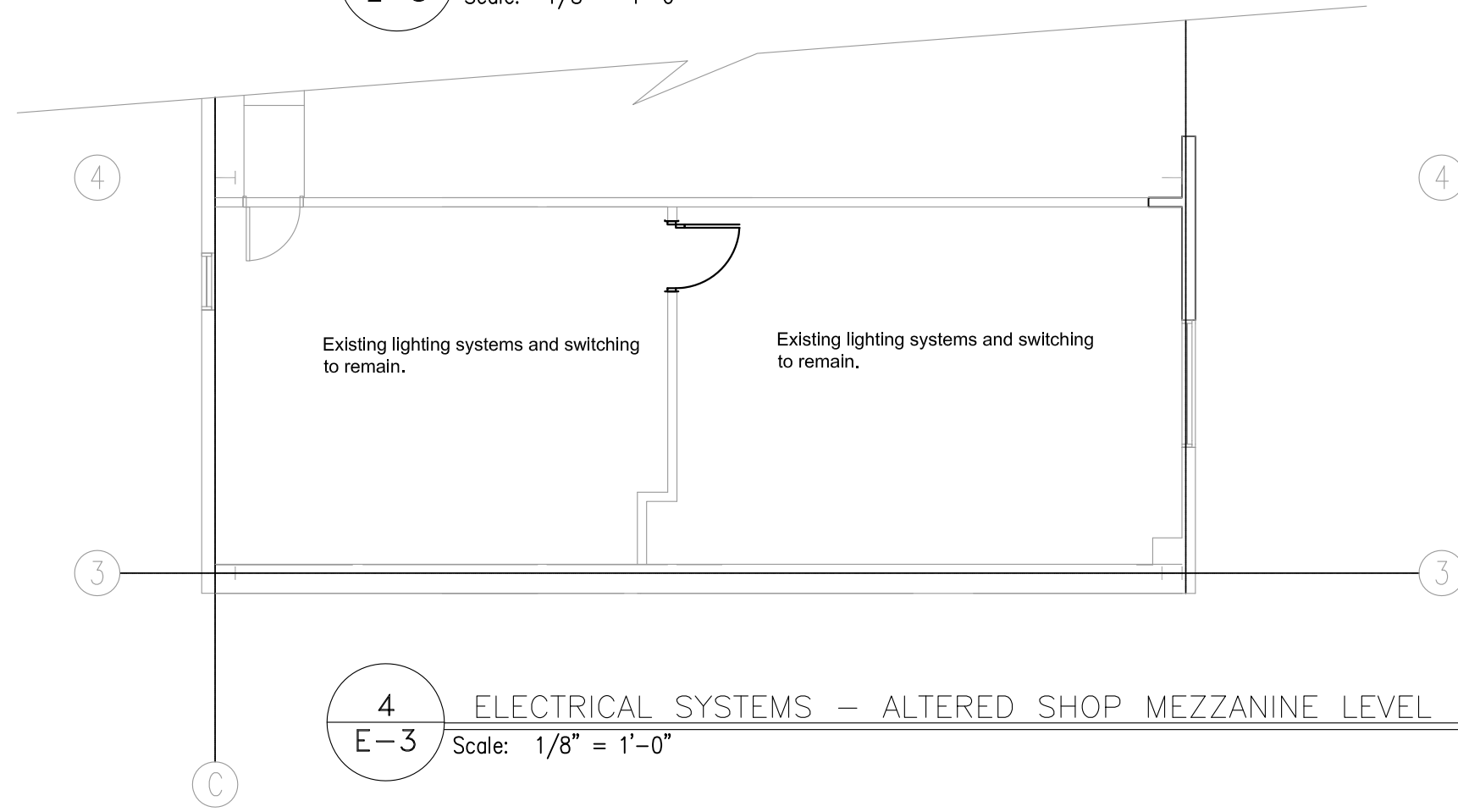
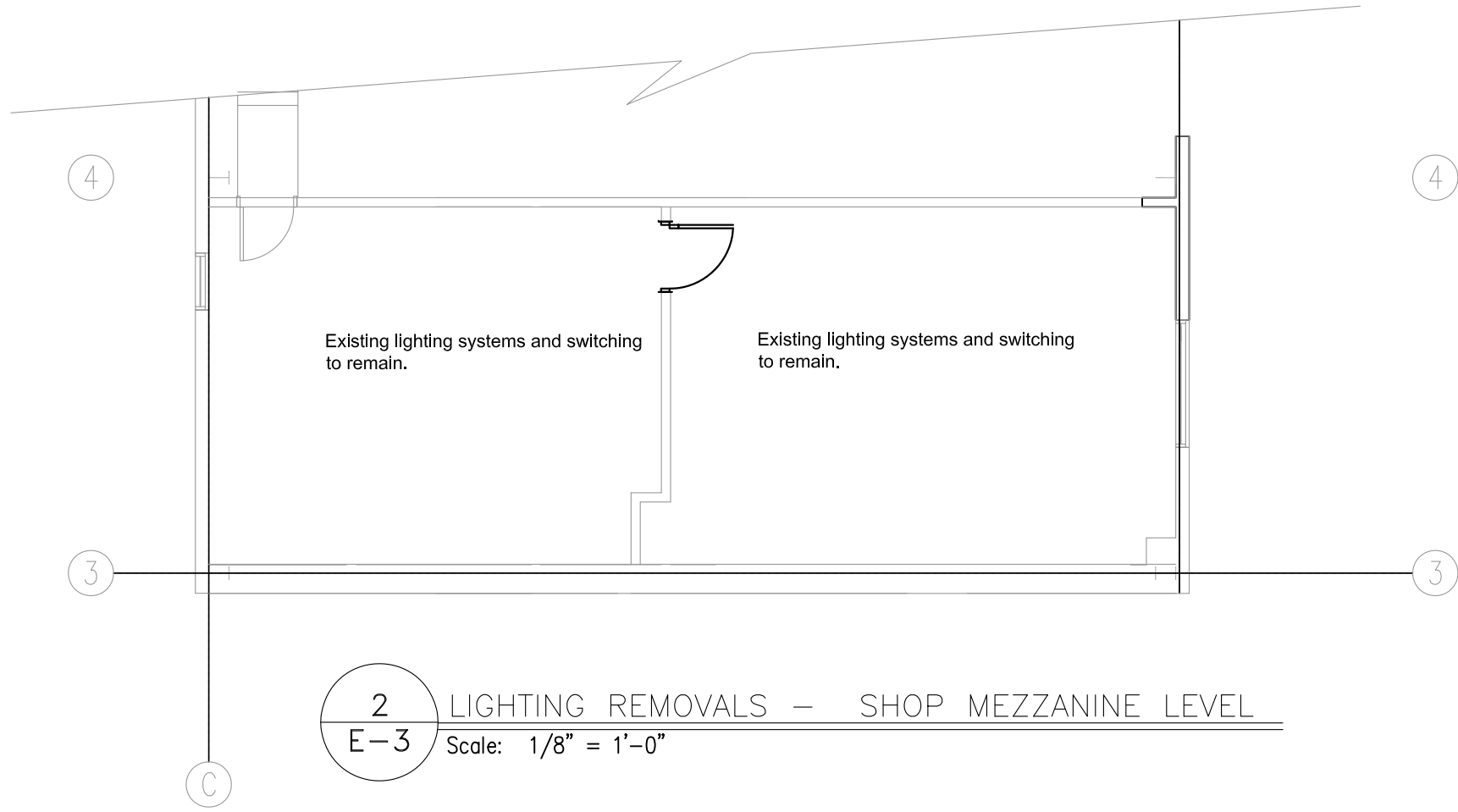
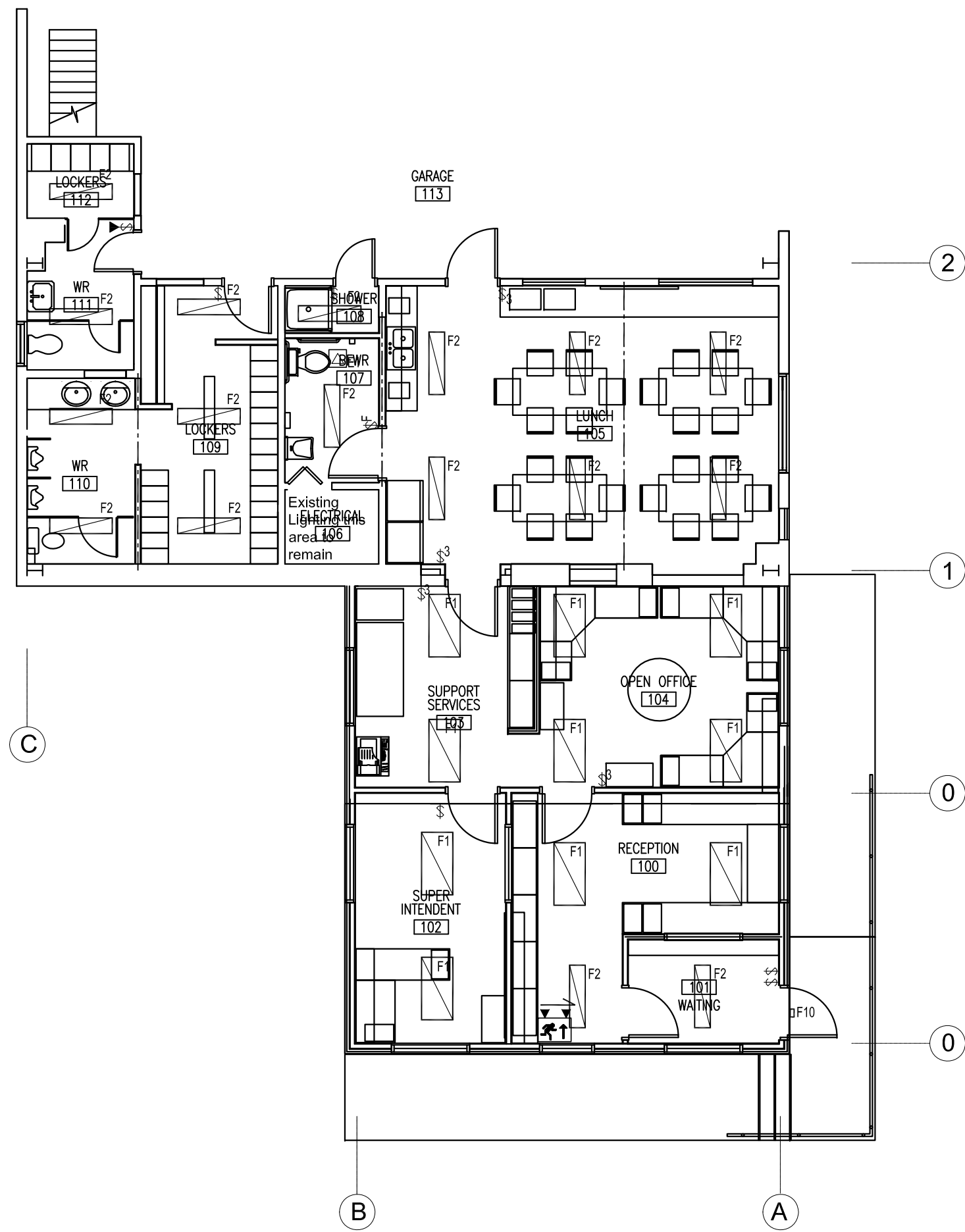
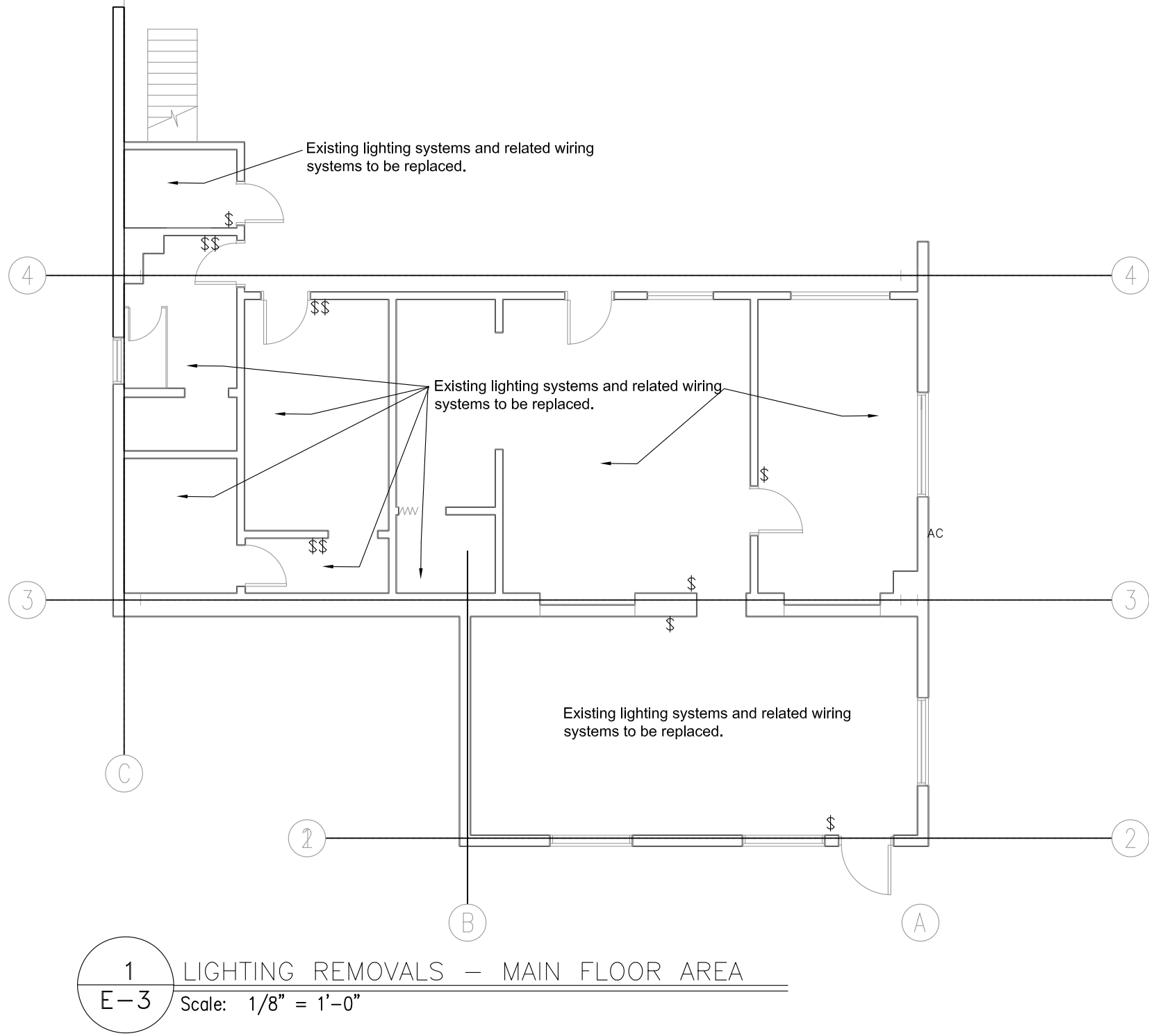


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2022 OFFICE ADDITION
ESPANOLA PUBLIC WORKS BUILDING
596 2nd Avenue, Espanola, Ontario
LIGHTING SYSTEMS

Date: November 2022
Scale: As Noted
Drawn by: M.A. Checked by: K.L.
Project No.: 4252
Drawing No.: **E-3**

Rev.1



LIGHT FIXTURE SCHEDULE							
FIXTURE #	AREA SERVED	TYPE	MOUNTING	NOMINAL SIZE	VOLTAGE	STD. OF ACCEPTANCE	
F1	STAFF ROOM	LED	SURFACE MOUNT	24" x 48"	38.8 W 120 V 4268 Lumens	COOPER LIGHTING # 24CGT4535C c/w #CGTSURF24	
F2	GENERAL	LED	SURFACE MOUNT	12" x 48"	38.4 W 120 V 4199 Lumens	COOPER LIGHTING # 14CGT4035C c/w #CGTSURF14	
F10	EXTERIOR MAIN DOORS	LED	WALL MOUNT	5.75" x 3.625" x 6.75"H	18 W 120 V	COOPER LIGHTING # XTOR2B-PC1	
E1	EMERGENCY-EXIT	LED	UNIVERSAL	-	2 @ 6 W	LUMACELL # LAC-1W-1250-2LD10	
E2	EMERGENCY	LED	UNIVERSAL	-	1 @ 6 W	LUMACELL # MOM-1-LD10	
E2	EMERGENCY	LED	UNIVERSAL	-	2 @ 6 W	LUMACELL # MOM-2-LD10	
EXIT	DIRECTIONAL EXIT	LED	UNIVERSAL	-		LUMACELL # LA-2W-U	

5 LIGHT FIXTURE SCHEDULE
E-3 Scale: NTS