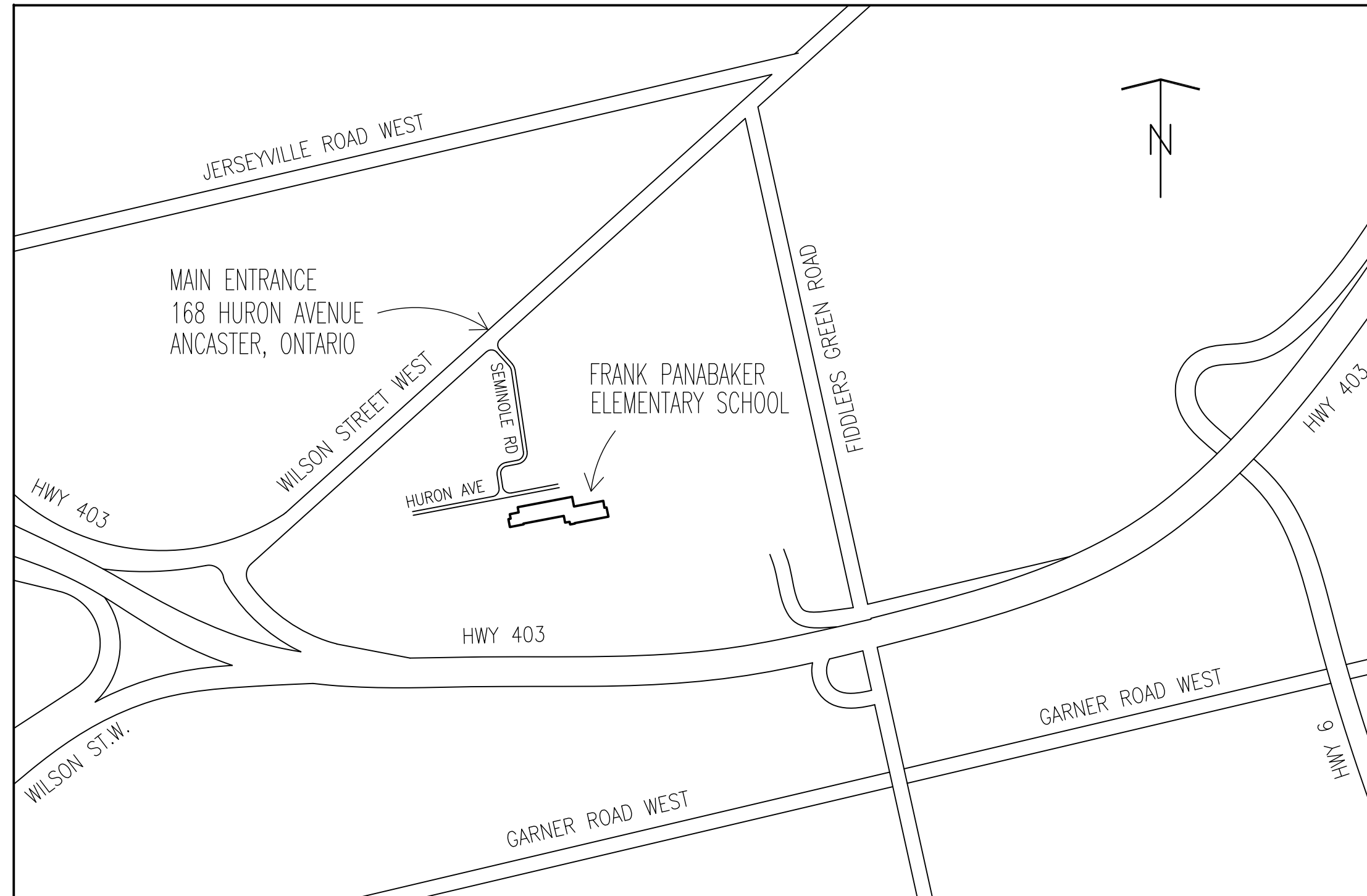


ABBREVIATIONS	
@	- AT
&	- AND
C	- CENTRE LINE
A.C.	- ACOUSTIC
ALUM.	- ALUMINUM
APPROX.	- APPROXIMATE(LY)
AT	- ACOUSTIC TILE
BARR.	- BARRIER
BD.	- BOARD
C.J.	- CONTROL JOINT
C/W	- COMPLETE WITH
CAR.	- CARPET
CEIL.	- CEILING
CL	- CENTRE LINE
CER.	- CERAMIC
CONC.	- CONCRETE
DB	- DISPOSAL BAG UNITS
DN	- DOWN
ELEC.	- ELECTRICAL
FIN.	- FINISH(ED)
FL.	- FLOOR
GL	- GLAZING
GR.	- GRADE
GY.	- GYPSIUM
HD.	- ELECTRIC HAND DRYER
H.DG.	- HOT DIPPED GALVANIZED
H.M.	- HOLLOW METAL
HR.	- HOUR
H.S.S.	- HOLLOW STRUCTURAL SECTION
H.W.	- HOT WATER
MAX.	- MAXIMUM
MECH.	- MECHANICAL
MIN.	- MINIMUM
N.B.C.	- NATIONAL BUILDING CODE
(N.I.C.)	- NOT IN CONTRACT
O.B.C.	- ONTARIO BUILDING CODE
O.C.	- ON CENTRE
O.W.S.J.	- OPEN WEB STEEL JOISTS
P.G.W.G.	- POLISHED GEORGIAN WIRE GLASS
PT.	- PAPER TOWEL DISPENSER
P.V.C.	- POLY VINYL CHLORIDE
PLY.	- PLYWOOD
P.LAM.	- PLASTIC LAMINATE
POLY.	- POLYETHYLENE
Q.T.	- QUARRY TILE
R.D.	- ROOF DRAIN
R.W.L.	- RAIN WATER LEADER
RCB	- RUBBER COVE BASE
REV.	- REVERSED
SD.	- SOAP DISPENSER
S.P.F.	- SPRUCE PINE FIR
SIM.	- SIMILAR
TYP.	- TYPICAL
U/S	- UNDERSIDE
V.A.T.	- VINYL ASBESTOS TILE
V.C.T.	- VINYL COMPOSITE TILE
V.R.T.	- VINYL REINFORCED TILE
VAP.	- VAPOUR
E.J.	- EXPANSION JOINT

**RICHARD G BUTTERWORTH ARCHITECT INC.**  
 CERTIFICATE OF PRACTICE NUMBER: 1409  
 127 JUDITH CRESCENT, ANCASTER, ON L9G 1L3  
 905-304-0241  
 THE CERTIFICATE OF PRACTICE NUMBER  
 OF THE HOLDER IS THE HOLDER'S BCIN.  
**NAME OF PROJECT:**  
**FRANK PANABAKER ELEMENTARY SCHOOL**  
**NORTH CAMPUS**  
**LOCATION:**  
 168 HURON AVENUE  
 ANCASTER, ONTARIO L9G 1V1

ONTARIO BUILDING CODE PART 11 REVIEW MATRIX			
PROJECT DESCRIPTION: BASIC RENOVATION TO FRANK PANABAKER ELEMENTARY SCHOOL - NORTH CAMPUS			
AGE OF BUILDING (YEARS):	67	ANY ADDITION:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
AGE OF ADDITION (YEARS):	N/A	WILL ADDITION BE AFFECTED:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
CONSTRUCTION INDEX: TABLE 11.2.1.1. A.	N/A	HAZARD INDEX (OLD): TABLE 11.2.1.1.J.	N/A
NUMBER OF STOREYS:	UNCHANGED	HAZARD INDEX (NEW): TABLE 11.2.1.1.	N/A
HEIGHT OF BUILDING (m):	UNCHANGED	HAZARD INDEX CREDIT APPLICABLE: TABLE 11.2.1.1. (2)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NUMBER OF STREETS:	1	FARM BUILDING: TABLE 11.4.2.3. (1)(c)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
STRUCTURAL UPGRADING REQUIRED: TABLE 11.4.2.1.1.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	COMPLIANCE ALTERNATIVE NUMBER: TABLE 11.5.1.1.	N/A
TYPE OF CONSTRUCTION:	<input type="checkbox"/> COMBUSTABLE <input checked="" type="checkbox"/> NON-COMBUSTABLE <input type="checkbox"/> HEAVY TIMBER		
EARLY WARNING AND EVACUATION SYSTEM UPGRADE REQUIRED: TABLE 11.3.3.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

BUILDING DETAILS	EXISTING	PROPOSED
MAJOR OCCUPANCY CLASSIFICATIONS: TABLE 3.1.2.1.	GROUP A DIVISION 2	GROUP A DIVISION 2
OCCUPANCY LOAD DETERMINATION: TABLE 3.1.16.1 (3.1.17.1 CORRECTED)	418	418
FRR FLOORS OVER BASEMENT (HOURS):	N/A	N/A
FRR OTHER FLOORS (HOURS):	N/A	N/A
FRR ROOF (HOURS):	N/A	N/A
NUMBER OF SUITES OF GROUP C: OCCUPANCY 11.4.2.3. (1)(b)	N/A	N/A
AREA OF BUILDING (RENOVATION) (SQ.M.):	229	229
BUILDING SPRINKLERED:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FIRE ALARM SYSTEM REQUIRED:	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

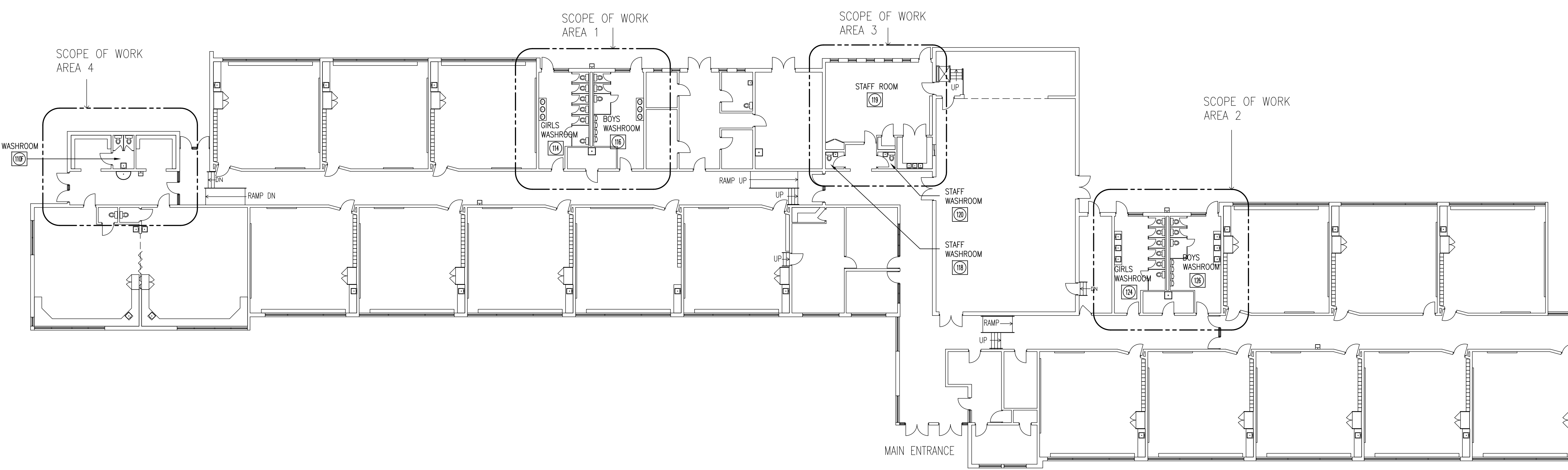


- GENERAL NOTES**
- BEFORE COMMENCING THE WORK THE CONTRACTOR SHALL ASCERTAIN ALL CONDITIONS AFFECTING THE SITE AND WORK TO BE DONE THEREON. THE DOCUMENTS ARE FURNISHED IN GOOD FAITH FOR THE GUIDANCE OF THE CONTRACTOR, BUT SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ASCERTAINING, TO THEIR SATISFACTION, THE NATURE OF ALL CONDITIONS ON THE SITE.
  - REPORT TO THE OWNER ALL DISCREPANCIES, OMISSIONS, ERRORS, DEPARTURES FROM ALL APPLICABLE CODES, BY-LAWS AND REGULATIONS, GOOD PRACTICE AND ANY POINTS CONSIDERED TO BE OF DUBIOUS INTENT PRIOR TO THE QUESTION PERIOD DEADLINE, SO THAT THE OWNER MAY IF CONSIDERED DESIRABLE, ISSUE INSTRUCTIONS BY ADDENDA. THE OWNER AND ARCHITECT WILL NOT BE RESPONSIBLE FOR ORAL INSTRUCTIONS.
  - ALL DIMENSIONS AND INFORMATION SHOWN ON THE CONTRACT DRAWINGS MUST BE CHECKED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION AND FABRICATION OF ITS COMPONENTS. SHOULD EXISTING CONDITIONS OR SERVICES BE FOUND TO VARY FOR THAT INDICATED ON THE CONTRACT DRAWINGS, THE ARCHITECT MUST BE NOTIFIED IMMEDIATELY.
  - ALL CUTTING AND PATCHING BY GENERAL CONTRACTOR. MAKE GOOD ALL SURFACES TO MATCH EXISTING FLUSH.
  - REMOVE ALL EXISTING ITEMS SHOWN DOTTED AS INDICATED ON DRAWINGS. MAKE GOOD ALL SURFACES TO MATCH EXISTING. PATCH ALL HOLES FLUSH WITH EXISTING SURFACES AND PAINT TO MATCH.
  - PAINT ALL NEW AND EXISTING SURFACES AND ITEMS WITH COLOUR BLOCK PRIMER FOR OIL BASED PAINT AND 2 FINISHED COATS (TYP.)
  - DO NOT SCALE THE DRAWINGS.

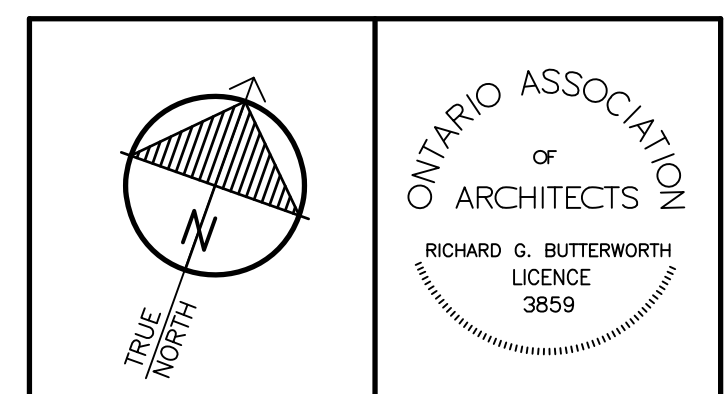
**WASHROOM FIXTURE CALCULATIONS**

FIXTURES REQUIRED (OBC)	FIXTURES EXISTING	FIXTURES PROVIDED
MALE = 209 / 30 = 7 FIXTURES	MALE = 17 FIXTURES	MALE = 17 FIXTURES
FEMALE = 209 / 26 = 8 FIXTURES	FEMALE = 15 FIXTURES	FEMALE = 14 FIXTURES

1 SITE KEY PLAN AND O.B.C. MATRIX AND GENERAL NOTES  
 A0.01 N.T.S.



2 GROUND FLOOR KEY PLAN  
 A0.01 N.T.S.



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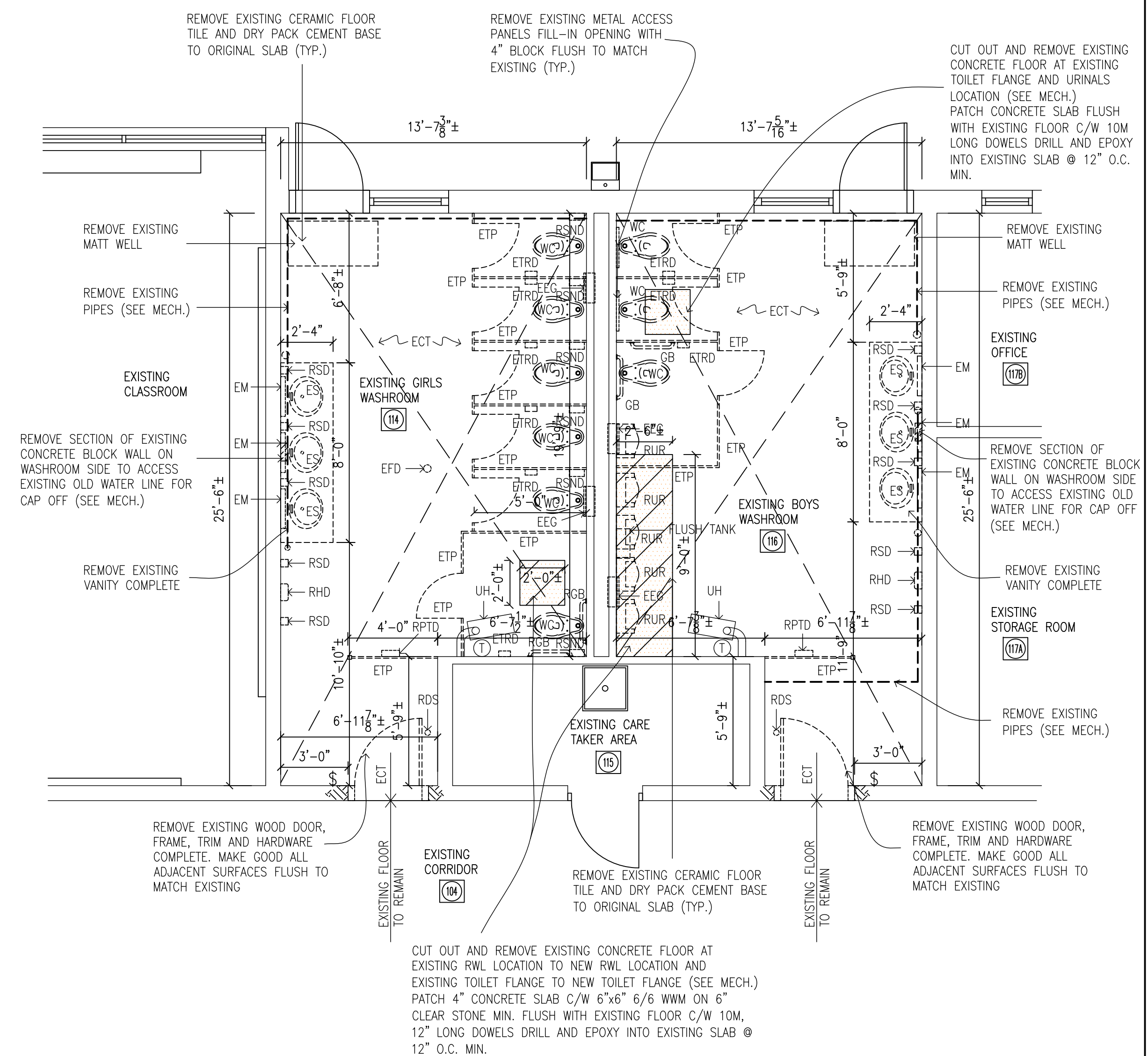
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2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
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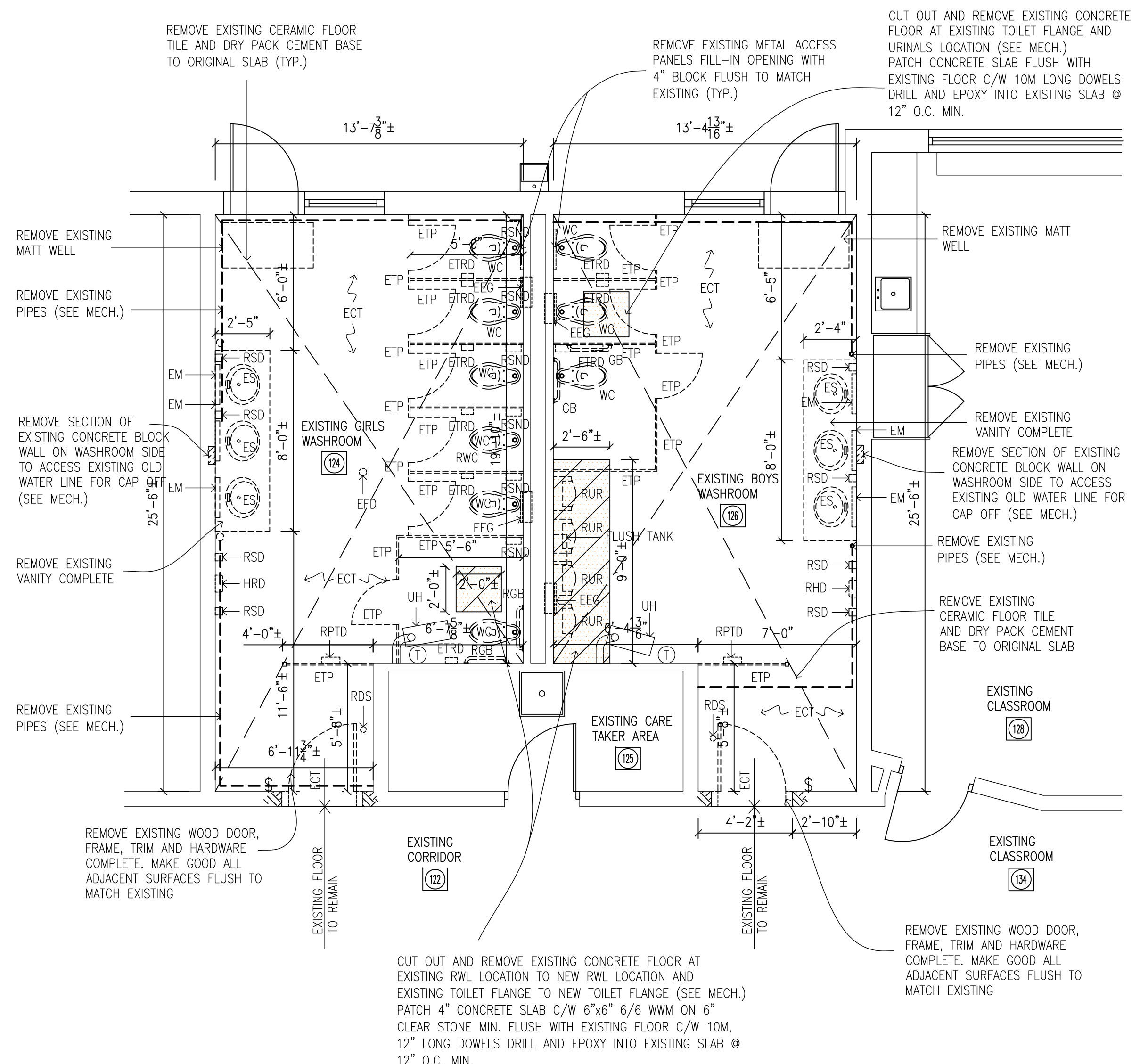
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OBC MATRIX, LEGEND & GENERAL NOTES AND KEY PLANS

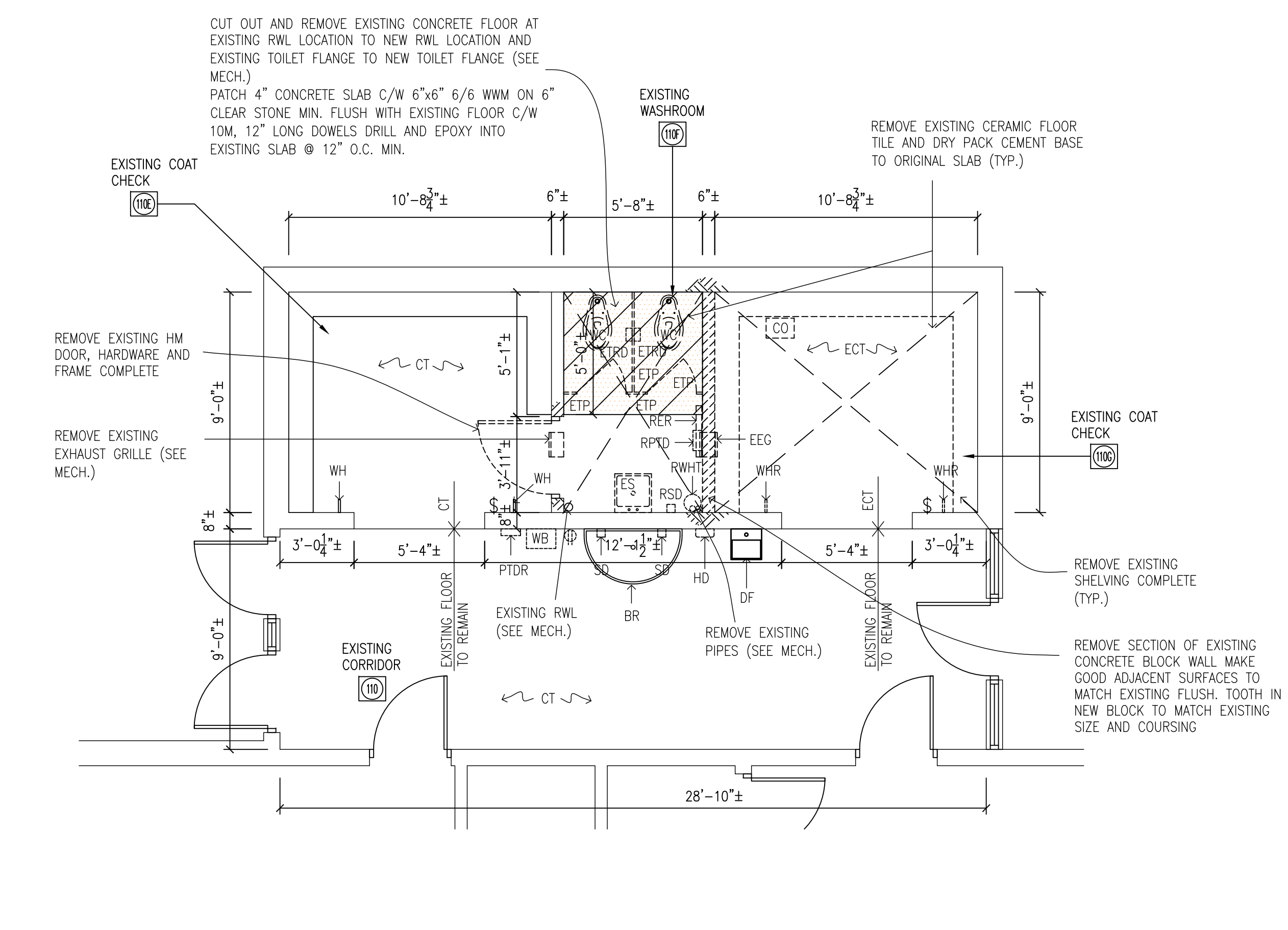
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MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
N.T.S.	A0.01



1 PARTIAL FIRST FLOOR PLAN - DEMOLITION AREA 1  
A1.01 1/4"=1'-0"

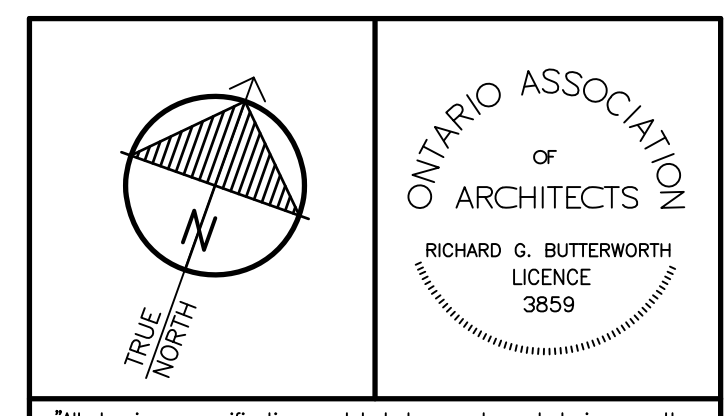


2 PARTIAL FIRST FLOOR PLAN - DEMOLITION AREA 2  
A1.01 1/4"=1'-0"



3 PARTIAL FIRST FLOOR PLAN - DEMOLITION AREA 3  
A1.01 1/4"=1'-0"

- DEMOLITION LEGEND**
- C - EXISTING CONDUIT TO REMAIN (SEE ELEC.)
  - CO - EXISTING SLUMP PIT CLEANOUT (SEE MECH.)
  - CT - EXISTING CERAMIC FLOOR TILE TO REMAIN
  - ECT - REMOVE EXISTING CERAMIC FLOOR TILE
  - DF - EXISTING DRINKING FOUNTAIN TO REMAIN
  - HD - REMOVE EXISTING HAND DRYER (TURN OVER TO OWNER)
  - SD - EXISTING SMOKE DETECTOR TO REMOVE (TURN OVER TO OWNER)
  - RSND - REMOVE EXISTING SANITARY NAPKIN DISPOSAL
  - ES - EXISTING SINK, FAUCET REMOVE COMPLETE (SEE MECH.)
  - EML - REMOVE EXISTING EMERGENCY OR LIGHT FIXTURE (SEE ELEC.)
  - ELF - EXISTING LIGHT FIXTURE TO BE REMOVED (SEE ELEC.)
  - EEG - REMOVE EXISTING EXHAUST GRILLE OR FAN AND DUCTWORK (SEE MECH.)
  - EM - REMOVE EXISTING MIRROR
  - ETP - EXISTING TOILET PARTITION WALLS, DOORS AND HARDWARE REMOVE
  - ETRD - REMOVE EXISTING TOILET ROLL DISPENSER (TURN OVER TO OWNER)
  - EWS - EXISTING WALL SIGN REMOVE
  - EGB - REMOVE EXISTING GRAB BAR AND RELOCATE TO NEW TOILET PARTITION
  - EFDS - REMOVE EXISTING FLOOR DOOR STOP
  - ECT - REMOVE EXISTING CERAMIC FLOOR TILE AND DRY PACK CEMENT BASE COMPLETE
  - M/SH - REMOVE EXISTING MIRROR AND SHELF
  - RBS - REMOVE EXISTING 17"± HIGH BACKSPLASH COMPLETE
  - RPTD - REMOVE AND RELOCATE EXISTING PAPER TOWEL DISPENSER (TURN OVER TO OWNER)
  - EFD - REMOVE EXISTING FLOOR DRAIN (SEE MECH.)
  - CO - EXISTING CLEANOUT TO REMAIN (SEE MECH.)
  - RGB - EXISTING GRAB BAR TO BE REMOVED
  - RBS - REMOVE EXISTING BACKSPLASH COMPLETE
  - RSD - EXISTING SOAP DISPENSER TO BE REMOVED (TURN OVER TO OWNER)
  - BR - EXISTING BRADLEY WASH FOUNTAIN TO REMAIN (SEE MECH.)
  - RSD - REMOVE EXISTING SOAP DISPENSER (TURN OVER TO OWNER)
  - RWB - REMOVE EXISTING WASTE BIN (TURN OVER TO OWNER)
  - RUR - REMOVE EXISTING URINAL FLOOR TYPE (SEE MECH.)
  - RFT - REMOVE EXISTING FLUSH TANK (SEE MECH.)
  - RER - REMOVE EXISTING RAD (SEE MECH.)
  - RHD - REMOVE AND RELOCATE EXISTING ELECTRICAL HAND DRYER (SEE ELEC.)
  - RHWT - REMOVE EXISTING HOT WATER TANK AND SUPPORTS (SEE MECH.)
  - RVAT - REMOVE EXISTING VINYL, TILE, AND ADHESIVE (SEE ABATEMENT) GRIND BACK EXISTING CONCRETE AT DOORS TO CREATE A FLUSH FINISH WITH NEW TERRAZZO FLOORING
  - UH - EXISTING UNIT HEATER TO REMAIN (SEE MECH.)
  - WC - REMOVE EXISTING WATER CLOSET (SEE MECH.)
  - WH - EXISTING HOOK TO REMAIN
  - WHR - REMOVE EXISTING HOOK
  - VAT - EXISTING VINYL TILE TO REMAIN
  - Ⓣ - EXISTING THERMOSTAT TO REMAIN OR BE REMOVED (SEE MECH.)
  - Ⓢ - EXISTING SWITCH TO REMAIN OR BE REMOVED (SEE ELEC.)
  - Ⓡ - EXISTING RECEPTACLE TO REMAIN OR BE REMOVED (SEE ELEC.)
- DEMOLITION NOTES:**
- ① - THE WORD 'REMOVE' MEANS REMOVED FROM SITE UNLESS OTHERWISE NOTED.
  - INFILL CONCRETE FLOOR SLABS 15 MPa (2200 PSI) AT 28 DAYS SHADED SHOWN. 4" THICK C/W 6"x6" 6/6 W/M ON 6" CLEAR STONE MIN. C/W 10M, 12" LONG DOWELS DRILL AND EPOXY INTO EXISTING SLAB @ 12" O.C. MIN.



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- DEMOLITION LEGEND**
- REMOVE EXISTING ELEMENTS SHOWN DOTTED. MAKE GOOD ADJACENT SURFACES FLUSH TO MATCH EXISTING TOOTH IN BLOCK TO MATCH EXISTING COURSING AND SIZES (TYP.)
  - EXISTING ELEMENTS TO BE REMOVED MAKE GOOD ALL EXISTING SURFACES TO MATCH EXISTING FLUSH. TOOTH IN PATCH BLOCKS TO NEAREST FULL JOINTS.



**HWDSB**

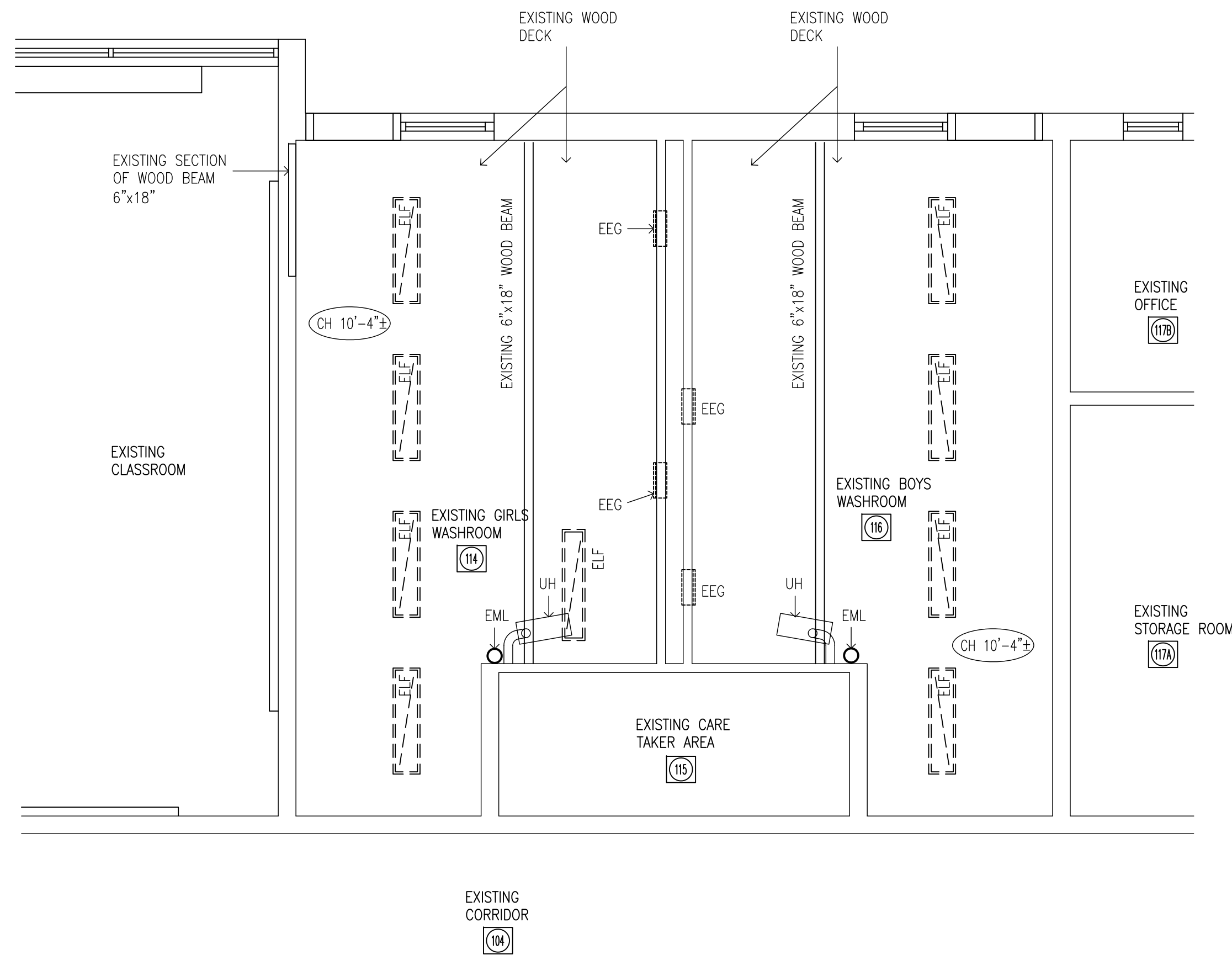
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2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB	
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB	

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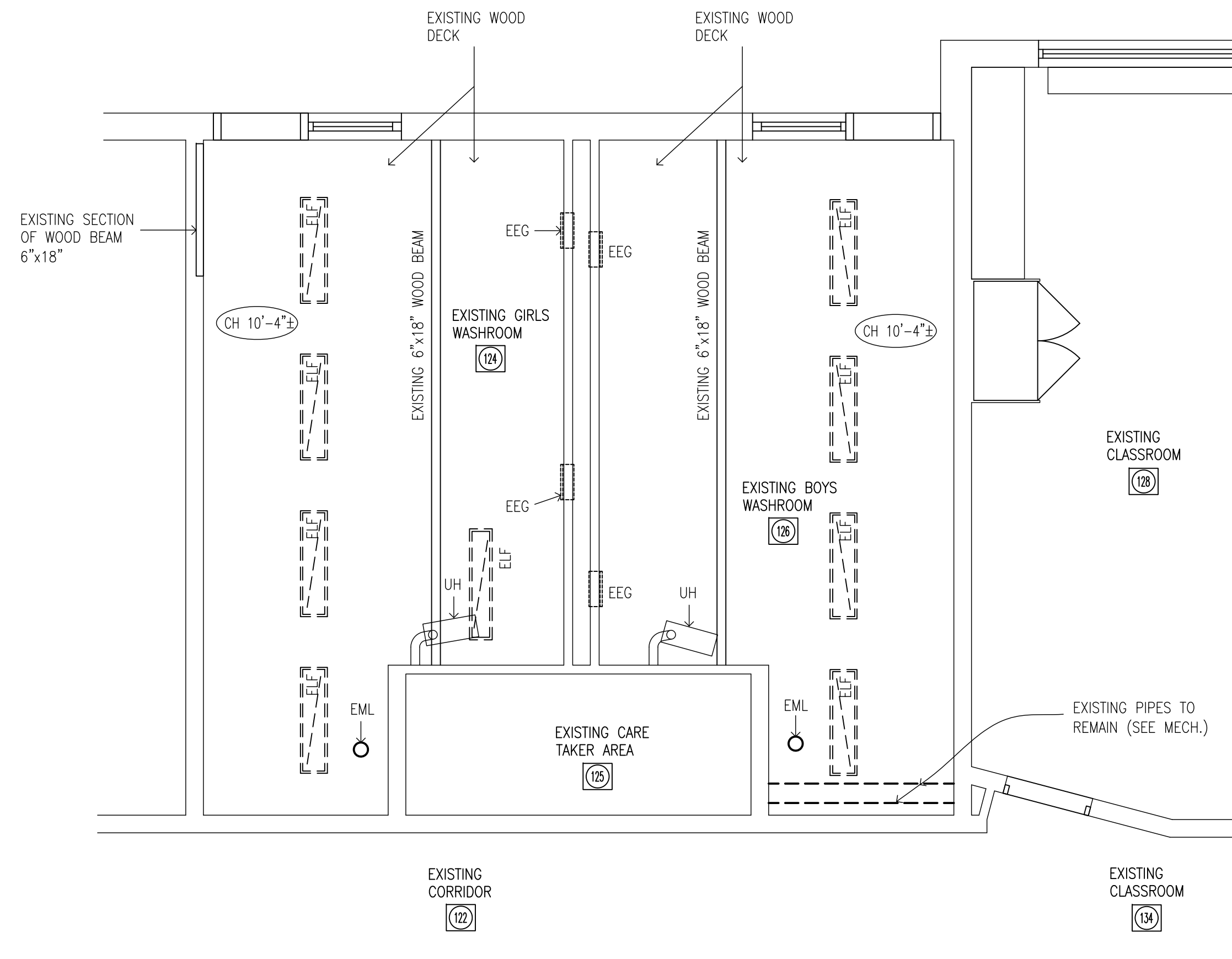
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NORTH CAMPUS RENOVATION  
HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD  
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ANCASTER, ONTARIO

**PARTIAL FIRST FLOOR PLAN**  
**DEMOLITION**

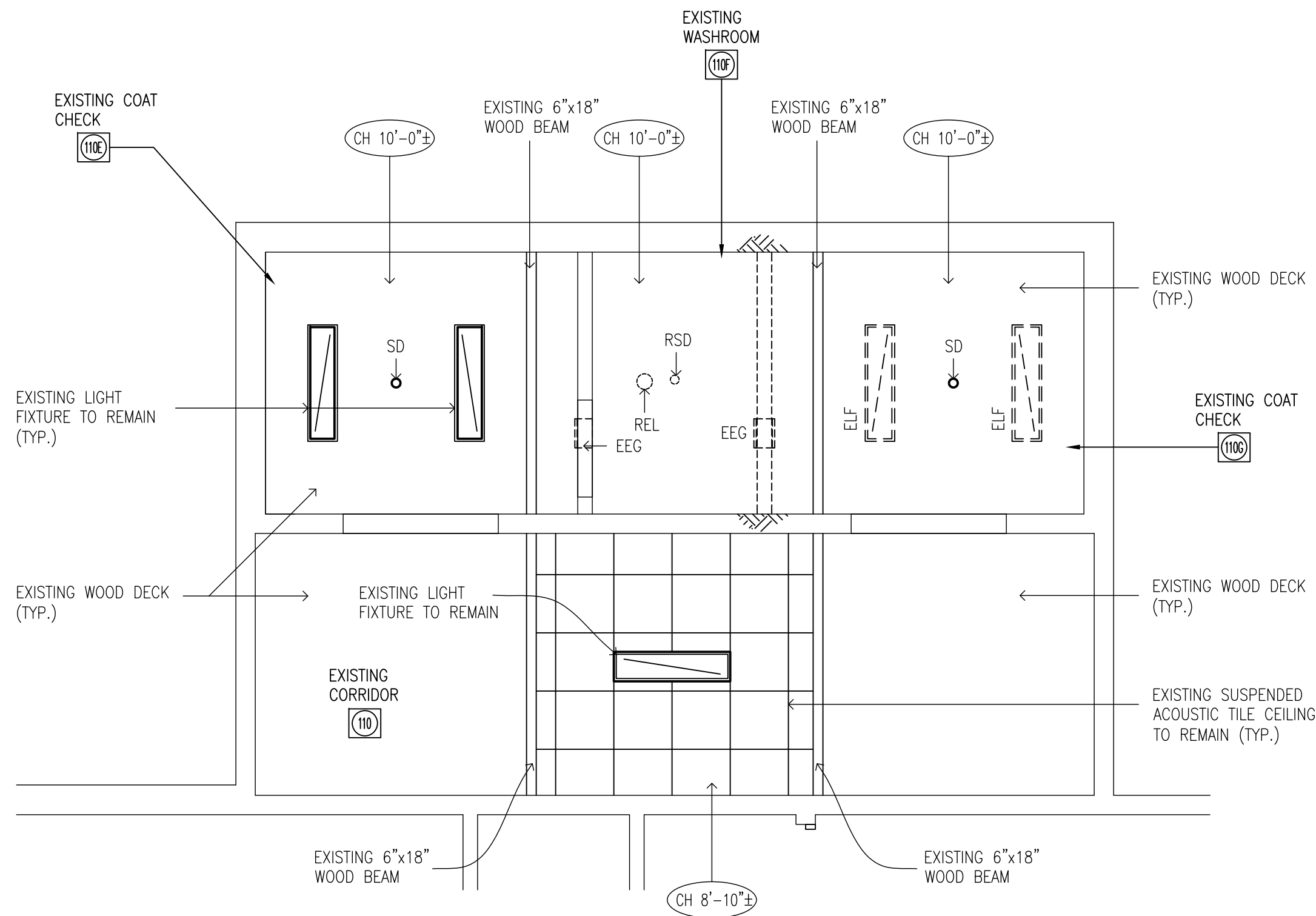
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DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
1/4"=1'-0"	A1.01



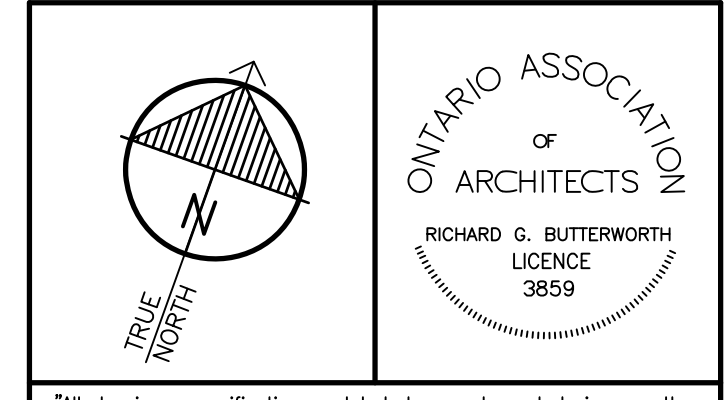
1 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION AREA 1  
A1.02 1/4"=1'-0"



2 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION AREA 2  
A1.02 1/4"=1'-0"



3 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - DEMOLITION AREA 4  
A1.02 1/4"=1'-0"



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- DEMOLITION LEGEND**
- ELF - EXISTING LIGHT FIXTURE TO BE REMOVED (SEE ELEC.)
  - EEG - REMOVE EXISTING EXHAUST GRILLE OR FAN AND DUCTWORK (SEE MECH.)
  - RSD - REMOVE EXISTING SMOKE DETECTOR (SEE ELEC.)
  - SD - EXISTING SMOKE DETECTOR TO REMAIN (SEE ELEC.)
  - REL - REMOVE EXISTING EMERGENCY LIGHT FIXTURE (SEE ELEC.)
  - EML - EXISTING EMERGENCY LIGHT FIXTURE TO REMAIN (SEE ELEC.)
  - UH - EXISTING UNIT HEATER TO REMAIN (SEE MECH.)

**DEMOLITION NOTES:**  
① - THE WORD 'REMOVE' MEANS REMOVED FROM SITE UNLESS OTHERWISE NOTED.

**HWDSB**

3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
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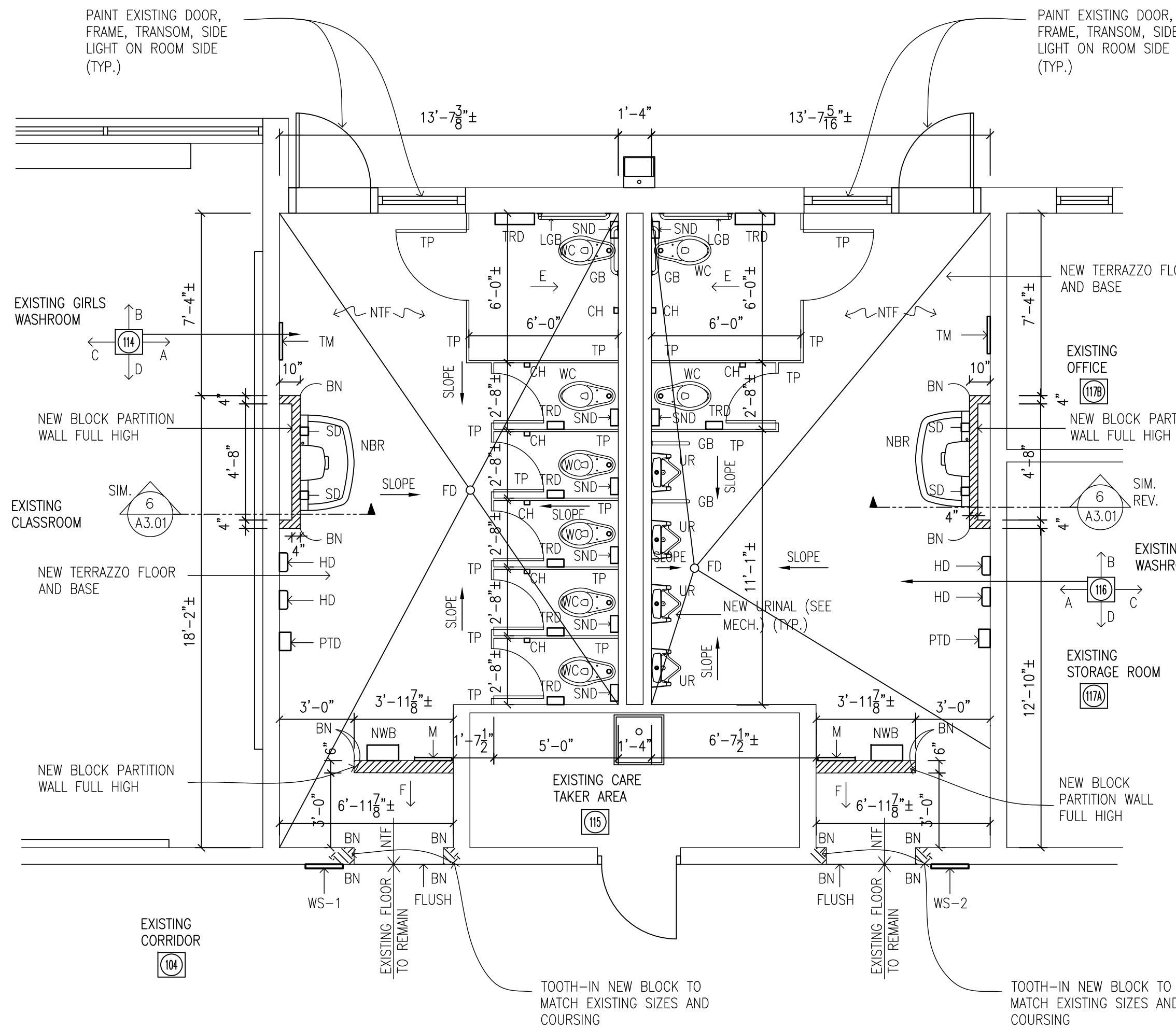
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PARTIAL FIRST FLOOR REFLECTED CEILING PLAN DEMOLITION

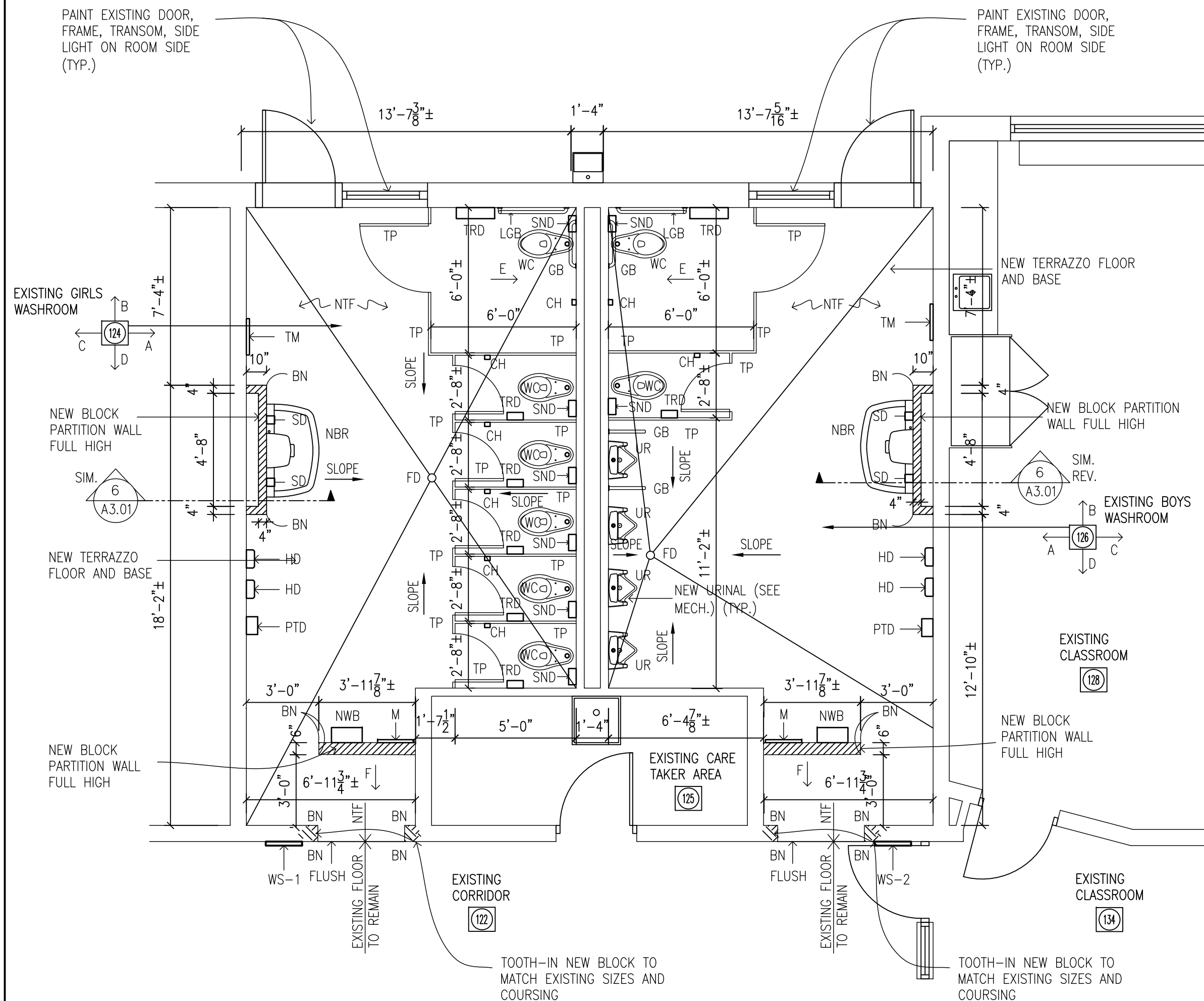
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DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
1/4"=1'-0"	A1.02

PLOT SCALE: 1/4"=1'-0"

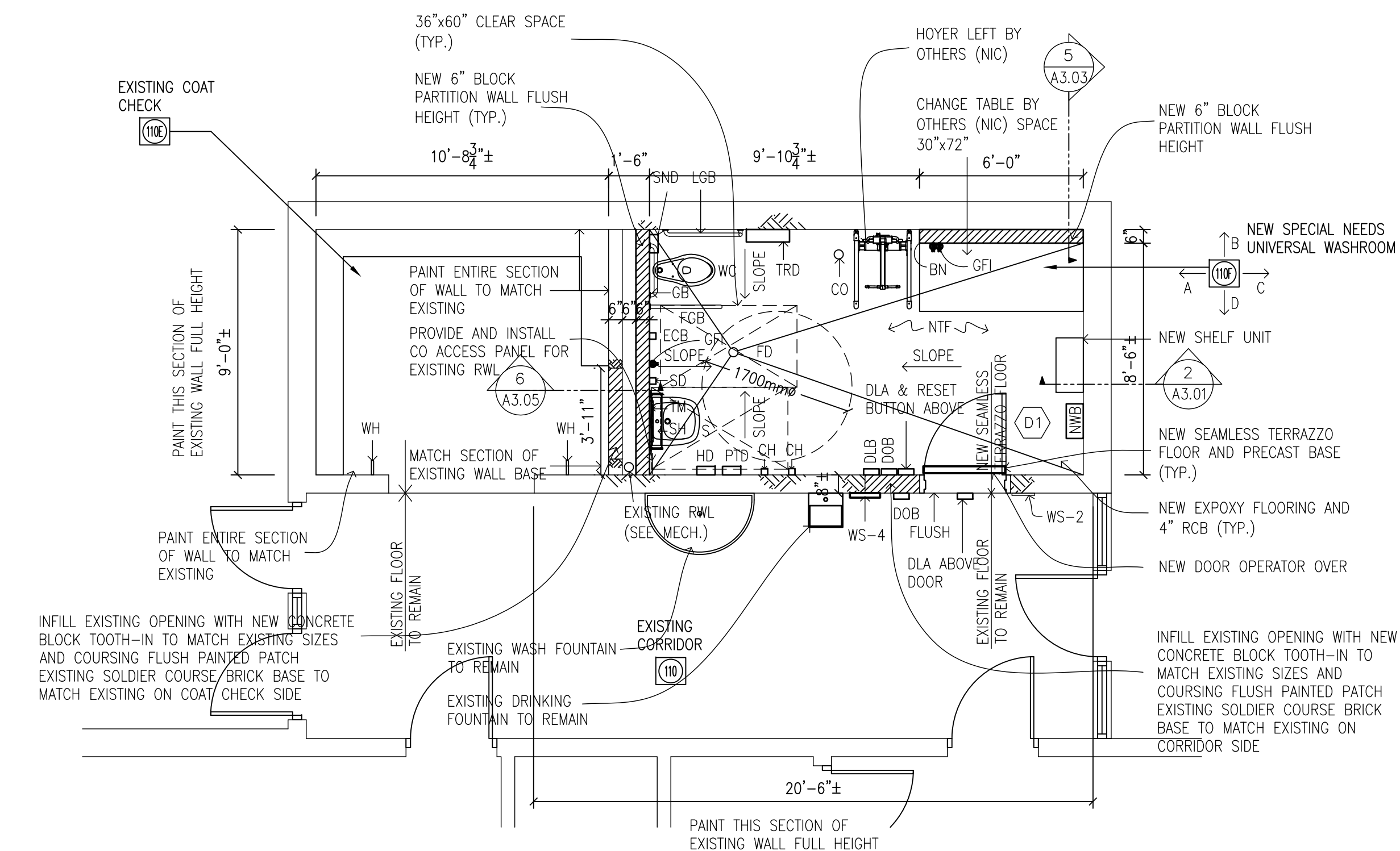




1 PARTIAL FIRST FLOOR PLAN - PROPOSED AREA 1  
A2.01 1/4"=1'-0"

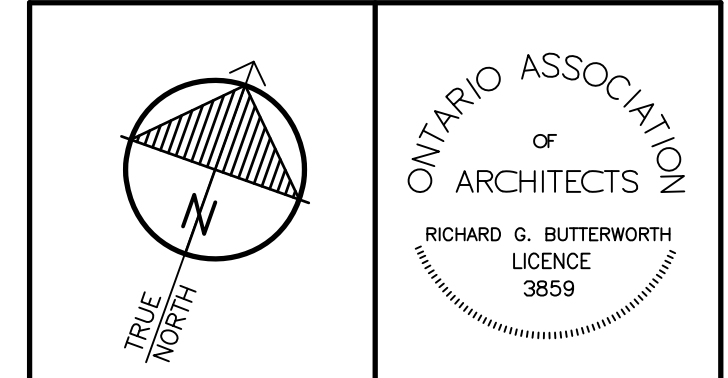


2 PARTIAL FIRST FLOOR PLAN - PROPOSED AREA 2  
A2.01 1/4"=1'-0"

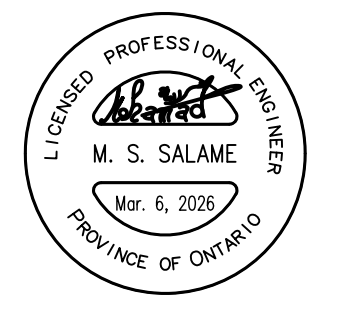


3 PARTIAL FIRST FLOOR PLAN - PROPOSED AREA 3  
A2.01 1/4"=1'-0"

- PROPOSED LEGEND**
- AP - 16"x16" ACCESS PANEL (SEE SPEC'S)
  - BN - METAL CORNER (SEE SPEC'S)
  - DOB - DOOR OPEN BUTTON (SEE ELEC. AND SPEC'S)
  - DLB - DOOR LOCK BUTTON (SEE ELEC. AND SPEC'S)
  - DIA - NEW AUDIBLE / VISUAL ALARM (SEE ELEC. AND SPEC'S)
  - ELB - NEW EMERGENCY CALL BUTTON (SEE ELEC. AND SPEC'S)
  - NBR - NEW WASH FOUNTAIN (SEE MECH.)
  - HD - NEW HAND DRYER (SEE ELEC.)
  - SP - 18"x36" STAINLESS STEEL SPLASH GUARD (SEE SPEC'S)
  - SD - EXISTING SMOKE DETECTOR TO REMAIN (SEE ELEC.)
  - SND - SANITARY NAPKIN DISPOSAL SUPPLIED BY OWNER (SEE SPEC'S)
  - S - NEW SINK, FAUCET (SEE MECH.)
  - EML - EXISTING EMERGENCY OR LIGHT FIXTURE TO REMAIN (SEE ELEC.)
  - LF - NEW LED LIGHT FIXTURE (SEE ELEC.)
  - EEG - EXISTING EXHAUST GRILLE TO REMAIN (SEE MECH.)
  - ECB - EMERGENCY CALL BUTTON (SEE SPEC'S)
  - M - NEW MIRROR (SEE SPEC'S)
  - TM - NEW TILT MIRROR (SEE SPEC'S)
  - NIC - NOT INCLUDING CONTRACT
  - TP - NEW TOILET PARTITION (SEE SPEC'S)
  - TRD - NEW TOILET ROLL DISPENSER (SEE SPEC'S)
  - WS - NEW WALL SIGN MOUNT AT 3'-0" TO BOTTOM FROM FINISHED FLOOR (FROM CASH ALLOWANCE)
  - NWB - NEW WASTE CONTAINER (SEE SPEC'S)
  - NTF - NEW TERRAZZO FLOOR AND BASE
  - CWT - NEW FULL HEIGHT CERAMIC WALL TILE
  - C - EXISTING CONDUIT TO REMAIN PAINTED
  - CO - NEW CLEANOUT (SEE MECH.)
  - GB - 24" STRAIGHT GRAB BAR (SEE SPEC'S)
  - LGB - 'L' SHAPE GRAB BAR (SEE SPEC'S)
  - WC - NEW WATER CLOSET (SEE MECH.)
  - WS - WALL SIGN (SEE SPEC'S)
  - FD - NEW FLOOR DRAIN SLOPE 1% MINIMUM (SEE MECH.)
  - PTD - NEW PAPER TOWEL DISPENSER SUPPLIED BY OWNER INSTALLED BY CONTRACTOR (SEE SPEC'S)
  - UR - NEW URINAL WALL TYPE (SEE MECH.)
  - UH - EXISTING UNIT HEATER TO REMAIN
  - VRT - NEW VINYL REINFORCED TILE (SEE SPEC'S)
  - \$ - EXISTING LIGHT SWITCH TO REMAIN OR BE REMOVED (SEE ELEC.)
  - Ⓜ - EXISTING EXIST SIGN AND EMERGENCY LIGHT TO BE REMOVED (SEE ELEC.)
  - Ⓜ - EXISTING ACCESS PANEL TO REMAIN PAINTED
  - Ⓜ - EXISTING THERMOSTAT TO REMAIN (SEE MECH.)
  - DENOTES: MAKE GOOD EXISTING SURFACES FLUSH TO MATCH EXISTING (TYP.)



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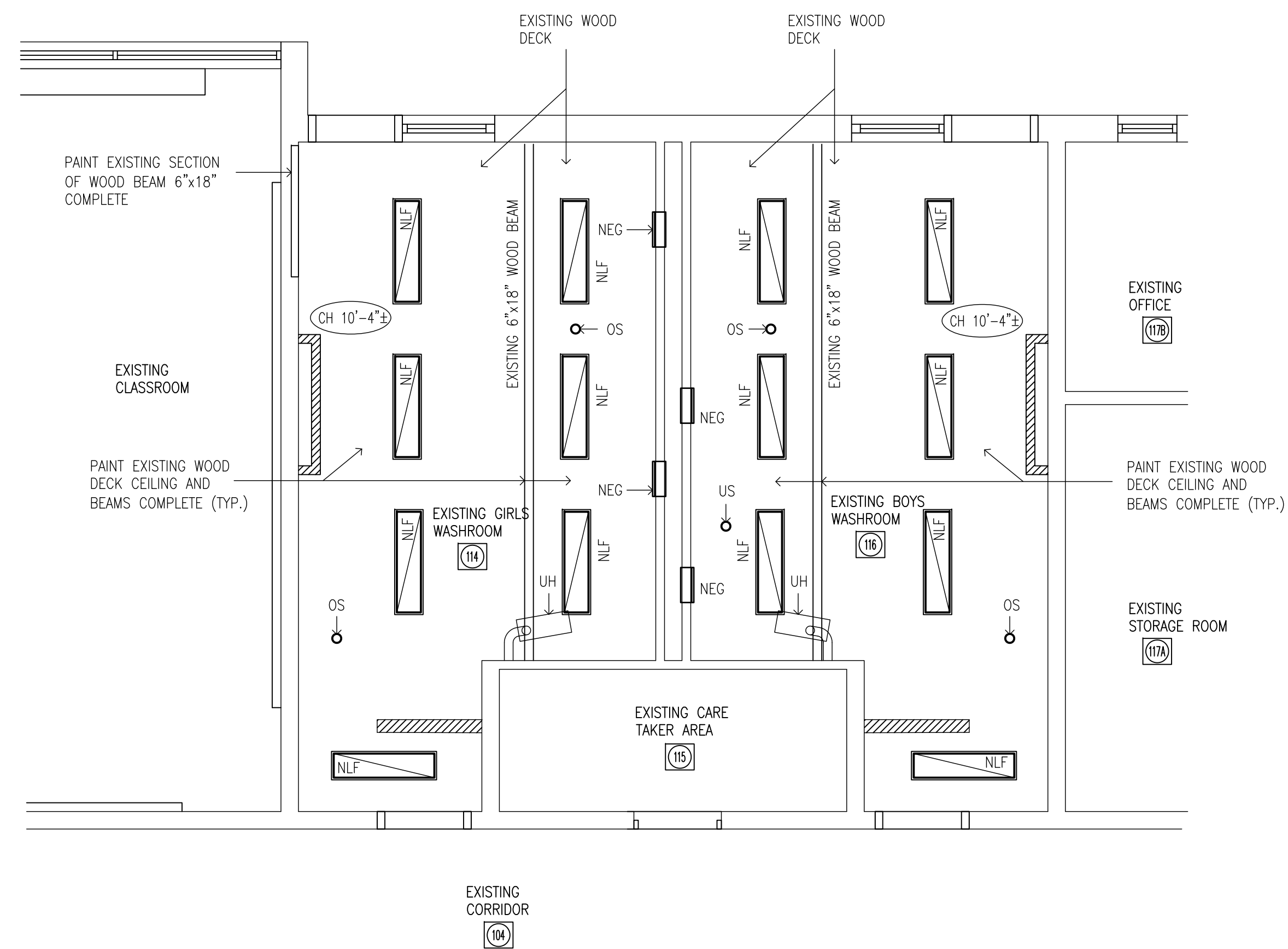
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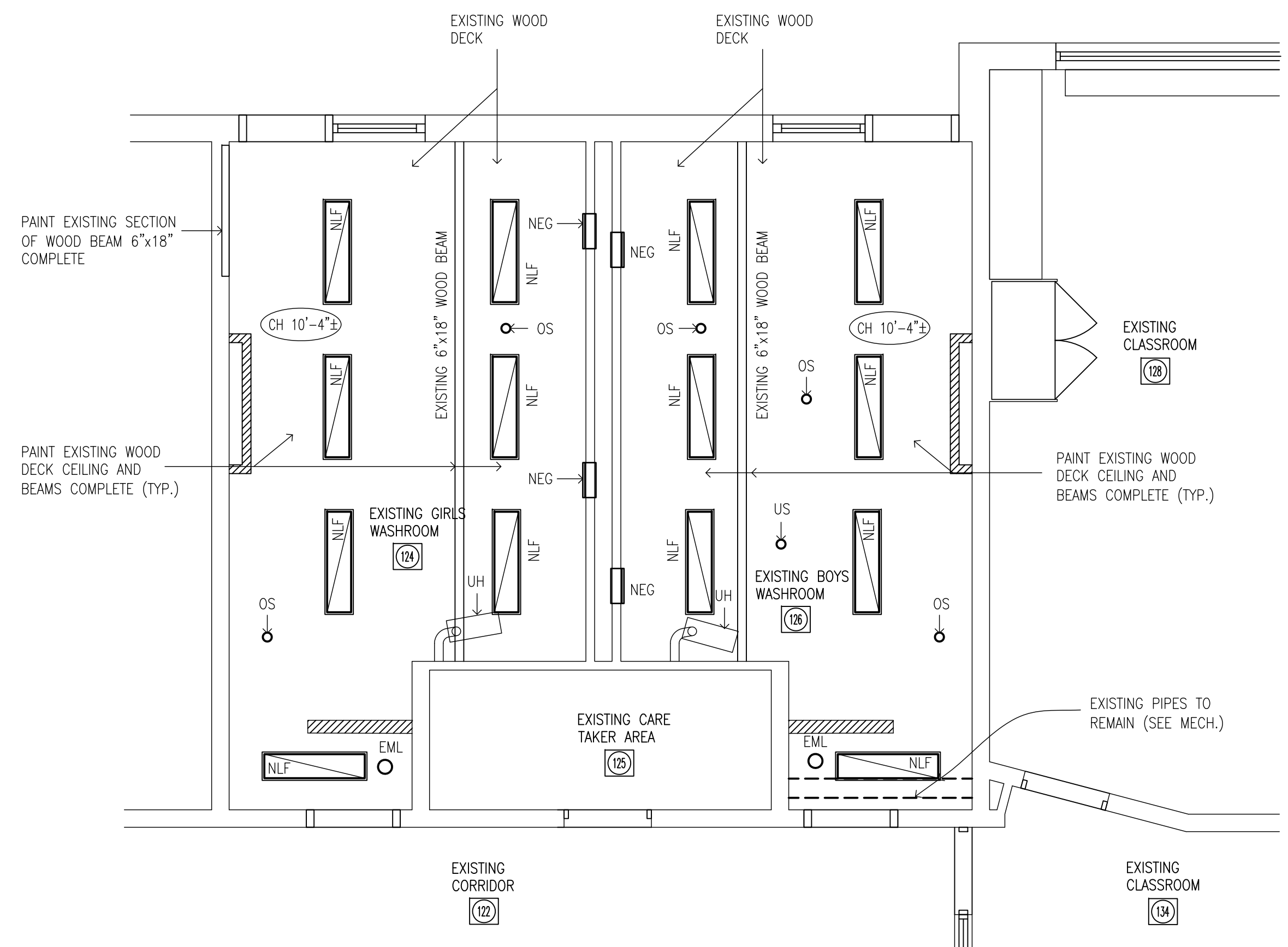
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HAMILTON - WENTWORTH  
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**PARTIAL FIRST FLOOR PLAN**  
PROPOSED

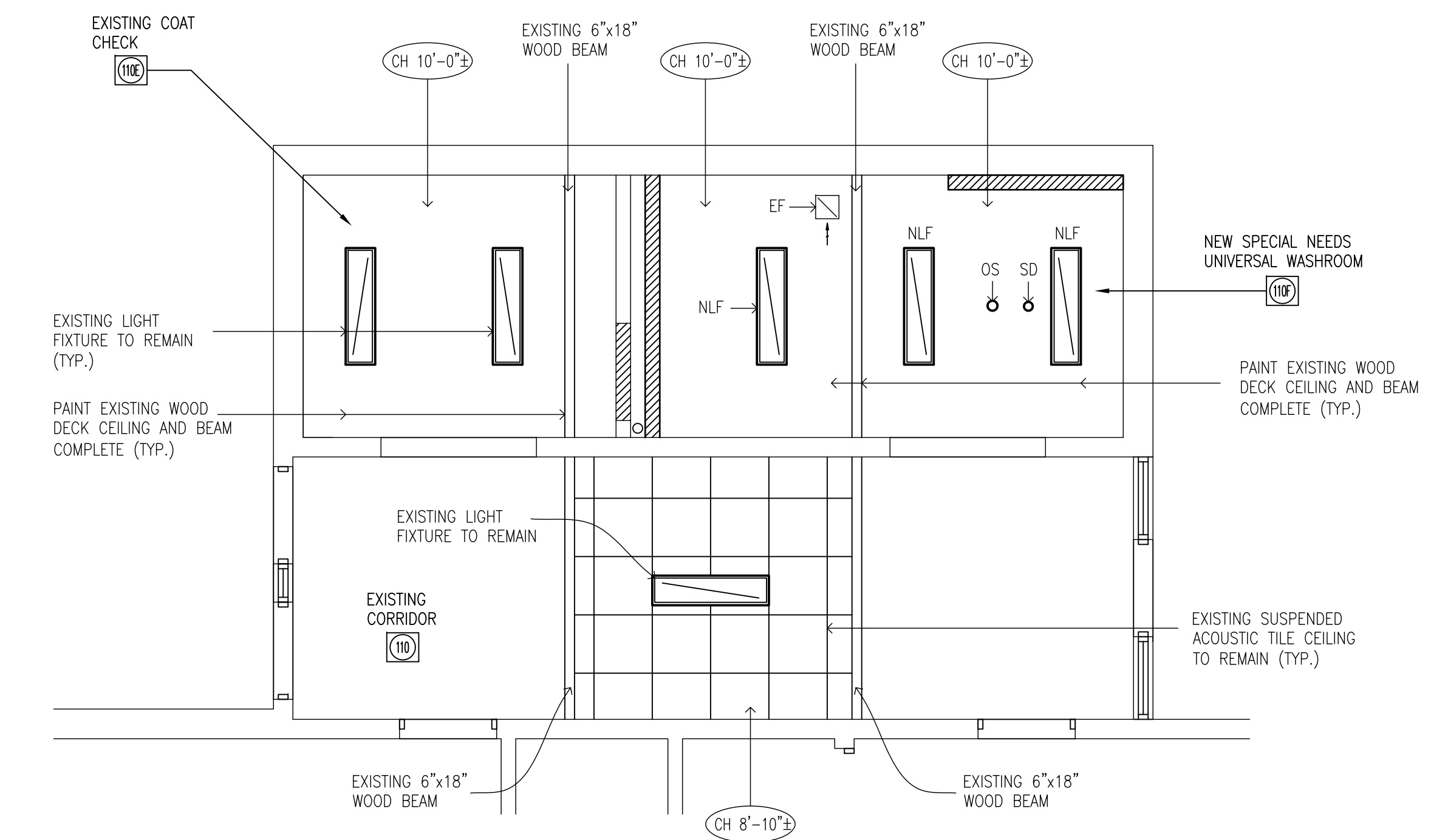
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MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
1/4"=1'-0"	A2.01



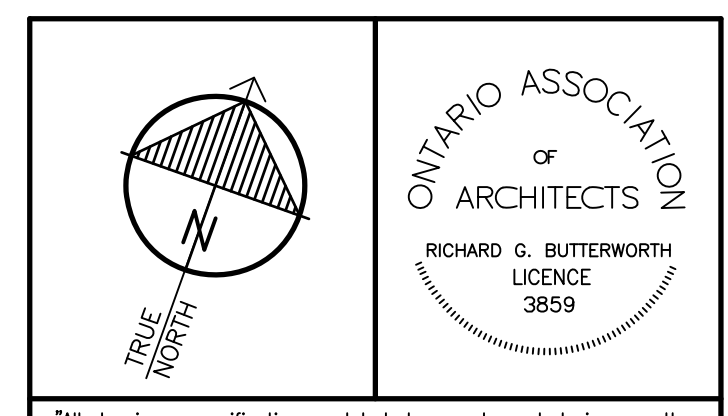
1 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - PROPOSED AREA 1  
A2.02 1/4"=1'-0"



2 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - PROPOSED AREA 2  
A2.02 1/4"=1'-0"



3 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - PROPOSED AREA 4  
A2.02 1/4"=1'-0"



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- PROPOSED LEGEND**
- OS - NEW OCCUPANCY SENSOR (SEE ELEC.)
  - SD - NEW SMOKE DETECTOR (SEE ELEC.)
  - US - MATRIX FLUSH SENSOR (SEE MECH.)
  - EML - EXISTING EMERGENCY LIGHT FIXTURE TO REMAIN (SEE ELEC.)
  - NEL - NEW EMERGENCY LIGHT FIXTURE (SEE ELEC.)
  - NLF - NEW SURFACE FOUNT 1x4 LED LIGHT FIXTURE (SEE ELEC.)
  - NSD - NEW SMOKE DETECTOR (SEE ELEC.)
  - NEG - NEW EXHAUST GRILLE SIZE TO MATCH EXISTING (SEE MECH.)
  - UH - EXISTING UNIT HEATER TO REMAIN (SEE MECH.)
  - EF - NEW EXHAUST FAN (SEE MECH & ELEC.)

**HWDSB**

REF.	DATE	DESCRIPTION	CH'D.
3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB

ISSUED:  
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Ancaster Ontario

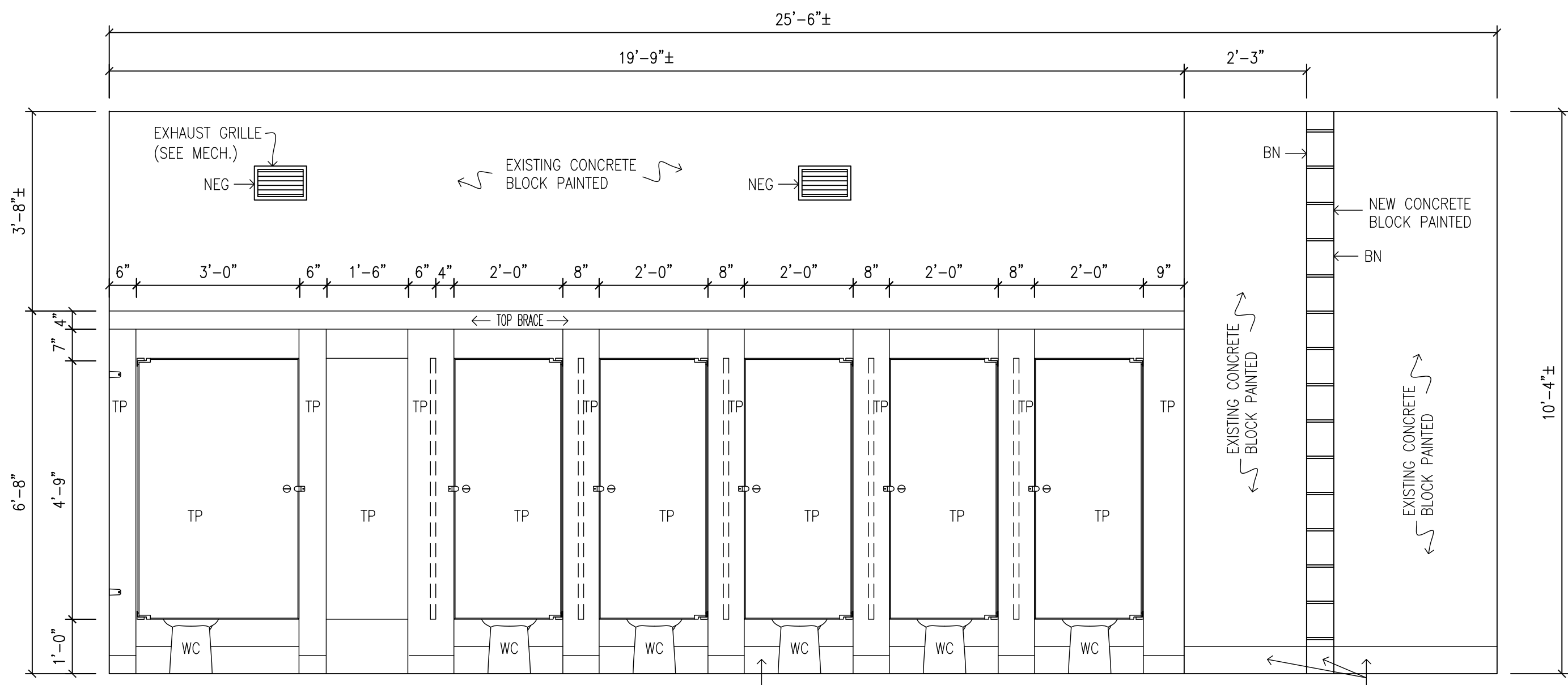
**FRANK PANABAKER ELEMENTARY**  
NORTH CAMPUS RENOVATION  
HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

**PARTIAL FIRST FLOOR REFLECTED CEILING PLAN PROPOSED**

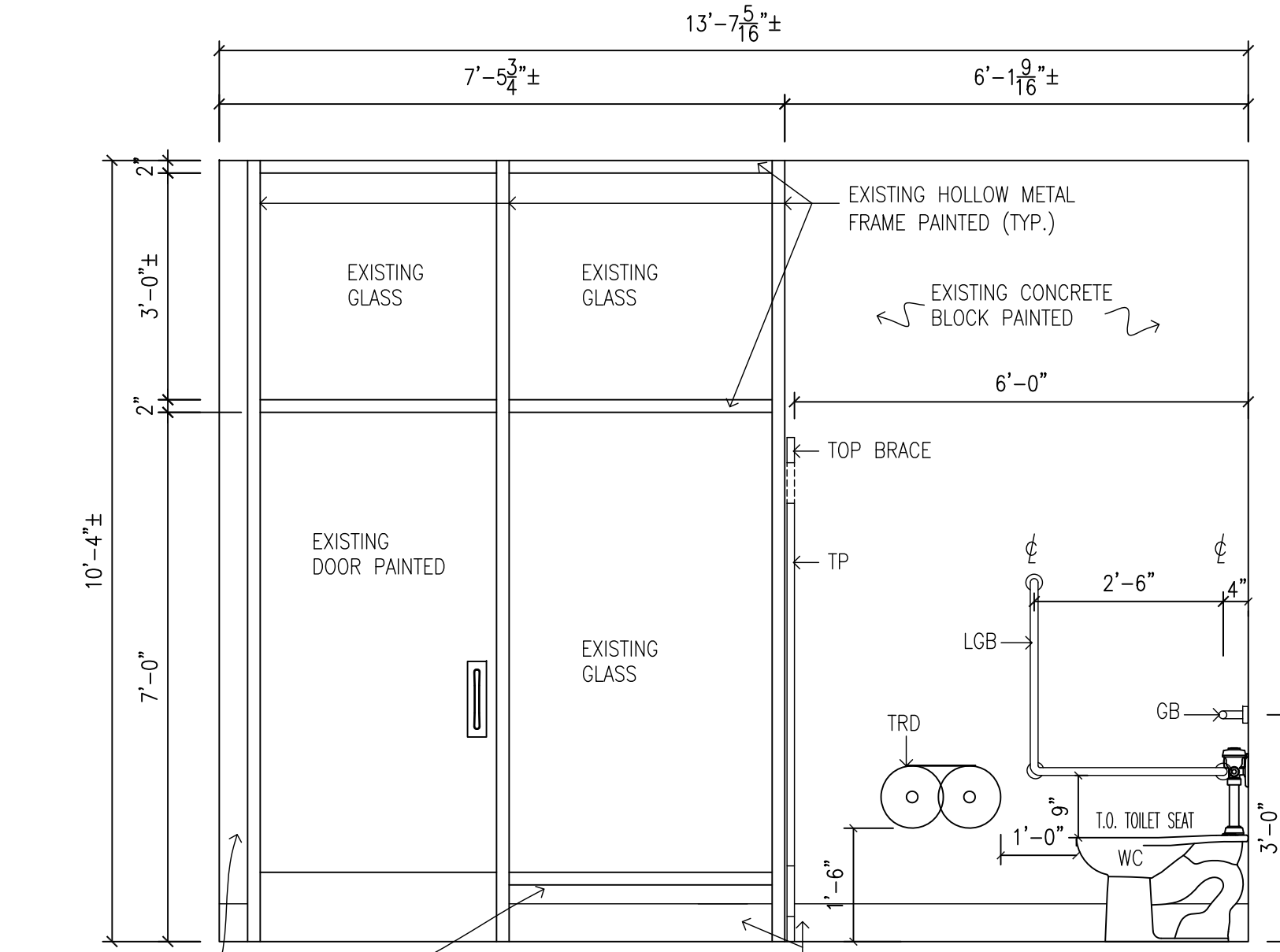
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DATE: <b>MARCH 2026</b>	JOB No.: <b>25-104</b>
SCALE: <b>1/4"=1'-0"</b>	SHEET No.: <b>A2.02</b>

PLOT SCALE: 1/4"=1'-0"

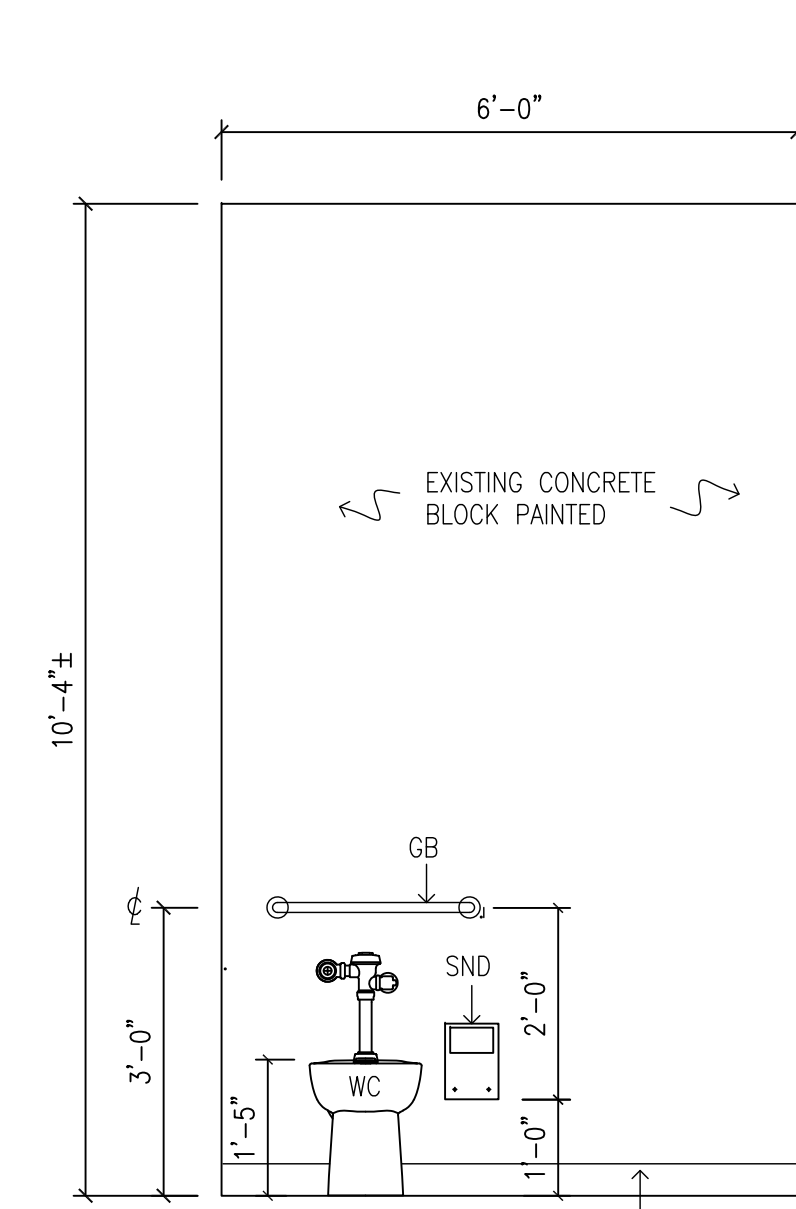




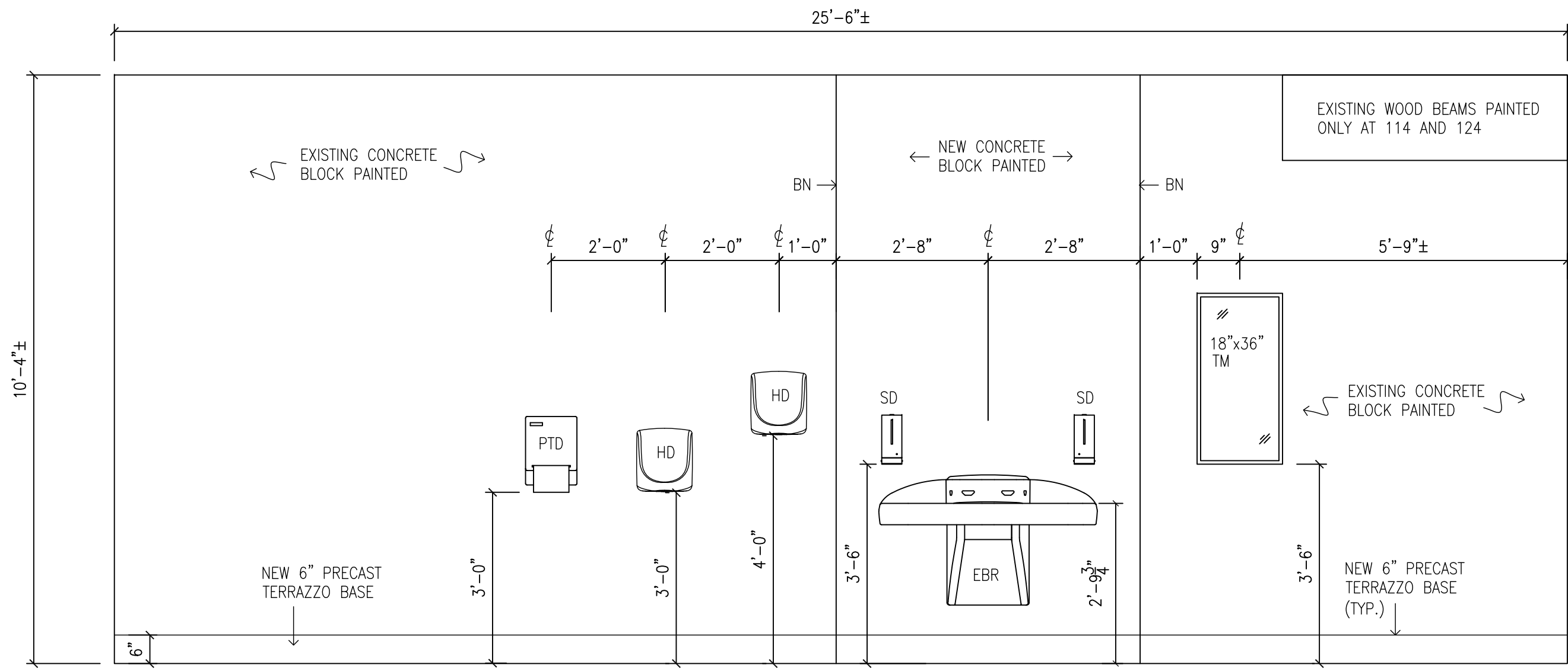
114 & 124 EXISTING GIRLS WASHROOM ELEVATION "A"



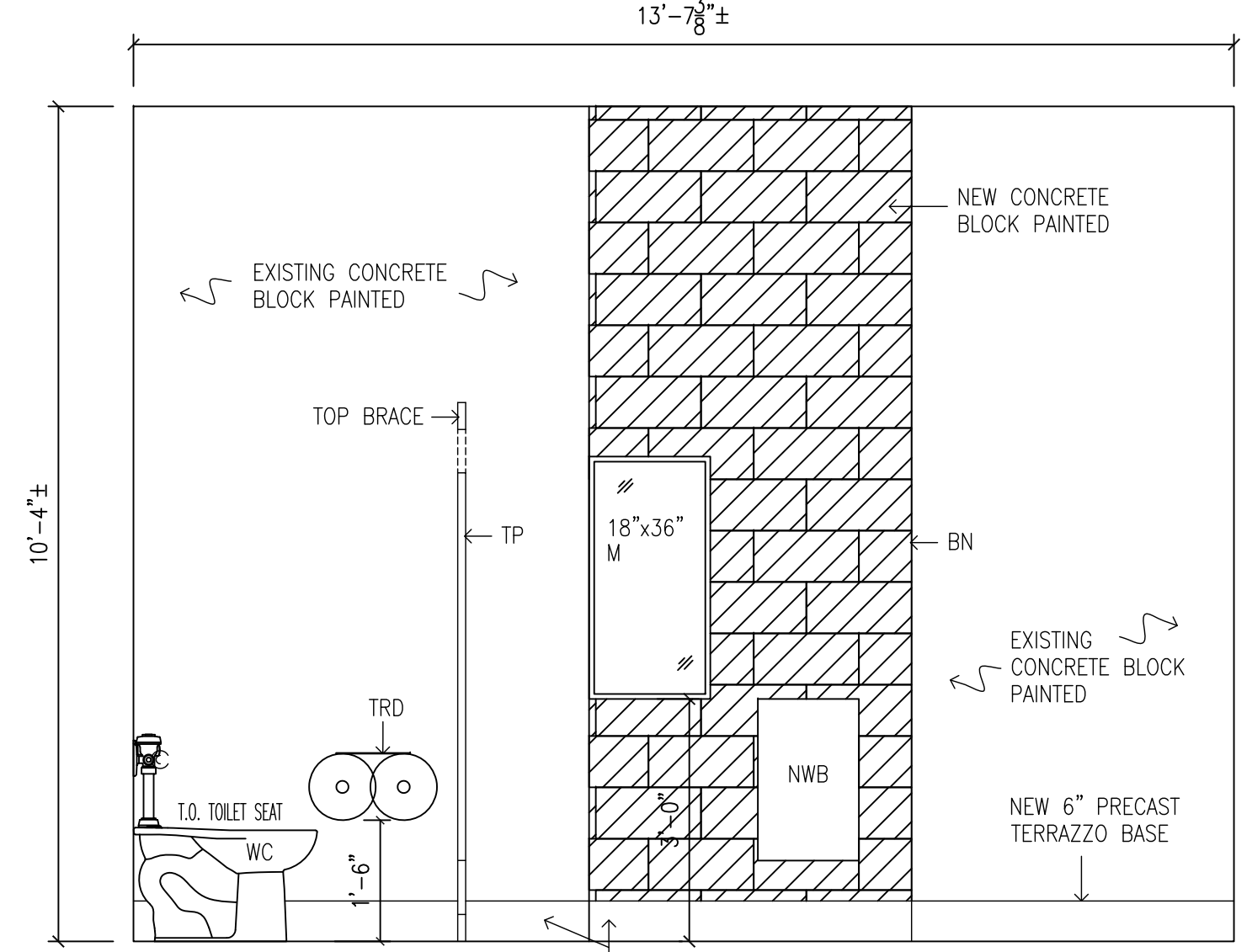
114 & 124 GIRLS WASHROOM ELEVATION "B"  
116 & 126 BOYS WASHROOM ELEVATION "B" REVERSED



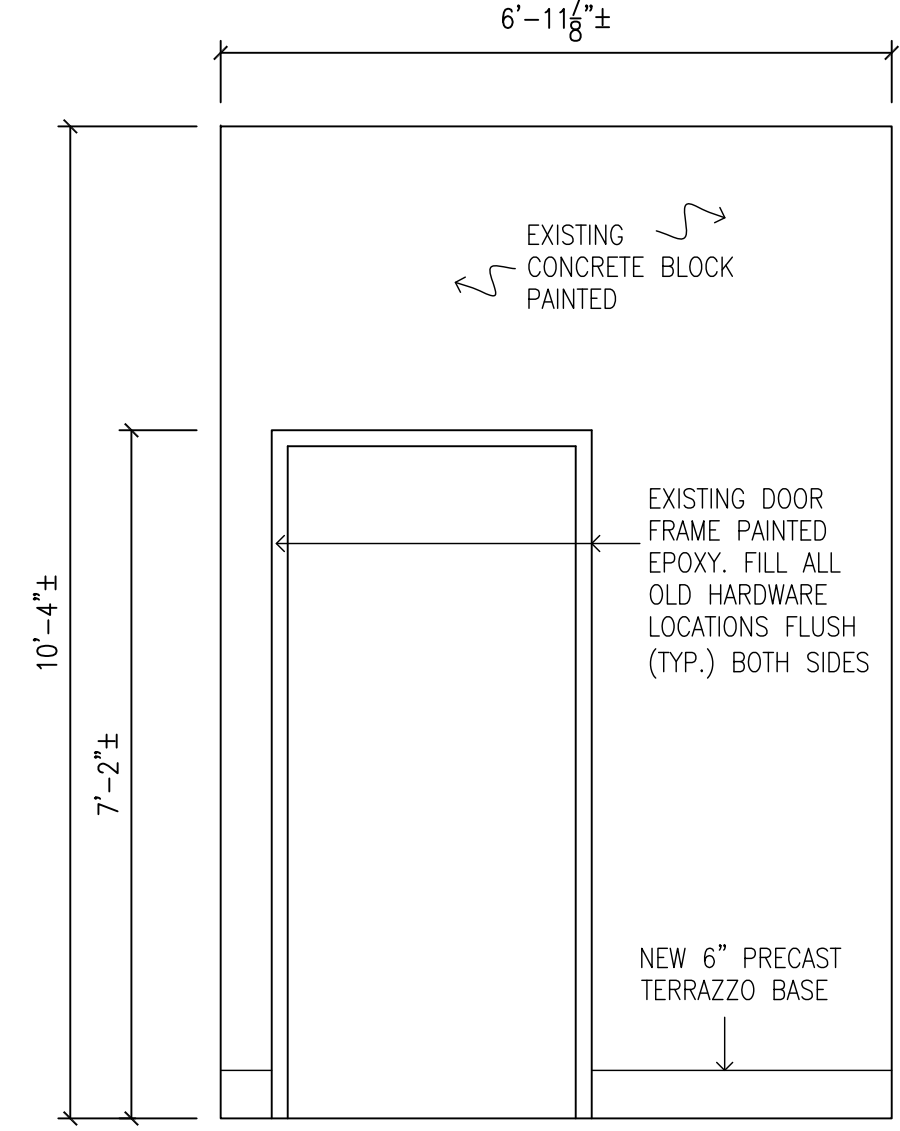
114 & 124 GIRLS WASHROOM ELEVATION "E"  
116 & 126 BOYS WASHROOM ELEVATION "E" REVERSED



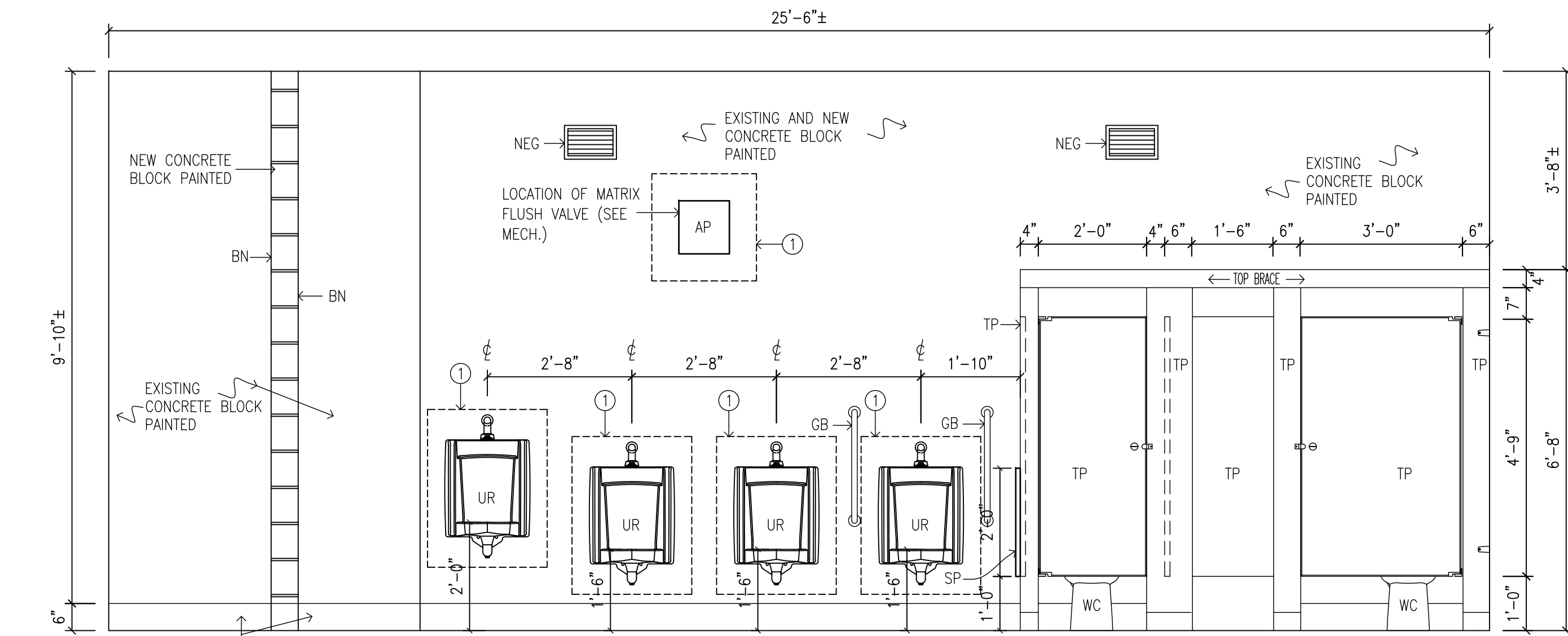
114 & 124 EXISTING GIRLS WASHROOM ELEVATION "C"  
116 & 126 EXISTING BOYS WASHROOM ELEVATION "C" REVERSED



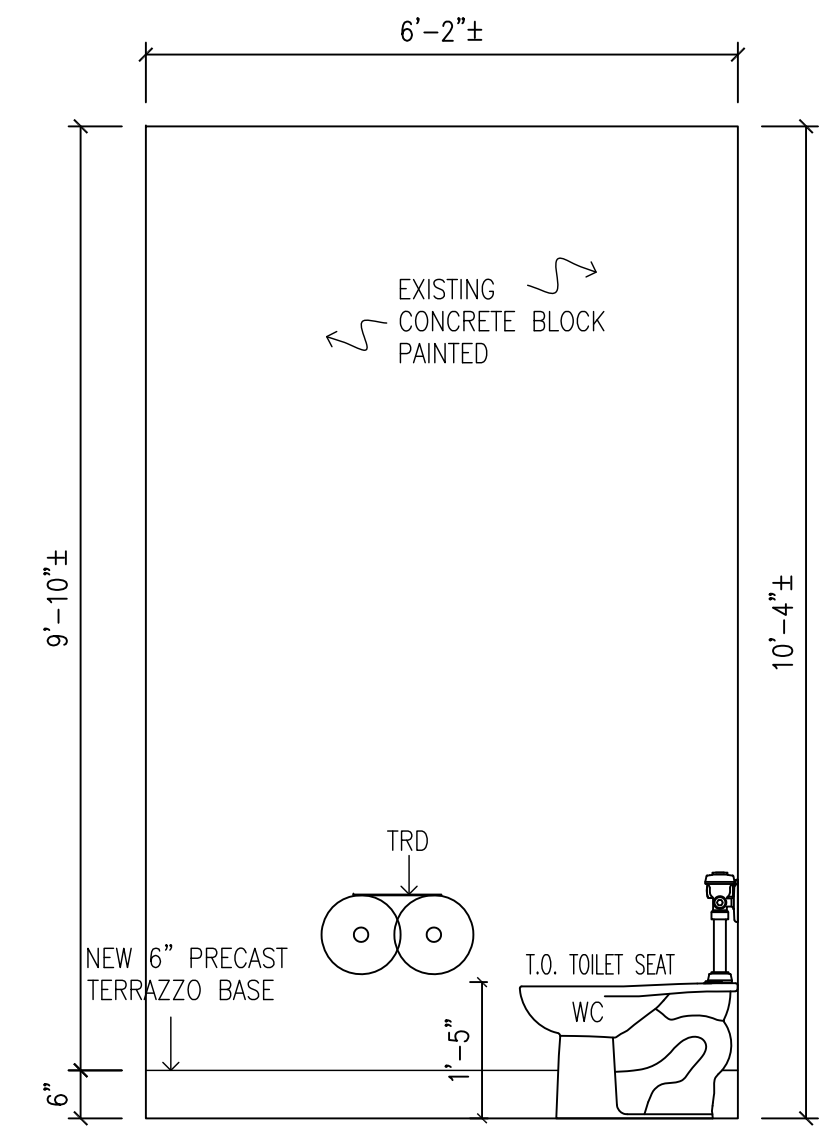
114 & 124 GIRLS WASHROOM ELEVATION "D"



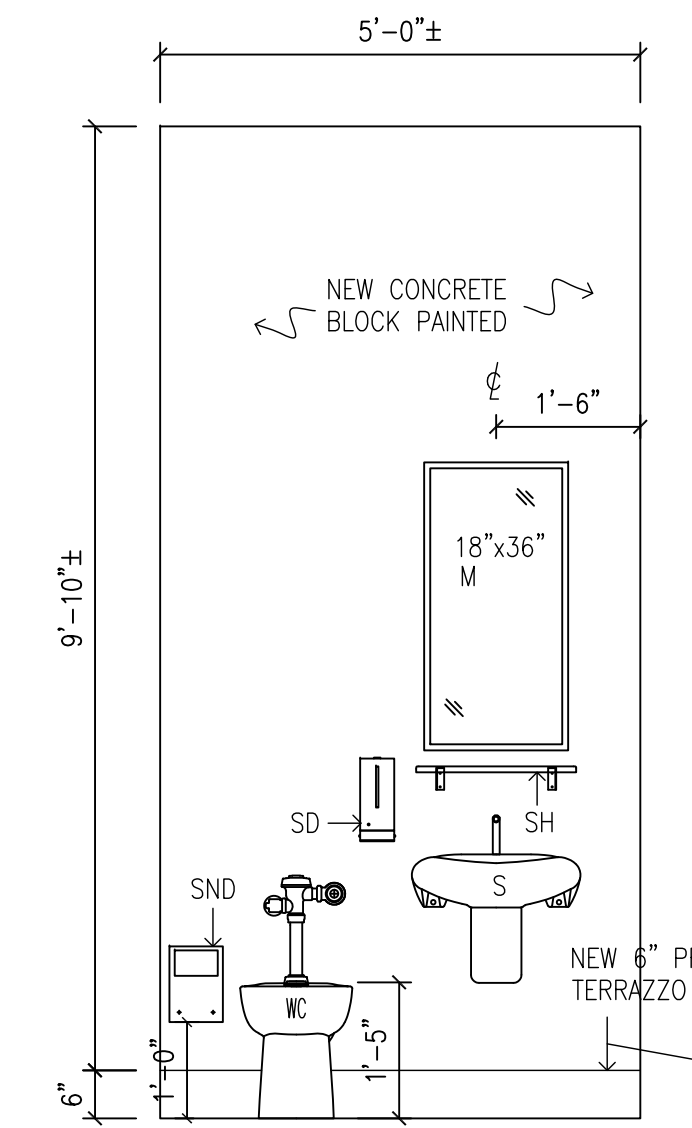
114 & 124 GIRLS WASHROOM ELEVATION "F"  
116 & 126 BOYS WASHROOM ELEVATION "F" REVERSED



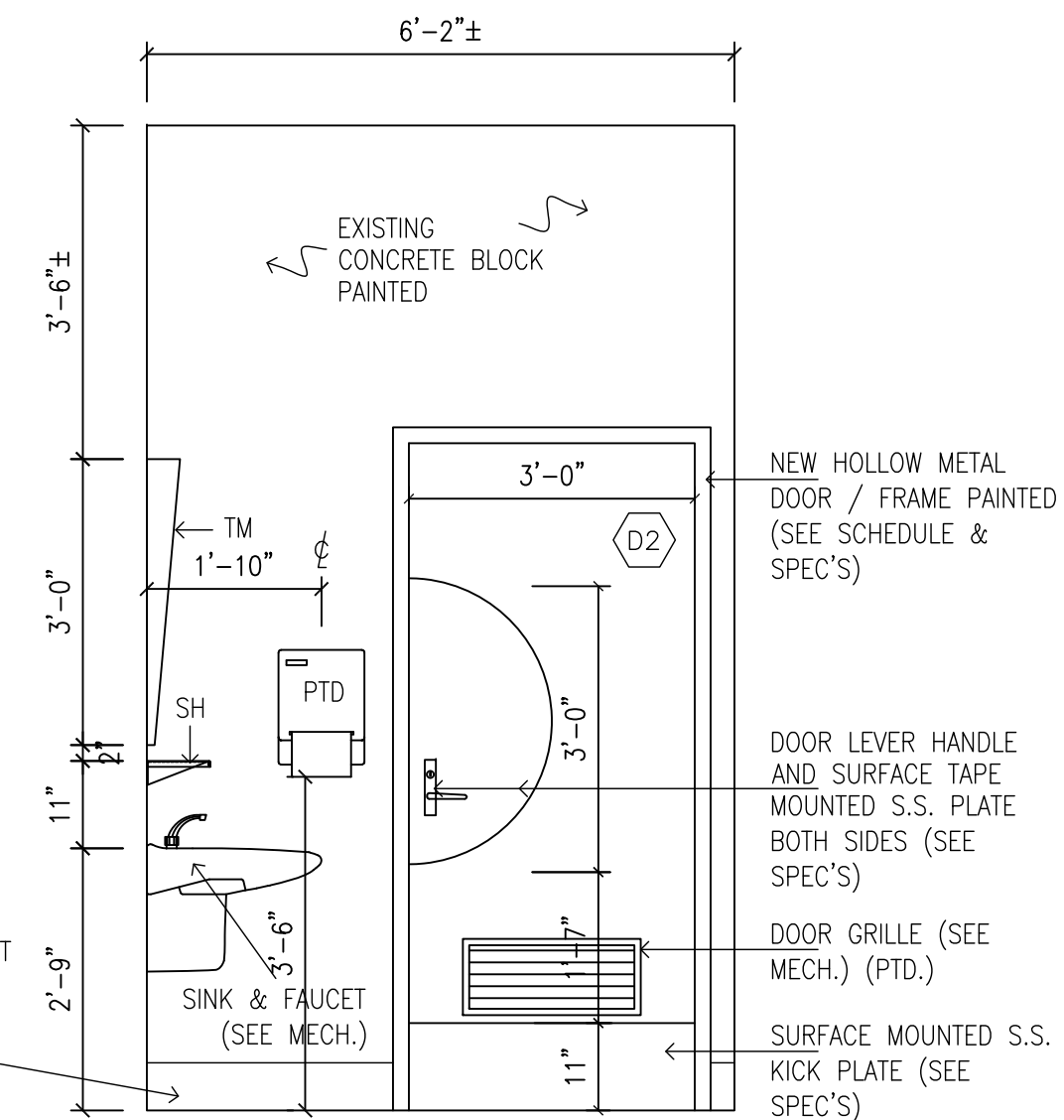
116 & 126 EXISTING BOYS WASHROOM ELEVATION "A"



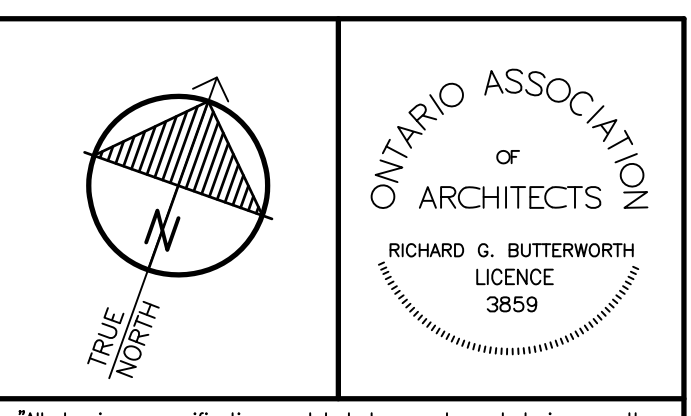
118 STAFF WASHROOM ELEVATION "A"



118 STAFF WASHROOM ELEVATION "B"



118 STAFF WASHROOM ELEVATION "C"



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**NOTES:**

① - REMOVE AND REPAIR SECTION OF EXISTING BLOCK WALLS TO ACCOMMODATE NEW FIXTURES AND MATRIX FLUSH VALVE ACCESS AND TO PATCH EXISTING WALLS WHERE OLD FIXTURES HAVE BEEN REMOVED. TOOTH IN NEW BLOCK TO MATCH EXISTING COURSING AND SIZES FLUSH.

**HWDSB**

3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB
REF.	DATE	DESCRIPTION	CH'D.

ISSUED:

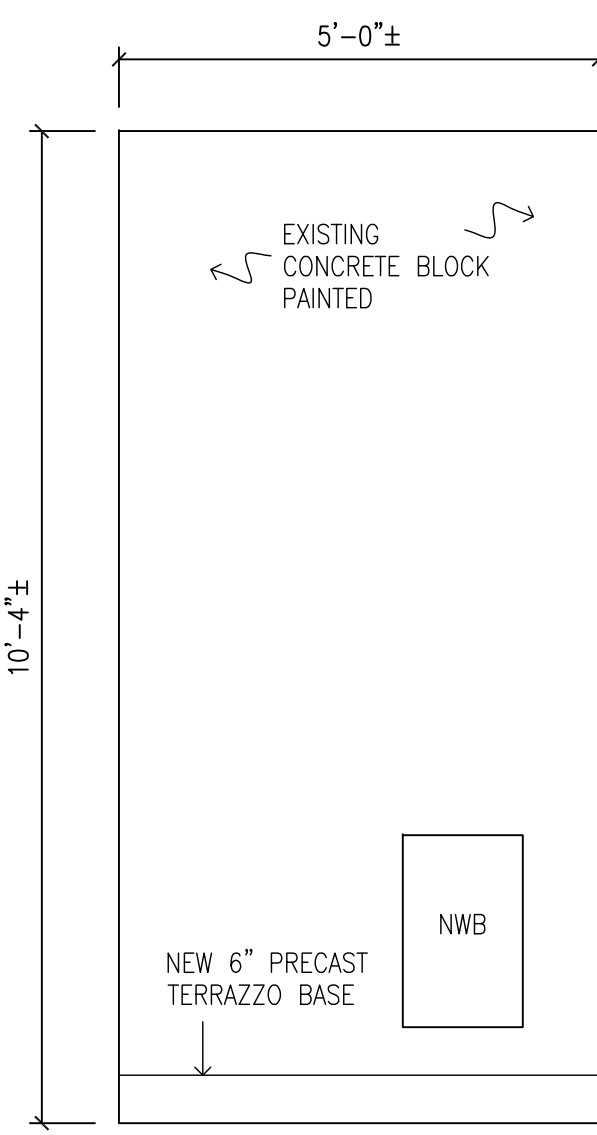
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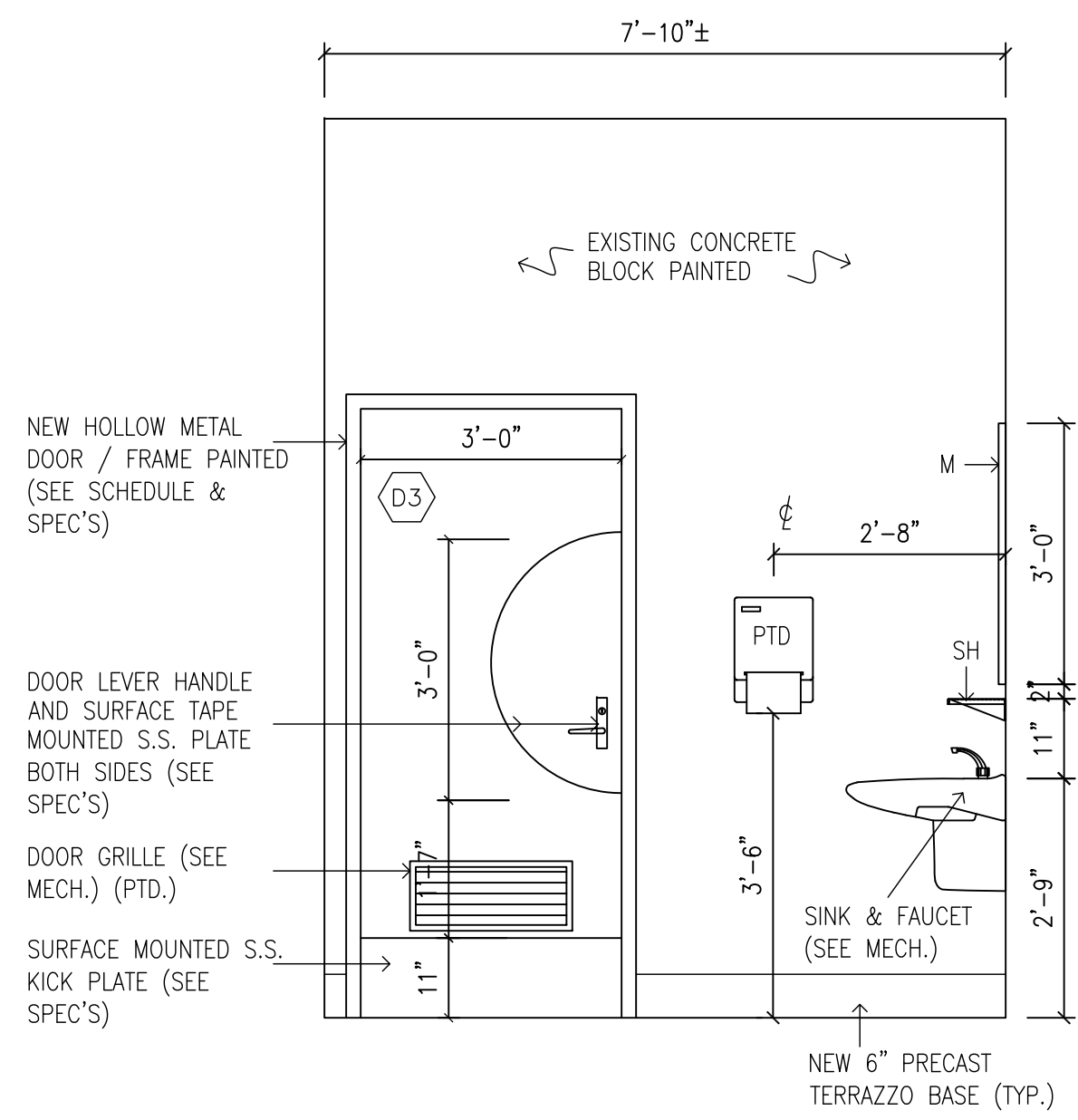
**FRANK PANABAKER ELEMENTARY**  
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HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

ROOM ELEVATIONS

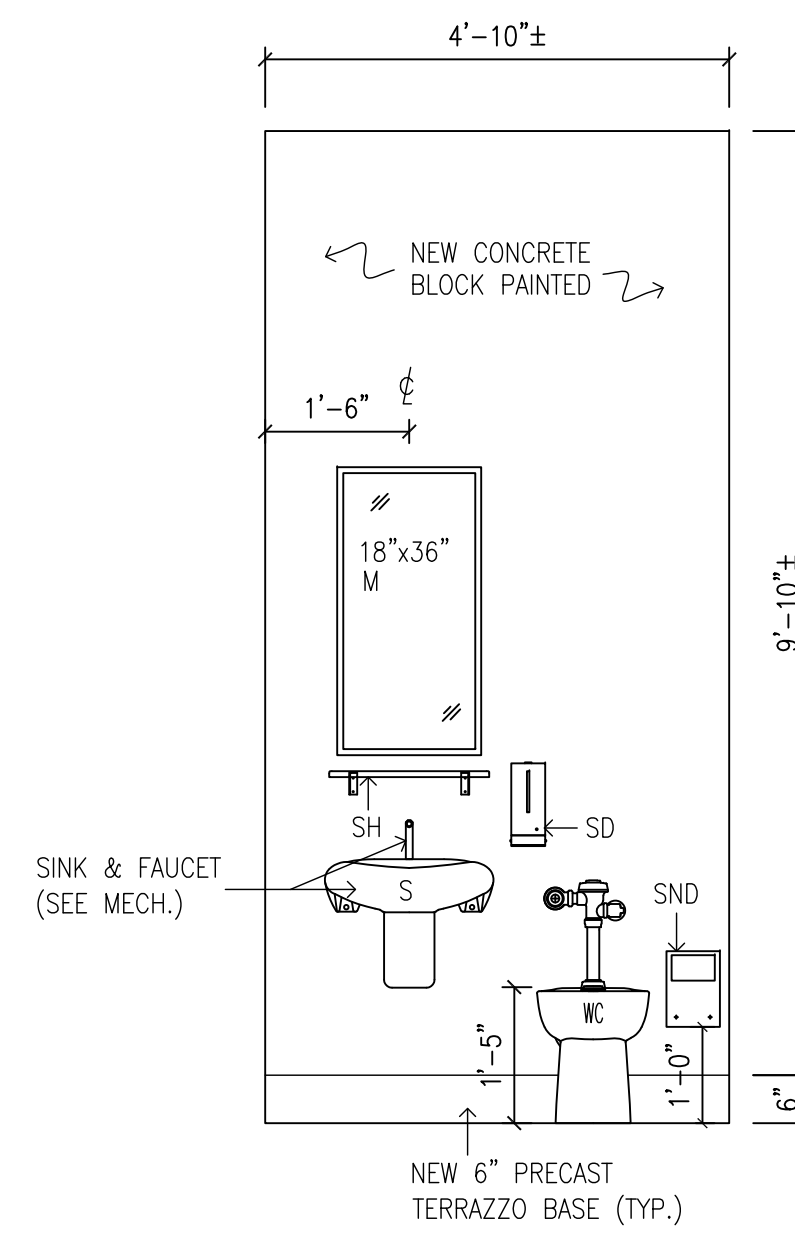
DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
AS SHOWN	A3.01



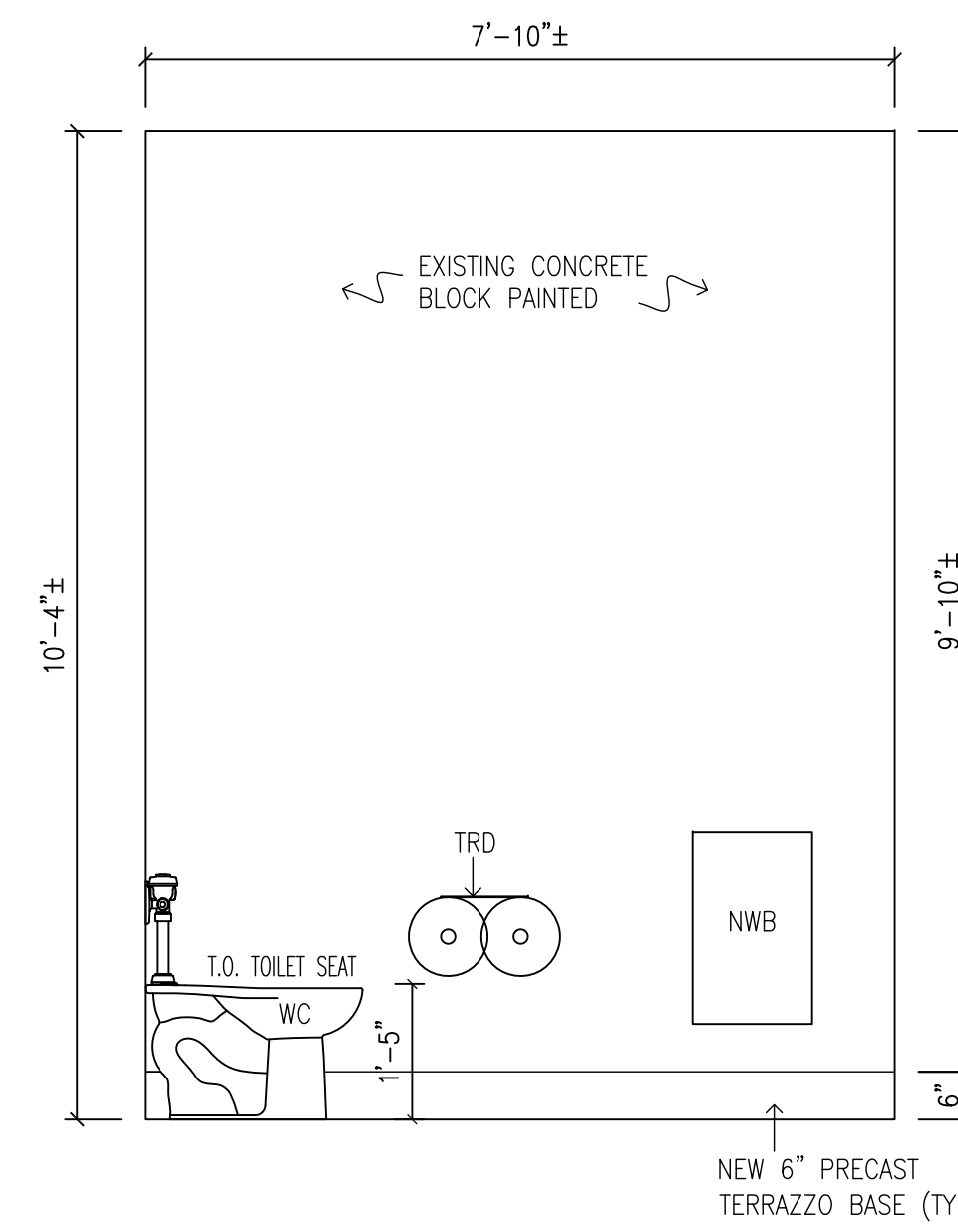
118 EXISTING STAFF WASHROOM ELEVATION "D"



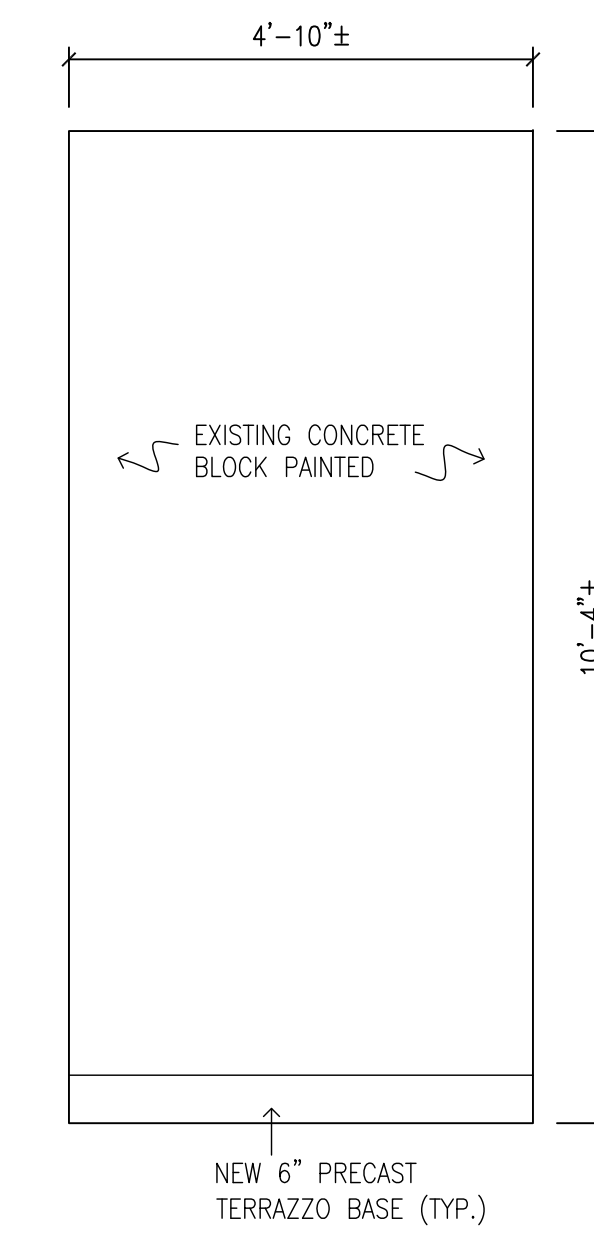
120 EXISTING STAFF WASHROOM ELEVATION "A"



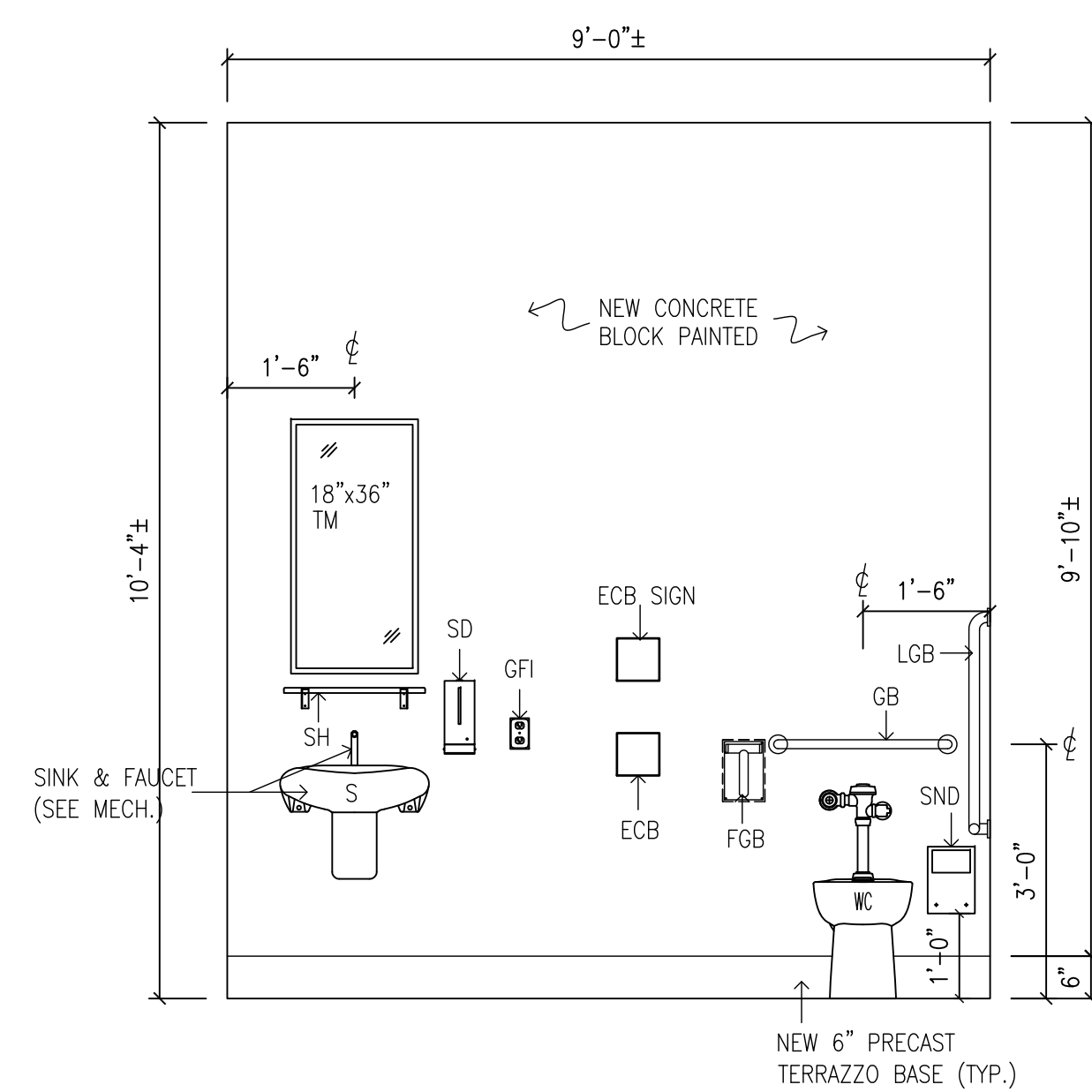
120 STAFF WASHROOM ELEVATION "B"



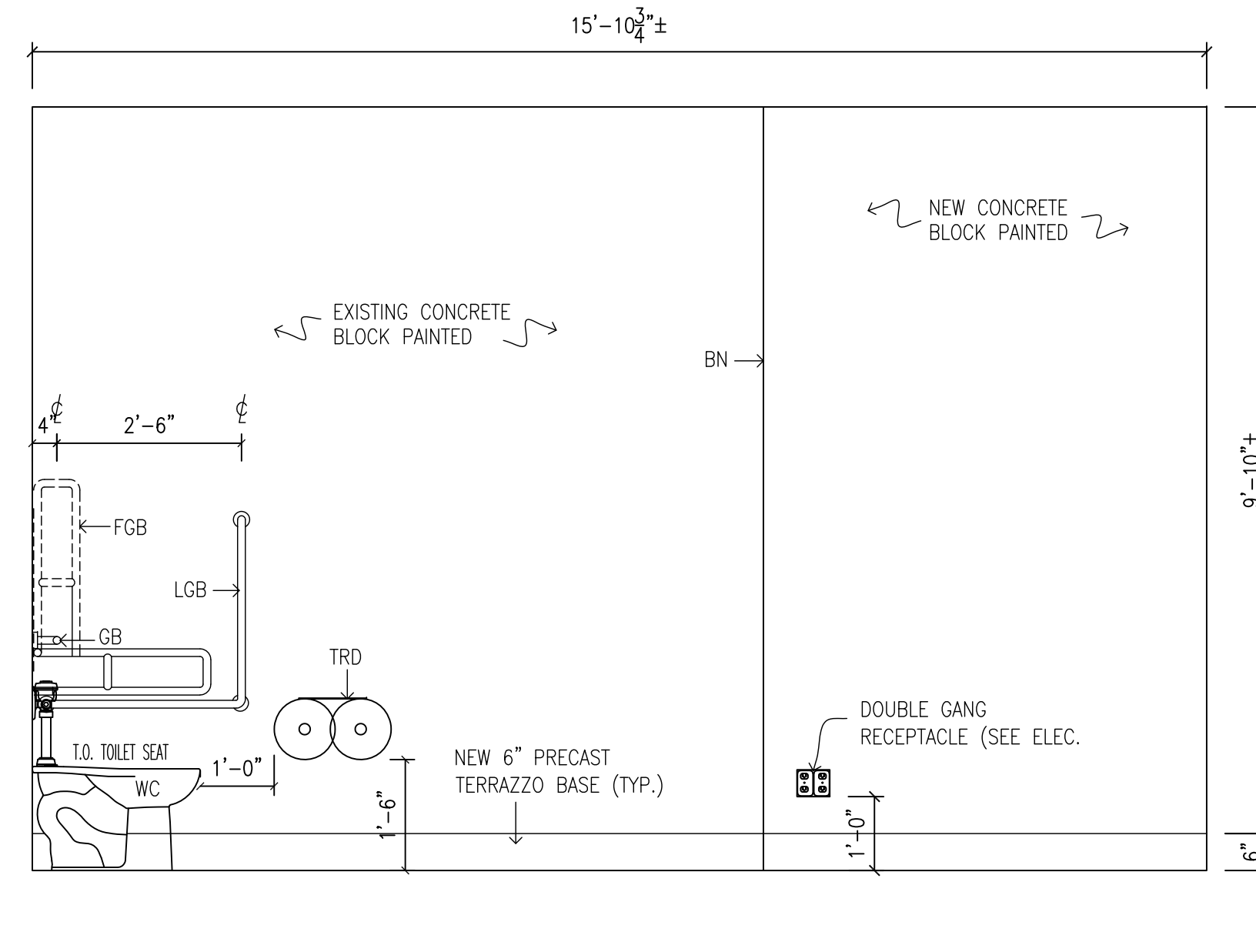
120 STAFF WASHROOM ELEVATION "C"



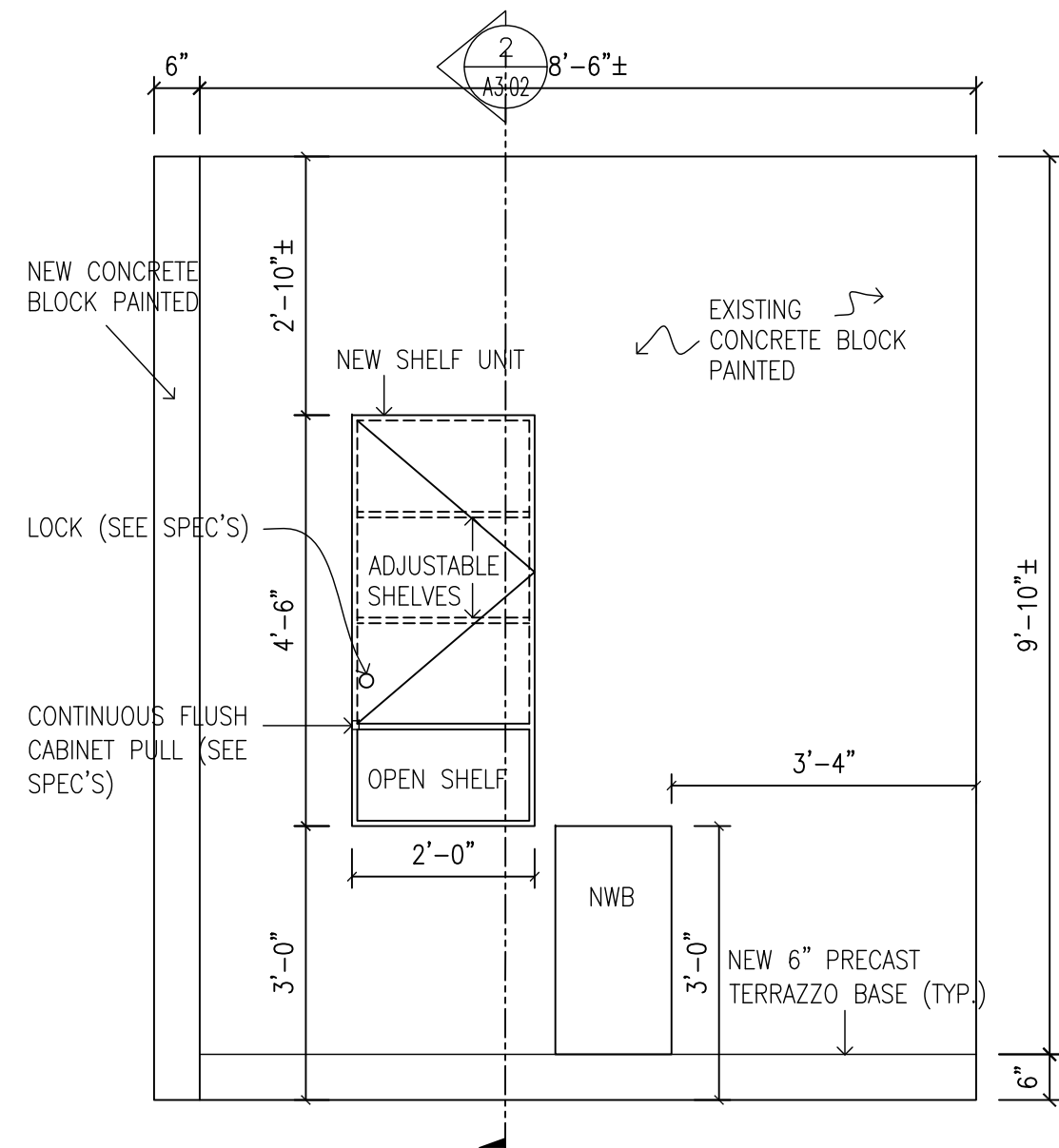
120 STAFF WASHROOM ELEVATION "D"



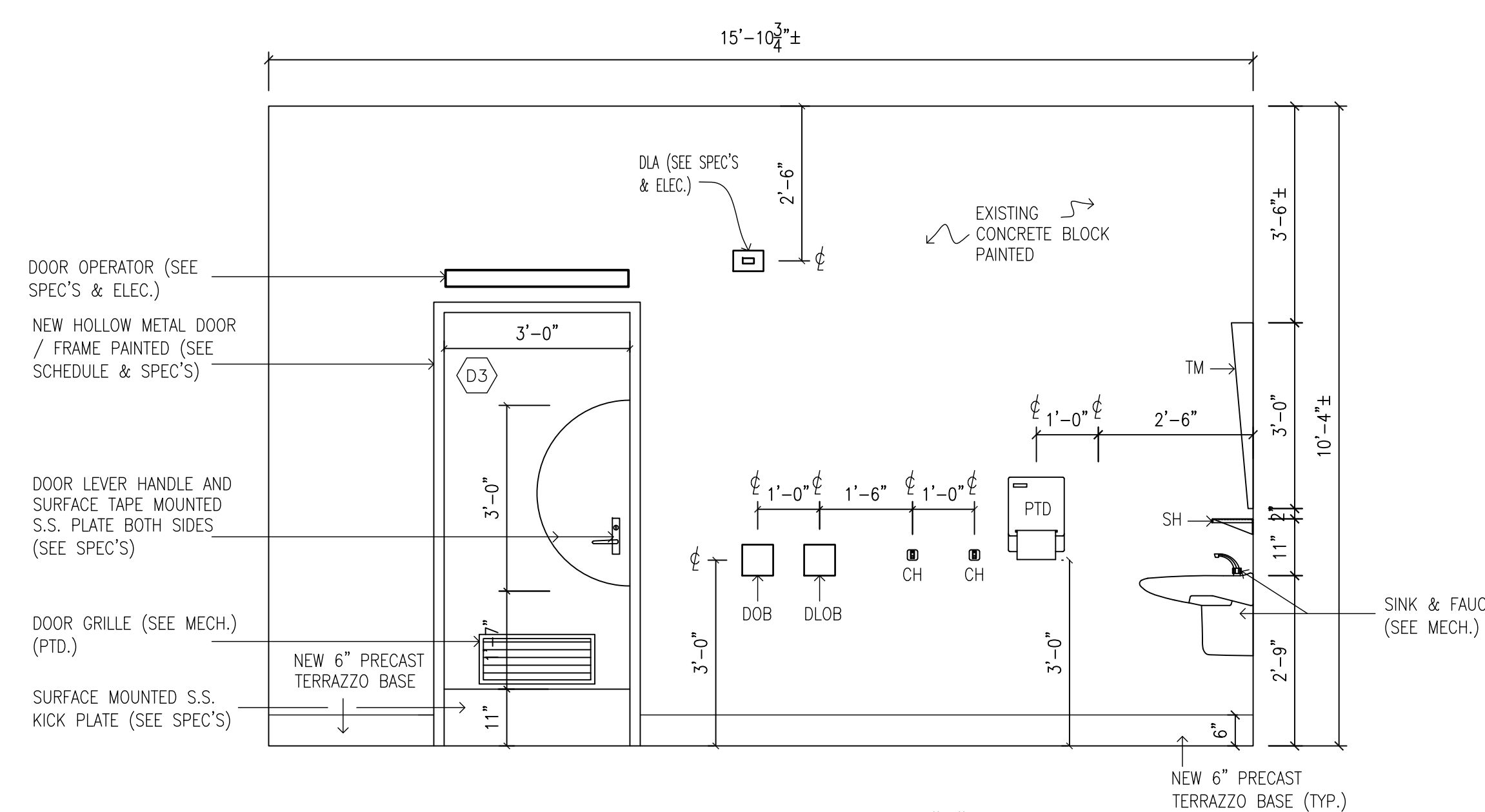
110F EXISTING UNIVERSAL WASHROOM ELEVATION "A"



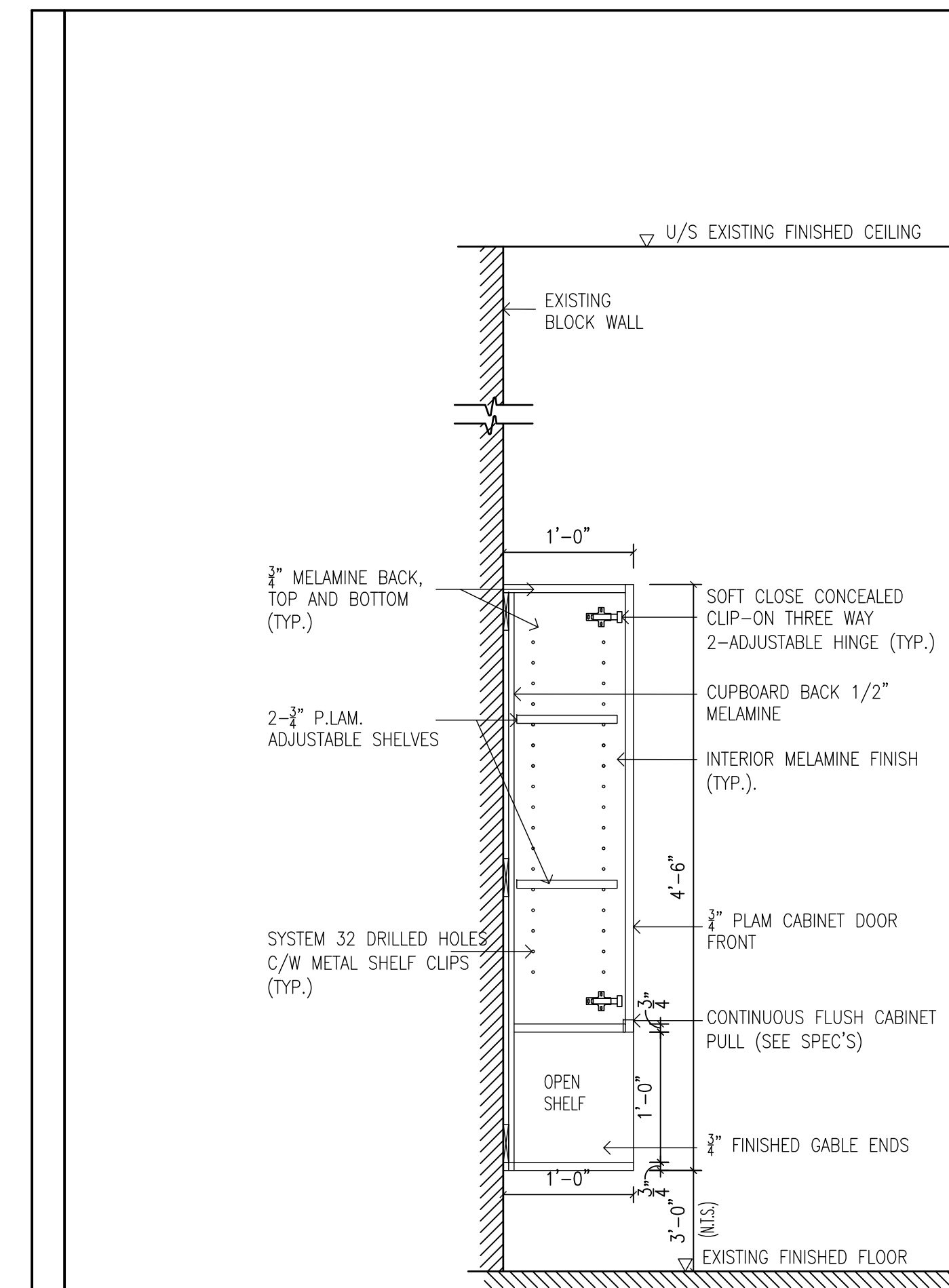
110F EXISTING UNIVERSAL WASHROOM ELEVATION "B"



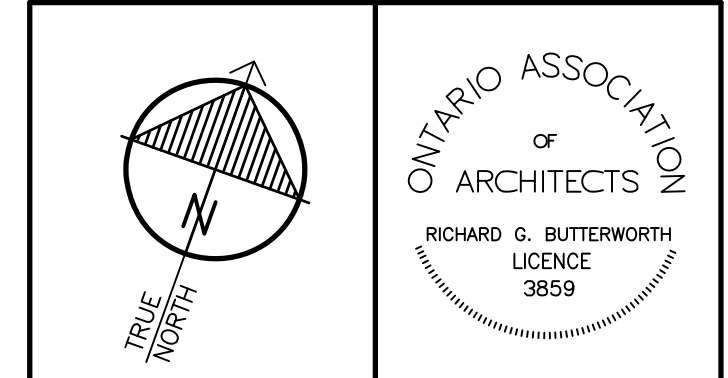
110F EXISTING UNIVERSAL WASHROOM ELEVATION "C"



110F EXISTING UNIVERSAL WASHROOM ELEVATION "D"



2 MILLWORK SECTION  
A3.02 1"=1'-0"



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**HWDSB**

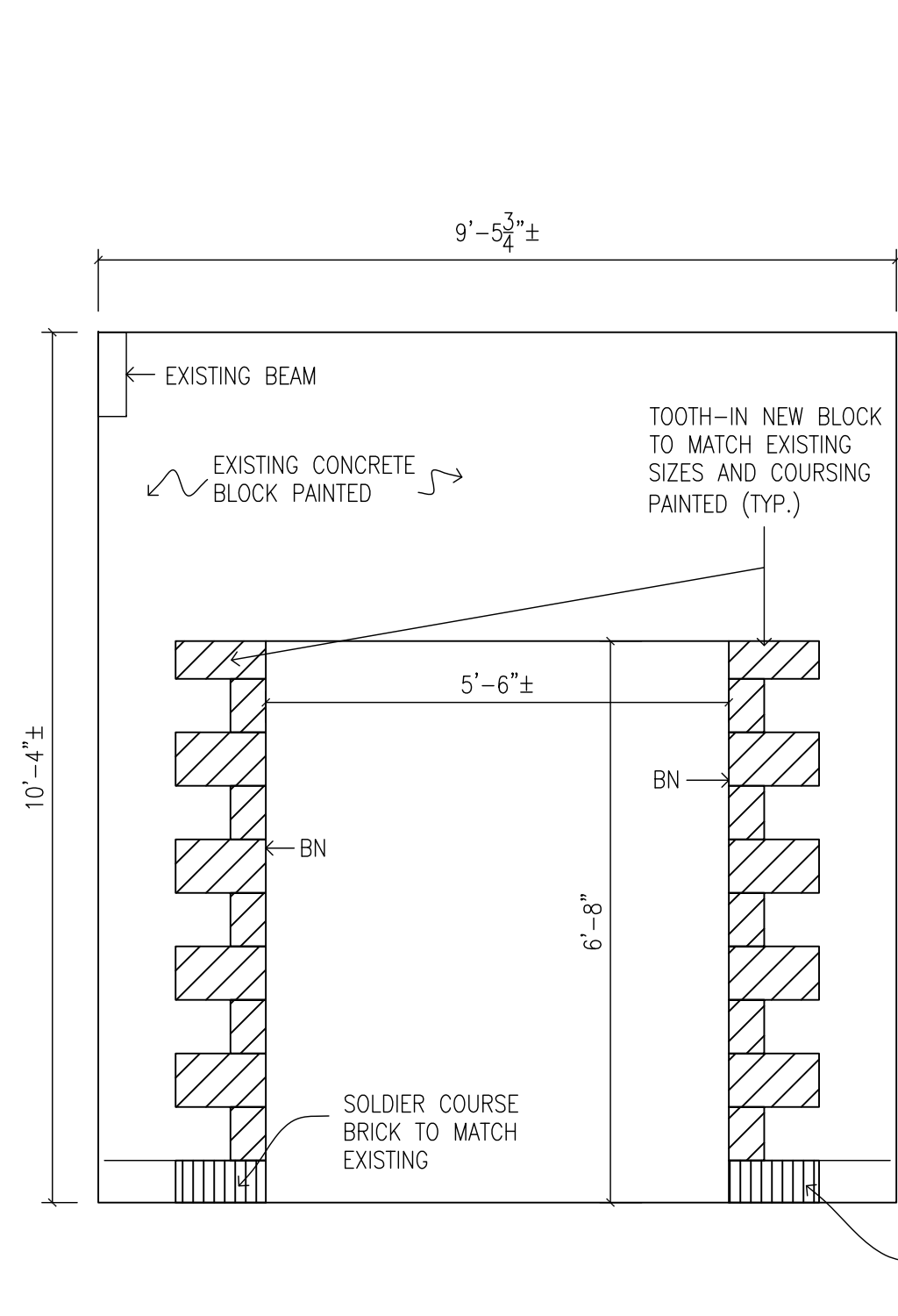
REF.	DATE	DESCRIPTION	CH'D.
3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB

ISSUED:  
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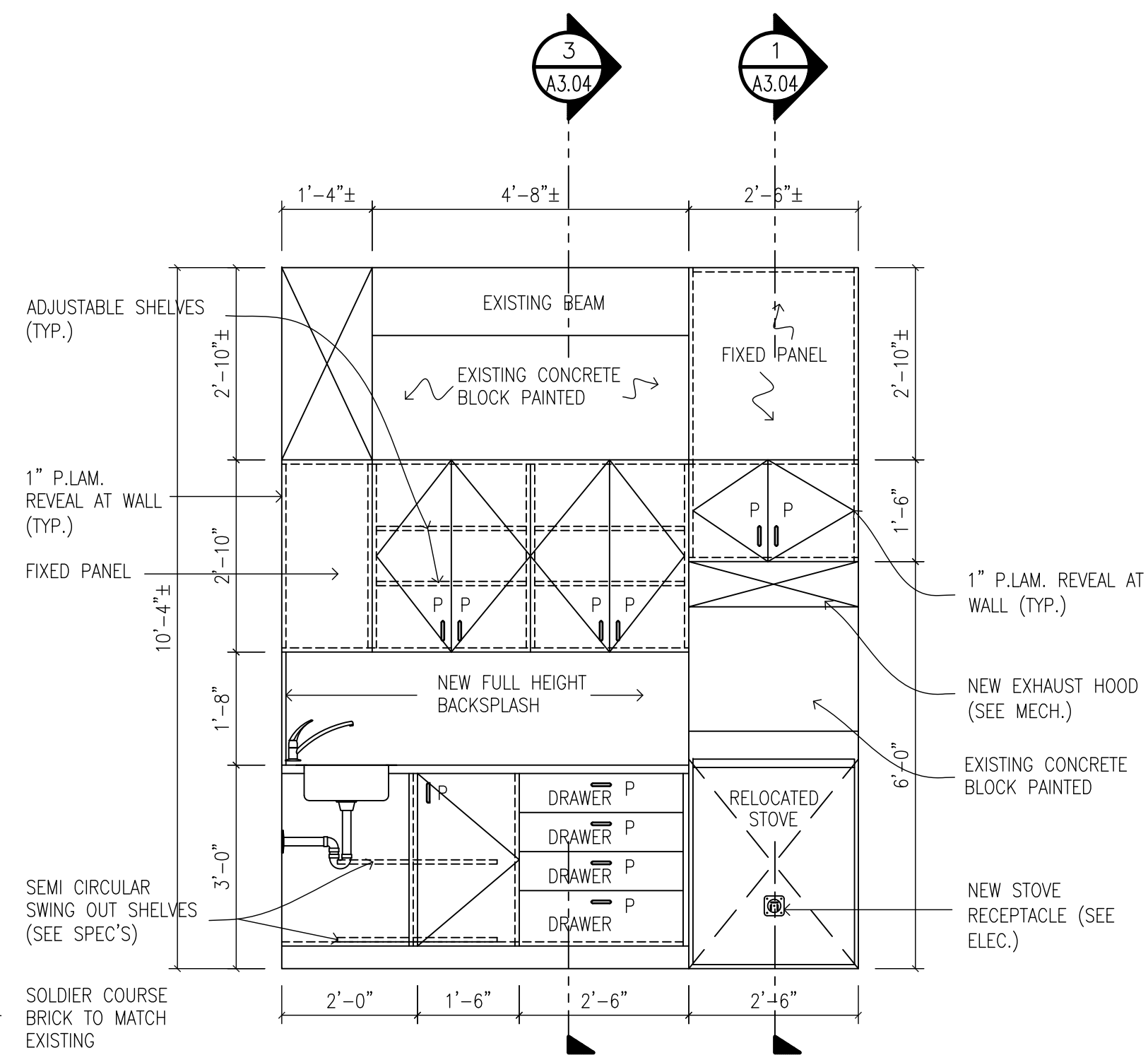
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HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

ROOM ELEVATIONS	
DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
AS SHOWN	A3.02

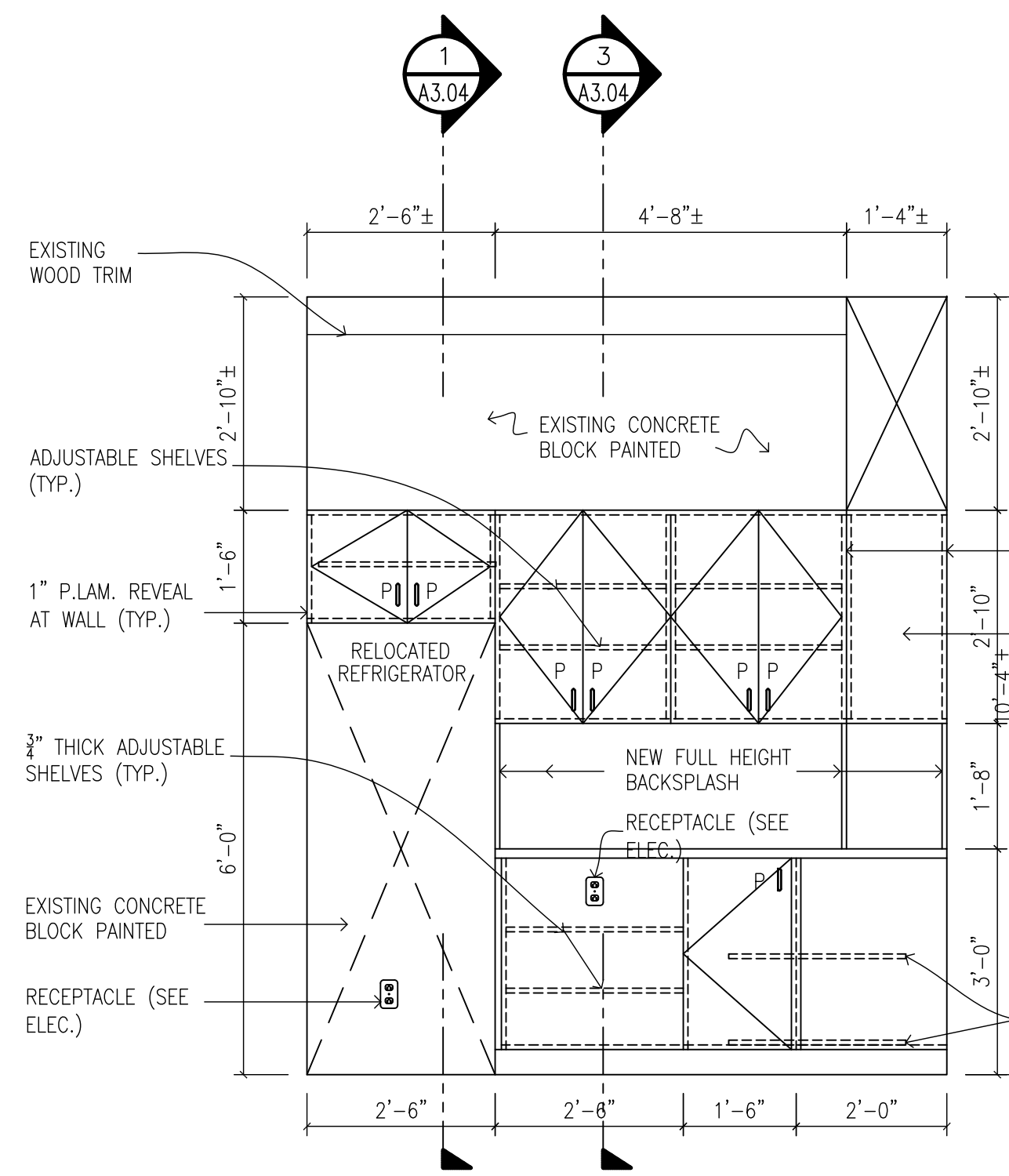
1 ROOM ELEVATIONS  
A3.02 1/2"=1'-0"



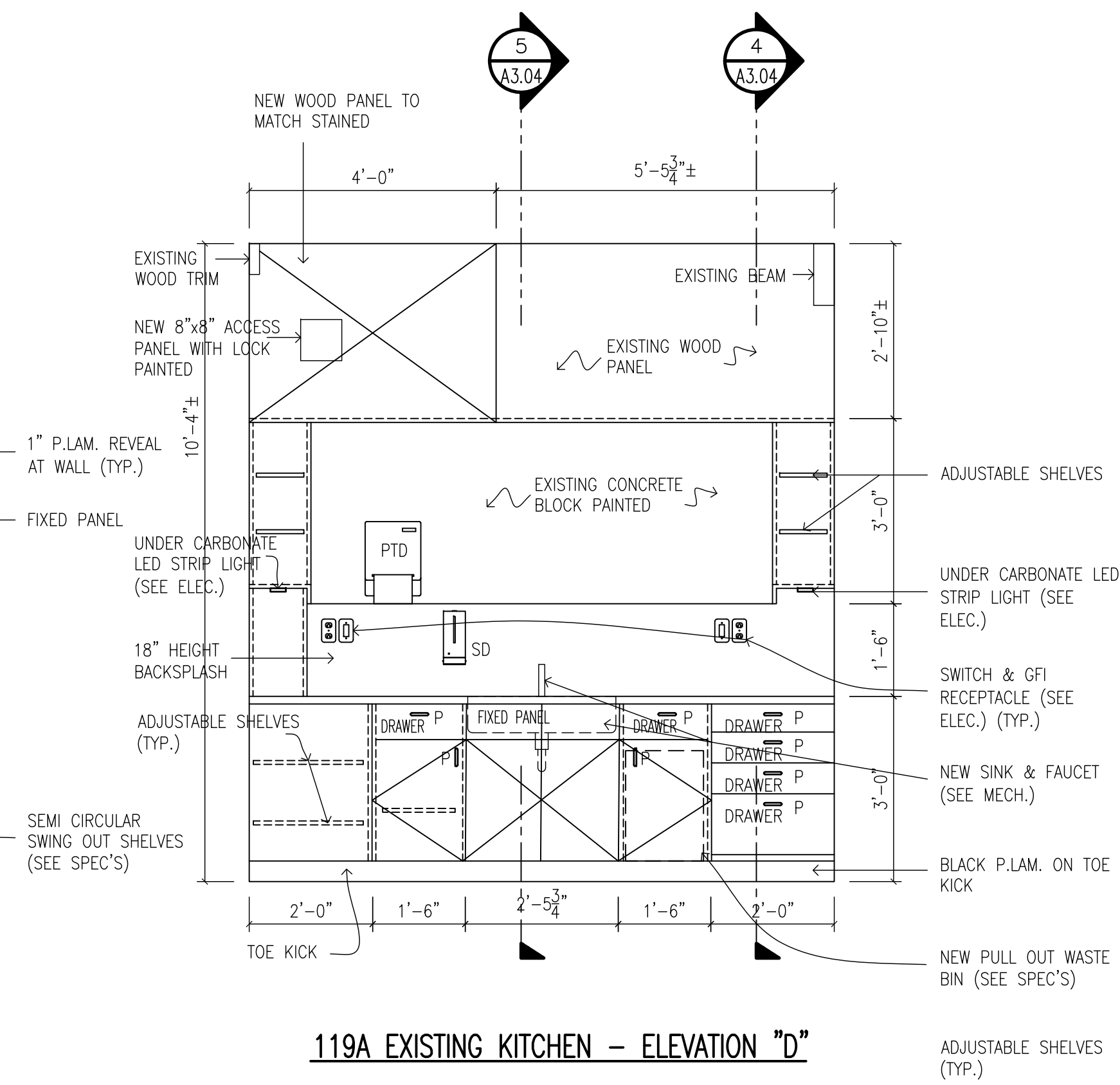
119A EXISTING KITCHEN – ELEVATION "A"



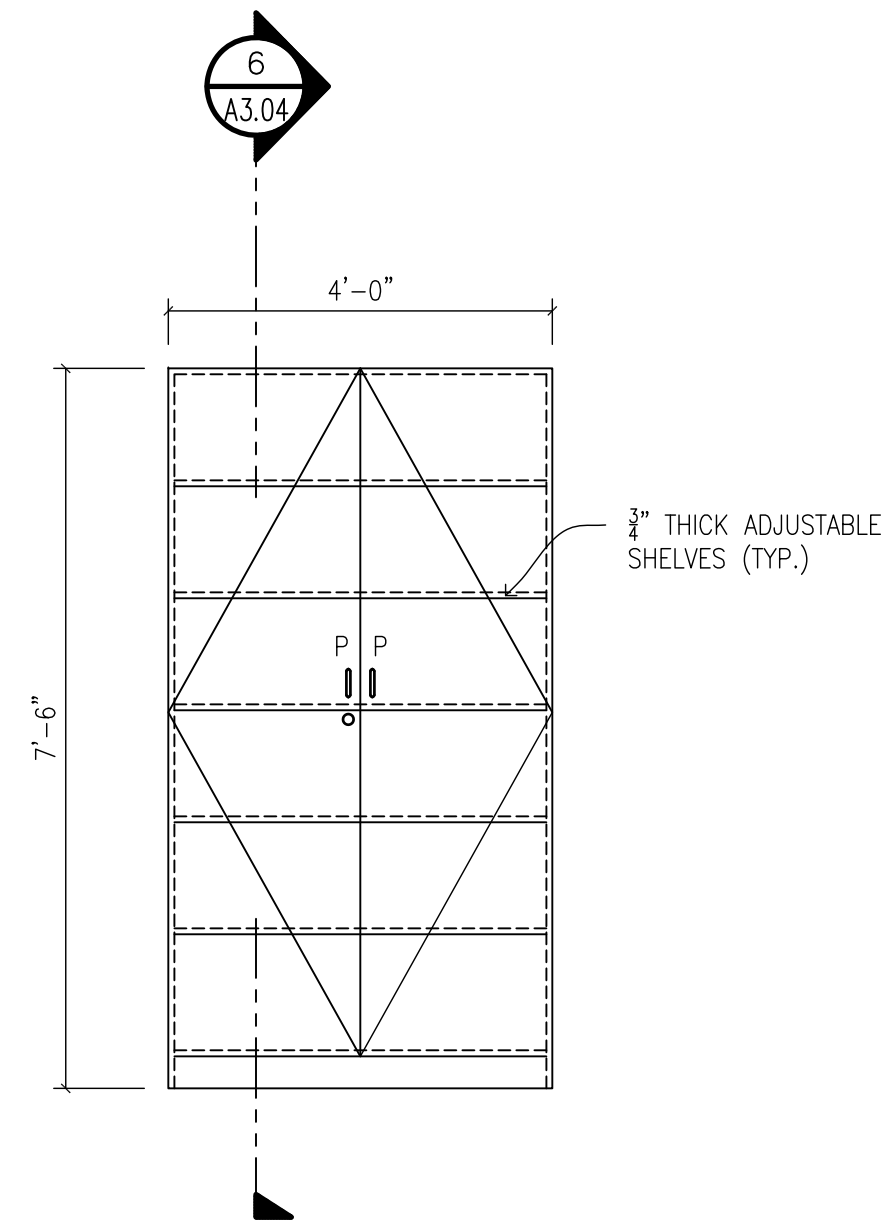
119A EXISTING KITCHEN – ELEVATION "B"



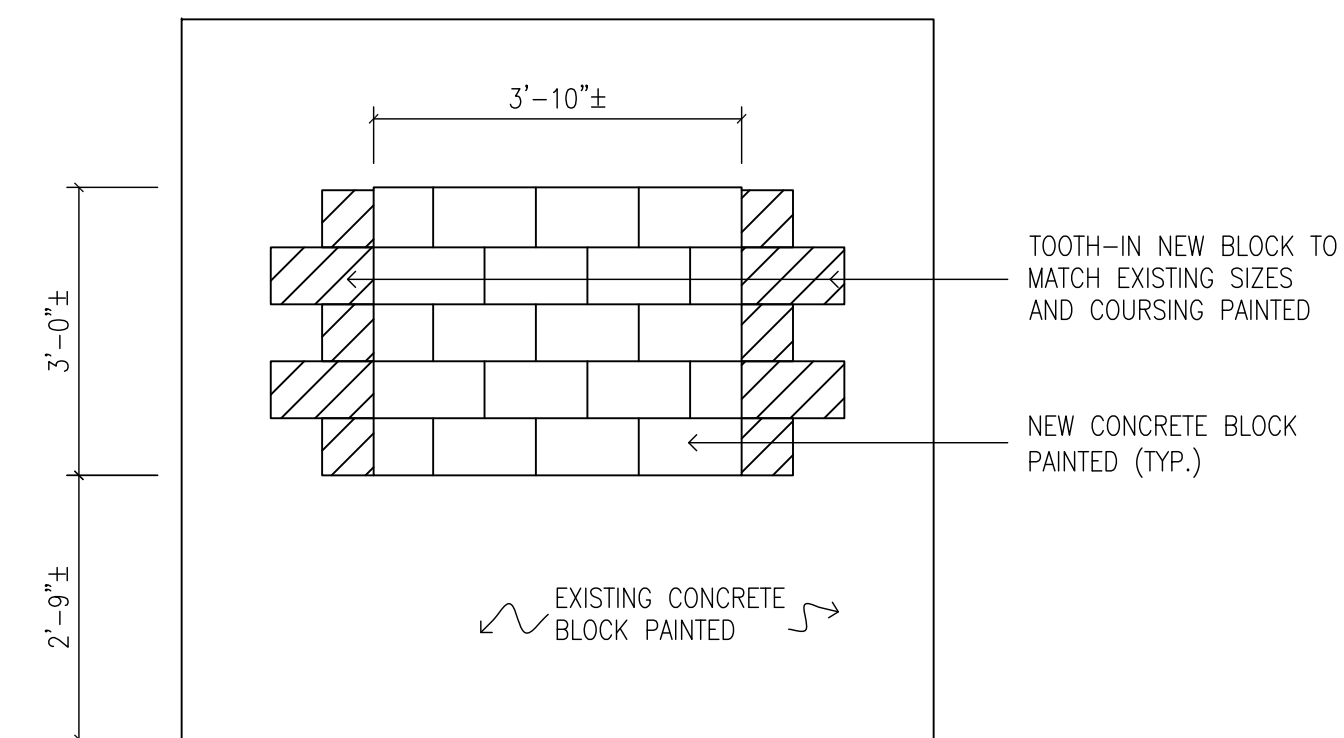
119A EXISTING KITCHEN – ELEVATION "C"



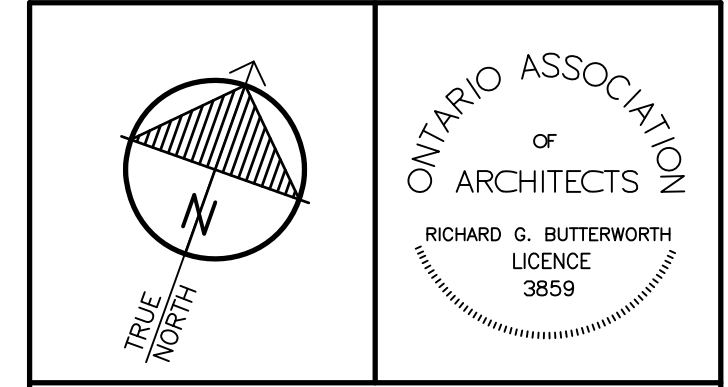
119A EXISTING KITCHEN – ELEVATION "D"



119 EXISTING STAFF ROOM – ELEVATION "A"



121 EXISTING GYMNASIUM – ELEVATION "A"



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**HWDSB**

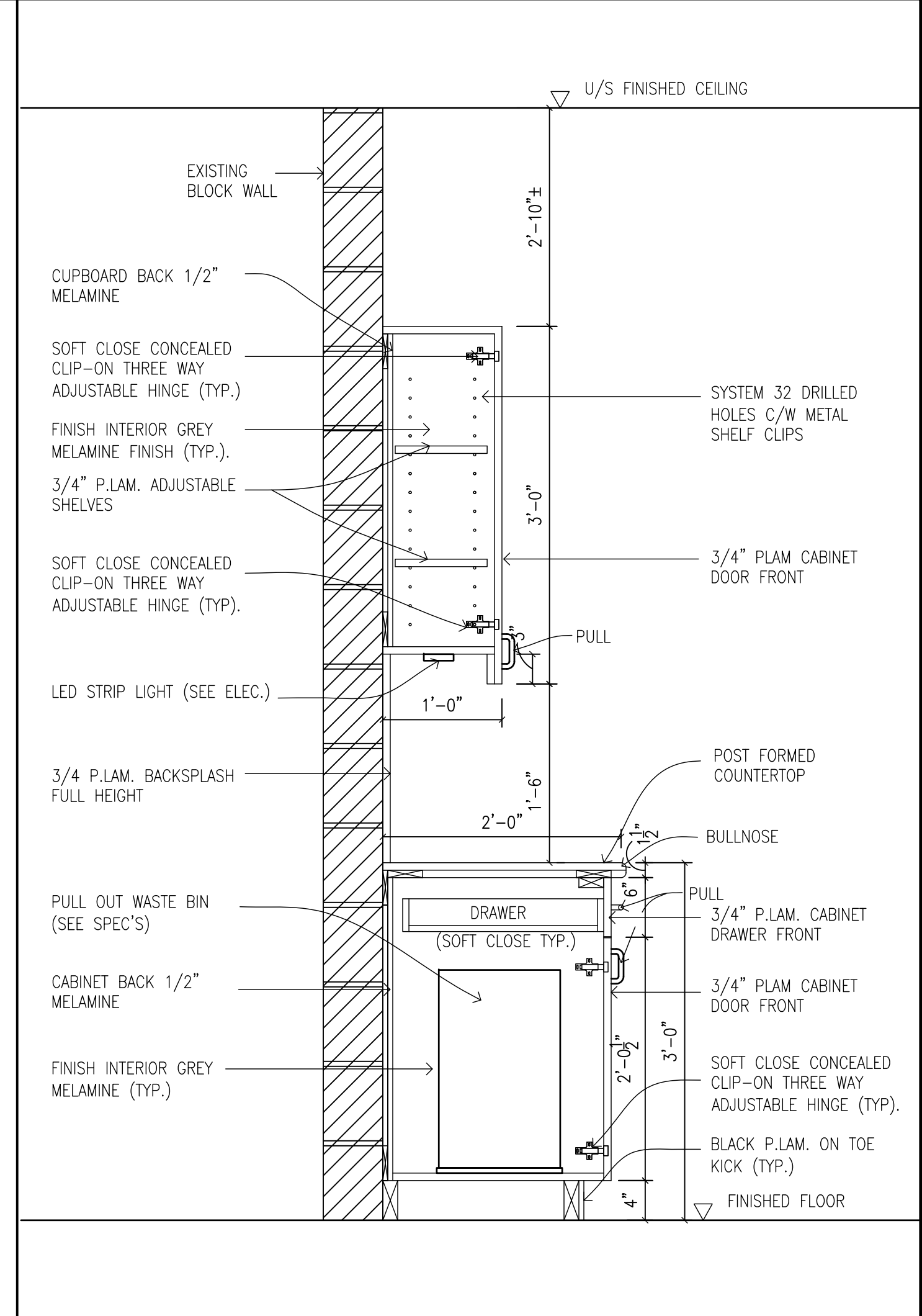
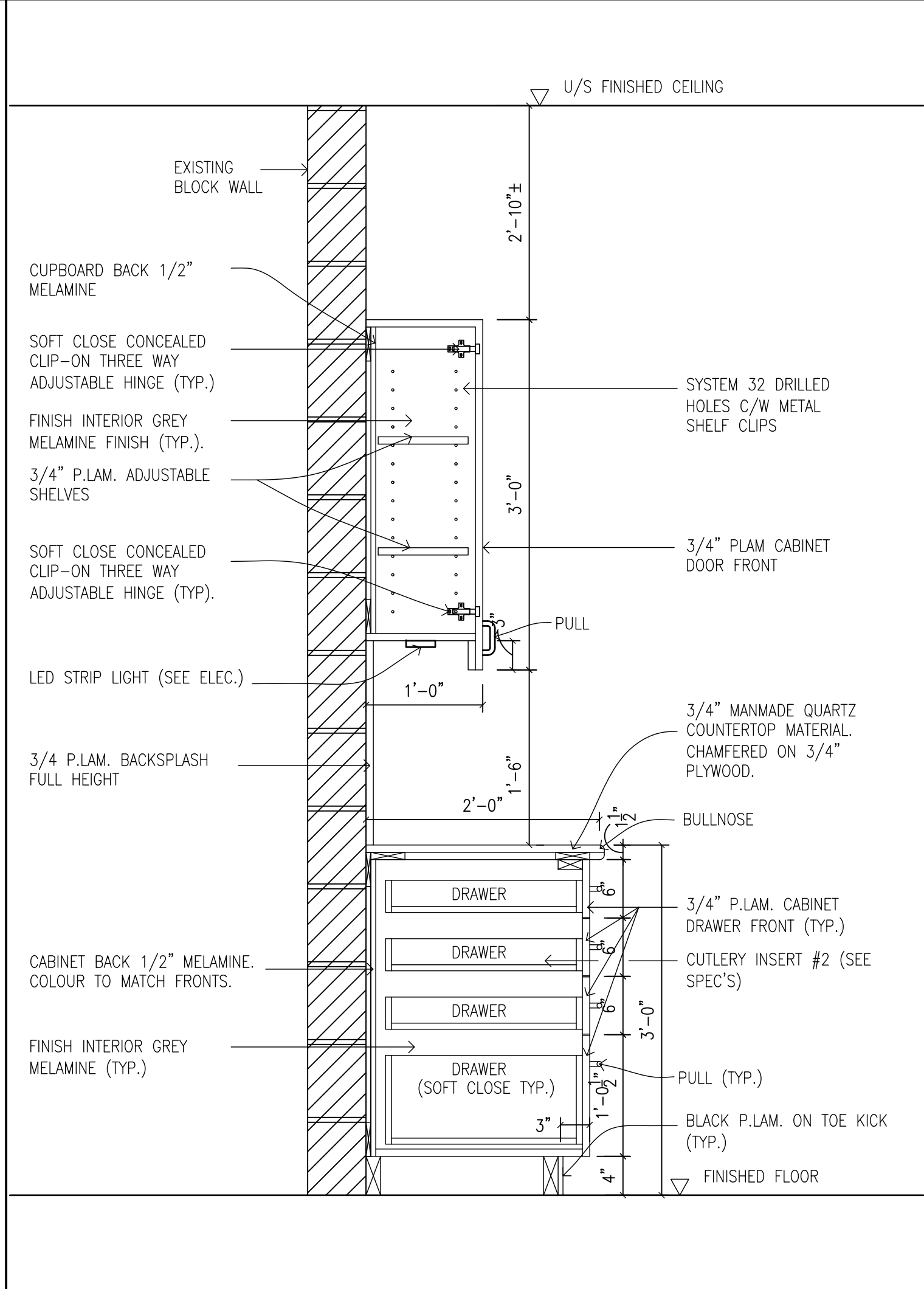
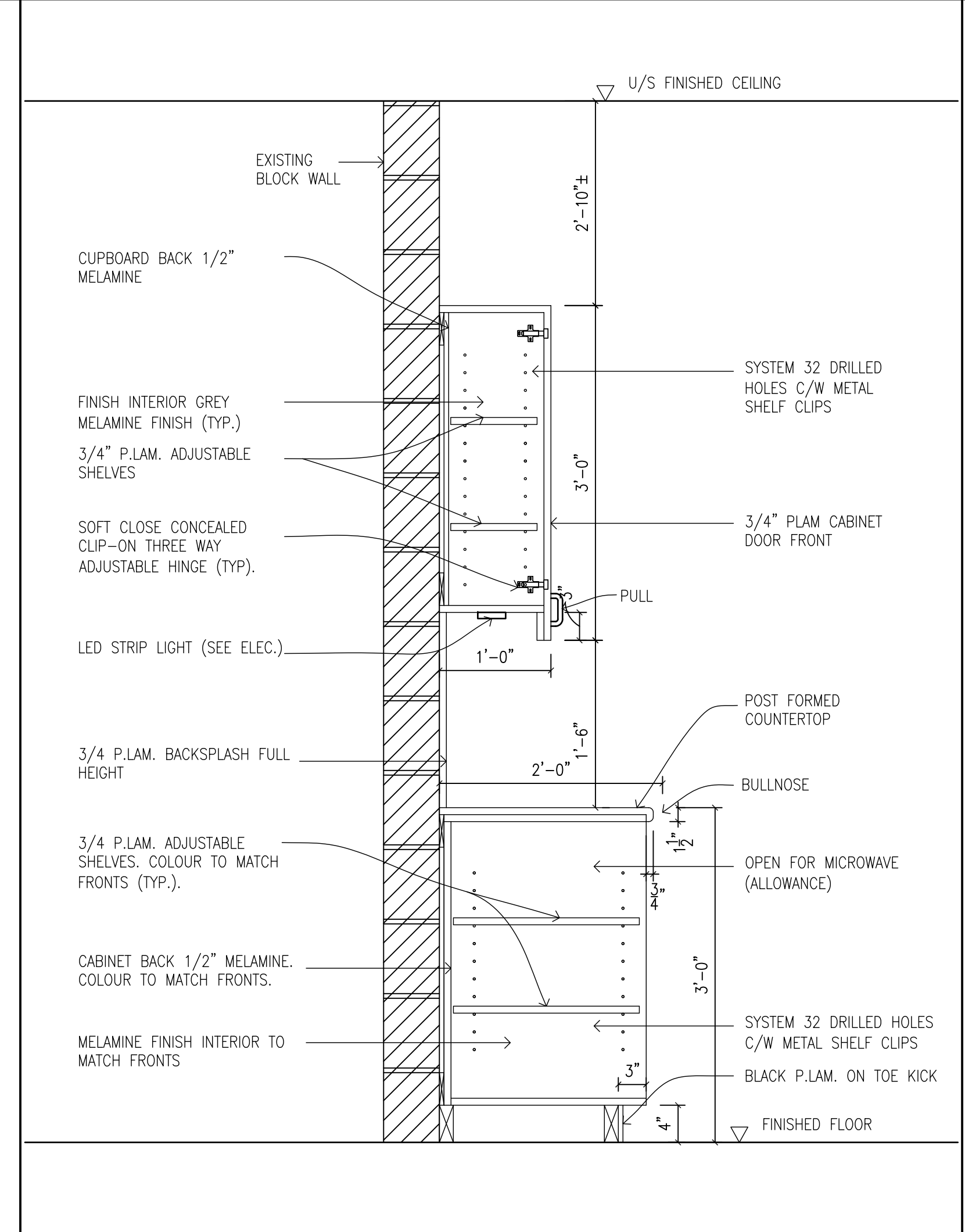
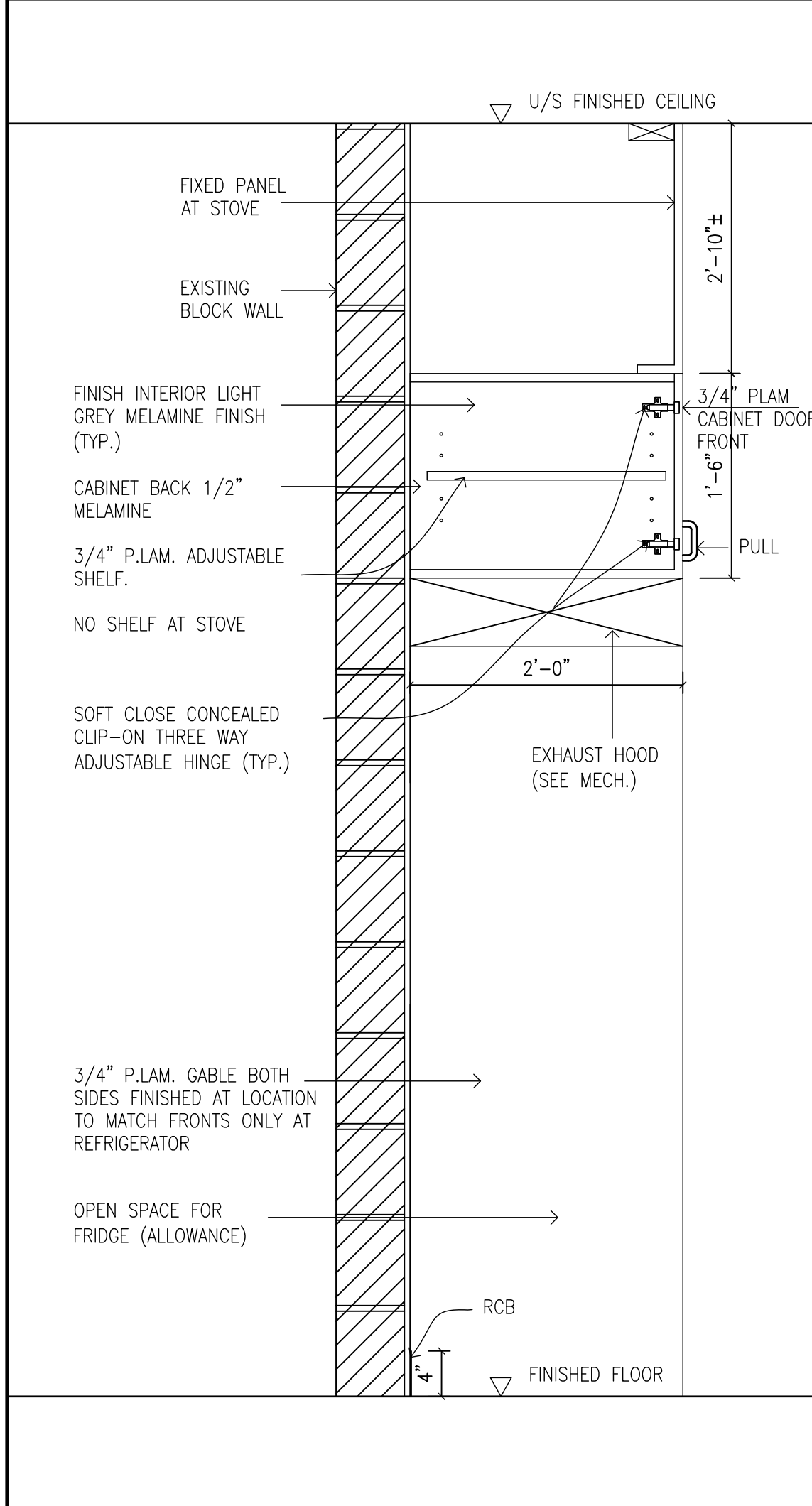
3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB
REF:	DATE	DESCRIPTION	CH'D.

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ROOM ELEVATIONS  
 MILLWORK SECTIONS AND DETAILS

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
AS SHOWN	A3.03

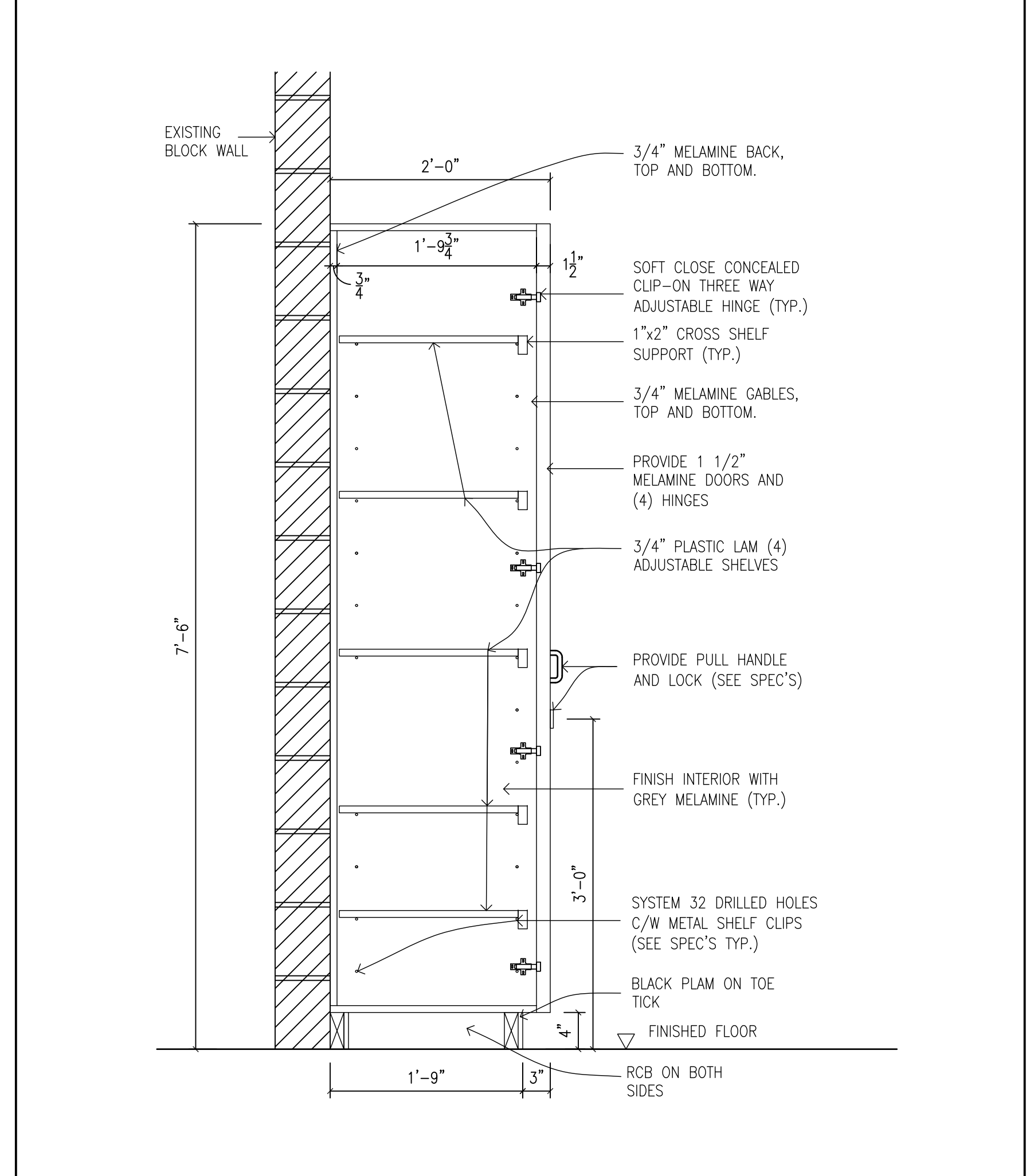
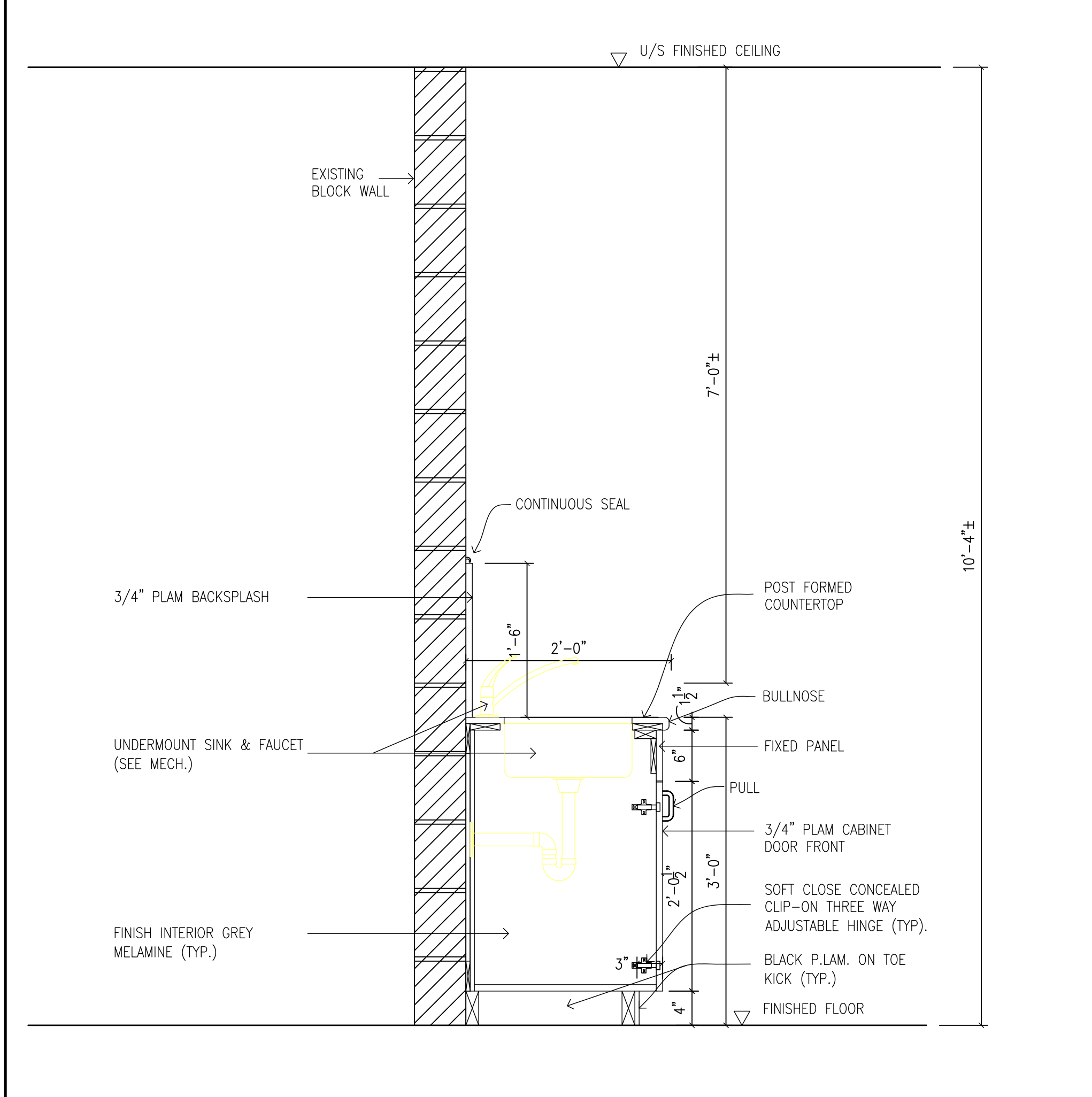


1 MILLWORK SECTION  
A3.04 1"=1'-0"

2 MILLWORK SECTION  
A3.04 1"=1'-0"

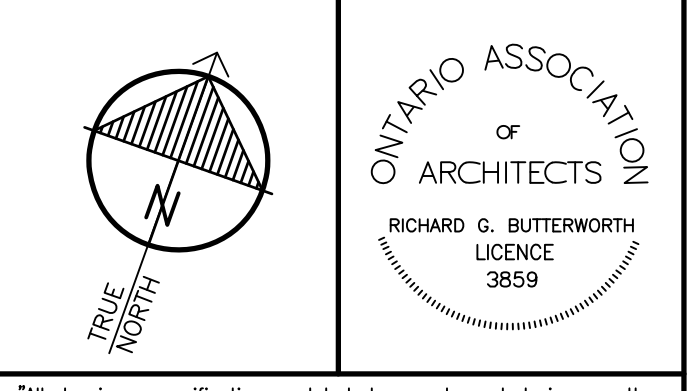
3 MILLWORK SECTION  
A3.04 1"=1'-0"

4 MILLWORK SECTION  
A3.04 1"=1'-0"



5 MILLWORK SECTION  
A3.04 1"=1'-0"

6 MILLWORK SECTION  
A3.04 1"=1'-0"



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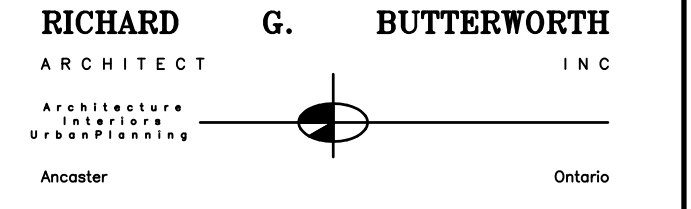
This drawing shall not be used for construction purposes unless countersigned by:  
Richard G. Butterworth, Architect

- GENERAL NOTES:**
1. ALL CABINET BOX CONSTRUCTION 3/4" MELAMINE WITH TAPED EDGES.
  2. 1/2" MELAMINE BACK PANELS.
  3. 3/4" MELAMINE SHELVES WITH TAPED EDGES.
  4. 3/4" MELAMINE FRONT PANELS C/W SOLID P.L.A.M. EDGES.
  5. ALL EXPOSED EDGES TO MATCH FRONT PANEL VENEERS.
  6. ALL EXPOSED CABLES 3/4" MELAMINE TO MATCH FRONT PANEL VENEERS.
  7. ALL HINGES AND FULL EXTENSION DRAWER GLIDES TO BE SOFT CLOSE TYPE.
  8. HANDLES TO BE RICHELIEU #30576 BRUSHED FINISH.
  9. USE SYSTEM 32 DRILLED HOLES WITH METAL SHELF CLIPS RICHELIEU # 5834-180.
  10. ALL OPEN SHELVING UNITS LAMINATE TO MATCH FRONTS TYPICAL.

**HWDSB**

REF.	DATE	DESCRIPTION	CH'D.
3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB

ISSUED:



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HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD**  
168 HURON AVENUE  
ANCASTER, ONTARIO

MILLWORK SECTIONS AND DETAILS

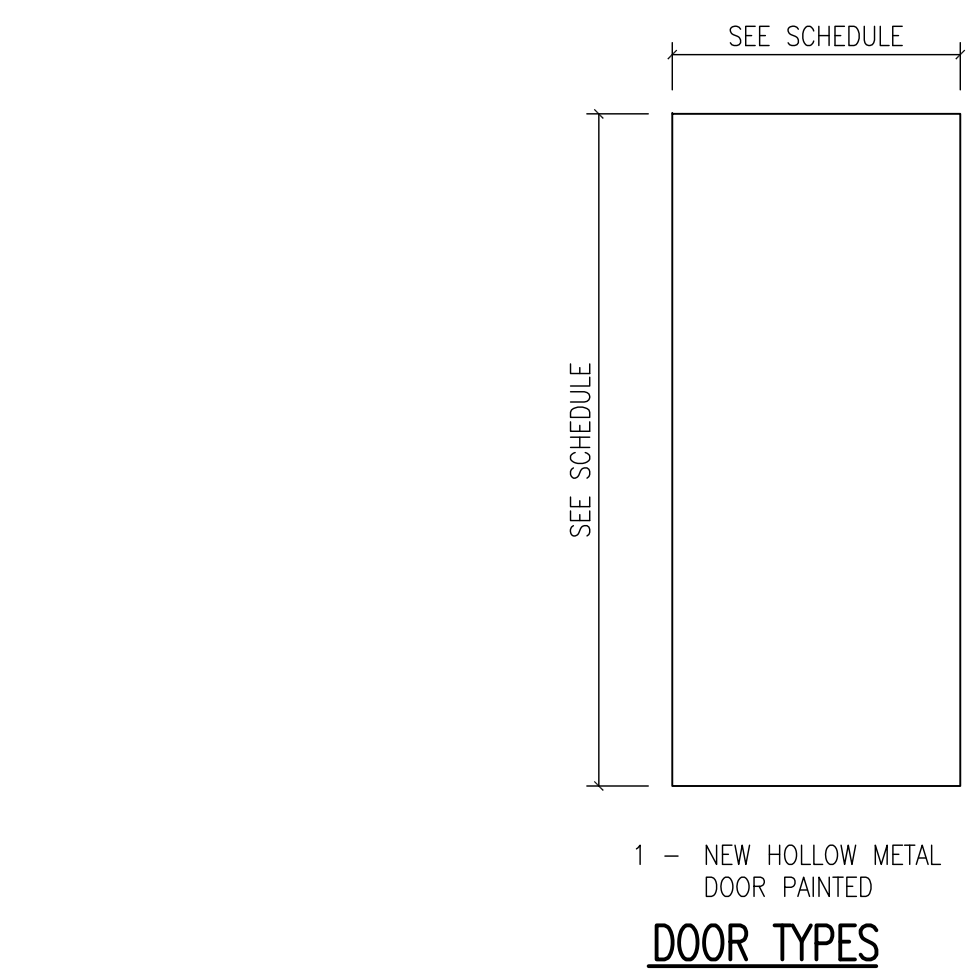
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DATE: MARCH 2026	JOB No.: 25-104
SCALE: AS SHOWN	SHEET No.: A3.04

PLOT SCALE: 1/4"

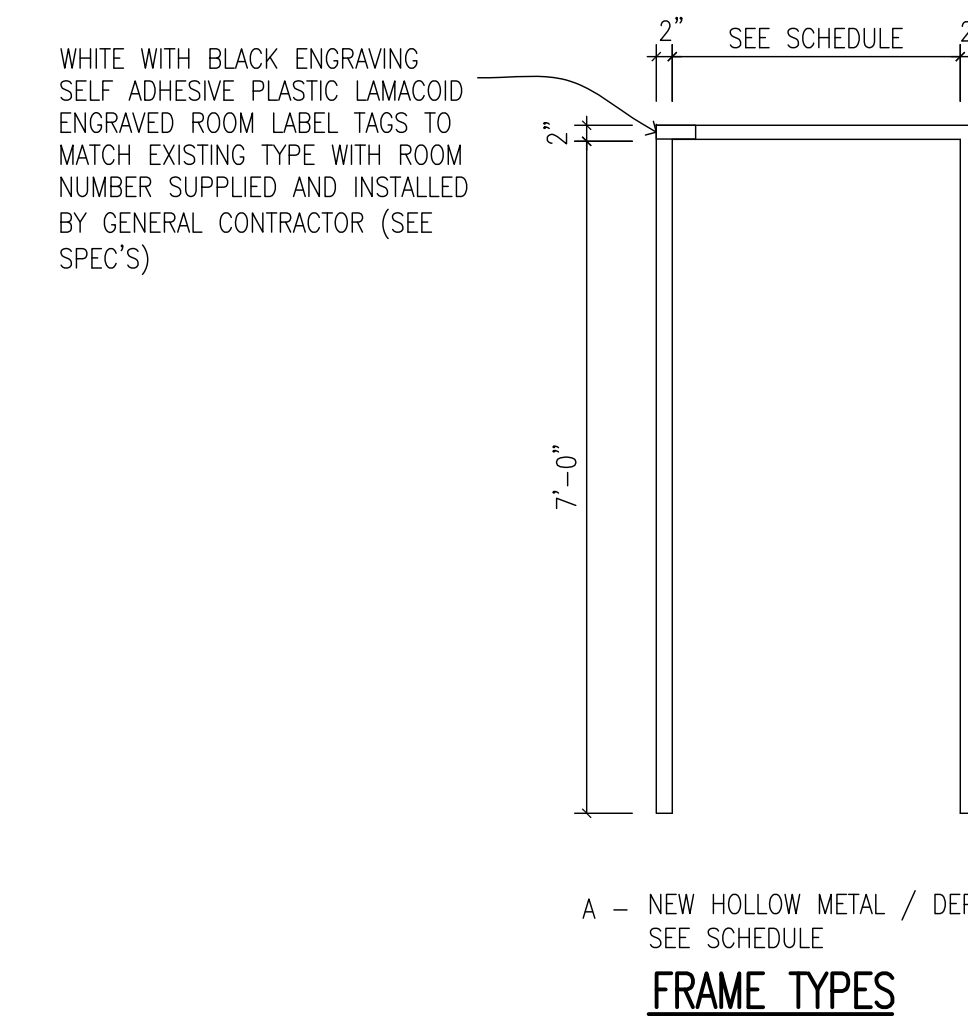
ROOM FINISH SCHEDULE										
No.	ROOM NAME	FLOOR FINISH	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT	
103	EXISTING CORRIDOR	EXISTING VAT	PATCH EXISTING SOLDIER COURSE BRICK TO MATCH EXISTING	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING ACOUSTIC TILE	7'-8"±	
104	EXISTING CORRIDOR	EXISTING VAT	PATCH EXISTING SOLDIER COURSE BRICK TO MATCH EXISTING	EXISTING / NEW CONCRETE BLOCK PATCHED AND PAINTED	-	-	-	-	10'-4"±	
110F	NEW UNIVERSAL WASHROOM	NEW SEAMLESS CEMENT TERRAZZO	NEW 6" PRECAST TERRAZZO	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING WOOD DECK AND BEAMS PAINTED		
114	EXISTING GIRLS WASHROOM			EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED			
116	EXISTING BOYS WASHROOM			EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED			
118	EXISTING STAFF WASHROOM			NEW CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED			
120	EXISTING STAFF WASHROOM									
124	EXISTING GIRLS WASHROOM			EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED. NEW BLOCK PATCHED AND PAINTED			
126	EXISTING BOYS WASHROOM			EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED			
110	EXISTING CORRIDOR	EXISTING VAT	PATCH EXISTING SOLDIER COURSE BRICK TO MATCH EXISTING	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	-	-	-	-		
110E	EXISTING COAT CHECK	EXISTING		-	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	-	-	-		
119	EXISTING STAFF ROOM	NEW VRT		EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING WOOD DECK STAIN TOUCH UP WHERE REQUIRED AT FUTURE REPLACEMENTS		
119A	EXISTING KITCHEN	NEW VRT	NEW 4" RCB AT MILLWORK	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING CONCRETE / NEW BLOCK PATCHED AND PAINTED	EXISTING WOOD DECK STAIN TOUCH UP WHERE REQUIRED AT FUTURE REPLACEMENTS		
121	EXISTING GYMNASIUM	-	-	-	NEW CONCRETE BLOCK PATCHED AND PAINTED	-	-	-		
122	EXISTING CORRIDOR	EXISTING VAT	PATCH EXISTING SOLDIER COURSE BRICK BASE TO MATCH EXISTING	EXISTING / NEW CONCRETE BLOCK PATCHED AND PAINTED	-	-	-	-	10'-4"±	

- NOTES**
- WHERE ALL EXISTING ELEMENTS TO BE REMOVED. PATCH ALL ADJACENT SURFACES FLUSH TO MATCH EXISTING.
  - PAINT ALL EXISTING OR NEW MECHANICAL AND ELECTRICAL ITEMS ON WALLS AND CEILINGS, BOXES, CONDUITS ETC. INCLUDING ALL PREVIOUSLY PAINTED ITEMS.
  - PATCH ALL HOLES IN WALLS FLUSH TO MATCH EXISTING.
  - GENERAL CONTRACTOR TO SITE VERIFY ALL DIMENSIONS.
  - ALL WALLS, CEILINGS AND WOOD BEAMS TO HAVE 2-FINISHED COATS AND 1-COAT COLOR BLOCK PRIMER.
  - ON EXISTING SURFACES USE SPECIAL PRIMER FOR EXISTING OIL BASED PAINT TO NEW PAINTED SURFACES.
  - PAINT ALL EXISTING, EXPOSED AND NEW PIPING, CONDUITS, BOXES, DUCTWORK, GRILLES AND RADS.
  - REMOVE AND REPLACE ALL TACKBOARDS, WHITEBOARDS, CLOCKS, FIRE EXTINGUISHERS FOR PAINTING.

DOOR										FRAME					THRES.	REMARKS
No.	QUANTITY	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	GLASS	LABEL	TYPE	MATERIAL	FINISH	GLASS	LABEL		
D1	1	3'-0"	7'-0"	1 1/2"	1	HM	PAINTED	-	1 HR	A	HM	PAINTED	-	1 HR	NEW DOOR OPERATOR (SEE SPEC'S AND ELEC). STEEL LEVEL 2-13 1/2"x 1/2" x 5/16", FRAME DEPTH TO MATCH WALL 8"	
D2	1	3'-0"			1			-	1 HR	A			-	1 HR	FRAME DEPTH TO MATCH WALL 4"±	
D3	1	3'-0"			1			-	1 HR	A			-	1 HR	FRAME DEPTH TO MATCH WALL 4"±	
D4	1	3'-0"			EXISTING	WOOD	EXISTING	-	-	EXISTING	WOOD	-	-	-		
D5	1	3'-0"			EXISTING	WOOD	-	-	-	EXISTING	WOOD	-	-	-		
D6	1	3'-0"			EXISTING	HM	-	-	-	EXISTING	HM	-	-	-	PAINT EXISTING TRANSOM FRAME ABOVE DOOR.	



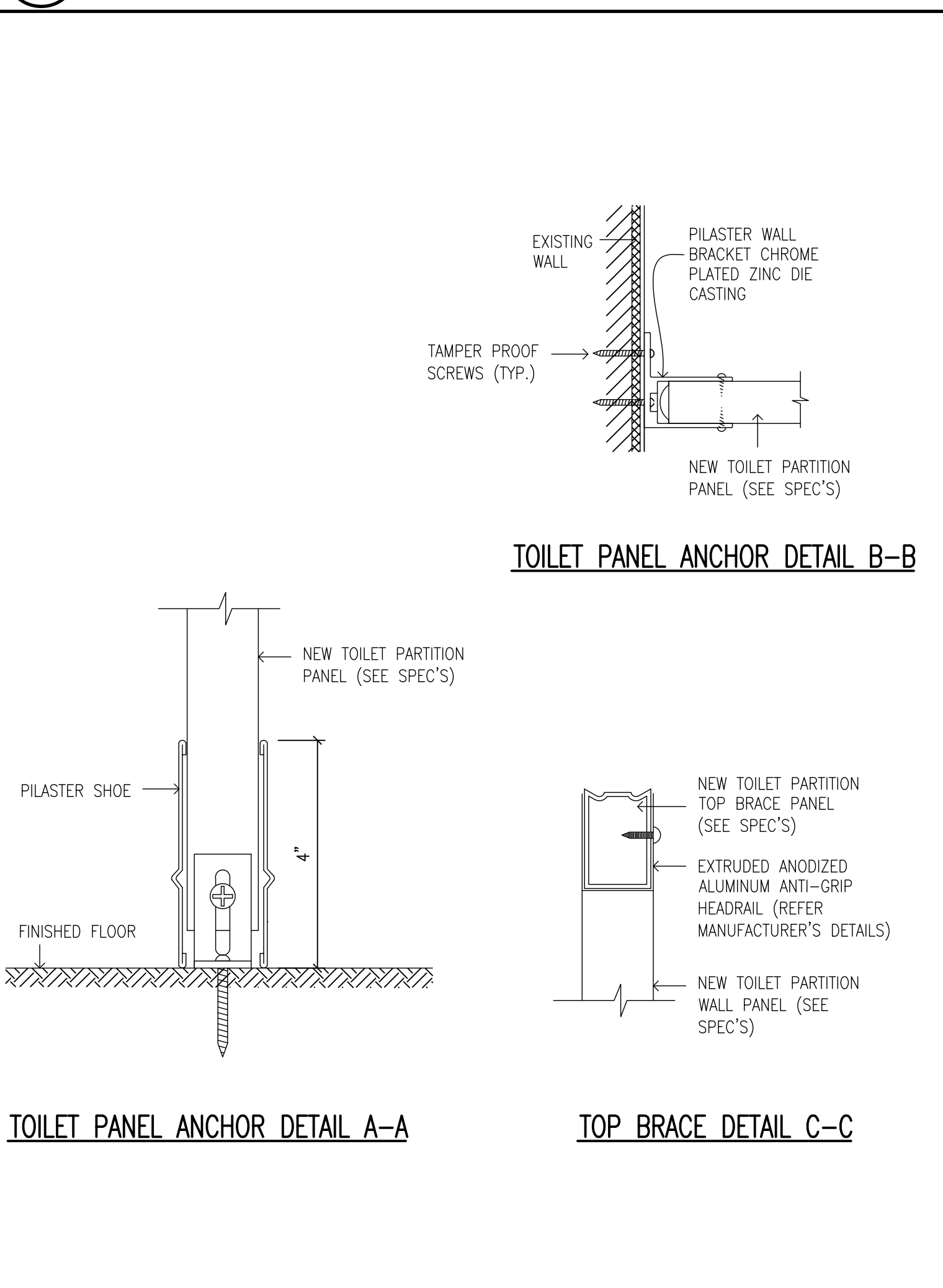
**DOOR TYPES**



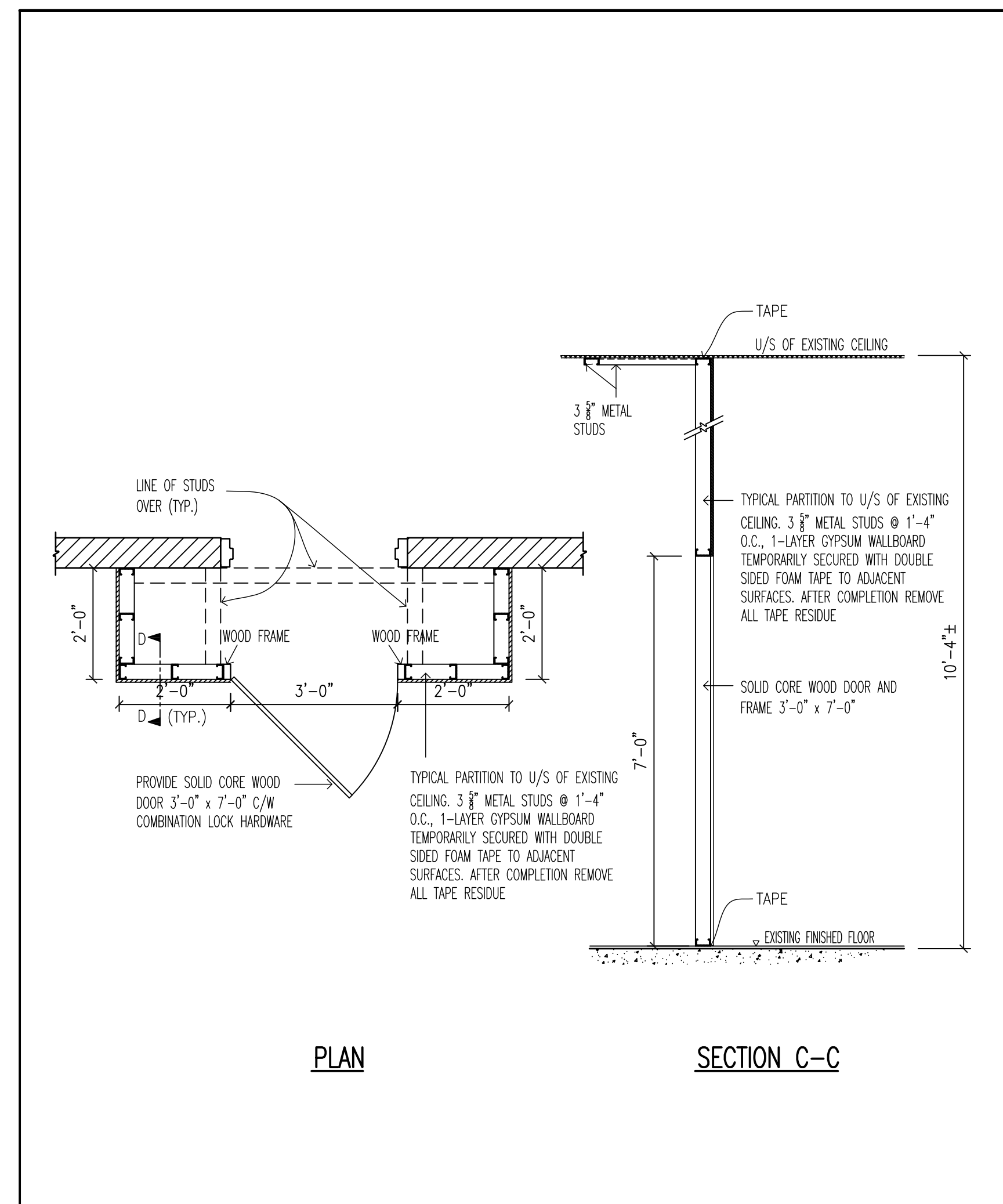
**FRAME TYPES**

**1** DOOR AND ROOM FINISH SCHEDULES  
A3.05 N.T.S.

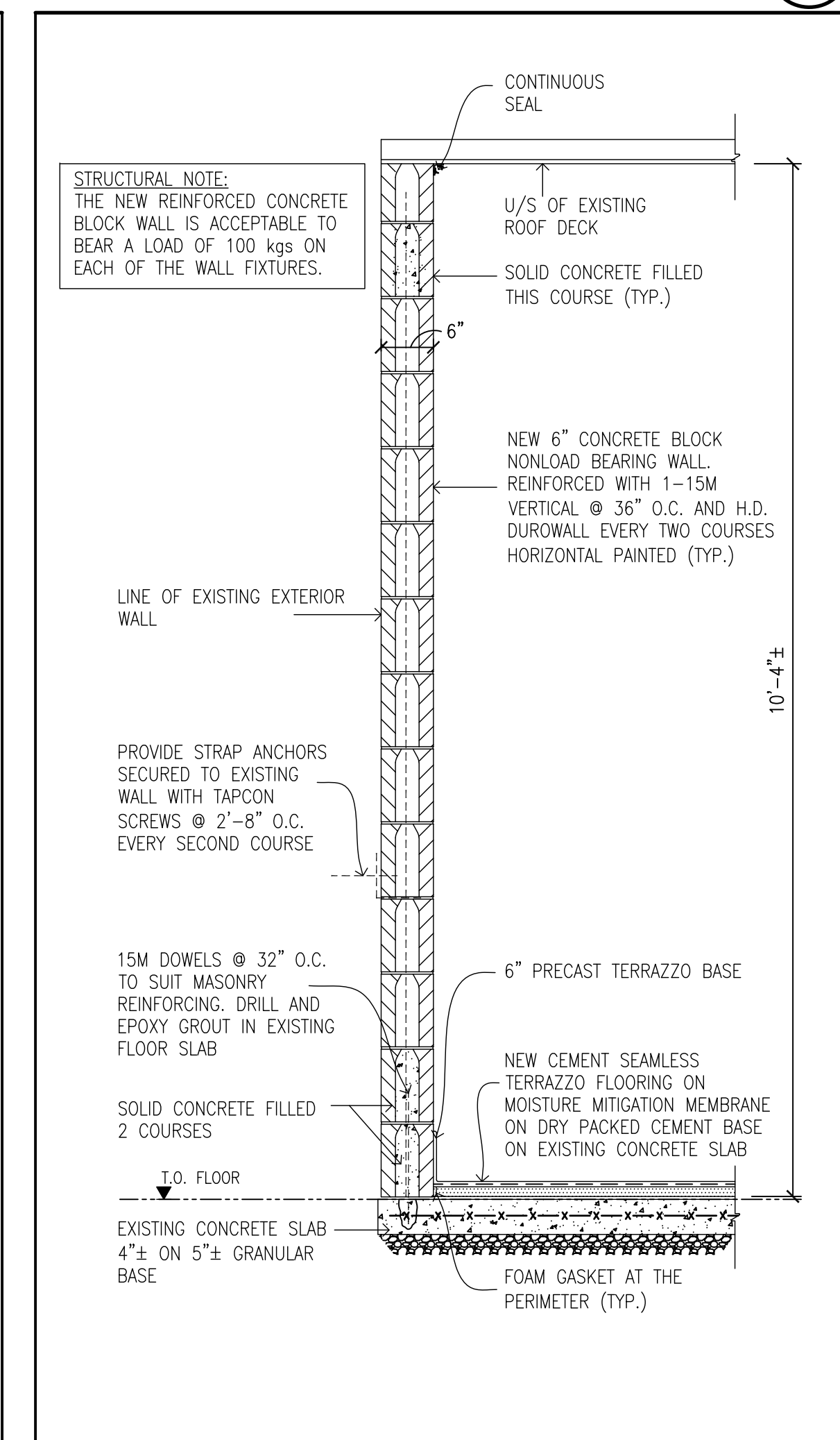
**2** DOOR AND FRAMES TYPES  
A3.05 1/2"=1'-0"



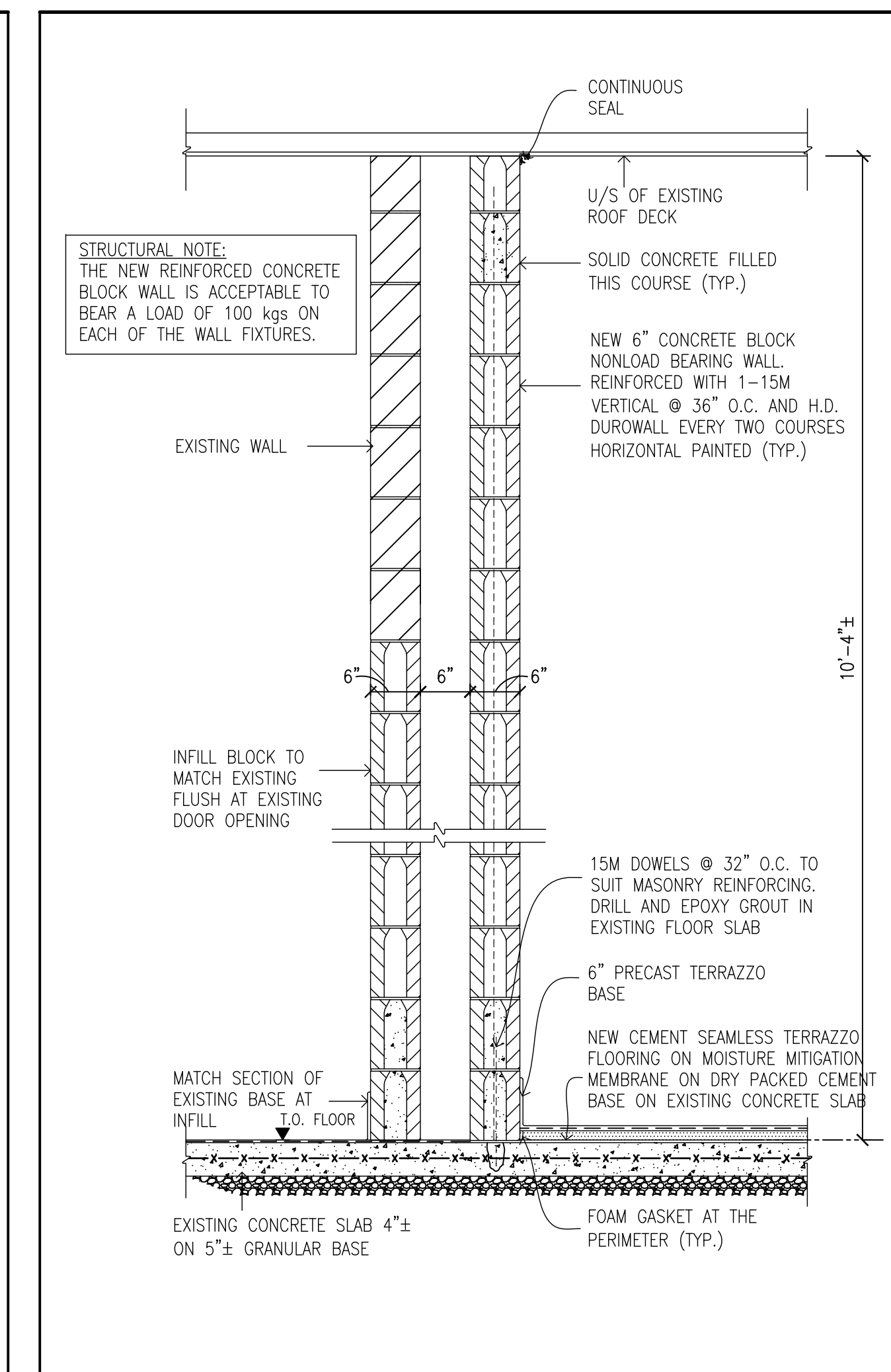
**3** TOILET PARTITION DETAILS  
A3.05 N.T.S.



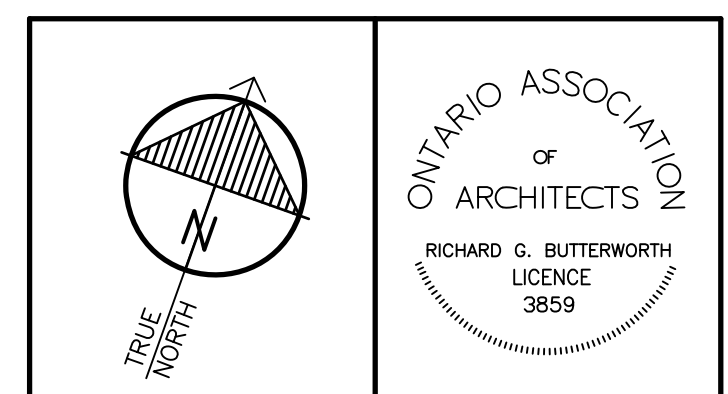
**4** TYPICAL TEMPORARY CONSTRUCTION HOARDING DETAIL  
A3.05 N.T.S.



**5** NEW CONCRETE BLOCK PARTITION WALL SECTION  
A3.05 N.T.S.



**6** NEW CONCRETE BLOCK PARTITION WALL SECTION  
A3.05 N.T.S.



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Richard G. Butterworth, Architect



**HWDSB**

REF.	DATE	DESCRIPTION	CHK'D.
3.	MAR. 06, 2026	ISSUED FOR TENDER	RGB
2.	DEC. 04, 2025	ISSUED FOR BUILDING PERMIT	RGB
1.	OCT. 03, 2025	PRELIMINARY REVIEW DESIGN	RGB

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DOOR AND ROOM FINISH SCHEDULES AND DOOR AND FRAME TYPES	
DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MARCH 2026	25-104
SCALE:	SHEET No.:
AS SHOWN	A3.05

# ELECTRICAL NOTES AND SPECIFICATIONS

## CODES AND STANDARDS

- THE ELECTRICAL AND FIRE ALARM WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE ELECTRICAL SAFETY AUTHORITY, CANADIAN ELECTRICAL CODE, ONTARIO BUILDING CODE, CSA STANDARDS, ULC, NFPA, AND OTHER APPLICABLE CODES AS REQUIRED. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA).

## CONTRACT DOCUMENTS

- THE DRAWINGS ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF ELECTRICAL EQUIPMENT, SENSORS, SWITCHES, DEVICES AND FIXTURES. THE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL, INTERIOR DESIGN, MECHANICAL, STRUCTURAL OR BASE BUILDING DETAILS. BE RESPONSIBLE FOR A THOROUGH KNOWLEDGE OF SAME BEFORE PROCEEDING WITH THE WORK.
- COOPERATE AND COORDINATE WITH OTHER TRADES IN LAYING OUT OF WORK SO AS NOT TO CONFLICT WITH THE WORK OF OTHER TRADES. CARRY OUT WORK PROMPTLY AS PER CONSTRUCTION SCHEDULE AND COORDINATE WITH WORK OF OTHER TRADES.
- MAKE, AT NO ADDITIONAL COST, ANY CHANGES OR ADDITIONS TO MATERIALS AND EQUIPMENT NECESSARY TO ACCOMMODATE STRUCTURAL CONDITIONS (OFFSETS AROUND BEAMS, COLUMN, ETC.)

## MATERIALS AND EQUIPMENT

- ALL SUPPLIED EQUIPMENT AND MATERIALS SHALL BE NEW, UNUSED, AND FREE FROM DEFECTS, CONFORMING TO ALL REQUIRED QUALITY APPROVALS. THIS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, CERTIFICATIONS FROM CSA, ULC, AND COMPLIANCE WITH ALL APPLICABLE STANDARDS AND REGULATIONS. ANY ALTERNATE EQUIPMENT OR MATERIALS PROPOSED MUST ALSO MEET THE SAME STANDARDS AND CERTIFICATIONS.

## LOCATION OF OUTLETS

- COORDINATE ON SITE THE PLACEMENT OF ALL OUTLETS AND DEVICES WITH MILLWORK LAYOUTS, LIGHTING LOCATIONS, FURNITURE ARRANGEMENTS (IF SHOWN), AND EXISTING SITE CONDITIONS. VERIFY THAT DEVICE LOCATIONS DO NOT CONFLICT WITH BUILT-IN ELEMENTS, EQUIPMENT CLEARANCES, OR OPERATIONAL REQUIREMENTS. ADJUST OUTLET LOCATIONS AS REQUIRED TO SUIT FINAL FIELD CONDITIONS AND ENSURE FUNCTIONAL, UNOBSTRUCTED ACCESS. THE MINIMUM MOUNTING HEIGHT FOR RECEPTACLES SHALL BE 16 INCHES ABOVE FINISHED FLOOR UNLESS INSTALLED OVER COUNTERTOPS OR OTHERWISE NOTED.

## WORK IN RENOVATED AREAS

- WHEN DELETING AND/OR MAKING SAFE EXISTING ELECTRICAL WORK, ENSURE THAT IT INCLUDES REMOVAL OF ALL DISCONNECTED WIRING BACK TO THE ASSOCIATED PANELBOARD.
- DISCONNECT AND REMOVE ALL EXISTING LUMINAIRES, DEVICES, OUTLETS, AND RELATED COMPONENTS THAT ARE NOT DESIGNATED FOR REUSE. REMOVED ITEMS SHALL BE DISPOSED OF OFF-SITE IN A SAFE AND ENVIRONMENTALLY APPROVED METHOD. CUT BACK AND CAP UNUSED RACEWAY THAT ARE CONCEALED AND CANNOT BE REMOVED AND REMOVE UNUSED WIRING BACK TO PANELBOARD. REMOVE ALL REDUNDANT COMMUNICATIONS CABLES WHERE FOUND.
- ENSURE THAT ALL EXISTING EQUIPMENT WHICH IS TO BE REUSED AND/OR RELOCATED IS THOROUGHLY INSPECTED AND REFURBISHED TO ENSURE CORRECT OPERATION WHEN PUT BACK INTO SERVICE AND TO MEET ELECTRICAL SAFETY AUTHORITY AND CANADIAN ELECTRICAL CODE (CEC).
- ALL EXISTING ELECTRICAL EQUIPMENT WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF, OFF SITE.
- WHERE EXISTING OUTLET BOXES OR CONDUITS CANNOT BE REMOVED FROM THE FLOOR, PLUG AND CAP EXISTING HOLES FLUSH WITH FLOOR USING APPROVED FITTINGS.
- BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BASE BUILDING INCURRED BY WORK OF THIS DIVISION, OR REPAIR TO THE SATISFACTION OF THE CONSULTANT.
- CARRY OUT THE WORK WITH A MINIMUM OF NOISE, DUST AND DISTURBANCE.
- PROVIDE ALL REQUIRED TOOLS TO COMPLETE THE WORK. OBTAIN PERMISSION FOR THE USE OF EXISTING ELECTRICAL OUTLETS, ELEVATOR, WASHROOMS OR EXISTING SYSTEMS.
- PERFORM DAILY CLEANUP AND DISPOSE OF DEBRIS PROPERLY. UPON COMPLETION, REMOVE ALL TOOLS, SURPLUS, AND WASTE MATERIALS, LEAVING THE PREMISES CLEAN.

## WIRING FOR OTHER TRADES

- ALL STARTERS AND LOW VOLTAGE CONTROL WIRING WILL BE SUPPLIED BY OTHER TRADES. THIS ELECTRICAL DIVISION SHALL RECEIVE, INSTALL AND WIRE ALL STARTERS. REVIEW SHOP DRAWINGS BEFORE COMMENCING WORK AND VERIFY POWER, VOLTAGE AND BREAKERS REQUIREMENTS.
- SUPPLY, INSTALL AND WIRE ALL REQUIRED DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT. CONFIRM ELECTRICAL REQUIREMENTS AND EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND DEVICES WITH OTHER DIVISIONS PRIOR TO INSTALLATION. REVIEW THE MECHANICAL AND ELECTRICAL DRAWINGS TO ENSURE FULL COORDINATION.
- PROVIDE RECEPTACLE FOR TRAP SEAL PRIMER AND WIRE TO NEAREST CIRCUIT. COORDINATE WITH MECHANICAL TRADE.
- PROVIDE POWER WIRING FROM NEAREST CIRCUIT TO BAS (CONTROLS) TRANSFORMER(S). COORDINATE WITH MECHANICAL TRADE FOR LOCATION OR EACH TRANSFORMER.

## FIRE SEAL

- MAINTAIN THE INTEGRITY OF ALL FIRE SEPARATIONS. PROVIDE ALL NECESSARY CSA AND ULC LISTED PRODUCTS WHICH ARE REQUIRED TO GO AROUND AND IN CABLE TROUGH FIRE RATED ASSEMBLIES, TO RETAIN THE FIRE RATING OF THESE ASSEMBLIES.
- WHERE CABLES OR CONDUITS PASS THROUGH FLOORS AND FIRE RATED WALLS, PACK SPACE BETWEEN WIRING AND SLEEVE FULL WITH FIREPROOFING, AND SEAL WITH CANSTRUT ELASTA-SEAL OR APPROVED CAULKING COMPOUND WITH FIRE RESISTANCE RATING EQUAL TO THE WALL/FLOOR BEING PENETRATED.
- PACK ALL SLEEVES, CONDUITS AND AROUND THE CONDUITS FOR A COMPLETE TIGHT SEAL. ACCEPTED FIRE SEAL LIQUID OR PUTTY TYPE SHALL ONLY BE PROVIDED BY DOW CORNING OR 3M. MINERAL WOOL FIBRE SHALL NOT BE USED.

## EMERGENCY LIGHTING AND TESTING NOTE

- ELECTRICAL CONTRACTOR SHALL PROVIDE DEDICATED CIRCUIT BREAKERS IN POWER PANELS FOR THE EMERGENCY LIGHTS AND EXIT SIGNS. TEST ALL EMERGENCY LIGHTS AND PROVIDE A SIGNED LETTER CERTIFYING THAT 10 LUX IS MAINTAINED AND ALL EMERGENCY LAMPS WERE ON 100% FOR A DURATION OF 30 MINUTES TIMED AFTER EACH CIRCUIT BREAKER IS TURNED OFF.

## ALTERATIONS AND RELOCATIONS

- THE DESIGN ENGINEER RESERVES THE RIGHT TO ALTER THE LOCATION OF ANY EQUIPMENT, DEVICES, CONDUITS, OR WIRING DURING CONSTRUCTION AT NO EXTRA COST, PROVIDED THAT THE REQUEST IS MADE BEFORE THE COMMENCEMENT OF ROUGH-IN WORK AND THE REQUESTED CHANGES ARE WITHIN A 3-METER RADIUS. THE REQUESTED REVISIONS AND ADJUSTMENTS SHALL BE INTEGRATED INTO THE CONSTRUCTION PROCESS WITHOUT IMPACTING THE OVERALL PROJECT TIMELINE OR BUDGET. ANY REQUEST FOR ALTERATION OR RELOCATION WILL BE COMMUNICATED IN WRITING TO THE CONSTRUCTION TEAM SUPERVISOR.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO AVOID ANY INTERFERENCES, CONFLICTS OR DISRUPTIONS IN THE CONSTRUCTION SCHEDULE.

## GENERAL ELECTRICAL SPECIFICATIONS

- OBTAIN AND PAY FOR PERMIT REQUIRED BY ESA AND LOCAL AUTHORITIES FOR THIS WORK. SUBMIT FINAL INSPECTION CERTIFICATES.
- CARRY OUT ALL WORK IN ACCORDANCE WITH OEC (ONTARIO ELECTRICAL CODE) REGULATIONS AND ESA INSPECTION REQUIREMENTS.
- SUBMIT SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS, AND BATTERY UNITS AND NEW PANELS TO CONSULTANT FOR REVIEW.
- MATERIALS DISCONNECTED AND REMOVED UNDER THIS CONTRACT THAT ARE NOT SCHEDULED FOR REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COORDINATION WITH THE GENERAL CONTRACTOR BEFORE COMPLETION OF THE WORK.
- PROVIDE LAMACOID LABELS (3-PLY) WHITE LETTERED ON BLACK BACKGROUND – 1/4" HIGH LETTERING ON ELECTRICAL EQUIPMENTS SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT. PROVIDE STICKER AT EACH RECEPTACLE INDICATING POWER PANEL NAME AND CIRCUIT BREAKER NUMBER.
- THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT, INCLUDING LUMINAIRES, WIRING DEVICES, PANELBOARDS, DISTRIBUTION ASSEMBLIES, AND ASSOCIATED COMPONENTS, THROUGHOUT CONSTRUCTION AND AT COMPLETION OF THE WORK.
- COORDINATE WITH ALL TRADES TO ENSURE THAT ALL EQUIPMENT IS LOCATED AND INSTALLED IN PROPER RELATION TO ADJACENT APPARATUS, DUCTWORK, PIPING, STRUCTURAL ELEMENTS, AND ARCHITECTURAL FINISHES. REVIEW AND CONFIRM CLEARANCES, ACCESS REQUIREMENTS, AND SPATIAL COMPATIBILITY PRIOR TO INSTALLATION.
- GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER/CONSULTANT. PROVIDE WRITTEN GUARANTEE. BOXES FOR OUTDOOR USE SHALL BE GALVANIZED CAST FERROUS ALLOY AND EQUIPPED WITH NEOPRENE GASKET.
- WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE APPROVED.
- DEFINITIONS: THE FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATIONS AND ON ASSOCIATED DRAWINGS.
  - "CONCEALED" – HIDDEN FROM NORMAL SIGHT IN FURRED SPACES, SHAFTS, CEILING SPACES, WALLS, UNDER FLOOR AND PARTITIONS.
  - "EXPOSED" – ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
  - "PROVIDE" – (AND ALL TENSES OF PROVIDE) SUPPLY, INSTALL, WIRE AND CONNECT COMPLETE.
  - "INSTALL" – (AND ALL TENSES OF INSTALL) INSTALL WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
  - "SUPPLY" – SUPPLY ONLY.
  - "OR APPROVED EQUAL" – MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
  - "AS INDICATED" – AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.

- ALL WIRING SHALL BE COLOUR CODED AS PER OHSAC AND BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF STICKING PERMACODE WIRE MARKERS. ALL JUNCTION BOXES IN CONCEALED CEILING SPACES SHALL BE LABELED WITH PEN MARKER TO CIRCUITS CONTAINED THEREIN.

- SUPPLY, INSTALL WIRE AND CONNECT ALL EQUIPMENT SHOWN SPECIFIED OR MENTIONED.
- WIRE AND CONNECT MOTORS SUPPLIED BY OTHERS, AS INDICATED.

- DISCONNECT SWITCHES: FUSED AND NON-FUSED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK MECHANISM, LOAD BREAK TYPE WITH DOOR, HANDLE AND SWITCHING MECHANISM INTERLOCK, ARC EXTINGUISHERS, SILVER PLATED WIPE ACTION CONTACTS, AND SPRING REINFORCED FUSE CLIPS, OF SIZES INDICATED, CSA APPROVED AND CERTIFIED. PROVIDE DISCONNECT SWITCHES AHEAD OF EACH PIECE OF EQUIPMENT WHERE NECESSARY TO MEET CODE REQUIREMENTS.

- POWER PANELS SHALL BE NDP, CDP OR QMB, QMBQ TYPE WITH BOLT-ON BREAKERS OR FUSES, BREAKERS: MINIMUM 22,000-AM SYMMETRICAL AT 240V.

- BOXES FOR INDOOR USE: CODE GAUGE ELECTRO GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERROUS ALLOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.

- FIXTURE BOXES: ELECTRO GALVANIZED STEEL. 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.

- WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND / OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORATE THE VAPOUR BARRIER. PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES.

- SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.

- ALL CONDUCTORS: COPPER WITH OR R-90 INSULATION, MINIMUM #12AWG, UNLESS OTHERWISE NOTED. EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.

- ALL SWITCHES RECEPTACLES AND COMMUNICATION OUTLETS SHALL BE WHITE. TO BE LEVITON COMMERCIAL GRADE DECORA SERIES.

- ALL COVER PLATES SHALL BE BRUSHED STAINLESS STEEL.

- USB RECEPTACLE: NEW 14A, 125V COMMERCIAL DECORA TAMPER RESISTANT COMBINATION USB CHARGER / DUPLEX RECEPTACLE UNDER STAINLESS STEEL COVER PLATE, LEVITON 15632-W OR APPROVED EQUAL.

- NEW 15A, 125V COMMERCIAL DECORA SERIES SWITCH UNDER STAINLESS STEEL COVER PLATE, DIMMER SWITCH TO BE "MAESTRO" LED, MULTI LOCATION DIGITAL FADE DIMMER BY LUTRON. CONSULT WITH MANUFACTURERS FOR COMPATIBILITY WITH ACTUAL LIGHT FIXTURE SELECTION PRIOR TO ORDERING.

- RECEPTACLES: WHITE FINISH WITH STAINLESS STEEL COVER PLATES.

- RECEPTACLES: LEVITON COMMERCIAL GRADE DECORA SERIES.

- MOUNT SWITCHES AND ALL OPERABLE DEVICES AT HEIGHTS THAT COMPLY WITH THE ONTARIO BUILDING CODE AND APPLICABLE BARRIER-FREE ACCESSIBILITY REQUIREMENTS.

- PROVIDE, RELOCATE, INSTALL, WIRE AND CONNECT EMERGENCY LIGHTING AND EXIT LIGHTING SHOWN. PROVIDE NEW LAMPS FOR ALL RELOCATED EMERGENCY AND EXIT LIGHTS.

- IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE CONSULTANT AND PROJECT MANAGER. ALL PANEL BOARDS TO HAVE LOCKING HINGED DOOR C/W TYPED PLASTIC DIRECTORY AND NOTIFY THE CONSULTANT.

- FOR RENOVATIONS: PROVIDE ALL CUTTING AND PATCHING REQUIRED TO CARRY OUT ELECTRICAL WORK UNDER THIS CONTRACT.

- MINIMUM WIRE SIZE SHALL BE #14 AWG.

## GROUNDING

- GROUND ALL EQUIPMENT IN ACCORDANCE WITH LATEST EDITION OF THE ELECTRICAL SAFETY CODE. PROVIDE SEPARATE GREEN INSULATED GROUND CONDUCTOR IN EVERY CONDUIT TO ALL DEVICES, LUMINAIRES AND FEEDERS (PANELBOARDS, SPLITTERS, DISCONNECT SWITCHES, ETC.).

## PUBLIC ADDRESS SYSTEM

- ALL DEVICES SHALL BE COMPATIBLE WITH EXISTING PUBLIC ADDRESS SYSTEM. PROVIDE ALL REQUIRED DEVICES AND WIRING. WIRING SHALL BE IN EMT CONDUITS.
- PROVIDE PUBLIC ADDRESS SPEAKER UNITS RECESSED AT CEILING WHERE SHOWN. COORDINATE WITH REFLECTED CEILING PLAN. EACH SPEAKER SHALL BE JBL MODEL CSS8008 OR APPROVED EQUAL, 15-WATTS, 8" ROUND, 120 DEGREE CONICAL COVERAGE, RECESSED IN CEILING. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED SUPPORT BRACKETS, BACK BOX, WIRES AND ACCESSORIES (PARTS) TO COMPLETE INSTALLATION. WIRE TO EXITING PUBLIC ANNUNCIATION SYSTEM.
- PROVIDE ALL REQUIRED WIRES, JUNCTION BOXES, DEVICES AND ACCESSORIES TO COMPLETE SYSTEM INSTALLATION. CONNECT TO EXISTING SYSTEM. ALL WIRES SHALL BE IN EMT CONDUITS.

## COMPLETION OF CONTRACT

- ALL EQUIPMENT MUST BE CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY THE CONSULTANT. PRIOR TO CONTACTING THE CONSULTANT FOR FINAL INSPECTION, THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST.
- AFTER COMPLETION OF WORK PROVIDE A COPY OF ESA INSPECTION CERTIFICATE. FIRE ALARM VERIFICATION CERTIFICATE (AS PER STANDARD ULC 537) MUST BE PROVIDED WHEN THE FIRE ALARM SYSTEM WAS MODIFIED UNDER THE CONTRACT.
- PROVIDE A WRITTEN GUARANTEE FOR ONE YEAR COVERING ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE CONSULTANT.
- ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO EXTRA COST TO THE OWNER.
- IF DURING THE WARRANTY PERIOD, TRANSFORMERS, DEVICES, BALLASTS OR OTHER NOISE AND VIBRATION PRODUCING EQUIPMENT ARE CONSIDERED BY THE CONSULTANT TO EXCEED ACCEPTABLE STANDARDS, THEN THESE MUST BE REPLACED WITHOUT DELAY OR ADDITIONAL COST TO THE OWNER. ALL WORK RELATING TO THE REPLACEMENT OF DEFECTIVE ITEMS, MUST BE CARRIED OUT AFTER NORMAL WORKING HOURS AND AT A TIME WHICH IS ACCEPTABLE TO THE OWNER.

## AS-BUILT DRAWINGS

- REFER TO THE FRONT-END SPECIFICATIONS FOR THIS PROJECT FOR REQUIREMENTS RELATED TO AS-BUILT DRAWING PREPARATION AND SUBMITTAL. PREPARE, MAINTAIN, AND SUBMIT COMPLETE AS-BUILT DRAWINGS IN ACCORDANCE WITH ALL NOTES AND SPECIFIED PROCEDURES. THE ELECTRICAL AS-BUILT DRAWINGS SHALL CLEARLY SHOW THE ROUTING AND FINAL LOCATIONS OF ALL BURIED CONDUITS, TEX CABLES, UNDERGROUND FEEDERS, RISERS, AND ANY OTHER ELECTRICAL EQUIPMENT, DEVICES AND INSTALLATIONS.

## OCCUPANCY SENSORS

- THIS SECTION APPLIES WHEN OCCUPANCY SENSORS ARE SHOWN AND/OR NOTED ON THE FLOOR PLAN(S).
- CEILING SENSORS TO BE WATTSTOPPER DT-355 SERIES OR BY HUBBELL OR LEVITON. THE SENSORS SHALL CARRY A FIVE (5) YEAR WARRANTY
- SENSORS SHALL SENSE A PERSON OF AVERAGE SIZE MOVING DISTANCE OF 2" (50mm) AND RETAIN LIGHTS IN "ON" STATE.
- SENSORS SHALL HAVE AN INTEGRAL BYPASS SHUNT SWITCH FOR SERVICE OR MANUAL OPERATION.
- MULTIPLE SENSORS SHALL BE WIRED IN PARALLEL TO OBTAIN COVERAGE NOTED ON DRAWINGS.
- THE DELAY TO "OFF" SHALL BE ADJUSTED FROM 5 TO 30 MINUTES AND THE SENSOR SHALL BE COMPLETE WITH WALK THROUGH AND TEST MODE.
- SENSORS SHALL INTERFACE WITH POWER / RELAY PACKS AS REQUIRED BY THE SAME MANUFACTURER TO CONTROL THE LOADS NOTED ON THE DRAWINGS.

## WORKING HOURS AND SYSTEMS OPERATING NOTES

- ALL EXISTING MECHANICAL SYSTEMS SERVING THE RENOVATION AREA AND EXISTING BUILDING SHALL REMAIN FULLY OPERATIONAL DURING CONSTRUCTION. ALL NEW AND EXISTING SYSTEMS SHALL BE TESTED AND COMMISSIONED.
- REVIEW EXISTING CONDITIONS BEFORE COMMENCING WORK AND COORDINATE WITH OTHER TRADES FOR POWER WIRING REQUIREMENTS. PROVIDE ALL REQUIRED TEMPORARY CONNECTIONS AS NEEDED TO MAINTAIN SYSTEMS OPERATIONAL.
- COVER DURING CONSTRUCTION EXISTING ELECTRICAL EQUIPMENT AND LIGHT FIXTURES THAT WILL BE AFFECTED BY THE CONSTRUCTION ACTIVITIES AND SUBJECT TO DUST.
- REFER TO INSTRUCTIONS PROVIDED BY THE BOARD REGARDING THE FIRE ALARM SYSTEM AND BY-PASS INSTRUCTIONS.
- CERTAIN WORK INCLUDING SYSTEMS SHUT DOWN WILL HAVE TO BE COMPLETED AFTER HOURS AND ON WEEKENDS SUCH THAT IT DOES NOT AFFECT USE OF BUILDING AND SYSTEMS. CONTRACTS SHALL INCLUDE ALL PROVISIONS TO CARRY AFTER HOUR WORK IN BASE PRICE. AFTER HOUR WORK AND SHUT DOWN INCLUDE, BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:
  - BUILDING POWER SHUT DOWN
  - DRILLING AND ANY NOISY/VIBRATION WORK IN EXCESS OF 60db

## VERIFICATION OF EXISTING CONDITIONS

- CONTRACTOR SHALL REVIEW EXISTING SITE CONDITIONS AFFECTING THE PROPOSED WORK AND COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK. PREPARE INTERFERENCE SKETCHES IF NEEDED AND SUBMIT FOR REVIEW.
- REFER TO RECORD DRAWINGS, ARCHITECTURAL DRAWINGS, AND SPECIFICATIONS WHERE AVAILABLE FOR ADDITIONAL INFORMATION REGARDING EXISTING AND PROPOSED ELECTRICAL AND LIFE-SAFETY SYSTEMS. ALL WORK SHALL BE COORDINATED AND EXECUTED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE (OBC), THE ONTARIO ELECTRICAL SAFETY CODE (OESC), AND ALL RELEVANT CAN/ULC AND CSA STANDARDS.
- BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAIL REVIEW OF EXISTING DEVICES, POWER PANELS, DISCONNECTS, STARTERS, CONDUITS, CABLES, WIRING, PIPES, DUCTS, EQUIPMENT, CONTROLS AND FIRE PROTECTION. EXISTING CONDITIONS MAY VARY FROM THAT SHOWN ON DRAWINGS AND NO EXTRA WILL BE CONSIDERED FOR ANY VARIATION WITHIN 3 METERS (10 FT). THE DESIGN ENGINEER IS NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY WITH DETAILS FOR DIRECTION OR SITE INSTRUCTION ON HOW TO PROCEED.

## GENERAL ELECTRICAL DEMOLITION NOTES

- DISCONNECT AND REMOVE ALL EXISTING EQUIPMENT, DEVICES, WIRES, CONDUITS AND CABLES AS SHOWN AND NOTED ON THE ELECTRICAL DRAWINGS. EXISTING WIRING AND CONDUITS THAT ARE IN GOOD CONDITION AND MEETING THE STANDARDS CAN BE REUSED.
- DISCONNECT AND REMOVE EXISTING WIRING AND CONDUITS THAT ARE ASSOCIATED WITH LIGHT FIXTURES AND ELECTRICAL EQUIPMENT NOTED TO BE REMOVED. REMOVE CONDUITS AND WIRES BACK TO THE SOURCE UNLESS OTHERWISE NOTED. ALL DISCONNECT ELECTRICAL EQUIPMENT, DEVICES, CONDUITS AND WIRES SHALL BE REMOVED FROM SITE ON DAILY BASIS. EQUIPMENT THAT ARE NOTED TO BE RE-USED SHALL BE STORED ON SITE IN A SECURE PLACE. COORDINATE WITH GENERAL CONTRACTOR.
- ALL WORK SHALL BE DONE IN ACCORDANCE TO ESA STANDARDS AND ALL WIRING/SYSTEMS SHALL BE PROTECTED SAFELY AFTER EACH SHIFT ON A DAILY BASIS.
- THE DEMOLITION DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON EXISTING RECORD DRAWINGS, VISUAL SITE REVIEW AND INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE DESIGN ENGINEER CANNOT ASSURE ITS ACCURACY, AND THUS THE CONTRACTOR SHALL REVIEW SITE CONDITIONS BEFORE COMMENCING WORK.
- BEFORE COMMENCING WORK ON ANY SYSTEM, THE CONTRACTOR SHALL PERFORM SITE REVIEWS TO CHECK AND CONFIRM ALL EXISTING ELECTRICAL SYSTEMS INCLUDING POWER PANELS, DISCONNECTS, STARTERS, CIRCUITS, WIRING, JUNCTION BOXES, DEVICES, SWITCHES, LIGHT FIXTURES, HVAC UNITS, FANS AND CONTROLS.

## FIRE ALARM SPECIFICATIONS AND NOTES

- THE FIRE ALARM WORK SHALL BE PERFORMED BY LICENSED AND QUALIFIED FIRE ALARM TECHNICIANS EXPERIENCED IN THE INSTALLATION, VERIFICATION, TESTING, AND SERVICING OF FIRE ALARM SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS, INCLUDING THE ONTARIO BUILDING CODE, CSA, AND ULC STANDARDS.
  - SUPPLY AND INSTALL ALL REQUIRED DEVICES, CONDUITS, WIRING, CONTROLLERS TO COMPLETE INSTALLATION OF FIRE ALARM SYSTEM. COMPLY WITH CAN/CSA – S524 (INSTALLATION OF FIRE ALARM SYSTEMS), CAN/CSA – S537 (VERIFICATION OF FIRE ALARM SYSTEM), NFPA 72 AND THE ONTARIO BUILDING CODE. ALL DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.
  - THE SYSTEM SHALL INCLUDE, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING: INPUT DEVICES, OUTPUT DEVICES, RELAYS, CONDUITS, JUNCTION BOXES, WIRING, MANUAL PULL STATIONS, TONE ALARM (SPEAKERS) TYPE SIGNAL, ALARM INITIATING AND INDICATING PERIPHERAL DEVICES AND ALL ACCESSORIES REQUIRED TO FURNISH A COMPLETE OPERATIONAL SYSTEM.

- THE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CURRENT PROVISIONS OF THE FOLLOWING STANDARDS:

- CANADIAN ELECTRICAL CODE.
- NFPA 72 NATIONAL FIRE ALARM CODE
- NFPA 70 NATIONAL ELECTRIC CODE
- NFPA 101 LIFE SAFETY CODE
- ONTARIO BUILDING CODE
- LOCAL AUTHORITIES HAVING JURISDICTION.
- UNDERWRITERS LABORATORIES CANADA INC. (ULC)
- THE FOLLOWING LATEST STANDARDS AS APPLICABLE:
  - CAN/ULC-S524 DESIGN AND INSTALLATION OF FIRE ALARM SYSTEM
  - CAN/ULC-S537 FIRE ALARM VERIFICATION
  - CAN/ULC-S527 CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
  - CAN/ULC-S529 SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
  - CAN/ULC-S529 SMOKE DETECTORS FOR DUCT APPLICATIONS.
  - CAN/ULC-S531 SMOKE ALARMS.
  - CAN/ULC-S530 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
  - CAN/ULC-S525 AUDIBLE SIGNALING APPLIANCES.
  - CAN/ULC-S526 VISUAL SIGNALING APPLIANCES.
  - CAN/ULC-S528 MANUALLY ACTIVATED SIGNALING BOXES.
  - CAN/ULC-S548 WATER FLOW INDICATORS – FIRE PROTECTIVE SIGNALING SYSTEMS.
  - CAN/ULC-S541 SPEAKERS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

- THE AUDIBILITY LEVEL OF THE ALARMS SHALL BE MAINTAINED IN ALL AREAS OF THE BUILDING. INTERIOR FINISHES AND FURNISHINGS MAY HAVE AN EFFECT ON THE DECIBEL LEVEL OF THE FIRE ALARM SYSTEM. NEW FIRE ALARM COMPONENTS SHALL BE COMPATIBLE WITH REMAINING DEVICES. UPON COMPLETION OF WORK, ALL EXISTING ANCILLARY SYSTEMS, DEVICES, SMOKE CONTROL SYSTEMS, AND EXHAUST SYSTEMS SHALL BE RECONNECTED AND SHALL FUNCTION AND OPERATE AS ORIGINALLY DESIGNED. FIRE ALARM VISUAL SIGNAL DEVICES SHALL BE INSTALLED IN ADDITION TO AUDIBLE SIGNAL DEVICES IN CORRIDORS USED BY THE PUBLIC.

- THE CONTRACTOR SHALL SUBMIT DIGITAL SET OF SHOP DRAWINGS. THE DOCUMENTATION SHALL INDICATE THE TYPE, SIZE, RATING, STYLE, CATALOG NUMBER, MANUFACTURERS NAMES, PHOTOS, AND/OR CATALOG DATA SHEETS FOR ALL ITEMS TO ENSURE COMPLIANCE WITH THESE SPECIFICATIONS.

- UPON COMPLETE OF SYSTEM INSTALLATION, PERFORM TESTING AND VERIFICATION OF THE SYSTEM. SUBMIT TESTING AND VERIFICATION REPORT INCLUDING THE FOLLOWING:
  - INSTALLATION AND PROGRAMMING MANUALS COVERING THE INSTALLED SYSTEM.
  - POINT-TO-POINT DIAGRAMS OF THE ENTIRE SYSTEM AS INSTALLED. NUMBER ALL CONDUCTORS AND SHOW ALL TERMINATION'S AND SPLICES.
  - THE APPLICATION PROGRAM LISTING FOR THE SYSTEM AS INSTALLED AT THE TIME OF ACCEPTANCE.
  - NAME, ADDRESS AND TELEPHONE OF THE AUTHORIZED FACTORY TRAINED REPRESENTATIVE.
  - PROOF OF LIABILITY INSURANCE FOR INSPECTION

- AUTOMATIC THERMAL DETECTORS: CONSTRUCTED AS PER CAN/ULC-S530-E) 1778. EDWARDS 281A RATED AT 58° C (135° F) FIXED TEMPERATURE NON-RESTORABLE AND 8° C DEGREE PER MINUTE RATE-OF-RISE. USE WHERE NORMAL TEMPERATURES DO NOT EXCEED 38° C (100° F).

- FIRE ALARM HORN/STROBE DEVICES: SIMPLEX OR EQUAL AS PER ULC-S525.

- IONIZATION TYPE SMOKE DETECTORS: SIMPLX DETECTOR AND 6250C-001 BASE OR E) 6250-002 RELAY BASE.

- INSTALLATION OF FIRE ALARM DEVICES SHALL BE PER NFPA 72 AND MANUFACTURER WRITTEN INSTRUCTIONS. MAINTAIN MINIMUM 914 mm SPACING BETWEEN SMOKE/HEAT DETECTOR AND ANY SUPPLY AIR/RETURN AIR GRILLE.

- ALL WIRES SHALL BE ON COLOUR CODED CONDUITS. USE COLOUR CODED JUNCTION BOXES. PROVIDE ALL REQUIRED LABELS.

- TEST AND VERIFY ALL NEW AND EXISTING INPUT/OUTPUT DEVICES IN THE RENOVATION AREAS, INCLUDING DEVICES OUTSIDE THE RENOVATION AREAS THAT ARE CONNECTED TO THE SAME FIRE ALARM ZONES. SUBMIT A DETAILED TESTING AND VERIFICATION REPORT.

- FIRE ALARM CONTRACTOR: MICHAEL FLEET, HAMILTON FIRE CONTROL, 445 WENTWORTH STREET NORTH, HAMILTON, TEL: 905-527-7042



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ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

NOTE BEFORE COMMENCING WORK:  
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# HWDSB

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2.	FOR TENDER	27 FEB 2026
1.	FOR PERMIT	12 DEC 2025
No.	DESCRIPTION	DATE

**SHELLARD BUILDING SYSTEMS LTD.**

1684 SHELLARD SIDE ROAD  
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shellard@consultant.com  
226 606 6542

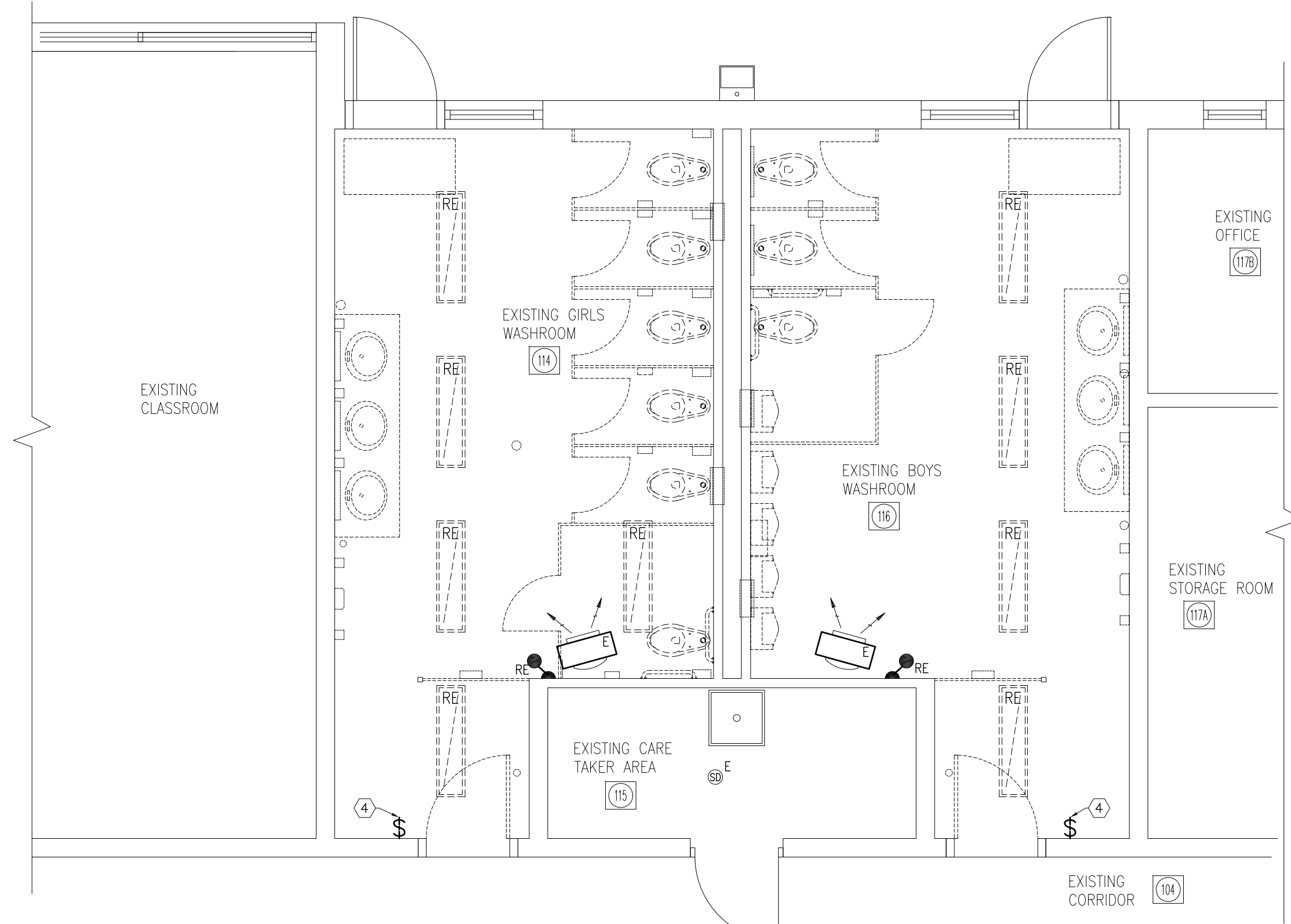
FRANK PANABAKER ELEMENTARY SCHOOL  
NORTH CAMPUS RENOVATION  
HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

DRAWN NAME:  
**NOTES AND SPECIFICATIONS ELECTRICAL**

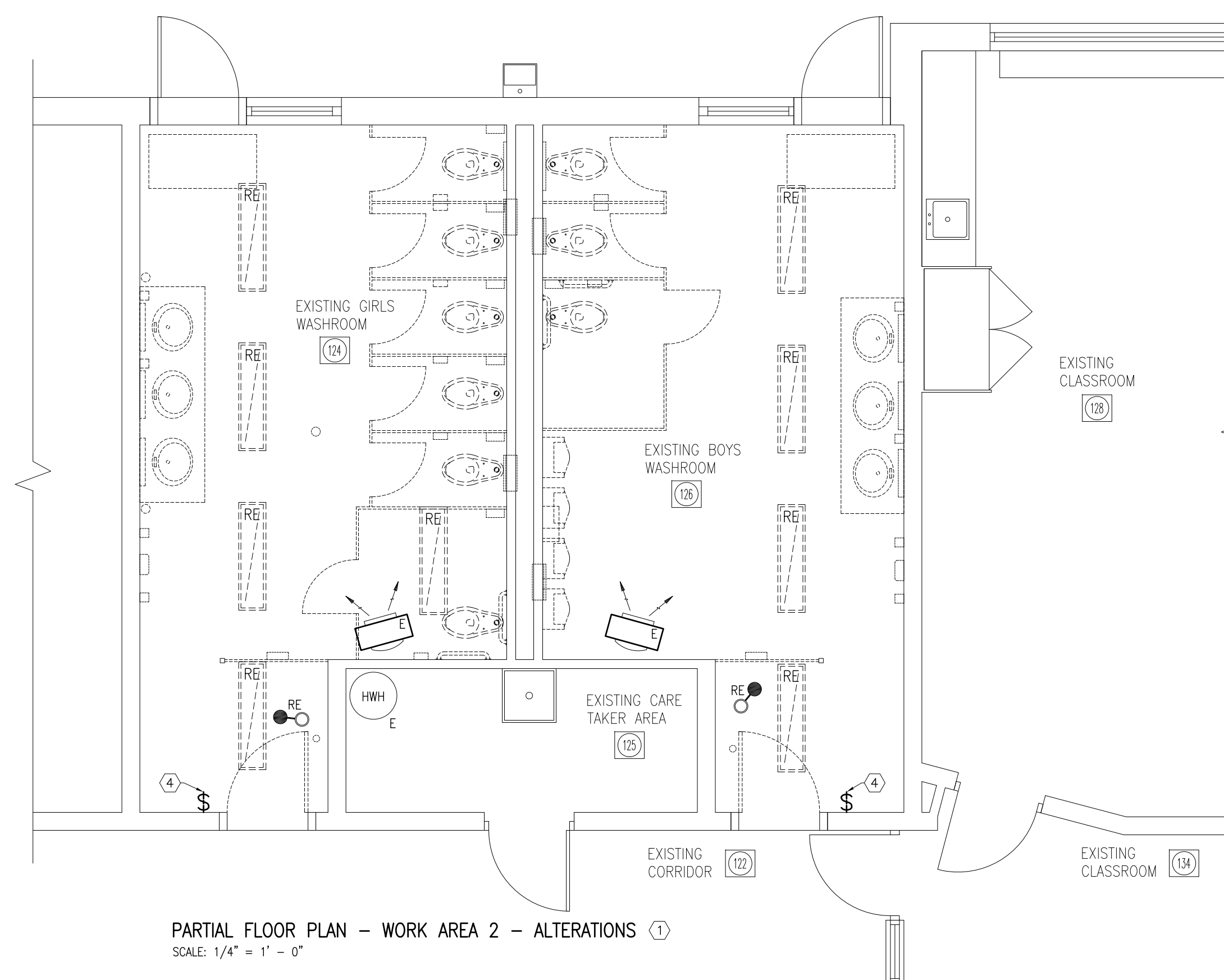
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M.S.	K.S.

DATE:	JOB No.:
NOVEMBER 2025	25-104

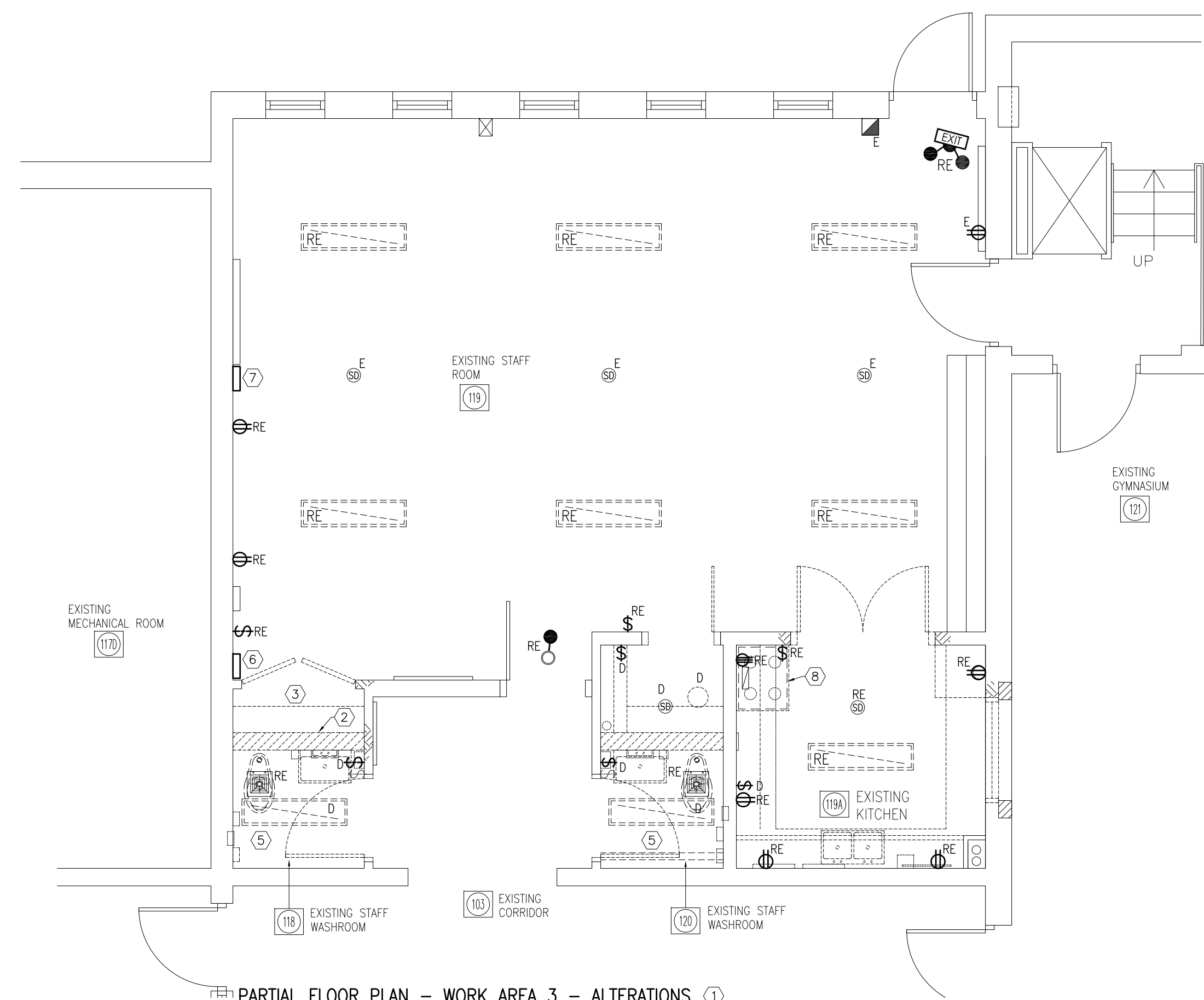
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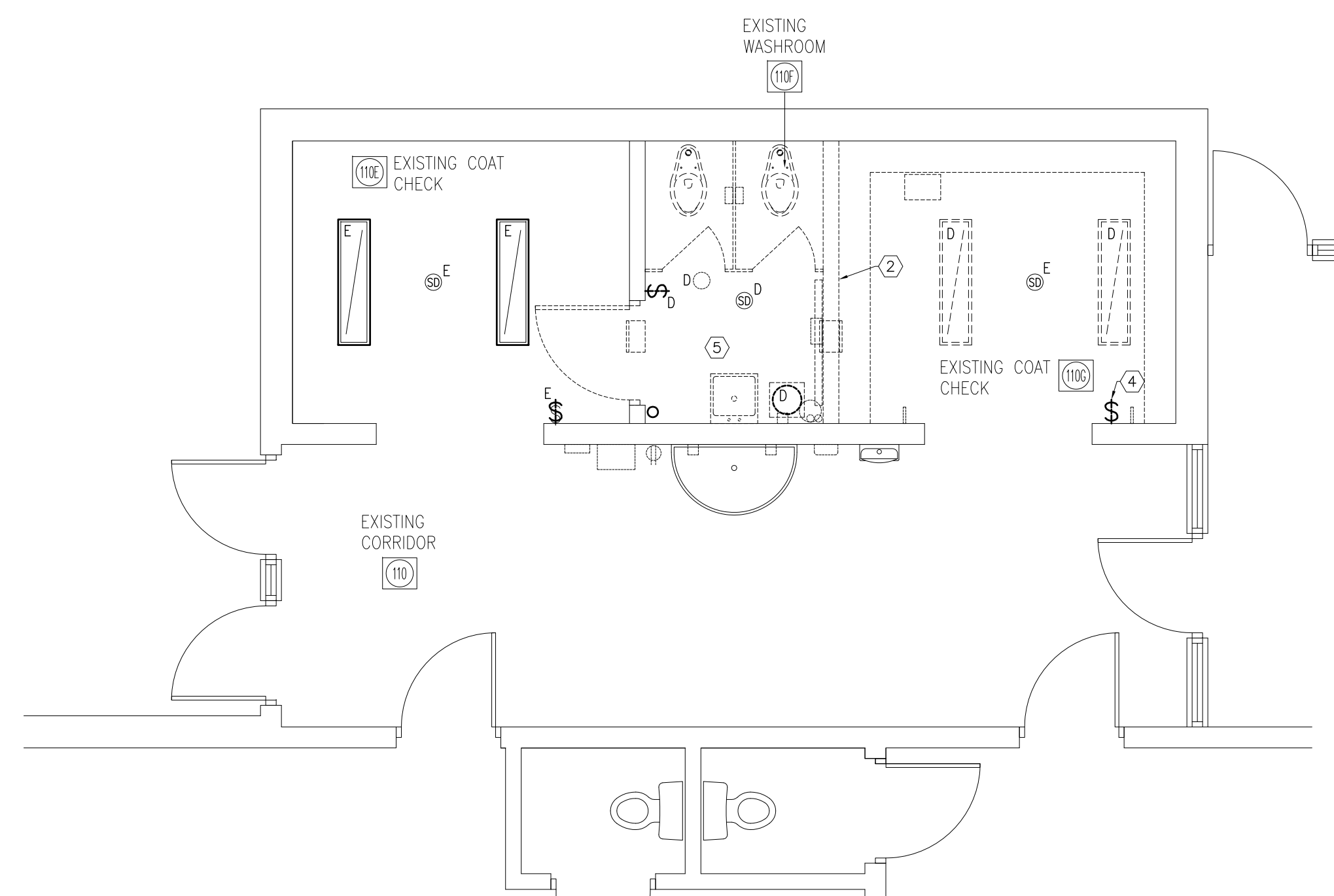
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SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 2 - ALTERATIONS ①  
SCALE: 1/4" = 1' - 0"



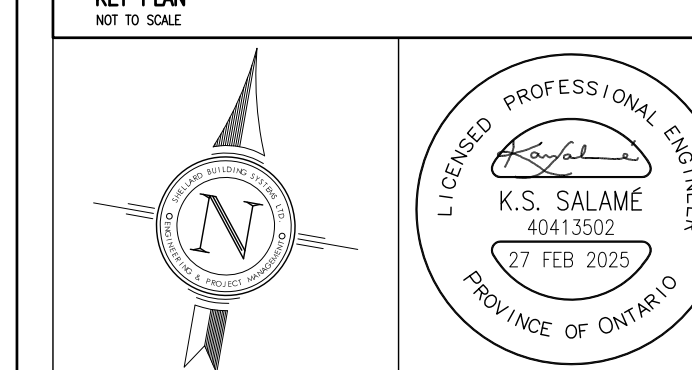
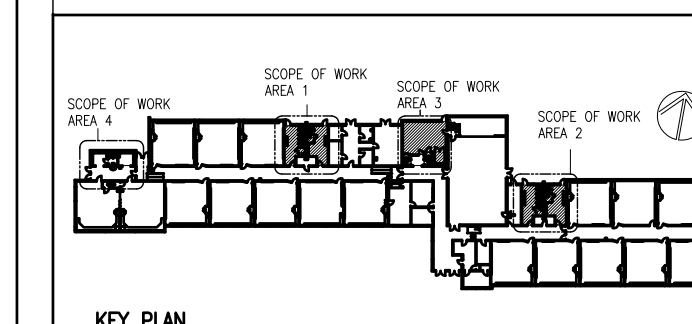
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SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 4 - ALTERATIONS ①  
SCALE: 1/4" = 1' - 0"

**DRAWING NOTES:**

- ① THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOUR, MATERIALS, EQUIPMENT, PERMITS, INSPECTIONS, AND COORDINATION NECESSARY TO COMPLETE THE ELECTRICAL WORK INDICATED AND DESCRIBED ON THE DRAWINGS. WORK SHALL COMPLY WITH THE ONTARIO ELECTRICAL SAFETY CODE AND ELECTRICAL SAFETY AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS, REPORTING DISCREPANCIES, AND ENSURING SAFE INSTALLATION THROUGHOUT THE PROJECT. THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
  - A. REMOVE EXISTING LIGHT FIXTURES (IDENTIFIED WITH "D") COMPLETE WITH ASSOCIATED BRANCH WIRING. REMOVED LIGHTS AND BALLASTS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL STANDARDS. PROVIDE A DISPOSAL REPORT FOR OWNER RECORDS. THE NUMBER OF EXISTING LIGHT FIXTURES, RECEPTABLES AND SWITCHES MAY VARY FROM WHAT IS SHOWN.
  - B. SUPPLY AND INSTALL NEW LIGHT FIXTURES INCLUDING BRANCH WIRING AND CONTROL DEVICES AS SHOWN AND INDICATED.
  - C. DISCONNECT EXISTING MECHANICAL UNITS AS SHOWN AND NOTED. REMOVE ASSOCIATED WIRING BACK TO SOURCE.
  - D. PROVIDE NEW WIRING TO MECHANICAL UNITS AS SHOWN AND NOTED, INCLUDING DISCONNECT SWITCHES AND POWER CONNECTIONS.
  - E. INTERLOCK EXHAUST FANS TO OPERATE FROM OCCUPANCY SENSORS.
  - F. REMOVE EXISTING EMERGENCY LIGHTING UNITS AS INDICATED.
  - G. SUPPLY AND INSTALL NEW EMERGENCY LIGHTING UNITS COMPLETE WITH BRANCH WIRING AND CONNECTIONS.
  - H. SUPPLY AND INSTALL DURESS SYSTEM IN THE UNIVERSAL WASHROOM, INCLUDING DEVICES, WIRING, AND CONNECTIONS TO ANNUNCIATION PANEL.
  - I. PROVIDE POWER (115V/1/60) FOR MECHANICAL BUILDING AUTOMATION CONTROL DEVICES AS SHOWN AND NOTED.
  - J. PERFORM TESTING AND VERIFICATION OF ALL EMERGENCY LIGHTING SYSTEMS TO CONFIRM OPERATION AND COMPLIANCE WITH CODE REQUIREMENTS.
  - K. UPDATE EXISTING POWER PANELS LABELS CHART TO REFLECT NEW CIRCUITING AND EQUIPMENT.
  - L. THE CONTRACTOR SHALL SURVEY EXISTING CONDITIONS TO ACCOUNT FOR ALL EXISTING LIGHT FIXTURES AND DEVICES BEFORE PRICING AND COMMENCING WORK.
  - M. ARRANGE THROUGH THE GENERAL CONTRACTOR FOR FIRE ALARM BY-PASS AND FIRE WATCH.
  - N. REMOVE CONSTRUCTION DEBRIS FROM SITE ON DAILY BASIS.
  - O. POWER CIRCUITS THAT ARE FEEDING ADJACENT ROOMS SHALL REMAIN ACTIVE. PROVIDE REQUIRED WIRING AND CIRCUITING TO MAINTAIN ADJACENT ROOMS AND CORRIDOR OPERATIONAL.
  - P. PROVIDE TEMPORARY LIGHTING FOR CONSTRUCTION WORK. COORDINATE WITH THE GENERAL CONTRACTOR.
- ② DISCONNECT AND REMOVE EXISTING RECEPTABLES, SWITCHES, AND DEVICES FROM WALLS NOTED TO BE DEMOLISHED (SHOWN WITH DASHED LINES). REMOVE POWER CIRCUITS BACK TO THE SOURCE, INCLUDING WIRES, CONDUITS, JUNCTION BOXES, AND SUPPORTS. COORDINATE WITH GENERAL CONTRACTOR BEFORE COMMENCING WORK. EXISTING POWER CIRCUITS THAT ARE FEEDING ADJACENT ROOMS OUTSIDE THE RENOVATION AREA SHALL REMAIN ACTIVE. PROVIDE REQUIRED WIRING AND CIRCUITING TO MAINTAIN ADJACENT ROOMS AND CORRIDOR OPERATIONAL.
- ③ RE-LOCATE EXISTING WIRES IN THE CLOSET TO CLEAR WAY FOR WASHROOM EXPANSION. RECONNECT EACH WIRE TO RESPECTIVE CIRCUIT.
- ④ DISCONNECT AND REMOVE THE EXISTING ON/OFF TOGGLE LIGHT SWITCH AND PROVIDE A FORK-TYPE TAMPER RESISTANT KEY SWITCH IN ITS PLACE. REWIRE THE BRANCH CIRCUIT FROM THE NEW KEY SWITCH TO THE NEW LIGHT FIXTURES AS SHOWN ON DRAWING E1.02. THE SWITCH SHALL OVERRIDE THE OCCUPANCY SENSORS SO THAT POWER IS CONTROLLED SOLELY BY THE KEY SWITCH. CONFIRM CIRCUIT CONTINUITY AND LOAD DISTRIBUTION, AND TEST OPERATION TO VERIFY COMPLIANCE WITH NEC/ESA REQUIREMENTS.
- ⑤ DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES, RECEPTABLES, SWITCHES, MECHANICAL UNITS (FANS, HOT WATER HEATER) AND FIRE ALARM DEVICES MARKED WITH "D" FROM THE WASHROOM. REMOVE POWER CIRCUITS BACK TO THE SOURCE, INCLUDING WIRES, CONDUITS, JUNCTION BOXES, AND SUPPORTS. COORDINATE WITH GENERAL CONTRACTOR BEFORE COMMENCING WORK. EXISTING POWER CIRCUITS THAT ARE FEEDING ADJACENT ROOMS OUTSIDE THE RENOVATION AREA SHALL REMAIN ACTIVE. PROVIDE REQUIRED WIRING AND CIRCUITING TO MAINTAIN ADJACENT ROOMS AND CORRIDOR OPERATIONAL. REFER TO DRAWING E1.02 FOR NEW LIGHTING AND POWER SYSTEMS.
- ⑥ EXISTING PUBLIC ADDRESS SPEAKER TO REMAIN.
- ⑦ EXISTING WIFI REPEATER AND DATA OUTLET TO REMAIN.
- ⑧ DISCONNECT POWER TO EXISTING HOOD AND REMOVE BACK TO SOURCE. RE-WIRE TO NEW RANGE HOOD (EF-4).



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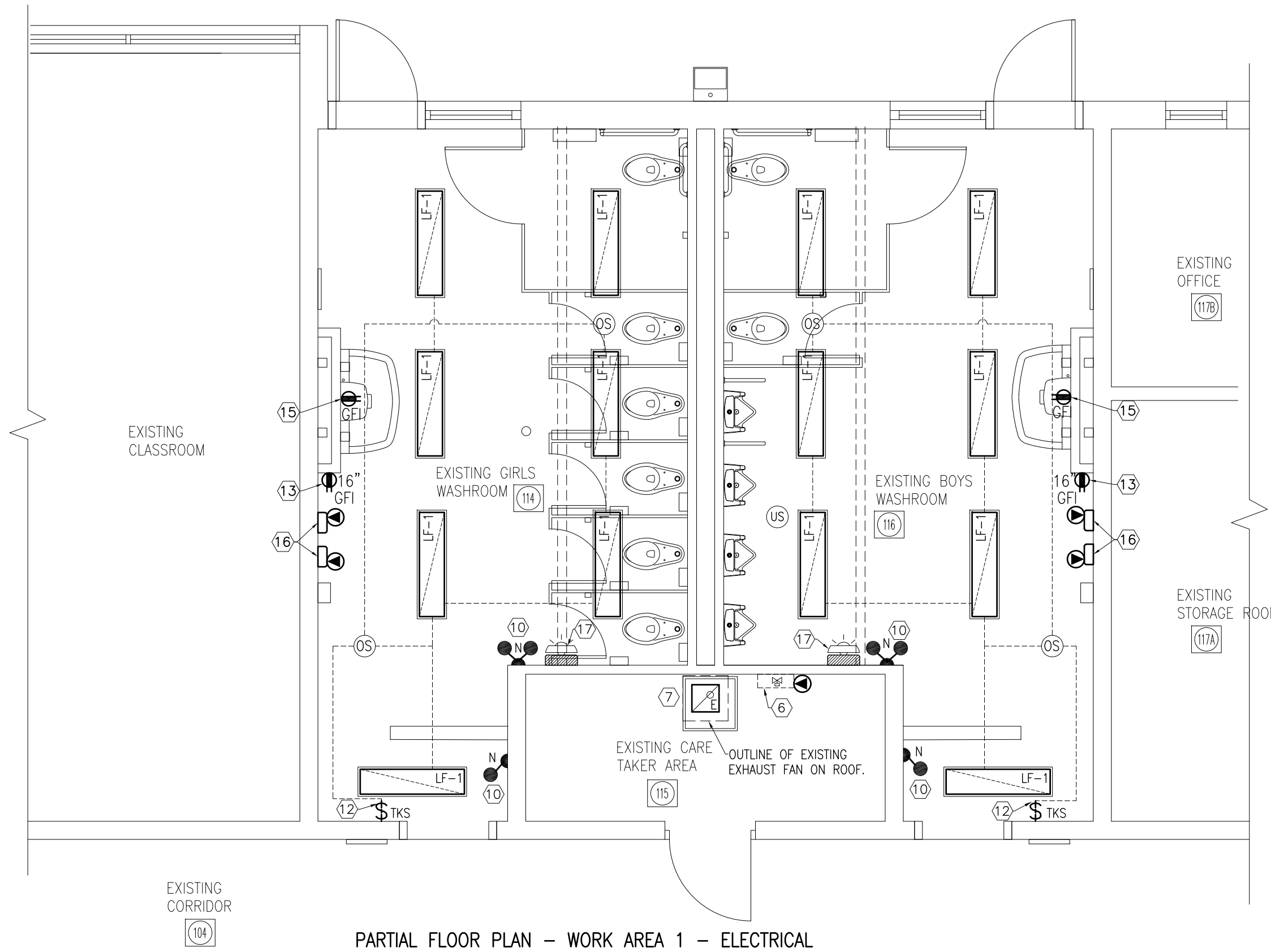
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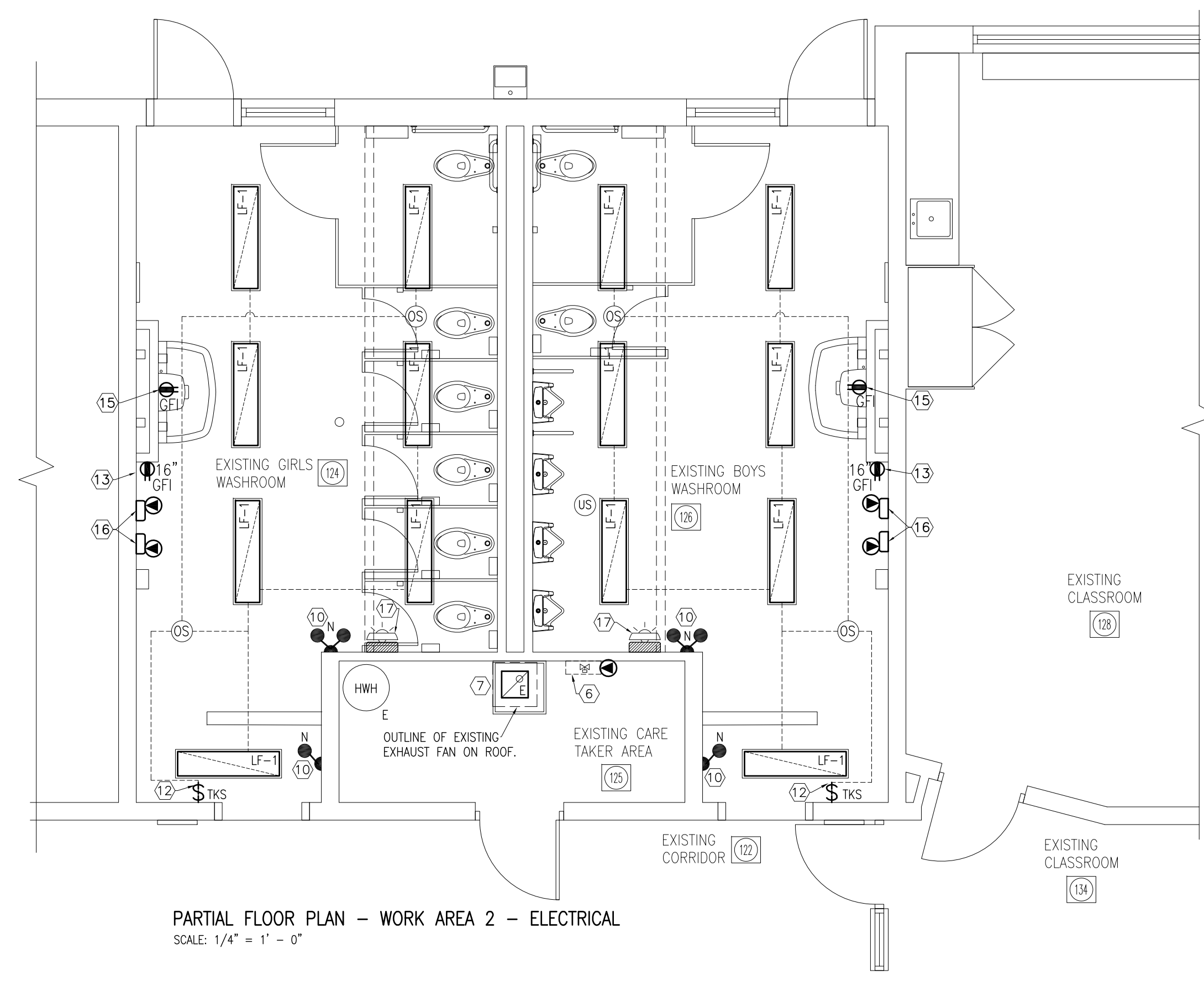
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**PARTIAL FLOOR PLANS ELECTRICAL - ALTERATIONS**

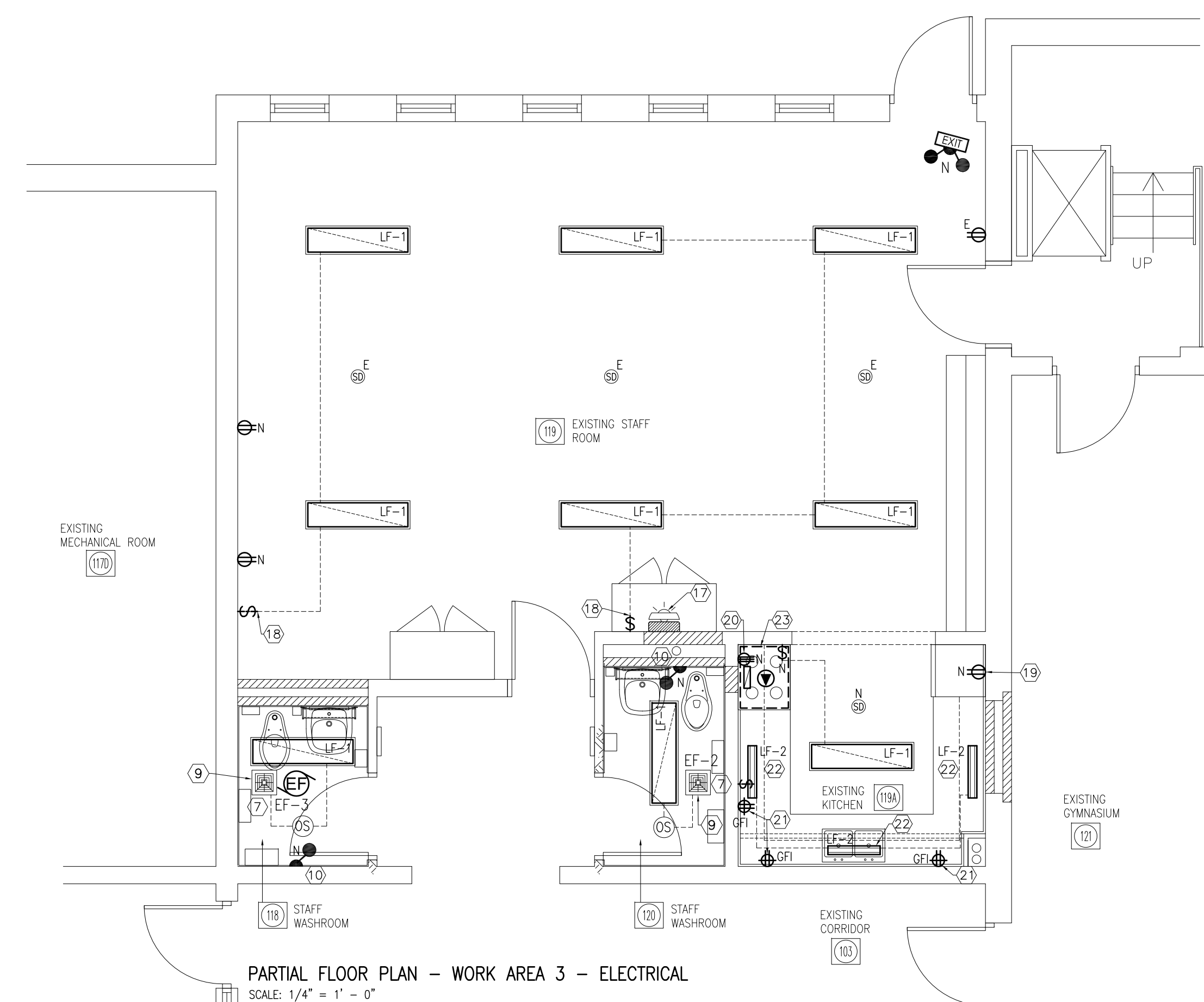
<b>DRAWN BY:</b> M.S.	<b>CHECKED BY:</b> K.S.
<b>DATE:</b> NOVEMBER 2025	<b>JOB No.:</b> 25-104
<b>SCALE:</b> 1/4" = 1' - 0"	<b>SHEET No.:</b> E1.01



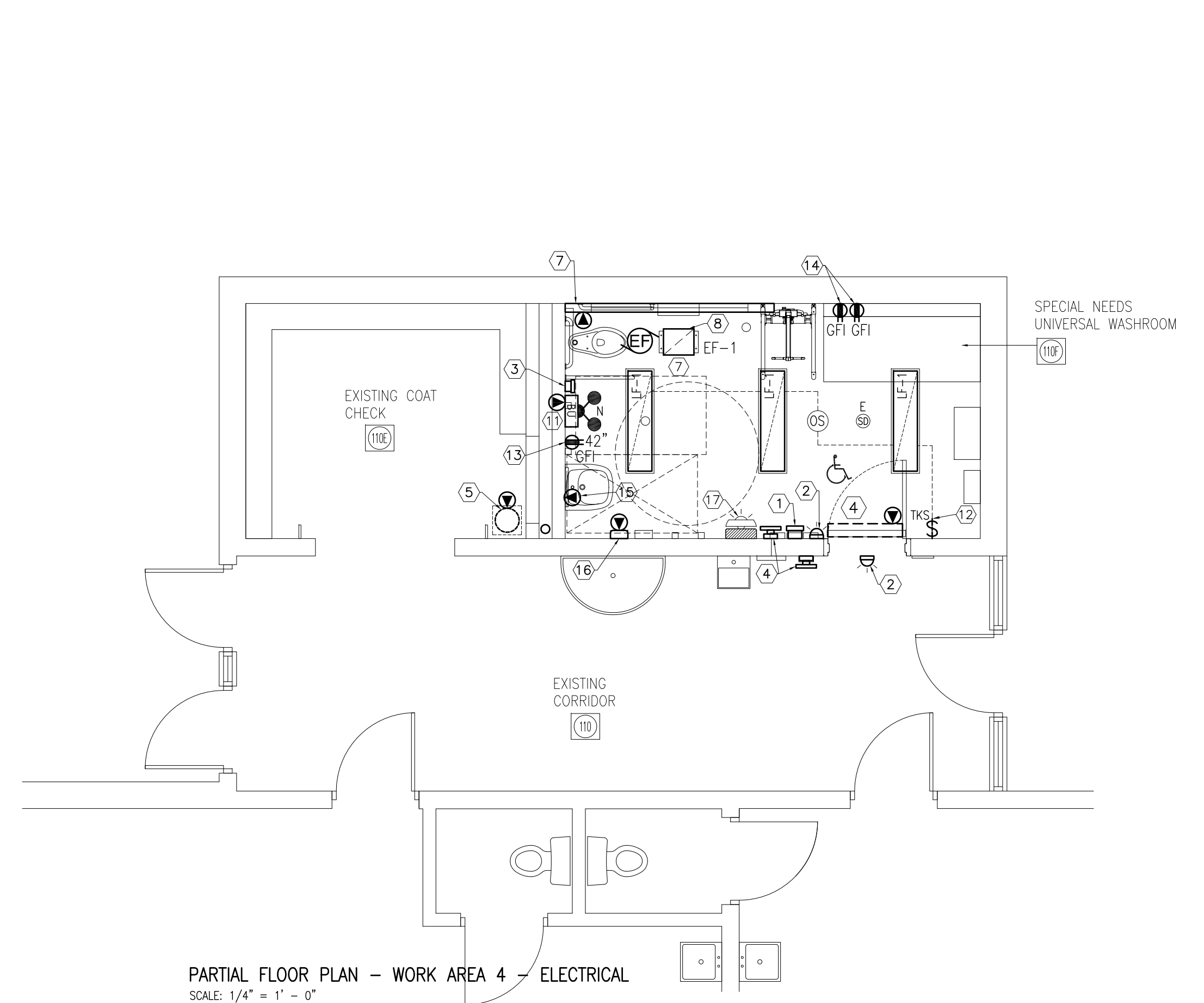
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SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 2 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 3 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 4 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"

**RECEPTACLES AND DEVICES NOTES:**

- RECEPTACLES, DEVICES, LIGHT FIXTURE, EMERGENCY LIGHTING, EXIT SIGNS, BATTERY UNITS AND ALL ASSOCIATED WIRES THAT ARE SHOWN ON THE FLOOR PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL THE RECEPTACLES AND ELECTRICAL DEVICES SHOWN SHALL BE NEW UNLESS OTHERWISE NOTED. REVIEW OWNER SUPPLIED EQUIPMENT/APPLIANCES SCHEDULE, ARCHITECTURAL FLOOR PLAN AND MECHANICAL EQUIPMENT SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN.
- COORDINATE LOCATION OF EACH RECEPTACLE. REVIEW ARCHITECTURAL DRAWINGS FOR EQUIPMENT AND FURNITURE LAYOUT.
- PROVIDE LABEL FOR EACH RECEPTACLE INDICATING THE PANEL NAME AND BREAKER NUMBER.

**DRAWING NOTES:**

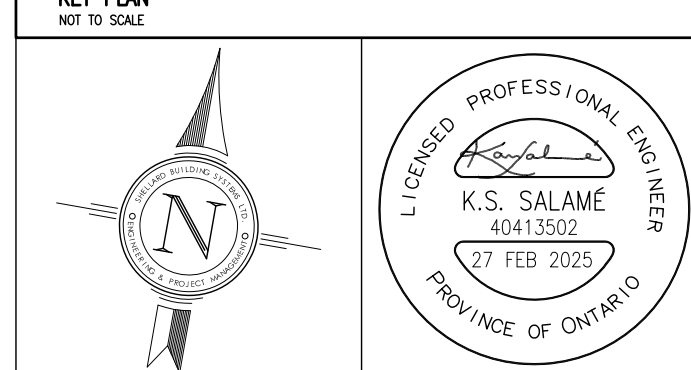
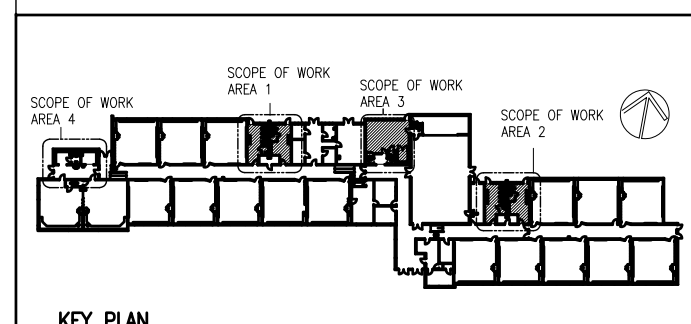
- PROVIDE DOOR LOCK PUSH BUTTON AND WIRE TO DOOR LATCH. TEST AND VERIFY DOOR PUSH BUTTON OPERATION.
- PROVIDE STROBE LIGHT/SIREN WALL MOUNTED AT HIGH LEVEL AND WIRE TO WASHROOM DURESS PUSH BUTTON.
- PROVIDE EMERGENCY DURESS PUSH BUTTON AND WIRE TO STROBE LIGHT/SIREN ABOVE DOOR. REFER TO ARCHITECTURAL ELEVATION DRAWING FOR EXACT LOCATION AND ELEVATION.
- PROVIDE FROM NEAREST POWER PANEL 15A, 115V/1/60 POWER CIRCUIT TO LINE SIDE OF ELECTRIC DOOR OPERATOR. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM OPERATOR POWER (WATTS) AND POWER CONNECTION REQUIREMENTS. UPDATE POWER PANEL LABEL CHART. SIDE. PROVIDE RECESSED BACK BOXES AND CONDUITS FROM DOOR OPEN PUSH BUTTONS AND DOOR LOCK PUSH BUTTON TO THE ELECTRIC DOOR OPERATOR.
- PROVIDE A 20A, 115V/1/60 BREAKER IN THE EXISTING POWER PANEL FEEDING EXISTING WATER HEATER AND WIRE TO THE NEW DOMESTIC HOT WATER HEATER. COORDINATE WITH THE MECHANICAL TRADE AND REVIEW SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN. RE-USE THE EXISTING POWER CIRCUIT IF INSPECTED AND DEEMED COMPLIANT WITH ESA STANDARDS
- PROVIDE 115V/1/60 GFI RECEPTACLE AT LINE SIDE OF THE URINAL FLUSH CONTROLLER AND WIRE TO NEAREST POWER CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR AND REVIEW CONTROLLER SHOP DRAWINGS FOR POWER REQUIREMENTS AND TYPE OF CONNECTION.
- PROVIDE FROM NEAREST POWER CIRCUIT 115V/1/60 POWER WIRING TO LINE SIDE OF HEATING UNIT AND EXHAUST FAN BAS CONTROLS. COORDINATE WITH MECHANICAL CONTRACTOR.
- WIRE FROM NEAREST POWER PANEL TO EF-1 AND INTERLOCK FAN TO START WHEN THE LIGHTS ARE ON. WIRE TO BAS FOR START/STOP (SCHEDULE) AND ALARM.
- WIRE FROM NEAREST POWER PANEL TO EXHAUST FAN AND INTERLOCK FAN TO START WHEN THE LIGHT IS ON.
- PROVIDE NEW EMERGENCY LIGHTING FIXTURES. INCLUDE ALL REQUIRED WIRING, RACEWAYS, SUPPORTS, AND TERMINATIONS. CONNECT ALL NEW EMERGENCY LIGHTING TO THE EXISTING EMERGENCY POWER CIRCUIT. FIELD REVIEW AND VERIFY EXISTING EMERGENCY LOW VOLTAGE SYSTEM VOLTAGE BEFORE COMMENCING WORK.

**DRAWING NOTES:**

- PROVIDE NEW EMERGENCY LIGHTS AND BATTERY UNIT. WIRE FROM A DEDICATED BREAKER IN NEAREST POWER PANEL TO THE BATTERY UNIT. ALL WIRES SHALL BE IN EMT CONDUITS.
- PROVIDE A FORK-TYPE TAMPER RESISTANT KEY, LIGHT FIXTURES AND OCCUPANCY SENSORS. WIRE THE BRANCH CIRCUIT FROM THE NEW KEY SWITCH TO THE NEW OCCUPANCY SENSORS AND LIGHT FIXTURES. THE SWITCH SHALL OVERRIDE THE OCCUPANCY SENSORS SO THAT POWER IS CONTROLLED SOLELY BY THE KEY SWITCH. REFER TO AND USE THE MANUFACTURER WIRING AND OCCUPANCY SENSORS INSTALLATION DIAGRAM. CONFIRM CIRCUIT CONTINUITY AND LOAD DISTRIBUTION, AND TEST OPERATION TO VERIFY COMPLIANCE WITH NEC/ESA REQUIREMENTS.
- PROVIDE 15A GFI RECEPTACLE RECESSED IN NEW BLOCK WALL AND WIRE TO NEAREST POWER CIRCUIT. WIRING SHALL BE CONCEALED EXCEPT WHERE NO DROP CEILING EXISTS. ALL WIRING SHALL BE IN EMT CONDUITS.
- PROVIDE GFI RECEPTACLE RECESSED IN BLOCK WALL AND WIRE TO NEAREST POWER CIRCUIT. WIRING SHALL BE CONCEALED EXCEPT AT ROOF LEVEL. ALL WIRE SHALL BE IN EMT CONDUITS.
- PROVIDE A RECESSED GFI RECEPTACLE BELOW THE WASH FOUNTAIN/LAVATORY FIXTURE UNIT AND WIRE TO THE NEAREST POWER PANEL OR AVAILABLE POWER CIRCUIT. ALL WIRING SHALL BE CONCEALED EXCEPT AT ROOF LEVEL AND SHALL BE INSTALLED IN EMT CONDUIT. COORDINATE INSTALLATION WITH THE GENERAL CONTRACTOR AND THE MECHANICAL TRADE.
- PROVIDE ELECTRIC HAND DRYER: WORLD DRYER SLIMDRY SURFACE MOUNTED MODEL L-972, POLISHED STAINLESS STEEL, BARRIER FREE COMPLIANCE, AUTOMATIC SENSOR, BUILT IN ON/OFF HEATING CONTROL SWITCH, 8.3 AMPS, 950 WATTS AND 120V/1/60. INSTALL WALL MOUNTED POSITION AS DETAILED ON ARCHITECTURAL DRAWINGS. WIRE FROM NEAREST POWER PANEL USING DEDICATED CIRCUIT FOR EACH DRYER. ALL WIRING SHALL BE IN CONCEALED CONDUITS.
- PROVIDE COMBINATION HORNE/STROBE AND WIRE TO EXISTING FIRE ALARM SYSTEM. ARRANGE WITH THE GENERAL CONTRACTOR FOR FIRE ALARM BY-PASS. CONTRACTOR SHALL VERIFY EXISTING FIRE ALARM SYSTEM CAPACITY AND PROVIDE ALL REQUIRED UPGRADES, INCLUDING NOTIFICATION APPLIANCE MODULES, BATTERY CAPACITY, AND WIRING TO SUPPORT CODE-COMPLIANT VISUAL STROBE DEVICES. CONTRACTOR SHALL PERFORM COMPLETE TESTING AND VERIFICATION OF ALL NEW AND EXISTING FIRE ALARM COMPONENTS, AND SUBMIT FORMAL TEST REPORTS TO THE CONSULTANT AND AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL PROVIDE UPDATED AS-BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS, AND TRAINING TO SCHOOL STAFF UPON WORK COMPLETION. ALL WORK SHALL BE IN ACCORDANCE WITH CAN/ULC S524, CAN/ULC-S537, CAN/ULC-S528, CAN/ULC-S526, CAN/ULC-S540 AND NFPA 72 REQUIREMENTS.

**DRAWING NOTES:**

- PROVIDE NEW LIGHT SWITCH AND RE-WIRE TO SERVE THE NEW LIGHT FIXTURES IN THE ROOM. EXISTING WIRING MAY BE REUSED ONLY IF VERIFIED TO BE CODE-COMPLIANT AND IN GOOD CONDITION
- REPLACE EXISTING REFRIGERATOR RECEPTACLE WITH NEW 20A, 120V/1/60 RECEPTACLE AND CIRCUIT BREAKER. PROVIDE NEW #12 AWG CONDUCTORS AS REQUIRED AND CONNECT TO EXISTING POWER SOURCE. VERIFY CIRCUIT CAPACITY AND CODE COMPLIANCE PRIOR TO COMMENCING WORK.
- REPLACE EXISTING ELECTRIC RANGE CABLE, PLUG, 40A, 240V/1/60 RECEPTACLE AND CIRCUIT BREAKER. PROVIDE NEW #8 AWG CONDUCTORS AND WIRING BACK TO EXISTING POWER SOURCE. VERIFY CIRCUIT CAPACITY, BREAKER RATING, AND CODE COMPLIANCE PRIOR TO INSTALLATION.
- REPLACE EXISTING ABOVE-COUNTER RECEPTACLE WITH NEW SPLIT CIRCUIT GFCI-TYPE RECEPTACLE. PROVIDE ALL REQUIRED WIRING, NEW 2-POLE CIRCUIT BREAKERS, AND CONNECTION TO SOURCE (TYPICAL OF 3).
- PROVIDE UNDER COUNTER STRIP LED LIGHT FIXTURES (TYPICAL OF 3) AND WIRE TO NEW LIGHT SWITCH. CONNECT TO NEAREST POWER CIRCUIT.
- WIRE FROM EXISTING RANGE HOOD POWER CIRCUIT (120V/1/60) TO NEW HOOD (EF-4). COORDINATE WITH MECHANICAL TRADE BEFORE COMMENCING WORK.



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**HWDSB**

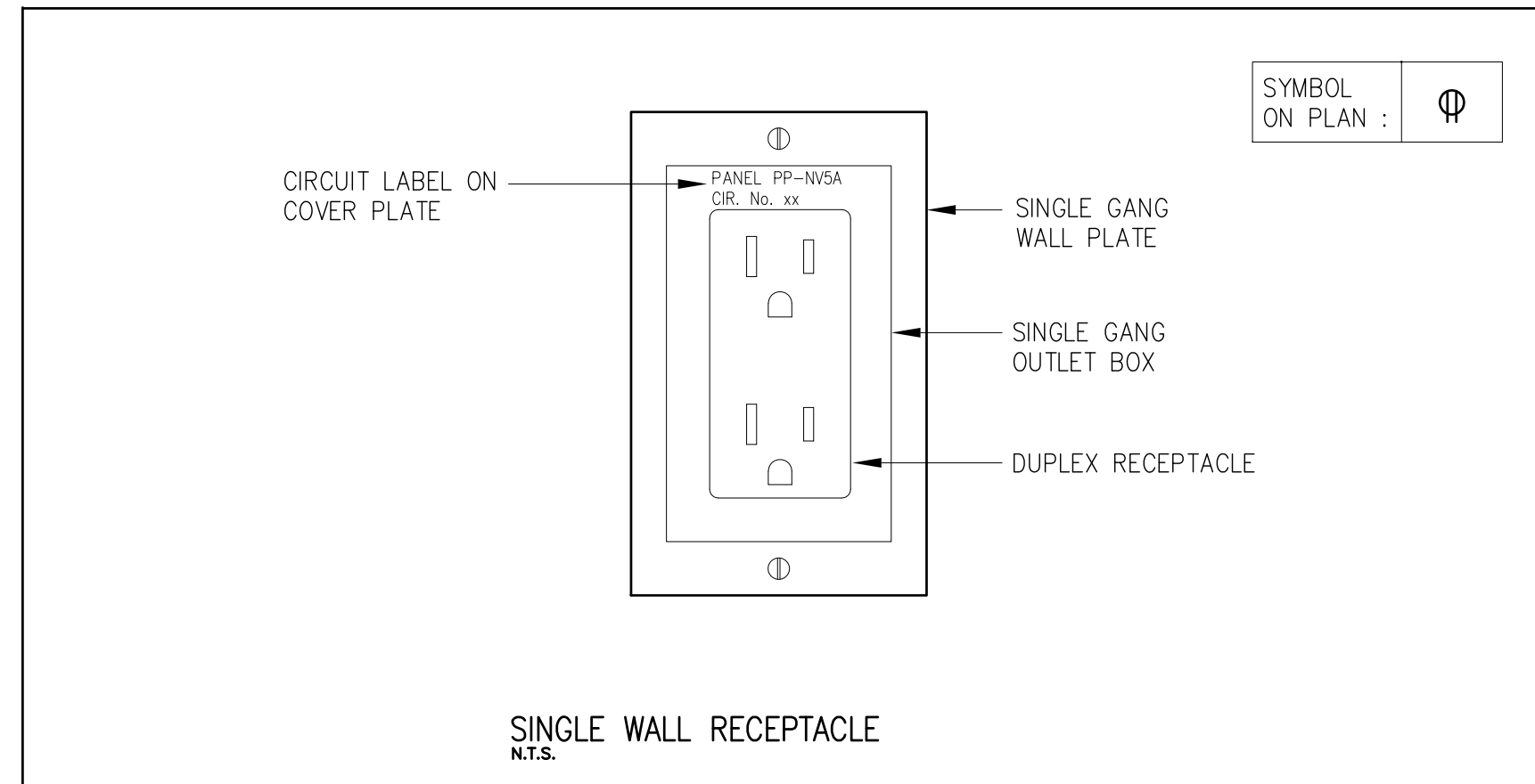
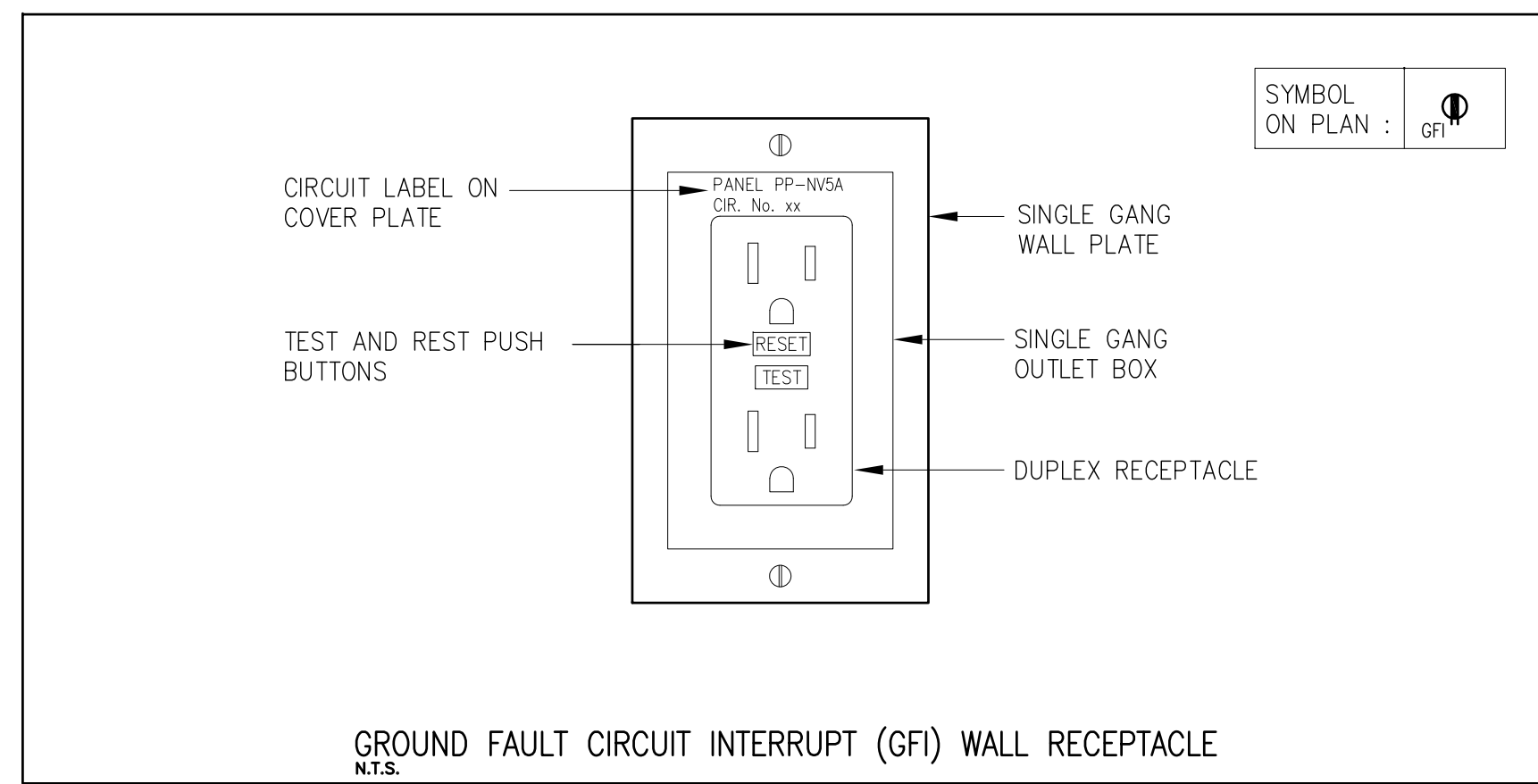
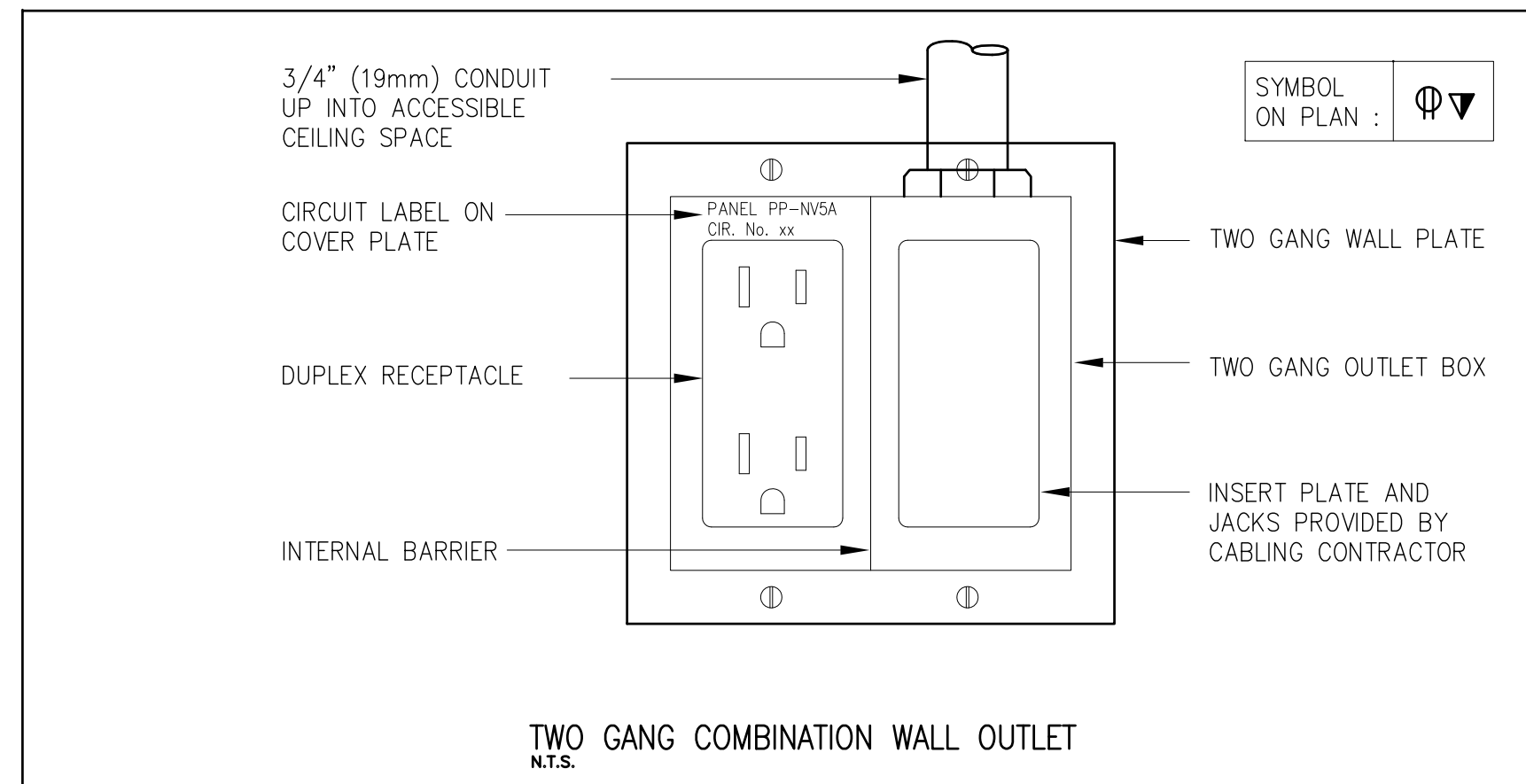
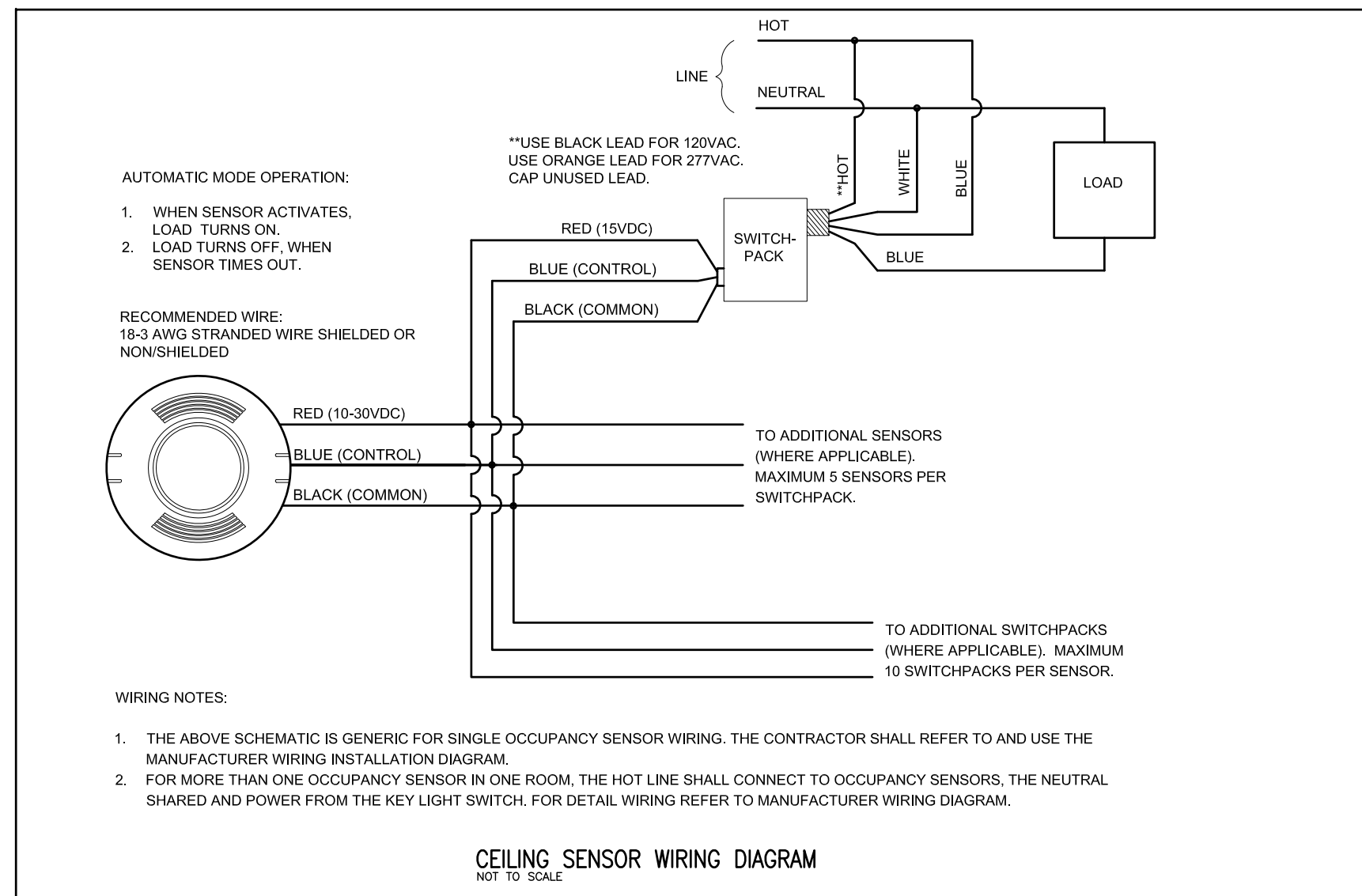
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HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

DRAWING NAME:  
**PARTIAL FLOOR PLANS ELECTRICAL**

DRAWN BY: M.S.	CHECKED BY: K.S.
DATE: NOVEMBER 2025	JOB No.: 25-104
SCALE: 1/4" = 1' - 0"	SHEET No.: <b>E1.02</b>



TAG	MAKE, MODEL AND DESCRIPTION	ELECTRICAL			SPECIFICATION FEATURES				MOUNTING			CEILING TYPE		
		VOLTS	PH	HZ	CCT	CRI	WATTS	LM/W	DIMMING	SURFACE	SUSPENDED	RECESSED	T-BAR	HARD CEILING
LF-1	LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL, SURFACE MOUNTED AT CEILING. LITHONIA MODEL CPX-1X4-AL07-SW7, 583 LUMENS, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, SURFACE MOUNT KIT, FRAM BOX, SURFACE MOUNT FRAME, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND SUPPORT BRACKETS.	120	1	60	4000K	80	34		●	●				●
LF-2	UNDER CABINET LED LIGHT FIXTURE, LITHONIA MODEL CSS-L24-4000LM-MVOLT-40K, 24" LONG, 2" DEPTH, LED, 19W, 4000K, 120V, 80 CRI, 4333 LUMENS AND WHITE. PROVIDE ALL REQUIRED SUPPORTS, DRIVER AND ACCESSORIES TO COMPLETE EACH FIXTURE UNIT INSTALLATION. LIGHT FIXTURES SHALL BE CSA, ULC AND DLC APPROVED.	120	1	60	4000K	80	19			●				●

- LIGHT FIXTURES NOTES:**
- REFER TO REFLECTED CEILING PLANS FOR LAYOUT AND NUMBER OF FIXTURES.
  - ALL LIGHT FIXTURES SHALL BE CSA, ULC AND DLC APPROVED.
  - PROVIDE 0-10VDC DIMMER DRIVER (MINIMUM DIMMING 1%) FOR EACH FIXTURE NOTED TO HAVE DIMMING FEATURE.
  - REFER TO LATEST DESIGN REFLECTED CEILING PLAN (ARCHITECTURAL DRAWINGS) FOR COORDINATION OF LIGHTING LAYOUT AND CEILING TYPES.
  - PROVIDE SAFETY CHAINS OR APPROVED SAFETY CABLES FOR EACH DROP CEILING MOUNTED LIGHT FIXTURE.
  - WIRE LIGHT FIXTURES TO POWER CIRCUITS AND CONTROLS.
  - LIGHT FIXTURES SHALL HAVE 10 YEAR WARRANTY.
  - THE LIGHT FIXTURES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE TYPE, SIZE, DESCRIPTIONS, ACCESSORIES AND RATINGS IN THE LIGHT FIXTURE SCHEDULE, AS SOME MODEL NUMBERS MAY HAVE BEEN UPDATED BY THE MANUFACTURER.

**LEGEND AND DEVICES SPECIFICATIONS**

- EMERGENCY LIGHTING WALL MOUNTED TWO LED LAMPHEADS, 12V. AMLITE OR EQUAL.
- EMERGENCY LIGHTING WALL MOUNTED SINGLE LED LAMPHEAD, 12V. AMLITE OR EQUAL.
- EMERGENCY LIGHTING CEILING MOUNTED DOUBLE LED LAMPHEAD, 12V. AMLITE OR EQUAL.
- EXIT SIGN AT CEILING WITH DIRECTIONAL ARROW. AMLITE OR APPROVED EQUAL (RUNNING MAN) MODEL RPTE EDGELIT
- COMBINATION EXIT SIGN (RUNNING MAN) AND EMERGENCY LIGHTS, AMLITE OR EQUAL, DURABLE 18 GAUGE STEEL, COMBINATION BATTERY UNIT, EXIT SIGN AND TWO 6W LED EMERGENCY LIGHTS, 12V, SLIM PROFILE, STEEL BOX, 144 W, MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. 'BU' DENOTES BATTERY UNIT.
- COMBINATION EXIT SIGN (RUNNING MAN) AND BATTERY UNIT. AMLITE OR EQUAL BATTERY UNIT, DURABLE 18 GAUGE STEEL, 120V, 144W, 12 VDC SLIM PROFILE, MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. WIRE EACH UNIT TO DEDICATED BREAKER IN NEAREST POWER PANEL.
- BATTERY UNIT: AMLITE OR EQUAL BATTERY UNIT, DURABLE 18 GAUGE STEEL, 120V, 144W, 12 VDC SLIM PROFILE, MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. WIRE EACH UNIT TO DEDICATED BREAKER IN NEAREST POWER PANEL. PROVIDE LOW VOLTAGE WIRING TO EACH REMOTE EMERGENCY LIGHT.
- RECESSED REMOTE EMERGENCY LIGHT FIXTURE. REFER TO LIGHT FIXTURES SCHEDULE.
- PROVIDE SPECIFICATION GRADE DUPLEX RECEPTACLE LEVITON DUPLEX 120V, 15A. PROVIDE BACK BOX RECESSED IN WALL, STAINLESS STEEL COVER PLATE, CONDUITS AND WIRING TO POWER PANEL. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL AND CIRCUIT BREAKER NUMBER. ALL WIRING SHALL BE IN 3/4" EMT CONDUITS.
- 'HL' DENOTES RECEPTACLE AT HIGH LEVEL FOR EMERGENCY LIGHTING UNIT / TV / MONITOR.
- 'AC' DENOTES ABOVE COUNTER (COORDINATE WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS.)
- 'GFI' GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE.
- 120 VOLT, 15A SPECIFICATION GRADE SINGLE SWITCH COMPLETE WITH RECESSED BACKBOX AND STAINLESS STEEL COVER PLATE. WIRE TO LIGHT FIXTURES AS SHOWN. ALL WIRING SHALL BE IN EMT CONDUITS.
- '3' DENOTES THREE WAY LIGHT SWITCH
- 'D' DENOTES DIMMER SWITCH
- 'OS' DENOTES SWITCH WITH OCCUPANCY SENSOR
- 'TKS' TAMPER-RESISTANT KEY SWITCH
- SPECIFICATION GRADE RECEPTACLE, SPLIT CIRCUIT, LEVITON DUPLEX 120V, 15A. PROVIDE BACK BOX RECESSED IN WALL, STAINLESS STEEL COVER PLATE, CONDUITS AND WIRING TO POWER PANEL. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL AND CIRCUIT BREAKER NUMBER. ALL WIRING SHALL BE IN 3/4" EMT CONDUITS.
- LEVITON RANGE RECEPTACLE DUPLEX 240V, 40A. PROVIDE BACK BOX RECESSED IN WALL, STAINLESS STEEL COVER PLATE, CONDUITS AND WIRING TO POWER PANEL. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL AND CIRCUIT BREAKER NUMBER.
- EXHAUST FAN, FRACTIONAL HORSE POWER, SUPPLIED BY MECHANICAL. PROVIDE CONTROL DEVICES AND WIRE FROM POWER PANEL TO FAN AND CONTROL DEVICES.
- HARD WIRED POWER CONNECTION TO EQUIPMENT COMPLETE WITH MANUAL DISCONNECT SWITCH RATED PER EQUIPMENT SPECIFICATION. WP - DENOTES WEATHER PROOF HARDWARE
- HARD WIRED POWER CONNECTION TO EQUIPMENT. REVIEW SHOP DRAWINGS AND COORDINATE WITH OTHER TRADES FOR EQUIPMENT SPECIFICATION.
- WALL MOUNTED HORN / STROBE COMBINATION UNIT. SPECTRALERT ADVANCE AUDIBLE VISIBILITY NOTIFICATION MODEL HWA, WHITE, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.
- WALL MOUNTED HORN UNIT. SPECTRALERT ADVANCE AUDIBLE VISIBILITY NOTIFICATION HORN, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.
- WALL MOUNTED FIRE ALARM PULL STATION (MANUAL INITIATION DEVICE)
- HIGH BAY CEILING MOUNTED OCCUPANCY SENSOR SWITCH, LUTRON OR EQUAL DUAL TECHNOLOGY WITH XCT AND POWER PACKS. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE BACK BOX AND SUPPORT BRACKETS TO SECURE EACH SENSOR IN PLACE.
- CEILING MOUNTED SMOKE ALERT DETECTOR, SIMPLEX IONIZATION TYPE BASE SMOKE DETECTOR SERIES 4098 AND/OR RELAY BASE (PHOTO ELECTRIC). PROVIDE BACK BOX AND SUPPORT BRIDGE.
- CEILING MOUNTED HEAT DETECTOR, SIMPLEX COMBINATION 135°F (57°C) FIXED TEMPERATURE AND 15°F (8°C) PER MINUTE RATE-OF-RISE HEAT DETECTOR. PROVIDE BACK BOX AND SUPPORT BRIDGE.
- CEILING MOUNTED MOTION SENSOR SWITCH, DUAL TECHNOLOGY, ULTRASONIC AND INFRARED TYPE FOR LIGHTING CONTROL. WATTSTOPPER OR EQUAL MODEL LMD CATALOGUE No. LMDC-100, 24VDC/VAC COMPLETE WITH LEGRAND BZ-250 POWER PACK. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE FOR EACH SENSOR BACK BOX. PROVIDE FOR EACH SENSOR SUPPORT BRIDGE FOR LAY-IN TILE CEILING INSTALLATION.
- CEILING MOUNTED HORN / STROBE COMBINATION UNIT. SPECTRALERT ADVANCE MODEL SPC-LENS RC, WHITE, 85 dBA AT 10 FT (ULC REVERBERANT), THREE POSITION SWITCH, AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.
- CEILING MOUNTED FIRE ALARM HORN UNIT. SIMPLEX OR APPROVED EQUAL WHITE, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME. PROVIDE JUNCTION BOX AND ALL REQUIRED WIRING. CONNECT TO EXISTING FIRE ALARM SYSTEM.
- PUBLIC ADDRESS SPEAKER RECESSED AT CEILING.
- JBL MODEL CSS8008 OR APPROVED EQUAL, 15-WATTS, 8" ROUND, 120 DEGREES CONICAL COVERAGE, RECESSED IN CEILING. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED SUPPORT BRACKETS, BACK BOX, WIRES AND ACCESSORIES (PARTS) TO COMPLETE INSTALLATION. WIRE TO EXISTING PUBLIC ANNUNCIATION SYSTEM.
- HUBBELL DAY LIGHT PHOTOCELL SENSOR CEILING MOUNTED. WIRE TO LIGHT FIXTURES AS SHOWN AND TO OVERRIDE MANUAL SWITCHES.
- CEILING MOUNTED URINAL SENSOR. PROVIDE BACK BOX AND ALL REQUIRED WIRING.
- DATA OUTLET. PROVIDE BACK BOX WITH 3/8" EMT CONDUIT AND PULL STRING UP TO CEILING SPACE. WIRING BY THE INFORMATION TECHNOLOGY (IT) TEAM UNLESS OTHERWISE NOTED.
- TELEPHONE OUTLET. PROVIDE BACK BOX WITH 3/8" EMT CONDUIT WITH PULL STRING UP TO CEILING SPACE.
- PUBLIC ANNUNCIATOR
- SPEAKER - PUBLIC ANNUNCIATOR

**EMERGENCY LIGHTING POWER AND TESTING NOTE:**

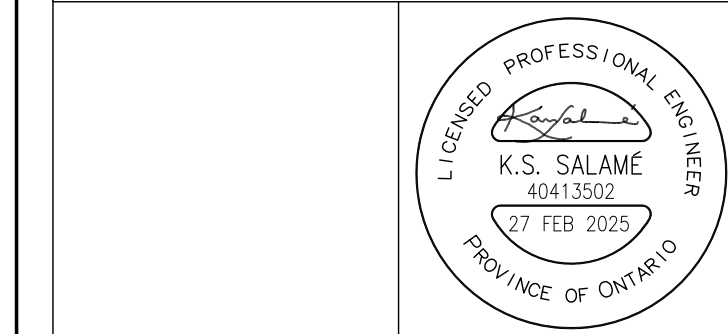
ELECTRICAL CONTRACTOR SHALL PROVIDE A DEDICATED CIRCUIT BREAKER FOR THE EMERGENCY LIGHTS AND EXIST SIGNS. TEST ALL EMERGENCY LIGHTS AND PROVIDE A LETTER CERTIFYING THAT ALL EMERGENCY LAMPS WERE ON 100% FOR A DURATION OF 30 MINUTES TIMED AFTER CIRCUIT BREAKER IS TURNED OFF. PROVIDE TEST CERTIFICATE.

**ABBREVIATIONS**

- E EXISTING TO REMAIN.
- N PROVIDE NEW UNIT/DEVICE.
- D DISCONNECT AND REMOVE.
- R RELOCATE EXISTING UNIT/DEVICE.
- CTE CONNECT TO EXISTING
- RE REPLACE EXISTING WITH A NEW UNIT/DEVICE AND RECONNECT

**GENERAL DEMOLITION NOTES**

- DISCONNECT AND RELOCATE EXISTING EQUIPMENT, DISCONNECTS, POWER PANEL, SWITCHES, CONDUITS, JUNCTION BOXES, DEVICES AND SYSTEMS AS NOTED AND REQUIRED. REMOVE ALL REDUNDANT CONDUITS AND WIRING BACK TO SOURCE. MAKE SAFE ALL EXISTING POWER CIRCUITS.
- ALL MATERIALS AND ITEMS THAT ARE NOT BEING RE-USED SHALL BE REMOVED FROM SITE.
- CONTRACTOR SHALL REVIEW THE CONSTRUCTION SCHEDULE AND COORDINATE REMOVAL OF ITEMS ACCORDINGLY. DO NOT DISCONNECT EQUIPMENT NOTED TO BE REMOVED OR SHUT DOWN SYSTEMS WITHOUT PRIOR SCHEDULING AND APPROVAL.
- ALL FIXTURES, EQUIPMENT, SYSTEMS THAT ARE EXISTING TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
- CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE WORK AREA ON DAILY BASIS. COORDINATE WITH GENERAL CONTRACTOR FOR USE OF WASTE BINS.
- ELECTRICAL DEMOLITION SHALL BE DONE SUCH THAT NO DAMAGE TO EXISTING WALLS AND/OR FLOORS.
- EXISTING SYSTEMS AND FACILITIES SHALL NOT BE USED UNLESS ARRANGED FOR AND APPROVED BY OWNER.
- SEAL ALL FLOOR AND WALL OPENINGS RESULTED FROM REMOVAL OF CONDUITS USING APPROVAL FIRE RESISTANT RATING SEALANT.
- PROVIDE ALL REQUIRED CORE DRILLING AND OPENINGS FOR NEW CONDUITS AND WIRES. COORDINATE ON SITE AND OBTAIN APPROVAL BEFORE COMMENCING WORK.



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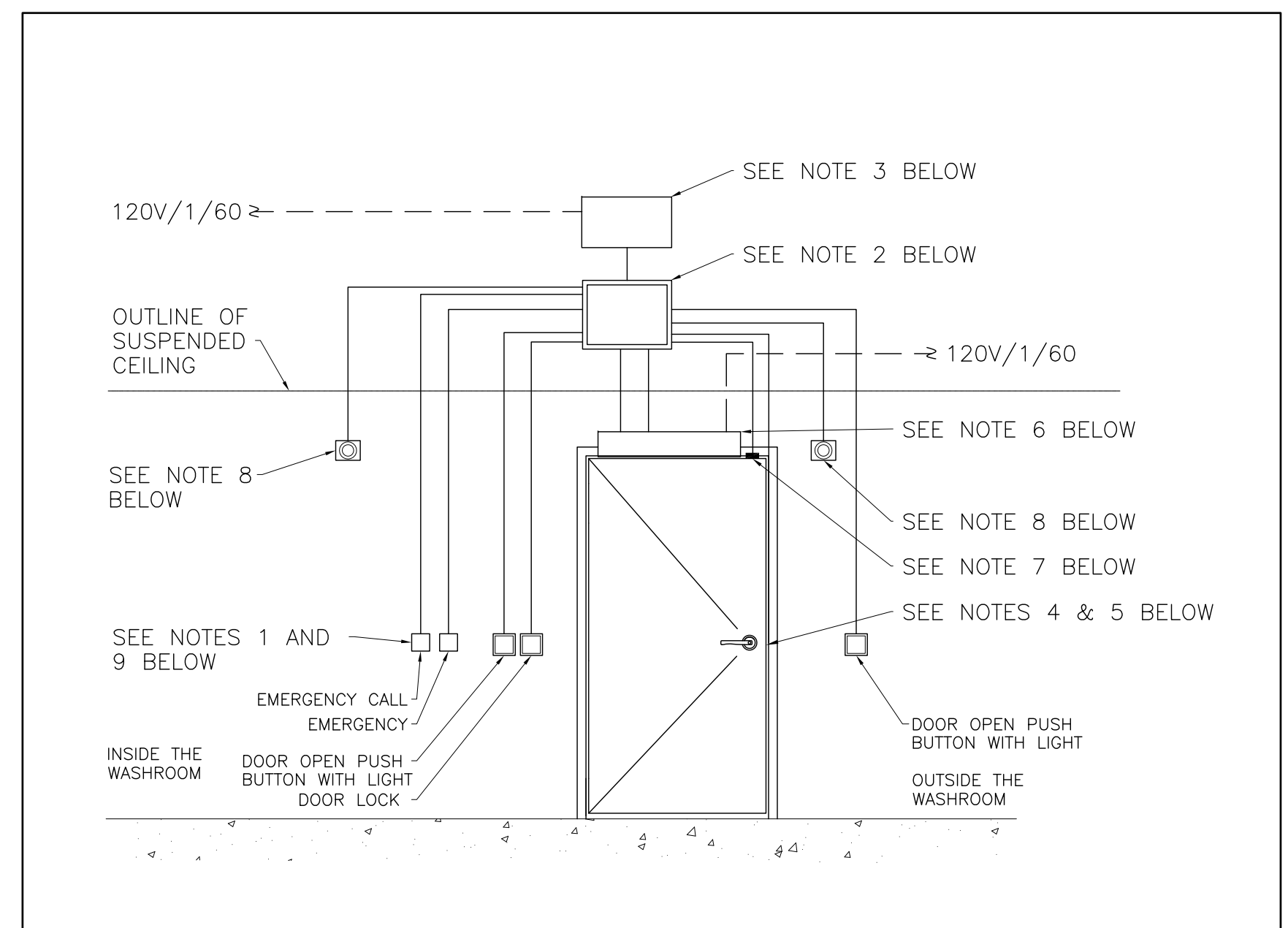
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168 HURON AVENUE  
ANCASTER, ONTARIO

**DRAWN NAME:**

**SCHEDULE AND DETAILS ELECTRICAL**

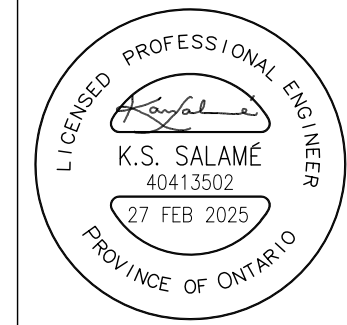
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NOVEMBER 2025	25-104
SCALE:	SHEET No.:
NOT TO SCALE	E3.01



**NOTES:**

- COORDINATE LOCATIONS AND INSTALLATION HEIGHT OF OPERATORS AND SWITCHES WITH ARCHITECTURAL DRAWINGS. DOOR OPEN PUSH BUTTONS AND DOOR LOCK SHALL BE AT 1100 mm FROM FINISHED FLOOR TO TOP OF DEVICE.
- PROVIDE 12x12x6 INCH JUNCTION BOX IN CEILING SPACE ABOVE THE DOOR.
- DOOR HARDWARE POWER SUPPLY. THIS WILL BE SUPPLIED BY THE DOOR HARDWARE VENDOR AND INSTALLATION BY THIS CONTRACTOR.
- WIRE DOOR CONTACT TO DOOR OPERATOR
- ELECTRICAL CONTRACTOR SHALL WIRE ALL DOOR OPERATORS TO STRIKES AND PUSH OPEN BUTTONS. ALL LOW VOLTAGE WIRING (24V AND LOWER) SHALL BE #18AWG.
- ELECTRIC DOOR OPERATOR SUPPLIED BY DOOR HARDWARE. WIRING BY ELECTRICAL CONTRACTOR.
- WIRE TO DOOR CONTACT.
- PROVIDE BACK BOX FOR EACH EMERGENCY DOME LIGHT AND BUZZER. COORDINATE EXACT LOCATION ON SITE AND WIRE TO CONTROLLER.
- PROVIDE RECESSED BACK-BOXES FOR OPEN DOOR BUTTONS, DOOR LOCK, ANNUNCIATION, EMERGENCY CALL BUTTON AND LOCKED LIGHT. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS IN THE WASHROOM.

UNIVERSAL WASHROOM WIRING SCHEMATIC  
NOT TO SCALE



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ANCASTER, ONTARIO

<b>DRAWN NAME:</b> WIRING SCHEMATIC ELECTRICAL	
<b>DRAWN BY:</b> M.S.	<b>CHECKED BY:</b> K.S.
<b>DATE:</b> NOVEMBER 2025	<b>JOB No.:</b> 25-104
<b>SCALE:</b> NOT TO SCALE	<b>SHEET No.:</b> E3.02

MECHANICAL NOTES AND SPECIFICATIONS

GENERAL CONDITIONS

- SUPPLY AND INSTALL A COMPLETE MECHANICAL SYSTEM AS SHOWN AND/OR SPECIFIED HEREIN. VISIT JOB SITE AND EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK
- THE SPECIFIED ITEMS OUTLINED IN THIS DOCUMENT ARE INTENDED TO COVER A BROAD RANGE OF MECHANICAL EQUIPMENT, DEVICES AND SYSTEMS. SOME SPECIFICATION ITEMS MAY NOT BE APPLICABLE AND THE CONTRACTOR SHALL IDENTIFY AND APPLY ONLY THE RELEVANT SPECIFICATIONS.
- PAY AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENSES, CERTIFICATE OF INSPECTIONS, ETC. PROVIDE AND SUBMIT DRAWINGS TO THE AUTHORITIES IF REQUIRED.
- DESIGN DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH APPLICABLE BUILDING CODES, STANDARDS, AND LOCAL BY-LAWS. HOWEVER, THE DRAWINGS MAY NOT NECESSARILY ILLUSTRATE ALL REQUIRED ACCESSORIES, FITTINGS, DEVICES, OR INSTALLATION DETAILS NEEDED TO FULLY CONFORM TO GOVERNING STANDARDS. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLETE COMPLIANCE WITH THE INTENT AND DETAILED REQUIREMENTS OF ALL APPLICABLE CODES, STANDARDS, AND AUTHORITIES HAVING JURISDICTION.
- COORDINATE WITH OTHER TRADES REGARDING LOCATION OF EQUIPMENT, DEVICES, DISTRIBUTION SYSTEM, ETC.
- PROVIDE SHOP DRAWINGS TO ALL NEW EQUIPMENTS.
- SUPPLY WIRING DIAGRAMS TO ELECTRICAL CONTRACTOR FOR THEIR CONNECTION.
- CLEAN ALL EQUIPMENT AND OTHER INSTALLATIONS. FOLLOW WRITTEN MAINTENANCE INSTRUCTION FROM MANUFACTURER.
- PROVIDE GUARANTEE IN WRITING FOR THE MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR THE PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
- THE CONTRACTOR IS TO LOCATE THE EXACT DIMENSIONS AND POSITIONS OF OPENINGS AND HOLES WHERE CUTTING MAY BE REQUIRED IN ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF PIPES, DUCTS, ETC. CUTTING AND PATCHING SHALL BE DONE BY THIS CONTRACTOR. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION AND DETAILS.
- ALL MATERIALS AND EQUIPMENT TO BE NEW AND FREE OF DEFECTS, AND SHALL BE C.S.A. APPROVED.
- INSULATE EXHAUST AIR DUCT MINIMUM 6" FROM EXTERIOR WALLS AND ROOF.
- COORDINATE ON SITE EXACT LOCATION OF EACH EQUIPMENT TO ENSURE ADEQUATE SPACE AND SERVICE ACCESS INCLUDING DIMENSIONS, LOCATIONS AND POSITIONS.
- COORDINATE LOCATION OF OPENINGS AND CORE DRILLING WHERE REQUIRED IN FLOORS, ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF DUCTS, PIPES, WIRES, ETC. MARK EACH LOCATION AND OBTAIN APPROVAL BEFORE PROCEEDING. ALL OPENINGS REQUIRED TO COMPLETE SYSTEMS INSTALLATION SHALL BE CARRIED BY THIS DIVISION.

H.V.A.C. GENERAL REQUIREMENTS

- SUPPLY AND INSTALL DUCTS IN ACCORDANCE TO SMACNA AND ASHRAE STANDARDS.
- ALL BRANCH DUCT TAKEOFFS TO BE COMPLETE WITH SPLITTER DAMPERS. ALL RETURN AIR BRANCH DUCTS SHALL BE COMPLETE WITH OPPOSED BLADE DAMPERS FOR AIR BALANCING. COORDINATE ON SITE LOCATION OF EACH DUCT AND ENSURE ADEQUATE SPACE TO FIT IN PLACE AS WELL AS FOR OTHER TRADES (FIRE PROTECTION, ELECTRICAL, FIRE PROTECTION DEVICES, ETC). FINAL LOCATION OF ALL REGISTERS, GRILLES AND DIFFUSERS TO BE COORDINATED WITH LATEST CEILING LAY-OUT ON SITE PRIOR TO INSTALLATION AND ANY INTERFERENCES BEING PROMPTLY REPORTED.
- CONTRACTOR TO CONFIRM CEILING TYPE (DRYWALL OR T-BAR) PRIOR TO ORDERING GRILLES AND DIFFUSERS. ALL DUCT SIZES SHOWN ARE FREE AREA REQUIREMENTS AND WHERE INTERNAL INSULATION IS SHOWN.
- THE DUCT SIZES MUST BE INCREASED ACCORDINGLY. U/C DESIGNATES THAT A 20 MM DOOR UNDERCUT IS REQUIRED.
- ALL EXHAUST DUCTS TO BE KEPT AT LEAST 4.5 M AWAY FROM ANY FRESH AIR INTAKES.
- ALL HEATING, VENTILATING AND AIR CONDITIONING UNITS SHALL BE C.S.A. APPROVED AND THE INSTALLATION SHALL MEET C.S.A. STANDARDS.

FIRE SEAL

- MAINTAIN THE INTEGRITY OF ALL FIRE SEPARATIONS. PROVIDE ALL NECESSARY CSA AND ULC LISTED PRODUCTS WHICH ARE REQUIRED TO SEAL AROUND EACH PIPE, DUCT, CONDUIT AND WIRE; APPLY THE FIRE RATED SEALANT AT FLOORS AND RATED WALLS TO RETAIN THE FIRE RATING CONTINUITY OF THESE ASSEMBLIES.
- WHERE DUCTS AND PIPES PASS THROUGH FLOORS AND FIRE RATED WALLS, PACK SPACE BETWEEN WIRING AND SLEEVE FULL WITH FIREPROOFING, AND SEAL WITH CANSTRUT ELASTA-SEAL OR APPROVED CAULKING COMPOUND WITH FIRE RESISTANCE RATING EQUAL TO THE WALL/FLOOR BEING PENETRATED.
- PACK ALL SLEEVES AND AROUND THE DUCTS FOR A COMPLETE TIGHT SEAL. ACCEPTED FIRE SEAL LIQUID OR PUTTY TYPE SHALL ONLY BE PROVIDED BY DOW CORNING OR 3M. MINERAL WOOL FIBRE SHALL NOT BE USED.

ALTERATIONS AND RELOCATIONS

- THE OWNER AND/OR ENGINEER RESERVES THE RIGHT TO ALTER THE LOCATION OF ANY MECHANICAL UNIT, EQUIPMENT, DEVICES, DUCTS, PIPES, OR GRILLE/DIFFUSER DURING CONSTRUCTION AT NO EXTRA COST, PROVIDED THAT THE REQUEST IS MADE BEFORE THE COMMENCEMENT OF ROUGH-IN WORK AND THE REQUESTED CHANGES ARE WITHIN A 3-METER RADIUS. THE REQUESTED REVISIONS AND ADJUSTMENTS SHALL BE INTEGRATED INTO THE CONSTRUCTION PROCESS WITHOUT IMPACTING THE OVERALL PROJECT TIMELINE OR BUDGET. ALL REQUESTS FOR ALTERATION OR RELOCATION WILL BE COMMUNICATED IN WRITING TO THE CONSTRUCTION TEAM THROUGH THE GENERAL CONTRACTOR.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO AVOID ANY INTERFERENCES, CONFLICTS OR DISRUPTIONS IN THE CONSTRUCTION SCHEDULE.

SANITARY DRAIN LOCATE AND VERIFICATION

- THE CONTRACTOR SHALL CONDUCT A FULL LOCATE OF THE EXISTING BURIED SANITARY PIPING IN THE WORK AREAS USING A DRAIN DIGITAL CAMERA AND ASSOCIATED LOCATING EQUIPMENT PRIOR TO COMMENCING ANY EXCAVATION OR INSTALLATION WORK. VERIFY THE HORIZONTAL ALIGNMENT, DEPTH, AND INVERT ELEVATIONS OF ALL SANITARY LINES, INCLUDING ANY BRANCHES OR CONNECTIONS THAT MAY AFFECT THE PROPOSED WORK. CONTRACTOR SHALL DOCUMENT ALL FINDINGS AND DEVELOP ACCURATE AS-BUILT LOCATE DRAWINGS FOR REVIEW AND COORDINATION. THE CONTRACTOR SHALL REVISE THE LAYOUT AND ROUTING AND CONNECTION POINTS OF ALL PROPOSED DRAIN PIPING AS REQUIRED TO SUIT EXISTING CONDITIONS, AT NO ADDITIONAL COST TO THE OWNER.

UNITS AND EQUIPMENT

- SUPPLY AND INSTALL MECHANICAL UNITS, EQUIPMENT AND SYSTEM AS SHOWN AND NOTED.
- FAN EQUIPMENT (WHERE APPLICABLE):
  - PROVIDE FANS WHERE SHOWN AND NOTED ON DRAWINGS.
  - REFER TO SCHEDULE ON DRAWINGS FOR DETAILS.
  - EACH FAN SHALL BE CSA APPROVED AND COMPLETE WITH BACK DRAFT DAMPER, SCREEN, DISCONNECT, STARTER AND ACCESSORIES AS NOTED ON FAN SCHEDULE.
  - COORDINATE LOCATION OF EACH FAN ON SITE AND INSTALL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS.
  - INSTALL CEILING SUSPENDED FANS USING VIBRATION ISOLATION SPRINGS AND DUCT FLEXIBLE CONNECTORS.
  - MAINTAIN REQUIRED SERVICE ACCESS CLEARANCES.
- ALL DUCTWORK CONSTRUCTION, SUPPORT AND INSTALLATION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF CURRENT A.S.H.R.A.E. GUIDE AND SMACNA STANDARDS UNLESS NOTED OTHERWISE HEREIN. APPLY CROSS-BREAKING TO SHEET METAL BETWEEN THE STANDING SEAMS OR REINFORCING ANGLES. CENTRE OF CROSSBREAK TO BE OF REQUIRED HEIGHT TO ASSURE SURFACE BEING RIGID. ALL DUCTWORK SHALL BE MEDIUM PRESSURE AND SEALED TO PREVENT LEAKAGE IN EXCESS OF 1" AT 100 PA. CONSTRUCT ALL GURB CAPS, ETC., OF GALVANIZED STEEL SHEETS WHICH ARE FREE FROM BUSTERS, SILVERS, PITS, IMPERFECTLY COATED SPOTS, ETC. MAKE WITHOUT ADDITIONAL CHARGE, ANY NECESSARY CHANGES OR ADDITIONS TO LAYOUT OF SHEET METAL TO ACCOMMODATE STRUCTURAL ETC.
- PROVIDE FIRE DAMPERS WHERE SHOWN AND AS REQUIRED BY ORDINANCES OR CODES. THE FIRE DAMPERS SHALL BE MADE TO CANADIAN UNDERWRITERS ASSOCIATION STANDARDS. DAMPERS SHALL BE KERR HUNT SLIDE GATE TYPE 'B'. DAMPERS, HOUSINGS, AND METHOD OF INSTALLATION SHALL HAVE C.S.A. OR U.L. CANADA APPROVAL. CONFIRM ALL FIRE DAMPER CONSTRUCTION AND LOCATION WITH ALL AUTHORITIES HAVING JURISDICTION.
- PROVIDE FLEXIBLE AIR DUCT (FC) AT EACH CONNECTION TO MECHANICAL UNIT.
- MOTORIZED DAMPERS SHALL BE "LOW LEAKAGE" TYPE, HEAVY DUTY AND SHALL BE PROVIDED COMPLETE WITH FLEXIBLE BLADE SEALS, 16 GAUGE STEEL BLADES AND FRAME (MAXIMUM LEAKAGE 5%) 120V ELECTRIC MOTOR AND DAMPER LINKAGE. MOTORIZED DAMPERS SHALL BE AS MANUFACTURED BY NAVLOR HART INDUSTRIES (OR EQUIV).
- PROVIDE LOUVRES WHERE SHOWN AND NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR OPENINGS IN WALLS. LOUVRES SHALL BE E.H. PRICE LIMITED OR APPROVED EQUAL, 16 GAUGE GALVANIZED STEEL CONSTRUCTION, PRE-PAINTED TO COLOUR AS SELECTED BY ARCHITECT, COMPLETE WITH INSECT SCREENS, STORM VANES, DRAIN CHANNELS, AND MOUNTING FRAMES.

GENERAL DEMOLITION NOTES:

- REMOVE EXISTING EQUIPMENT, UNITS, DEVICES, WIRING, PLUMBING PIPES, DUCTS, HANGERS, VENTS...ETC. AS NOTED OR REQUIRED TO FACILITATE INSTALLATION OF NEW MECHANICAL SYSTEMS. REMOVE ALL ASSOCIATED ACCESSORIES AND PIPES AS NECESSARY TO PREPARE OF PLUMBING SYSTEM.
- ALL EQUIPMENT AND ITEMS THAT ARE NOT BEING RE-USED SHALL BE REMOVED FROM SITE.
- CONTRACTOR SHALL REVIEW THE CONSTRUCTION SCHEDULE AND COORDINATE REMOVAL OF ITEMS ACCORDINGLY. DO NOT DISCONNECT EQUIPMENT NOTED TO BE REMOVED OR SHUT DOWN SYSTEMS WITHOUT PRIOR SCHEDULING AND APPROVAL.
- ALL FIXTURES, EQUIPMENT, SYSTEMS THAT ARE EXISTING TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
- CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE WORK AREA ON DAILY BASIS. COORDINATE WITH GENERAL CONTRACTOR FOR USE OF WASTE BINS.
- THE MECHANICAL DEMOLITION SHALL BE DONE SUCH THAT NO DAMAGE TO EXISTING WALLS AND/OR FLOORS.
- THE EQUIPMENT AND SYSTEMS SHALL NOT BE USED DURING CONSTRUCTION EXCEPT FOR TESTING.

INSULATION AND LABELS

- INSULATE ALL EXPOSED SUPPLY AIR AND RETURN AIR DUCTS USING MINIMUM 1" THICK FIBRE GLASS FOIL FACED INSULATION. SECURE JOINTS USING APPROVED INSULATION TAPES AND STRAPS. COVER INSULATION WITH PVC JACKETING WHERE NOTED ON DRAWINGS.
- INSULATE DOMESTIC HOT AND COLD WATER PIPES USING 1" THICK FIBERGLASS PIPE INSULATION. TAPE ALL JOINTS USING MINIMUM 2" WIDE APPROVED INSULATION TAPE.
- INSULATE HOT WATER HEATING PIPES USING 2" THICK FIBERGLASS PIPE INSULATION. TAPE ALL JOINTS USING MINIMUM 2" WIDE APPROVED INSULATION TAPE.
- COVER ALL EXPOSED PIPES INSULATION WITH WHITE PVC JACKETING. SEAL ALL JOINTS TO APPROVAL. OVERLAP PVC JACKETING AND APPLY 2" PVC TAPE AT EACH JOINT. PVC JACKETING SHALL HAVE A FLAME SPREAD RATING NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATING NOT GREATER THAN 50, TESTED PER ASTM E84. USE PRE-MOLDED OR PRE-FORMED PVC JACKETING FOR ELBOWS AND FITTINGS. SEAL ALL JOINTS WITH APPROVED PVC TAPE. LABEL ALL PIPES AND PROVIDE FLOW DIRECTIONAL ARROWS.
- VALVES AND FITTINGS SHALL HAVE MOLDED INSULATION AND PVC JACKETING.
- PROVIDE GALVANIZED SADDLES FOR EACH PIPE HANGER.
- LABEL ALL PIPES AND PROVIDE ARROWS INDICATING FLOW DIRECTION.

RECORD DRAWINGS

- REFER TO THE FRONT-END SPECIFICATIONS FOR THIS PROJECT FOR REQUIREMENTS RELATED TO AS-BUILT DRAWING PREPARATION AND SUBMITTAL. PREPARE, MAINTAIN, AND SUBMIT COMPLETE AS-BUILT DRAWINGS IN ACCORDANCE WITH ALL NOTES AND SPECIFIED PROCEDURES. AS-BUILT DRAWINGS SHALL CLEARLY SHOW THE ROUTING AND FINAL LOCATIONS OF ALL BURIED PIPING, UNDERGROUND SERVICES, MECHANICAL RISERS, MECHANICAL EQUIPMENT, ROUTING OF DUCTWORK, PIPES, AND ANY OTHER EXPOSED OR CONCEALED PLUMBING AND HVAC INSTALLATIONS.

NAMEPLATES

- PROVIDE FOR EACH MECHANICAL UNIT LAMACOID NAMEPLATE SECURED MECHANICALLY TO THE UNIT CASING.
  - EXISTING EXHAUST FANS (TWO SYSTEMS).
  - NEW EXHAUST FANS (THREE SYSTEMS).
  - WATER FLOW THRU THE NEW HOT WATER HEATING ELEMENT.
- LAMACOID NAMEPLATES SHALL BE CONSTRUCTED FROM 3-PLY PLASTIC ENGRAVING MATERIAL BLACK WITH WHITE ENGRAVING, 3 MM THICK AND MINIMUM 10 MM HIGH LETTERING. THE NAMEPLATES SHOULD BE SUITABLE FOR BOTH INDOOR AND OUTDOOR USE.

HEATING PIPING SYSTEM TREATMENT

- DRAIN AND REFILL THE HOT WATER HEATING SYSTEM AS REQUIRED TO COMPLETE THE WORK. FLUSH THE EXISTING HOT WATER HEATING SYSTEM USING INDUSTRY STANDARD HYDRONIC CLEANING PRACTICES (CSA B214 AND ASHRAE GUIDELINE 12) TO REMOVE SEDIMENT, SCALE, SLUDGE, AND ACCUMULATED DEBRIS. PROVIDE AND INJECT ALL REQUIRED RUST INHIBITORS, CORROSION-CONTROL CHEMICALS, AND WATER TREATMENT ADDITIVES AS RECOMMENDED FOR CLOSED LOOP HEATING SYSTEMS.
- ALL FLUSHING, CHEMICAL TREATMENT, AND FINAL WATER QUALITY ADJUSTMENTS SHALL BE PERFORMED BY AQUARIAN CHEMICALS UPON COMPLETION OF WORK ON THE EXISTING HEATING SYSTEM. SUBMIT A FINAL WATER TREATMENT REPORT CONFIRMING SYSTEM CONDITION, CHEMICAL LEVELS, AND COMPLIANCE WITH MANUFACTURER AND INDUSTRY REQUIREMENTS

SCOPE OF WORK

- WORK SHALL INCLUDE SUPPLY AND INSTALLATION OF ALL LABOUR AND MATERIALS NECESSARY FOR THE VARIOUS SYSTEMS SHOWN, NOTED AND REQUIRED TO COMPLETE SYSTEMS INSTALLATION. TEST AND COMMISSION EACH SYSTEM TO APPROVAL.
- THE DRAWINGS INDICATE GENERAL LOCATION EQUIPMENT, ROUTING OF DUCTS, PIPES, FIXTURES, CONTROLS ...ETC. WHERE REQUIRED WORK IS NOT SHOWN OR ONLY SHOWN DIAGRAMMATICALLY, INSTALL SAME TO CONSERVE HEAD ROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH FREE USE OF SPACE THROUGH WHICH THEY PASS.
- THE WORK SHALL INCLUDE, BUT NOT NECESSARILY LIMITED TO, THE SUPPLY AND INSTALLATION OF THE FOLLOWING:
  - VISIT PROJECT SITE AND REVIEW EXISTING CONDITIONS.
  - COORDINATION WITH GENERAL CONTRACTOR AND FACILITIES FOR ANY REQUIRED SHUT DOWN.
  - DEMOLITION AS NOTED AND REQUIRED TO COMPLETE SYSTEM INSTALLATION.
  - CONNECT TO EXISTING SERVICES.
  - SUBMITTAL OF SHOP DRAWINGS FOR REVIEW.
  - SUPPLY AND INSTALLATION OF MECHANICAL SYSTEMS AS SHOWN AND NOTED.
  - PLUMBING FIXTURES AND ALL REQUIRED PIPES, VALVES, FITTINGS...ETC.
  - VENTILATION SYSTEM REVISION AND UPGRADE.
  - FIRE SEAL AT RATED WALLS.
  - DUCTS AND PIPES INSULATION.
  - ALL REQUIRED CUTTING, CORE DRILLING AND PATCHING.
  - BUILDING AUTOMATION SYSTEM AND ALL REQUIRED CONTROL WIRING.
  - ARRANGING FOR INSPECTION BY LOCAL AUTHORITIES HAVING JURISDICTION.
  - TESTING, BALANCING AND COMMISSIONING.
  - ALL REQUIRED WORK NOT NECESSARILY DETAILED BUT REQUIRED TO COMPLETE SYSTEMS INSTALLATION.
- CONTRACTOR AND SUB-TRADES SHALL EXAMINE THE SITE AS WELL AS ALL DRAWINGS AND SPECIFICATIONS RELATIVE TO THIS WORK. NO ALLOWANCE WILL BE MADE FOR FAILURE TO MAKE SUCH EXAMINATION AND TO TAKE INTO ACCOUNT ALL ASPECTS, WHICH MAY GOVERN THE EXECUTION AND COMPLETION OF THE WORK.
- TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURE FROM DAMAGE WHEN CARRYING OUT THE WORK. CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ANY CLAIMS OR DAMAGES IN RELATION TO WORK OF THIS CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED FOR ALL TRADES INCLUDING HOLES AND OPENINGS FOR EQUIPMENT ENTRY AND EXIT, CONDUITS, PIPING, VENTS, LOUVRES AND DUCT SYSTEMS.
- ABIDE BY ONTARIO BUILDING CODE, CSA STANDARDS, ASHRAE STANDARDS AND ALL LOCAL BY LAWS RELATING TO THIS INSTALLATION. OBTAIN AND PAY FOR PERMIT, FEES, INSPECTIONS AND DEPOSITS REQUIRED BY ALL AUTHORITIES. SUBMIT ALL REQUIRED PRINTS AND FORMS AS REQUIRED BY AUTHORITIES.
- ALL NOTES LISTED ON DRAWINGS SHALL FORM PART OF THE SPECIFICATIONS.
- CERTAIN WORK INCLUDING SYSTEMS SHUT DOWN WILL HAVE TO BE COMPLETED AFTER HOURS AND ON WEEKENDS SUCH THAT IT DOES NOT AFFECT USE OF BUILDING AND SYSTEMS. CONTRACTS SHALL INCLUDE ALL PROVISIONS TO CARRY AFTER HOUR WORK IN BASE PRICE. AFTER HOUR WORK AND SHUT DOWN INCLUDE, BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:
  - DOMESTIC WATER SUPPLY
  - DRILLING AND ANY NOISY/VIBRATION WORK IN EXCESS OF 50db
  - WELDING OR SOLDERING THAT MAY CAUSE FUMES
  - POWER SHUT DOWN

VERIFICATION OF EXISTING CONDITIONS

- CONTRACTOR SHALL REVIEW EXISTING SITE CONDITIONS AFFECTING THE PROPOSED WORK AND COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
- CONTRACTOR SHALL REVIEW SITE CONDITIONS AND PREPARE INTERFERENCE SKETCHES IF NEEDED AND SUBMIT FOR REVIEW BEFORE COMMENCING WORK.
- REFER TO ARCHITECTURAL DRAWINGS, SPECIFICATIONS AND OWNER'S STANDARDS WHERE APPLICABLE FOR ADDITIONAL INFORMATION ABOUT EXISTING AND PROPOSED SYSTEMS.
- BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAIL REVIEW OF EXISTING STRUCTURE, DOMESTIC WATER PIPES, SANITARY PIPES, DUCTS, EQUIPMENT, CONDUITS, POWER WIRING, CONTROLS AND FIRE PROTECTION. EXISTING CONDITIONS MAY VARY FROM THAT SHOWN ON DRAWINGS AND NO EXTRA WILL BE CONSIDERED FOR ANY VARIATION WITHIN 3 METERS (10 FT). THE CONSULTANT AND ARCHITECT ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY WITH DETAILS FOR DIRECTION OR SITE INSTRUCTION ON HOW TO PROCEED.

TESTING AND BALANCING

- TEST AND BALANCE SUPPLY AIRFLOW INCLUDING THE FOLLOWING:
  - EXISTING EXHAUST FANS (TWO SYSTEMS).
  - NEW EXHAUST FANS (THREE SYSTEMS).
  - WATER FLOW THRU THE NEW HOT WATER HEATING ELEMENT.
- THE TESTING AND BALANCING SHALL BE DONE FOR EACH SYSTEM SERVING THE RENOVATION AREAS AS A WHOLE AND NOT JUST THE RENOVATED ZONES. THE SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET CIRCUIT BALANCING VALVES, DUCT BALANCING DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUME FLOW RATES. THE BALANCING OF AIR AND WATER SYSTEMS SHALL BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN ALL EXISTING DUCT SYSTEMS AND REPLACE FILTERS BEFORE TESTING IS DONE.
- PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL BEFORE TESTING IS DONE. TESTING AND BALANCING FIRM. AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS. THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL, NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
- UPON COMPLETION OF THE AIR BALANCE AND SUBMITTAL OF THE AIR BALANCE MAINTENANCE MANUAL REPORT TO THE OWNER. THIS CONTRACTOR SHALL PROVIDE, IF CALLED FOR, A SPOT CHECK ON THE SYSTEM WITH THE CONSULTANT. IF ACTUAL AIR QUANTITIES DO NOT AGREE WITH THE AIR BALANCE REPORT DATA, THIS CONTRACTOR MAY BE CALLED UPON TO COMPLETELY RE-BALANCE THE SYSTEM UNTIL SATISFACTORY IS ACHIEVED AND ACCEPTED BY THE CONSULTANT.

GENERAL NOTES:

- REFER TO GENERAL NOTES AND SPECIFICATIONS ON LATEST ARCHITECTURAL DRAWINGS ISSUED OR CONSTRUCTION.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF PLUMBING FIXTURES, HEIGHTS, AND DIMENSIONS.
- FOR ANY PROPOSED EQUIPMENT ALTERNATIVE OR SUBSTITUTION AND WHERE THE TERM "APPROVED EQUAL" IS NOTED, THE CONTRACTOR AND SUB-CONTRACTORS SHALL SUBMIT PROPOSED ALTERNATE EQUIPMENT FOR REVIEW AND APPROVAL PRIOR TO QUESTION PERIOD DEADLINE.
- WHERE THE TERM "PROVIDE" IS NOTED ON DRAWINGS, IT MEANS SUPPLY AND INSTALL.
- CONTRACTOR TO FIELD VERIFY WORK SITE CONDITIONS.
- CONTRACTOR TO COORDINATE INSTALLATION WITH EXISTING CONDITIONS INCLUDING DUCTS, PIPES, ELECTRICAL LIGHTING & BUILDING STRUCTURE.
- INSTALL ACCESS DOOR FOR EACH CONCEALED VALVE, CLEANOUT AND WHERE SERVICE IS REQUIRED.
- CONNECTIONS TO EXISTING BURIED SANITARY WILL HAVE TO BE DONE WITHOUT AFFECTING OPERATION IN ADJACENT UNITS. WORK WILL HAVE TO BE DONE AFTER HOURS UNLESS LOCAL SHUT DOWN WILL NOT AFFECT ANY FUNCTION IN THE BUILDING AND APPROVAL IS OBTAINED.
- CONTRACTOR SHALL INCLUDE PRICE TO LOCATE EXISTING BURIED SANITARY PIPES USING DIGITAL TRACK CAMERA AND PRODUCE AS-BUILT DRAWINGS.
- COORDINATE WITH OTHER TRADES AND REVIEW ARCHITECTURAL DRAWINGS BEFORE COMMENCING WORK.
- ALL EQUIPMENT SHALL BE CSA AND ULC APPROVED. PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH EQUIPMENT AND FIXTURE INSTALLATION. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY FIXTURE.
- BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAIL REVIEW OF EXISTING SYSTEMS. EXISTING CONDITIONS MAY VARY FROM THAT SHOWN ON DRAWINGS AND NO EXTRA WILL BE CONSIDERED FOR ANY VARIATION WITHIN 3 METERS. THE CONSULTANTS ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED.

PLUMBING AND HEATING PIPES

- DOMESTIC HOT AND COLD WATER PIPES SHALL BE COPPER TYPE 'L' OR APPROVED EQUAL.
- UNDERGROUND SANITARY AND VENT PIPES SHALL COMPLY WITH ONTARIO BUILDING CODE SECTION 7.2.5.10:
  - CAN/CSA-B 182.1, PLASTIC DRAIN AND SEWER PIPE AND PIPE FITTINGS;
  - CAN/CSA-B 182.2, PVC SEWER PIPE AND FITTINGS (PSM TYPE);
  - CAN/CSA-B 182.4, PROFILE (RIBBED) PVC SEWER PIPE AND FITTINGS;
  - CAN/CSA-B 182.6, PROFILE POLYETHYLENE SEWER PIPE AND FITTINGS; OR
  - CAN/CSA B 182.7, MULTI-LAYER PVC SEWER PIPE (PSM TYPE) HAVING REPROCESSED-RECYCLED CONTENT.
- ABS SANITARY AND VENT PIPES MATERIAL SHALL BE PER ONTARIO BUILDING CODE 7.2.5.12, 3.1.5.16 AND CSA B181.2. EXPOSED ABS PIPES ARE NOT PERMITTED. PROVIDE NON-COMBUSTIBLE PIPING WHERE PIPING IS EXPOSED.
- PLASTIC PIPES INSTALLED IN CEILING PLENUM SHALL BE SYSTEM XFR DW CERTIFIED TO CSA B181.2 AND ULC S102.2
- HOT WATER HEATING SUPPLY AND RETURN PIPES 2" DIAMETER AND UNDER SHALL BE COPPER TYPE 'L'.
- HOT WATER HEATING PIPES SHALL BE BLACK STEEL SCHEDULE 40. PIPE SIZES UP TO 2 1/2" SHALL HAVE HAVE THREADED FITTINGS. PIPES 3" AND LARGER SHALL HAVE FLANGED FITTINGS OR WELDED. TEST PIPING SYSTEM AT MINIMUM 150 PSI FOR 48 HOURS AND PROVIDE REPORT. THE TESTING SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE. FLUSH AND CLEAN PIPING SYSTEM TO APPROVAL. PROVIDE TESTING AND FLUSHING REPORT.
- FLUSH AND PRESSURE TEST EACH PIPING SYSTEM BEFORE INSULATION IS APPLIED. SUBMIT TEST REPORTS.

GENERAL DEMOLITION NOTES

- DISCONNECT AND REMOVE NOTED EQUIPMENT, PLUMBING FIXTURES, PIPES, DUCTS, HANGERS, SUPPORT BRACKETS, CONTROLS AND ALL ASSOCIATED WIRING.
- REVISE EXISTING PIPES AND DUCTS AS NOTED AND REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT, FIXTURES AND LAYOUT. REMOVE ALL ASSOCIATED ACCESSORIES AND PIPES AS NECESSARY TO COMPLETE SYSTEMS REVISIONS.
- ALL DEMOLITION DEBRIS AND OBSOLETE FIXTURES SHALL BE REMOVED FROM SITE ON A DAILY BASIS. COORDINATE WITH GENERAL CONTRACTOR FOR USE OF WASTE BINS.
- CONTRACTOR SHALL REVIEW THE CONSTRUCTION SCHEDULE AND COORDINATE REMOVAL OF ITEMS ACCORDINGLY. DO NOT DISCONNECT EQUIPMENT NOTED TO BE REMOVED OR SHUT DOWN SYSTEMS WITHOUT PRIOR SCHEDULING AND APPROVAL.
- ALL FIXTURES, EQUIPMENT, SYSTEMS THAT ARE EXISTING TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
- THE MECHANICAL WORK AND ASSOCIATED DEMOLITION SHALL BE DONE SUCH THAT NO DAMAGE TO EXISTING WALLS AND/OR FLOORS.
- EXISTING SYSTEMS AND FACILITIES SHALL NOT BE USED UNLESS ARRANGED FOR AND APPROVED BY OWNER.
- EXISTING MECHANICAL, SANITARY AND DOMESTIC PIPING SYSTEMS SHALL REMAIN OPERATIONAL. PROVIDE ALL REQUIRED TEMPORARY ARRANGEMENTS AND REVISIONS TO MAINTAIN EXISTING SYSTEMS OPERATIONAL. INSULATE EXISTING DUCTS, PIPES AND VALVES WHERE INSULATION WAS DAMAGED OR REMOVED. INSULATE ALL NEW DOMESTIC WATER PIPES AND VALVES.

PIPE FREEZING REQUIREMENTS

- THE CONTRACTOR SHALL INCLUDE ALL THE COSTS REQUIRED TO PERFORM PIPE FREEZING ON THE EXISTING PIPE MAINS AND BRANCHES AS NEEDED TO FACILITATE THE DEMOLITION AND THE MAKING OF NEW CONNECTIONS. THE WORK MUST BE CARRIED OUT SAFELY AND EFFICIENTLY, ENSURING MINIMAL DISRUPTION TO THE EXISTING SYSTEM.
- THE LOCATION OF EACH PIPE FREEZING AND QUANTITIES SHALL BE DETERMINE ON SITE AND APPLIED AS NECESSARY. THE CONTRACTOR SHALL PLAN TO INSTALL STUBS WITH VALVES FOR THE NEW CONNECTIONS DURING THE DEMOLITION PERIOD.
- PIPE FREEZING METHOD: USE LIQUID NITROGEN OR AN APPROVED DRY ICE METHOD. THE FREEZING METHOD SHALL BE SUITABLE FOR THE PIPE MATERIAL AND DIAMETER.
- SAFETY: PIPE FREEZING SHALL BE APPLIED USING APPROPRIATE PROTECTIVE GEAR. ENSURE THE WORK AREA IS PROPERLY VENTILATED. THE CONTRACTOR SHALL ADHERE TO SAFETY GUIDELINES AND THE WRITTEN SAFETY AND APPLICATION INSTRUCTIONS OF THE FREEZING EQUIPMENT.



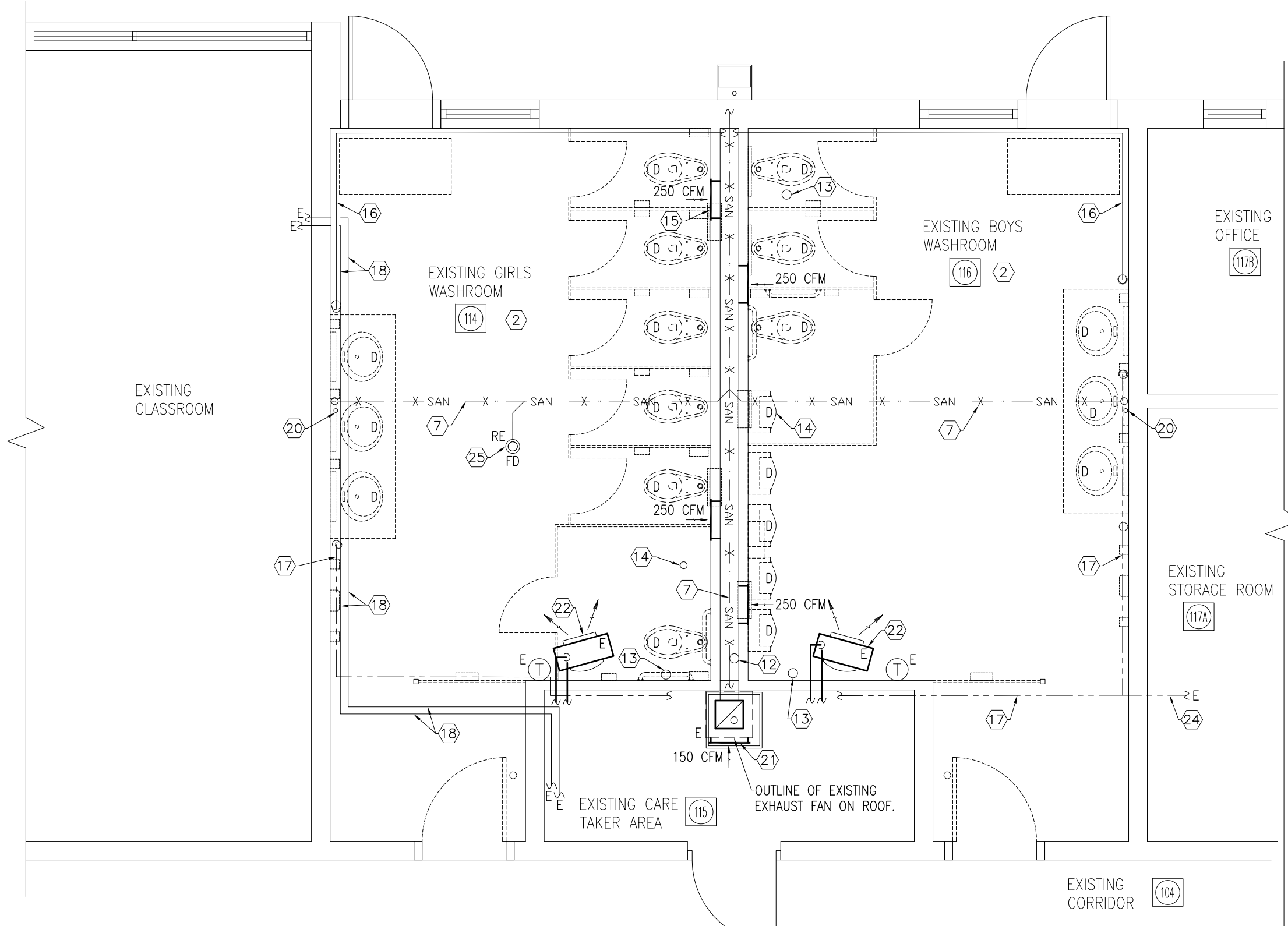
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 THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.  
 ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.  
 NOTE BEFORE COMMENCING WORK:  
 THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, DIFFUSERS, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.  
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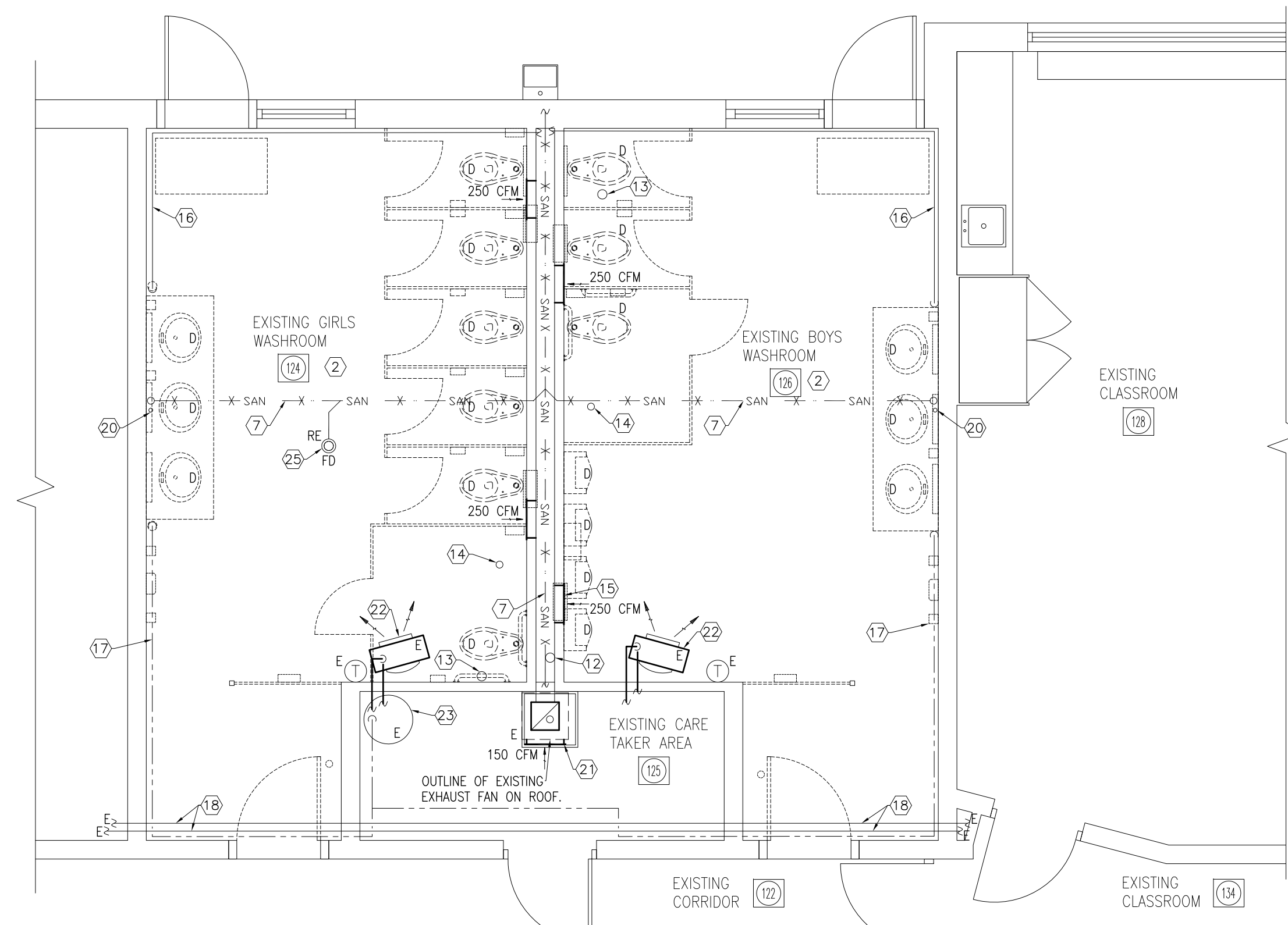
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FRANK PANABAKER ELEMENTARY SCHOOL  
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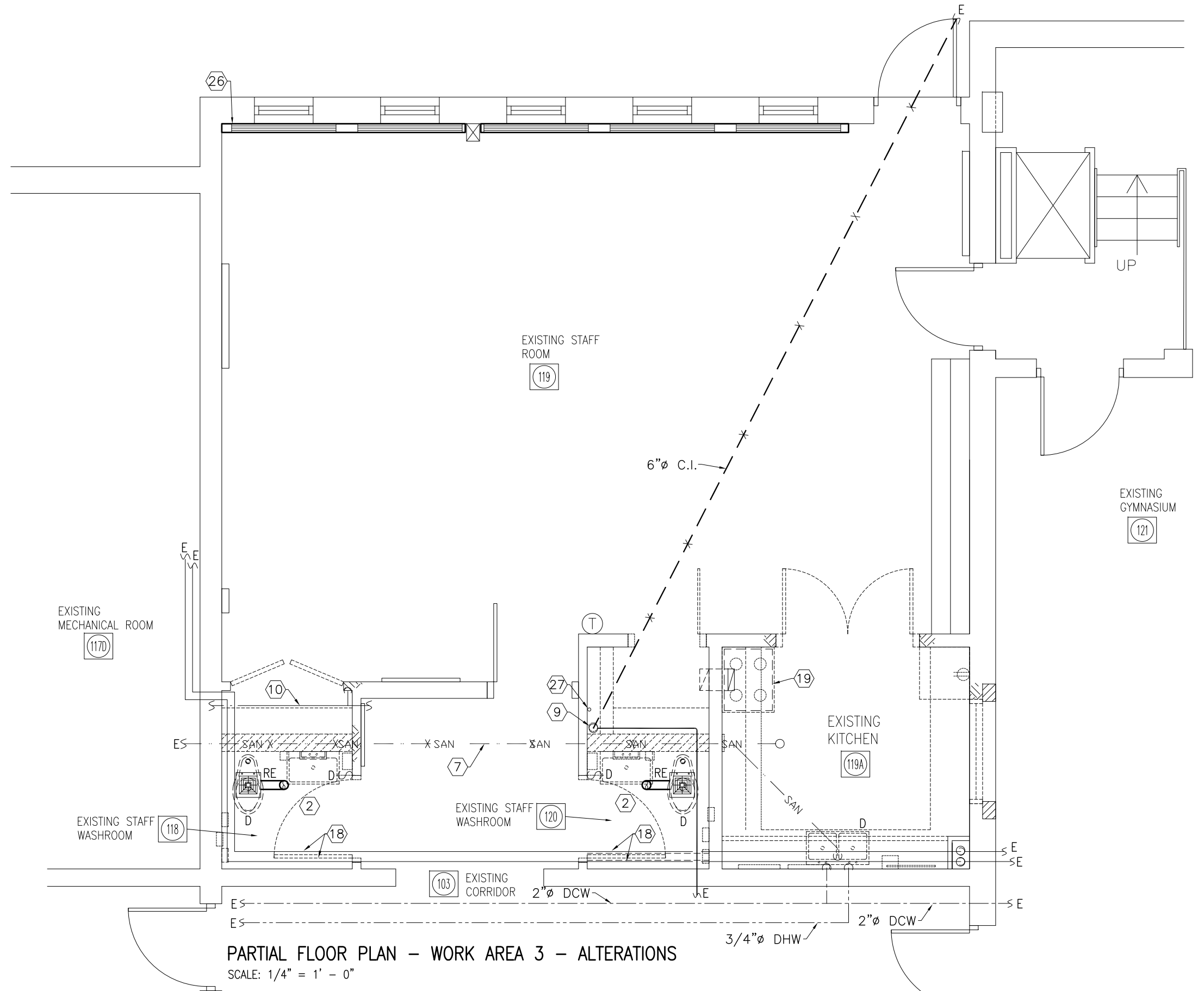
DRAWN NAME: <b>NOTES AND SPECIFICATIONS MECHANICAL</b>	
DRAWN BY: M.S.	CHECKED BY: K.S.
DATE: NOVEMBER 2025	JOB No.: 25-104
SCALE: NOT TO SCALE	SHEET No.: <b>MO.01</b>



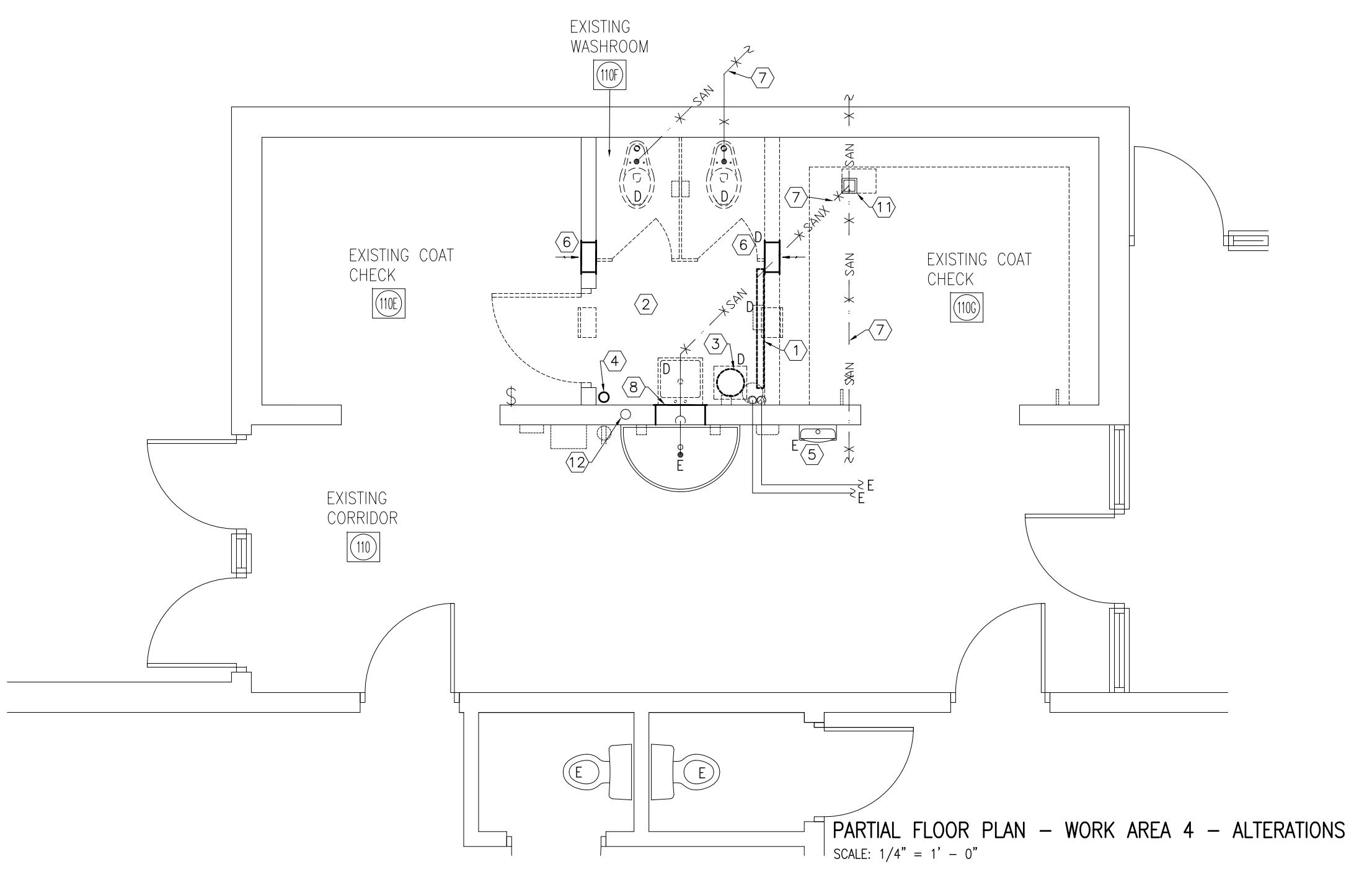
PARTIAL FLOOR PLAN - WORK AREA 1 - ALTERATIONS  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 2 - ALTERATIONS  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 3 - ALTERATIONS  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 4 - ALTERATIONS  
SCALE: 1/4" = 1' - 0"

- DRAWING NOTES:**
- DISCONNECT AND REMOVE EXISTING HOT WATER HEATING UNIT COMPLETE WITH ASSOCIATED HOT WATER HEATING PIPES, INSULATION, SUPPORTS, VALVES, FITTINGS AND CONTROLS. REMOVE HOT WATER SUPPLY AND RETURN PIPES BACK TO MAINS AND CAP TO APPROVAL. RE-INSULATE EXISTING PIPES AND SEAL ALL INSULATION JOINTS. THE CONTRACTOR SHALL INCLUDE THE COST TO SHUT DOWN THE HEATING SYSTEM TO FACILITATE THE WORK AND RE-COMMISSION IT AT THE END OF EACH WORK PHASE. HEATING SYSTEM SHUTDOWN AND RE-COMMISSIONING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OBTAIN APPROVAL BEFORE COMMENCING WORK.
  - A. DISCONNECT AND REMOVE ALL EXISTING PLUMBING FIXTURES (IDENTIFIED WITH "D"), INCLUDING THE FOLLOWING:

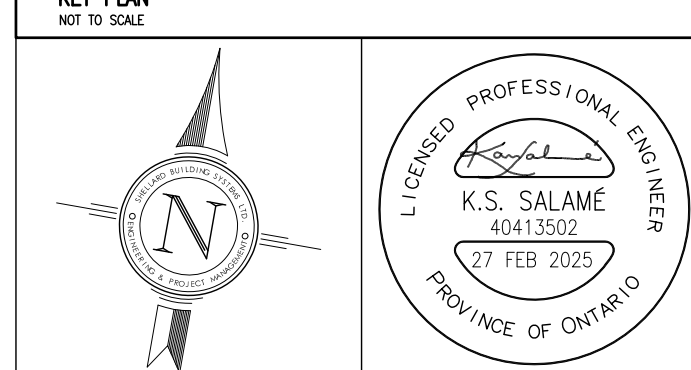
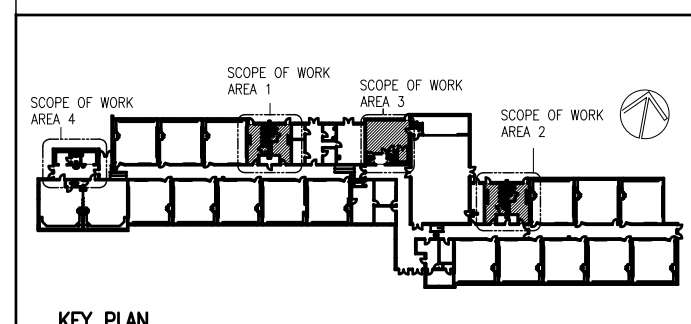
    - WATER CLOSETS EACH COMPLETE WITH ASSOCIATED FLUSH VALVE, SANITARY AND WATER SUPPLY PIPES.
    - URINALS EACH COMPLETE WITH ASSOCIATED FLUSH VALVE, FLUSH TANK, SANITARY PIPES AND WATER SUPPLY PIPES. REVISE SANITARY AND DOMESTIC WATER PIPES TO SUITE NEW URINALS. COORDINATE WITH THE GENERAL CONTRACTOR FOR FLOOR CUTTING, EXCAVATION BACKFILLING AND INSTALLATION OF PIPES CONCEALED BEHIND EXISTING BLOCK WALL.
    - LAVATORIES EACH COMPLETE WITH ASSOCIATED FAUCET, DOMESTIC HOT AND COLD WATER PIPES, SANITARY PIPES, VENT PIPES AND ALL ACCESSORIES. REVISE SANITARY, VENT AND DOMESTIC WATER PIPES TO SUITE NEW WASH FOUNTAINS.

B. REMOVE ALL HOT AND COLD DOMESTIC WATER PIPES, SANITARY PIPES AND VENT PIPES BACK TO SOURCE. CAP UN-USED BRANCH PIPES TO APPROVAL. DISCONNECT AND REMOVE ALL REDUNDANT, CAPPED AND ABANDONED SANITARY, HOT AND COLD DOMESTIC WATER PIPES AT SOURCE AND CAP EXISTING LIVE PIPE TO APPROVAL SUCH THAT NO STAGNANT WATER IN ANY PIPE (DEAD LEG PIPE SHALL NOT EXCEED 2 TIMES THE PIPE DIAMETER). RE-INSULATE EXISTING DOMESTIC WATER PIPES WHERE INSULATION WAS REMOVED OR DAMAGED DURING DEMOLITION.

C. DISCONNECT AND REMOVE EXISTING EXHAUST FANS (IDENTIFIED WITH "D", TOTAL OF TWO) COMPLETE WITH ASSOCIATED DUCTS, WIRING AND CONTROLS. RE-USE EXISTING ROOF OPENINGS FOR NEW EXHAUST AIR DUCTS THRU ROOF TO NEW WEATHER CAPS.

D. THE CONTRACTOR SHALL INCLUDE ALL THE COSTS REQUIRED TO PERFORM PIPE FREEZING ON THE EXISTING HOT AND COLD DOMESTIC WATER MAINS AND BRANCHES AS REQUIRED TO FACILITATE THE DEMOLITION AND THE MAKING NEW CONNECTIONS. REFER TO PIPE FREEZING NOTES AND REQUIREMENTS ON DRAWING M1.01.
  - DISCONNECT AND REMOVE EXISTING DOMESTIC HOT WATER HEATER COMPLETE WITH ALL ASSOCIATED VALVES, FITTINGS, PIPES, PIPE INSULATION, PIPE HANGERS SUPPORT PLATFORM. REMOVE PIPES BACK TO LIVE MAINS IN THE CORRIDOR. RE-USE DOMESTIC COLD WATER BRANCH PIPE TO FEED NEW HEATER AND PLUMBING FIXTURES. INSULATE ALL EXISTING PIPES IN THE RENOVATED AREA INCLUDING PIPE SECTIONS WHERE INSULATION WAS REMOVED OR DAMAGED. THE CONTRACTOR SHALL INCLUDE ALL THE COSTS REQUIRED TO PERFORM PIPE FREEZING ON THE EXISTING PIPE MAINS AND BRANCHES AS REQUIRED TO FACILITATE THE DEMOLITION AND THE MAKING NEW CONNECTIONS. REFER TO PIPE FREEZING REQUIREMENTS ON M1.01.
  - EXISTING RAIN WATER LEADER TO REMAIN. SUPPLY 16x16 HINGED STEEL ACCESS PANEL FOR INSTALLATION BY GENERAL CONTRACTOR IN THE BLOCK WALL. COORDINATE WITH GENERAL CONTRACTOR LOCATION OF SERVICE ACCESS PANEL.
  - EXISTING DRINKING FOUNTAIN AND WASH FOUNTAIN TO REMAIN. RE-PIPE TO FIXTURES DOWN IN NEW SECTION OF THE BLOCK WALL (ADJACENT TO NEW DOOR). COORDINATE WITH GENERAL CONTRACTOR TO CONCEAL NEW PIPING IN EXISTING BLOCK WALL TO THE FIXTURES.
  - DISCONNECT AND REMOVE EXISTING WALL GRILLE COMPLETE WITH SLEEVE.
  - EXISTING BURIED SANITARY TO REMAIN. THE PIPE IS SHOWN BASED ON RECORD DRAWINGS. NOTE THAT EXISTING BRANCH PIPES ARE NOT ALL SHOWN. THIS CONTRACTOR SHALL USE DRAIN DIGITAL CAMERA TO DETERMINE SIZE, LOCATION AND INVERT OF THE EXISTING SANITARY DRAIN PIPES BEFORE COMMENCING WORK. UPDATE AS-BUILT DRAWINGS.
  - DISCONNECT AND REMOVE GRILLE. REMOVE DUCT BACK TO MAIN IN CORRIDOR CEILING SPACE AND CAP TO APPROVAL.
  - RE-ROUTE EXISTING RAIN WATER LEADER TO CLEAR SPACE FOR WASHROOM EXPANSION. INSTALL HORIZONTAL PIPE AT HIGH LEVEL (1% SLOPE) AND RE-CONNECT PIPE TO EXISTING BURIED MAIN. USE DRAIN DIGITAL CAMERA TO LOCATE EXISTING BURIED MAIN. COORDINATE WITH THE GENERAL CONTRACTOR FOR EXCAVATION AND BACKFILLING.
  - RE-ROUTE EXISTING DOMESTIC WATER PIPE TO CLEAR SPACE FOR THE NEW BLOCK WALL. RELOCATE TO NEW PIPE CHASE.
  - REPLACE EXISTING ACCESS PANEL WITH A NEW UNIT AND INSTALL LEVEL WITH NEW FINISHED FLOOR.
  - APPROXIMATE LOCATION OF EXISTING SANITARY STACK NOTED PER RECORD DRAWINGS. VERIFY EXACT LOCATION ON SITE AND CONNECT NEW VENT PIPES TO THE EXISTING STACK.
  - THE CONTRACTOR SHALL REMOVE THE EXISTING SANITARY CLEANOUT PLATE AND REPLACE IT WITH A NEW BRASS CLEANOUT COVER ASSEMBLY. THE NEW BRASS UNIT SHALL BE SECURELY INSTALLED AND SET FLUSH WITH THE FINISHED FLOOR LEVEL.
  - REMOVE VERTICAL SECTION OF SANITARY PIPE FROM EXISTING FINISHED FLOOR DOWN TO THE EXISTING BURIED MAIN, AND CAP THE MAIN TO APPROVAL. COORDINATE WITH THE GENERAL CONTRACTOR FOR EXCAVATION AND BACKFILLING.
  - THIS CONTRACTOR SHALL DISCONNECT AND THOROUGHLY CLEAN ALL EXISTING EXHAUST AIR GRILLES THAT ARE SHOWN EXISTING TO REMAIN (TOTAL OF EIGHT GRILLES). CLEANING SHALL INCLUDE REMOVAL OF SURFACE DUST, DEBRIS, AND BUILDUP FROM BOTH THE GRILLE FACE, VANES AND ACCESSIBLE INTERIOR SURFACES, USING APPROPRIATE NON-ABRASIVE METHODS TO RESTORE PROPER AIRFLOW AND APPEARANCE. CLEAN THE WALL SLEEVES. REPAIR THE GRILLES WITH A DURABLE, CORROSION-RESISTANT FINISH TO MATCH THE SURROUNDING DECOR (COLOUR SHALL BE SELECTED BY ARCHITECT). RE-INSTALL THE GRILLES FLUSH WITH WALL FINISH. TEST AND BALANCE THE EXHAUST AIR SYSTEM.
  - REPLACE THE EXISTING VENT PIPE AND RECONNECT TO THE EXISTING STACK AND NEW WASH FOUNTAIN. THE NEW VENT PIPE SHALL BE COPPER TYPE "L", TYPICAL OF FOUR LOCATIONS. PAINT EXPOSED SECTIONS OF PIPE WITH A DURABLE COAT OF PAINT, COLOUR TO BE SELECTED BY THE ARCHITECT.
  - REPLACE EXISTING DOMESTIC WATER PIPES. REFER TO DRAWING M1.02 FOR DETAILS.

- DRAWING NOTES:**
- RECOVER EXISTING HOT WATER HEATING PIPES INSULATION WITH WHITE PVC JACKETING HAVING A FLAME SPREAD RATING NOT GREATER THAN 50, TESTED PER ASTM E84. USE PRE-MOLDED OR PREFORMED PVC JACKETING FOR ELBOWS AND FITTINGS. SEAL ALL JOINTS WITH APPROVED PVC TAPE, AND LABEL ALL PIPES (H.W. SUPPLY, H.W. RETURN) WITH FLOW DIRECTION ARROWS.
  - DISCONNECT AND REMOVE EXISTING RANGE HOOD COMPLETE WITH ASSOCIATED DUCT. PROVIDE NEW EXHAUST DUCT FROM TOP OF NEW HOOD (EF-4) UP THRU WALL AT HIGH LEVEL (7' 9") TO CLEAR SPACE FOR WASHROOM EXPANSION. RE-ROUTE NEW EXHAUST DUCT UP THRU EXISTING ROOF OPENING. REFER TO DRAWING M1.02 AND FAN SCHEDULE ON DRAWING M3.02 FOR NEW HOOD (EF-4) FAN DETAILS.
  - DISCONNECT AND ABANDON THE EXISTING BURIED DOMESTIC WATER LINE. IN ADDITION, DISCONNECT THE PIPE AT ITS SOURCE WITHIN THE PIPE CAVITY BEHIND THE WATER CLOSETS AND CAP THE MAIN TO PREVENT STAGNANT WATER IN THE ABANDONED BURIED LINE FROM CONTAMINATING THE ACTIVE DOMESTIC WATER SYSTEM. COORDINATE WITH THE GENERAL CONTRACTOR TO REMOVE A SECTION OF THE EXISTING BLOCK WALL AS REQUIRED TO ACCESS THE DOMESTIC WATER MAIN.
  - REPLACE THE EXISTING EXHAUST AIR GRILLE WITH A NEW GRILLE OF THE SAME SIZE, EQUIPPED WITH AN INTEGRAL BALANCING DAMPER. TEST AND BALANCE EACH EXHAUST AIR SYSTEM AND SUBMIT REPORT.
  - EXISTING HOT WATER UNIT HEATER TO REMAIN. CONTRACTOR SHALL EACH UNIT (TOTAL OF FOUR) INCLUDING THOROUGHLY CLEAN COIL AND FAN ASSEMBLY. ENSURE ALL DEBRIS, DUST AND SCALE ARE REMOVED TO RESTORE PROPER AIRFLOW AND HEAT TRANSFER. VERIFY UNIT IS IN GOOD WORKING CONDITION AFTER CLEANING AND REPORT ANY DEFICIENCIES TO THE CONSULTANT.
  - EXISTING DOMESTIC HOT WATER HEATER (ELECTRIC) TO REMAIN. CONNECT NEW DOMESTIC WATER PIPES TO EXISTING MAINS AND INSULATE ALL NEW AND EXISTING PIPES.
  - EXISTING DOMESTIC HOT WATER PIPE IN STORAGE 117A TO REMAIN. CONNECT NEW DOMESTIC WATER PIPE TO EXISTING MAIN AND INSULATE ALL NEW AND EXISTING PIPES. RECOVER EXPOSED PIPE INSULATION WITH WHITE PVC JACKETING HAVING A FLAME-SPREAD RATING NOT GREATER THAN 25 AND A SMOKE-DEVELOPED RATING NOT GREATER THAN 50, TESTED PER ASTM E84. USE PRE-MOLDED INSULATION AND PREFORMED PVC JACKETING FOR ELBOWS AND FITTINGS. SEAL ALL JOINTS WITH APPROVED PVC TAPE AND LABEL ALL PIPES.
  - REPLACE EXISTING FLOOR DRAIN AND INSTALL THE NEW DRAIN STRAINER LEVEL WITH NEW FINISHED FLOOR.
  - EXISTING WALL-FIN HOT WATER HEATING UNITS TO REMAIN. REMOVE ENCLOSURES AND CLEAN HEATING ELEMENTS AND PIPES TO APPROVAL. SERVICE CONTROL VALVE TO ENSURE PROPER OPERATION.
  - REROUTE EXISTING DOMESTIC WATER PIPES TO FEED NEW PLUMBING FIXTURES.



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ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

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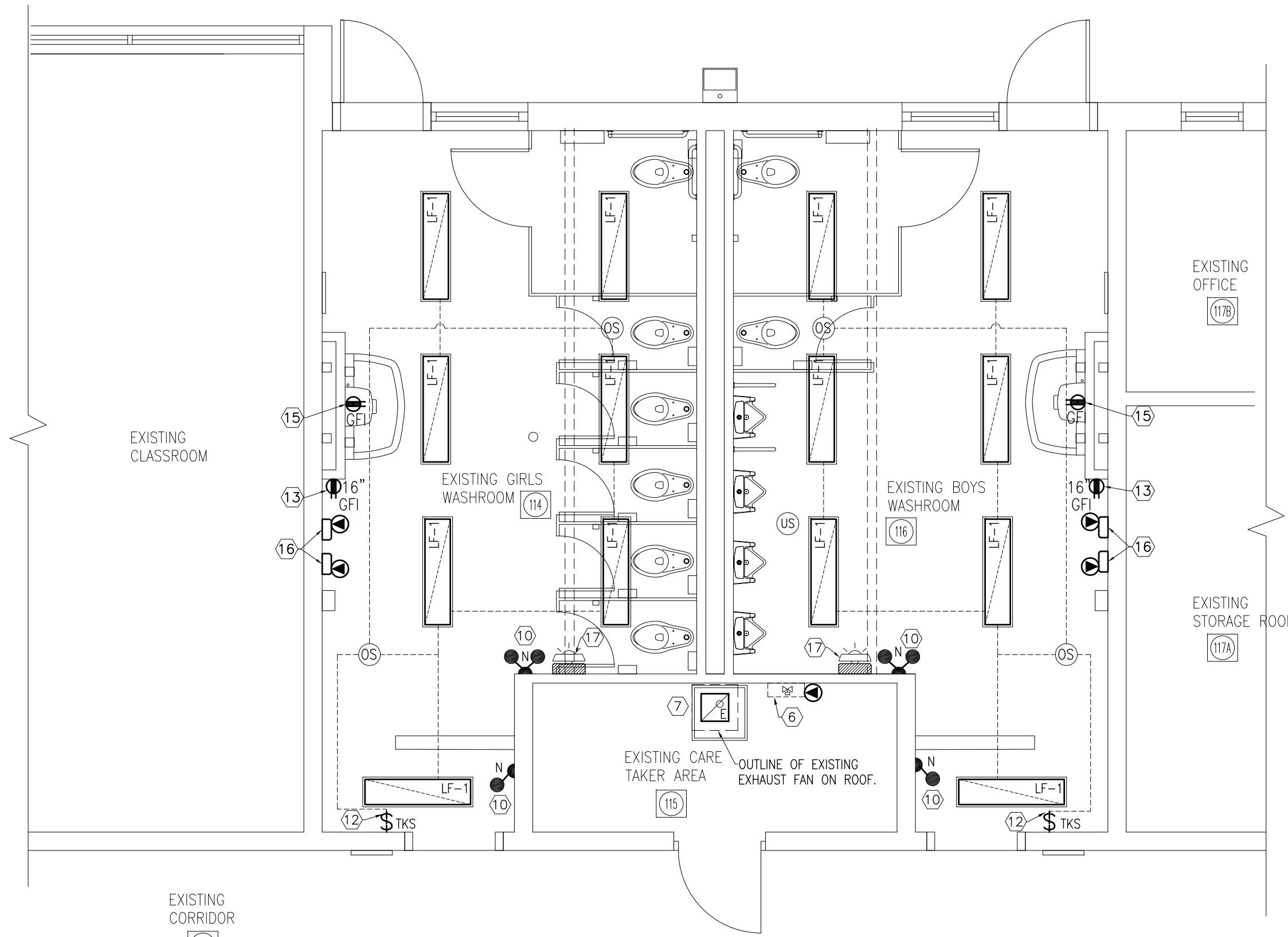
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2.	FOR TENDER	27 FEB 2026
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No.	DESCRIPTION	DATE

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shellard@consultant.com  
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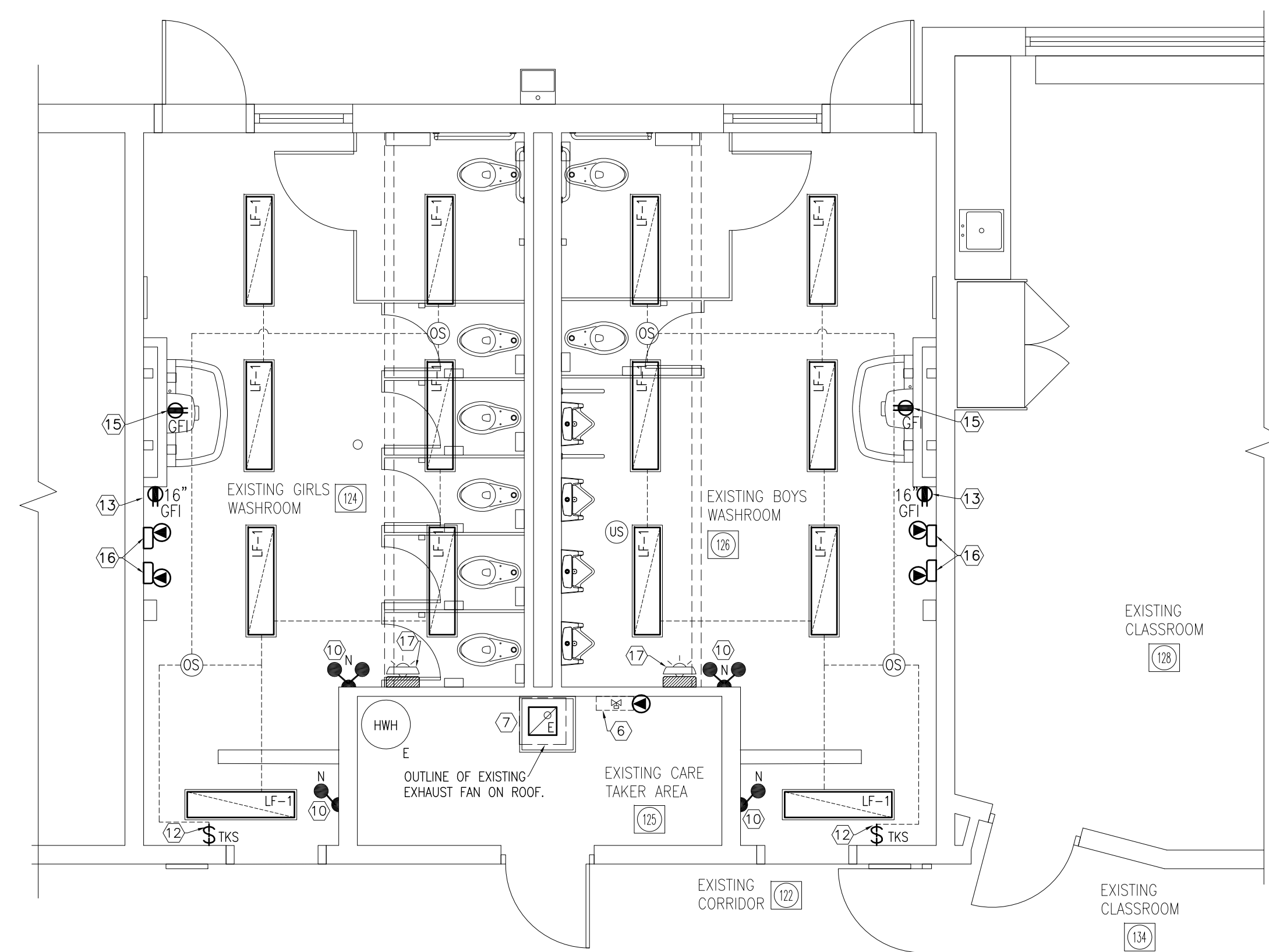
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SCHOOL  
NORTH CAMPUS RENOVATION  
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ANCASTER, ONTARIO

**DRAWING NAME:**  
PARTIAL FLOOR PLANS  
MECHANICAL - ALTERATIONS

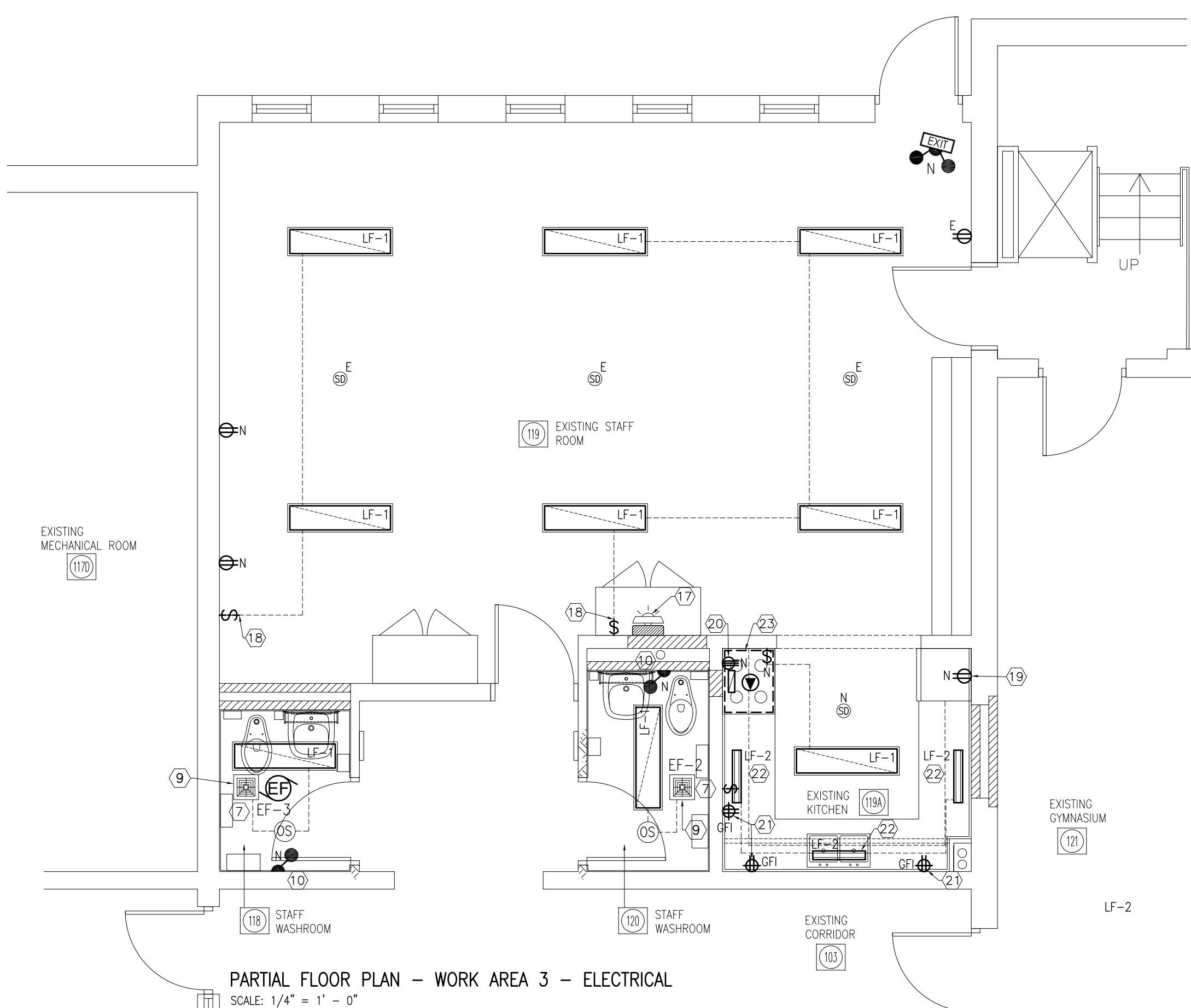
<b>DRAWN BY:</b> M.S.	<b>CHECKED BY:</b> K.S.
<b>DATE:</b> NOVEMBER 2025	<b>JOB No.:</b> 25-104
<b>SCALE:</b> 1/4" = 1' - 0"	<b>SHEET No.:</b> M1.01



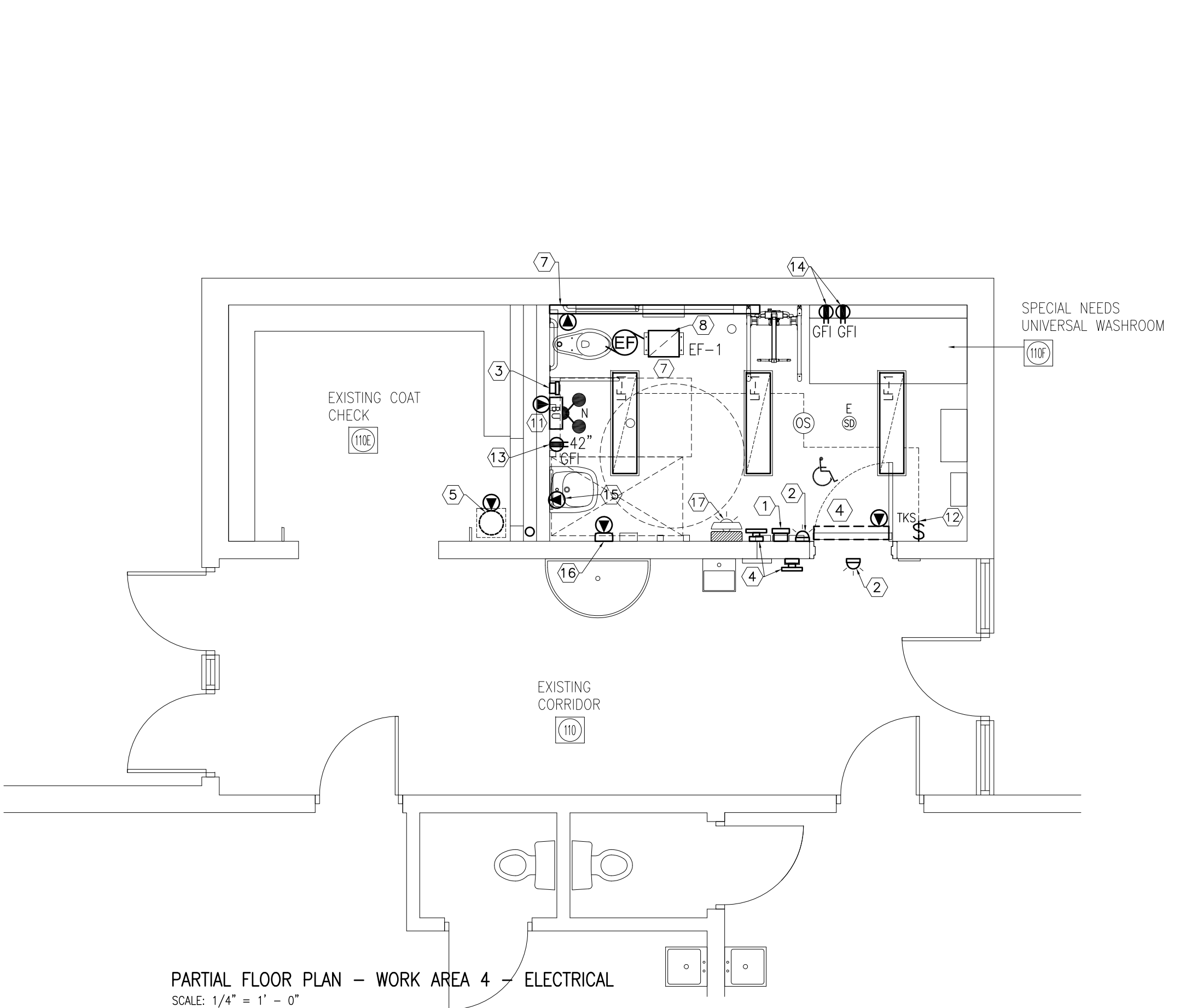
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SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 2 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 3 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"



PARTIAL FLOOR PLAN - WORK AREA 4 - ELECTRICAL  
SCALE: 1/4" = 1' - 0"

**RECEPTACLES AND DEVICES NOTES:**

- RECEPTACLES, DEVICES, LIGHT FIXTURE, EMERGENCY LIGHTING, EXIT SIGNS, BATTERY UNITS AND ALL ASSOCIATED WIRES THAT ARE SHOWN ON THE FLOOR PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL THE RECEPTACLES AND ELECTRICAL DEVICES SHOWN SHALL BE NEW UNLESS OTHERWISE NOTED. REVIEW OWNER SUPPLIED EQUIPMENT/APPLIANCES SCHEDULE, ARCHITECTURAL FLOOR PLAN AND MECHANICAL EQUIPMENT SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN.
- COORDINATE LOCATION OF EACH RECEPTACLE. REVIEW ARCHITECTURAL DRAWINGS FOR EQUIPMENT AND FURNITURE LAYOUT.
- PROVIDE LABEL FOR EACH RECEPTACLE INDICATING THE PANEL NAME AND BREAKER NUMBER.

**DRAWING NOTES:**

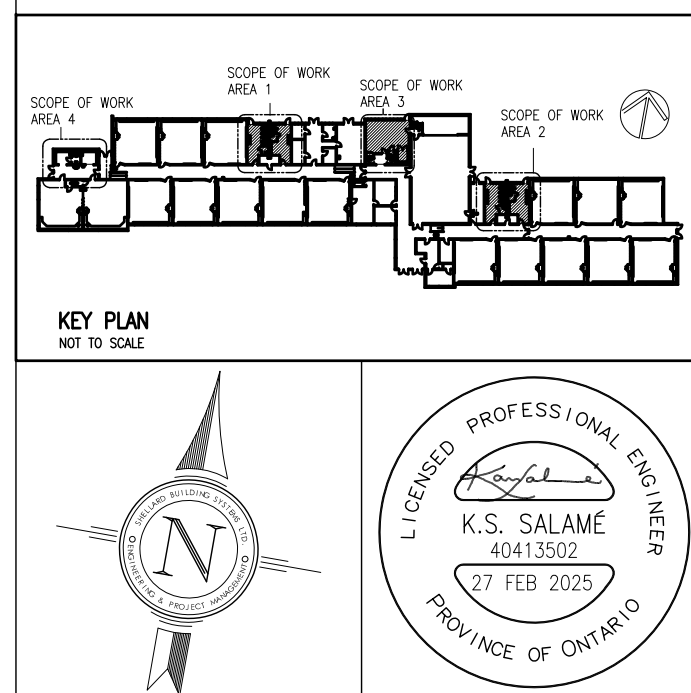
- PROVIDE DOOR LOCK PUSH BUTTON AND WIRE TO DOOR LATCH. TEST AND VERIFY DOOR PUSH BUTTON OPERATION.
- PROVIDE STROBE LIGHT/SIREN WALL MOUNTED AT HIGH LEVEL AND WIRE TO WASHROOM DURESS PUSH BUTTON.
- PROVIDE EMERGENCY DURESS PUSH BUTTON AND WIRE TO STROBE LIGHT/SIREN ABOVE DOOR. REFER TO ARCHITECTURAL ELEVATION DRAWING FOR EXACT LOCATION AND ELEVATION.
- PROVIDE FROM NEAREST POWER PANEL 15A, 115V/1/60 POWER CIRCUIT TO LINE SIDE OF ELECTRIC DOOR OPERATOR. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM OPERATOR POWER (WATTS) AND POWER CONNECTION REQUIREMENTS. UPDATE POWER PANEL LABEL CHART. SIDE. PROVIDE RECESSED BACK BOXES AND CONDUITS FROM DOOR OPEN PUSH BUTTONS AND DOOR LOCK PUSH BUTTON TO THE ELECTRIC DOOR OPERATOR.
- PROVIDE A 20A, 115V/1/60 BREAKER IN THE EXISTING POWER PANEL FEEDING EXISTING WATER HEATER AND WIRE TO THE NEW DOMESTIC HOT WATER HEATER. COORDINATE WITH THE MECHANICAL TRADE AND REVIEW SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN. RE-USE THE EXISTING POWER CIRCUIT IF INSPECTED AND DEEMED COMPLIANT WITH ESA STANDARDS
- PROVIDE 115V/1/60 GFI RECEPTACLE AT LINE SIDE OF THE URINAL FLUSH CONTROLLER AND WIRE TO NEAREST POWER CIRCUIT. COORDINATE WITH MECHANICAL CONTRACTOR AND REVIEW CONTROLLER SHOP DRAWINGS FOR POWER REQUIREMENTS AND TYPE OF CONNECTION.
- PROVIDE FROM NEAREST POWER CIRCUIT 115V/1/60 POWER WIRING TO LINE SIDE OF HEATING UNIT AND EXHAUST FAN BAS CONTROLS. COORDINATE WITH MECHANICAL CONTRACTOR.
- WIRE FROM NEAREST POWER PANEL TO EF-1 AND INTERLOCK FAN TO START WHEN THE LIGHTS ARE ON. WIRE TO BAS FOR START/STOP (SCHEDULE) AND ALARM.
- WIRE FROM NEAREST POWER PANEL TO EXHAUST FAN AND INTERLOCK FAN TO START WHEN THE LIGHT IS ON.
- PROVIDE NEW EMERGENCY LIGHTING FIXTURES. INCLUDE ALL REQUIRED WIRING, RACEWAYS, SUPPORTS, AND TERMINATIONS. CONNECT ALL NEW EMERGENCY LIGHTING TO THE EXISTING EMERGENCY POWER CIRCUIT. FIELD REVIEW AND VERIFY EXISTING EMERGENCY LOW VOLTAGE SYSTEM VOLTAGE BEFORE COMMENCING WORK.

**DRAWING NOTES:**

- PROVIDE NEW EMERGENCY LIGHTS AND BATTERY UNIT. WIRE FROM A DEDICATED BREAKER IN NEAREST POWER PANEL TO THE BATTERY UNIT. ALL WIRES SHALL BE IN EMT CONDUITS.
- PROVIDE A FORK-TYPE TAMPER RESISTANT KEY, LIGHT FIXTURES AND OCCUPANCY SENSORS. WIRE THE BRANCH CIRCUIT FROM THE NEW KEY SWITCH TO THE NEW OCCUPANCY SENSORS AND LIGHT FIXTURES. THE SWITCH SHALL OVERRIDE THE OCCUPANCY SENSORS SO THAT POWER IS CONTROLLED SOLELY BY THE KEY SWITCH. REFER TO AND USE THE MANUFACTURER WIRING AND OCCUPANCY SENSORS INSTALLATION DIAGRAM. CONFIRM CIRCUIT CONTINUITY AND LOAD DISTRIBUTION, AND TEST OPERATION TO VERIFY COMPLIANCE WITH NEC/ESA REQUIREMENTS.
- PROVIDE 15A GFI RECEPTACLE RECESSED IN NEW BLOCK WALL AND WIRE TO NEAREST POWER CIRCUIT. WIRING SHALL BE CONCEALED EXCEPT WHERE NO DROP CEILING EXISTS. ALL WIRING SHALL BE IN EMT CONDUITS.
- PROVIDE GFI RECEPTACLE RECESSED IN BLOCK WALL AND WIRE TO NEAREST POWER CIRCUIT. WIRING SHALL BE CONCEALED EXCEPT AT ROOF LEVEL. ALL WIRE SHALL BE IN EMT CONDUITS.
- PROVIDE A RECESSED GFI RECEPTACLE BELOW THE WASH FOUNTAIN/LAVATORY FIXTURE UNIT AND WIRE TO THE NEAREST POWER PANEL OR AVAILABLE POWER CIRCUIT. ALL WIRING SHALL BE CONCEALED EXCEPT AT ROOF LEVEL AND SHALL BE INSTALLED IN EMT CONDUIT. COORDINATE INSTALLATION WITH THE GENERAL CONTRACTOR AND THE MECHANICAL TRADE.
- PROVIDE ELECTRIC HAND DRYER: WORLD DRYER SLIMDRY SURFACE MOUNTED MODEL L-972, POLISHED STAINLESS STEEL, BARRIER FREE COMPLIANCE, AUTOMATIC SENSOR, BUILT IN ON/OFF HEATING CONTROL SWITCH, 8.3 AMPS, 950 WATTS AND 120V/1/60. INSTALL WALL MOUNTED POSITION AS DETAILED ON ARCHITECTURAL DRAWINGS. WIRE FROM NEAREST POWER PANEL USING DEDICATED CIRCUIT FOR EACH DRYER. ALL WIRING SHALL BE IN CONCEALED CONDUITS.
- PROVIDE COMBINATION HORNE/STROBE AND WIRE TO EXISTING FIRE ALARM SYSTEM. ARRANGE WITH THE GENERAL CONTRACTOR FOR FIRE ALARM BY-PASS. CONTRACTOR SHALL VERIFY EXISTING FIRE ALARM SYSTEM CAPACITY AND PROVIDE ALL REQUIRED UPGRADES, INCLUDING NOTIFICATION APPLIANCE MODULES, BATTERY CAPACITY, AND WIRING TO SUPPORT CODE-COMPLIANT VISUAL STROBE DEVICES. CONTRACTOR SHALL PERFORM COMPLETE TESTING AND VERIFICATION OF ALL NEW AND EXISTING FIRE ALARM COMPONENTS, AND SUBMIT FORMAL TEST REPORTS TO THE CONSULTANT AND AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL PROVIDE UPDATED AS-BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS, AND TRAINING TO SCHOOL STAFF UPON WORK COMPLETION. ALL WORK SHALL BE IN ACCORDANCE WITH CAN/ULC S524, CAN/ULC-S537, CAN/ULC-S528, CAN/ULC-S526, CAN/ULC-S540 AND NFPA 72 REQUIREMENTS.

**DRAWING NOTES:**

- PROVIDE NEW LIGHT SWITCH AND RE-WIRE TO SERVE THE NEW LIGHT FIXTURES IN THE ROOM. EXISTING WIRING MAY BE REUSED ONLY IF VERIFIED TO BE CODE-COMPLIANT AND IN GOOD CONDITION
- REPLACE EXISTING REFRIGERATOR RECEPTACLE WITH NEW 20A, 120V/1/60 RECEPTACLE AND CIRCUIT BREAKER. PROVIDE NEW #12 AWG CONDUCTORS AS REQUIRED AND CONNECT TO EXISTING POWER SOURCE. VERIFY CIRCUIT CAPACITY AND CODE COMPLIANCE PRIOR TO COMMENCING WORK.
- REPLACE EXISTING ELECTRIC RANGE CABLE, PLUG, 40A, 240V/1/60 RECEPTACLE AND CIRCUIT BREAKER. PROVIDE NEW #8 AWG CONDUCTORS AND WIRING BACK TO EXISTING POWER SOURCE. VERIFY CIRCUIT CAPACITY, BREAKER RATING, AND CODE COMPLIANCE PRIOR TO INSTALLATION.
- REPLACE EXISTING ABOVE-COUNTER RECEPTACLE WITH NEW SPLIT CIRCUIT GFCI-TYPE RECEPTACLE. PROVIDE ALL REQUIRED WIRING, NEW 2-POLE CIRCUIT BREAKERS, AND CONNECTION TO SOURCE (TYPICAL OF 3).
- PROVIDE UNDER COUNTER STRIP LED LIGHT FIXTURES (TYPICAL OF 3) AND WIRE TO NEW LIGHT SWITCH. CONNECT TO NEAREST POWER CIRCUIT.
- WIRE FROM EXISTING RANGE HOOD POWER CIRCUIT (120V/1/60) TO NEW HOOD (EF-4). COORDINATE WITH MECHANICAL TRADE BEFORE COMMENCING WORK.



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ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

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**HWDSB**

5.		
4.		
3.		
2.	FOR TENDER	27 FEB 2026
1.	FOR PERMIT	12 DEC 2025
No.	DESCRIPTION	DATE

**SHELLARD BUILDING SYSTEMS LTD.**  
1684 SHELLARD SIDE ROAD  
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NORTH CAMPUS RENOVATION  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
168 HURON AVENUE  
ANCASTER, ONTARIO

**DRAWING NAME:**  
PARTIAL FLOOR PLANS  
ELECTRICAL

<b>DRAWN BY:</b> M.S.	<b>CHECKED BY:</b> K.S.
<b>DATE:</b> NOVEMBER 2025	<b>JOB No.:</b> 25-104
<b>SCALE:</b> 1/4" = 1' - 0"	<b>SHEET No.:</b> E1.02

MECHANICAL LEGEND AND NOTES	
	EXISTING SANITARY TO REMAIN
	SANITARY DRAIN
	REMOVE EXISTING PIPE
	PIPES TURNING DOWN
	PIPES TURNING UP
	GAS LINE
	PRV
	DOMESTIC COLD WATER LINE
	DOMESTIC HOT WATER LINE
	BALL VALVE
	CLEAN OUT FLUSH WITH FLOOR
	UNION
	FD
	FC
	FFD
	CO
	RD
	CV
	T
	⊖
	⊖
	DIRECTION OF AIR FLOW
	SUPPLY AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	BD
	SD
	U/C
	DHW
	DCW
	SUPPLY AIR GRILLE
	RETURN AIR GRILLE
	10 x 4 100
	10 A 100
	24" x 24" SUPPLY AIR DIFFUSER
	12" x 12" SUPPLY AIR DIFFUSER
	DRY CHEMICAL (FE) FIRE EXTINGUISHER 10 LB (ULC APPROVED)
	20x20 CEILING ACCESS PANEL WITH HINGED DOOR TO PROVIDE SERVICE ACCESS TO VALVES AND PLUMBING.
<p>'E' EXISTING TO REMAIN. SERVICE AS REQUIRED.</p> <p>'D' DISCONNECT AND REMOVE ENTIRELY COMPLETE WITH ASSOCIATED ELEMENTS.</p> <p>'R' RELOCATE TO WHERE SHOWN AND RECONNECT TO APPROVAL.</p> <p>'RE' REMOVE EXISTING AND REPLACE WITH NEW</p> <p>'N' PROVIDE NEW WHERE SHOWN COMPLETE WITH ASSOCIATED ELEMENTS.</p> <p>'CIE' CONNECT TO EXISTING.</p>	

## MECHANICAL SYSTEMS AND CONTROLS SPECIFICATIONS

### HOT WATER HEATING UNIT (WALL-FIN)

- PROVIDE SIGMA OR APPROVED EQUAL HOT WATER HEATING ELEMENT. THE UNIT SHALL BE MODEL SWE-30SS WITH ENCLOSURE SLOPED TOP AND SLOPED BOTTOM.
- UNIT CONSTRUCTION: 2 ROW ELEMENT, 7 FT LONG HEATING CORE WITHIN 9 FT LONG x 30" HIGH ENCLOSURE, FABRICATED FROM 14 GAUGE STEEL WITH STAMPED LOUVRES. THE HEATING UNIT SHALL BE COMPLETE WITH ISOLATING VALVES, CIRCUIT BALANCING VALVE, UNIONS, MODULATING CONTROL VALVE WITH ACTUATOR, REMOTE DDC ROOM THERMOSTAT, ALL REQUIRED WALL BRACKETS/SUPPORTS, INTEGRAL PIPE SADDLES.
- PERFORMANCE: 2.0 KW (6,902 MBH) HEATING OUTPUT AT 71°C (160°F) ENTERING WATER TEMPERATURE AND 21°C ENTERING AIR TEMPERATURE.
- REQUIRED UNIT OPTIONS AND FEATURES:
  - FLUSH MOUNT END CAPS.
  - HINGED ACCESS PANELS FOR VALVES AND AIR VENT.
  - WALL HANGERS AND FASTENERS.
  - 0-10V MODULATING WATER FLOW CONTROL VALVE.
  - PRIME PAINTED AND BAKED ENAMEL FINISH (COLOUR TO BE SELECTED BY ARCHITECT).
- MOUNT THE HEATING UNIT AT HIGH LEVEL, APPROXIMATELY 7 FT ABOVE FINISHED FLOOR. COORDINATE ON SITE EXACT LOCATION AND ELEVATION BEFORE COMMENCING WORK.
- CONNECT TO EXISTING HOT WATER HEATING MAINS IN THE CORRIDOR. REFER TO PIPING DETAIL FOR REQUIRED VALVES, CONTROLS, AND FITTINGS. INSTALL THE UNIT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- INSTALL THE HEATING ELEMENT WHERE SHOWN AND CONNECT TO THE HOT WATER HEATING SYSTEM COMPLETE WITH AIR VENTS AND ALL REQUIRED FITTINGS. INSULATE ALL NEW AND EXISTING PIPING. CONNECT THERMOSTAT AND MODULATING VALVE TO THE EXISTING BUILDING AUTOMATION SYSTEM (BAS). WIRE THE CONTROL VALVE TO A REMOTE TEMPERATURE SENSOR AND INTEGRATE WITH BAS. COORDINATE WITH SCHOOL BOARD FACILITIES (THROUGH THE GENERAL CONTRACTOR) TO COMPLETE BAS CONNECTIONS. REFER TO BUILDING AUTOMATION SYSTEM NOTES AND SPECIFICATIONS ON THIS DRAWING.
- SECURE THE HEATING ELEMENT TO THE EXISTING WALL STRUCTURE USING APPROVED SUPPORT BRACKETS AND ADDITIONAL WELDED CHAIN SUPPORTS FOR EMERGENCY RETENTION, SUCH THAT THE UNIT REMAINS SUPPORTED INDEPENDENTLY OF THE WALL FINISH. WELDED CHAIN SUPPORTS SHALL HOLD THE ELEMENT IN PLACE AND PREVENT IT FROM FALLING BELOW THE MOUNTING LINE.
- PROVIDE HOT WATER HEATING SUPPLY AND RETURN PIPING TO EACH WALL-FIN HEATING ELEMENT COMPLETE WITH UNIONS, CIRCUIT BALANCING VALVE, ISOLATING VALVES, CONTROL VALVE, AIR VENT, STRAINER, DRAIN VALVE AND HINGED ACCESS PANELS IN THE ENCLOSURE. COORDINATE WITH THE OWNER FOR ZONE PIPING SHUTDOWN BEFORE COMMENCING WORK. PROVIDE ISOLATING VALVE IN THE CORRIDOR AT MAIN HOT WATER SUPPLY AND HOT WATER RETURN. INSULATE ALL NEW AND EXISTING PIPING AND LABEL PIPES WITH FLOW DIRECTION OVER THE INSULATION. PROVIDE FORMED INSULATION FOR ELBOWS, VALVES AND FITTINGS.
- RECOVER ALL EXPOSED PIPES WITH WHITE PVC JACKETING. SEAL ALL JOINTS AND PROVIDE APPROVED TAPES. PROVIDE PRE-MOLDED JACKETING FOR ELBOWS, VALVES AND FITTINGS.
- THE MANUFACTURER'S RECOMMENDED PIPING SCHEMATIC SHALL TAKE PRECEDENCE OVER THE PIPING DETAIL, IF PROVIDED. THE PIPING DRAWING IS INTENDED TO ILLUSTRATE GENERAL ARRANGEMENT AND MINIMUM VALVE AND FITTING REQUIREMENTS; FINAL CONNECTIONS, VALVE LOCATIONS, AND FLOW ORIENTATION SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND APPROVED SHOP DRAWINGS.

### BUILDING AUTOMATION SYSTEM (BAS)

CONNECT THE NEW FANS AND HEATING UNIT TO EXISTING BUILDING AUTOMATION SYSTEM (BAS). THE EXISTING BAS IS BY SIEMENS. THE BAS WORK SHALL BE DONE BY SIEMENS. INCLUDE IN THIS CONTRACT TOTAL COST TO UPGRADE THE EXISTING BAS SYSTEM INCLUDING WIRING, DEVICES, SENSORS, INSTALLATION, SOFTWARE, GRAPHICS, TRAINING AND COMMISSIONING.

PROVIDE ALL REQUIRED DEVICES, CONTROLLERS, RELAYS, SWITCHES, DDC CONTROLLERS, CONDUITS, WIRING, CONTROL TRANSFORMERS, GRAPHICS AND SOFTWARE TO COMPLETE SYSTEMS INSTALLATION. THE BAS WORK SHALL BE COMMISSIONED AND TRAINING PROVIDED. ALL WIRES SHALL BE IN EMT CONDUITS.

UPDATE SYSTEM GRAPHICS AND ALARMS. THE CONTROLS SHALL BE COMMISSIONED AND VERIFIED BY SIEMENS. PROVIDE BAS SYSTEM TESTING AND VERIFICATION REPORT AT THE SUBSTANTIAL COMPLETION OF THE PROJECT. PROVIDE ON SITE TRAINING TO FACILITIES. THE TRAINING SHALL BE ARRANGED AT END OF CONSTRUCTION AND SHALL INCLUDE MINIMUM OF TWO SESSIONS, EACH OF TWO HOURS.

#### HOT WATER HEATING (WALL FIN UNIT)

SUPPLY AND INSTALL ALL REQUIRED DEVICES TO COMPLETE UNIT CONTROLS, INCLUDING BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:

- DXR2 ROOM AUTOMATIC STARION, BACNET/MSTP, 24V.
- TRANSFORMER, BACK BOXES, SENSORS, CONDUITS, WIRING, AND ALL REQUIRED DEVICES TO COMPLETE SYSTEM INSTALLATION.
- FLUSH-MOUNT SENSOR WITH METAL COVER PLATE AND 2x4 BACK BOX.
- DDC MODULATING 0-10V CONTROL VALVE (3/4"). FLOATING ACTUATOR VALVE NOT ACCEPTABLE.
- ZONE TEMPERATURE SENSOR.
- ALL REQUIRED WIRING IN EMT CONDUITS.

PROVIDE A CEILING-MOUNTED OCCUPANCY SENSOR IN THE WASHROOM AND INTERLOCK IT WITH THE HEATING UNIT'S CONTROL CIRCUIT SO THAT THE UNIT OVERRIDES NIGHT SETBACK TO THE OCCUPIED ROOM TEMPERATURE WHENEVER OCCUPANCY IS DETECTED. THE CONTROL SEQUENCE MUST ENSURE THAT:

- THE HEATING UNIT AUTOMATICALLY RETURNS TO NIGHT-SETBACK MODE ONCE THE SENSOR NO LONGER DETECTS OCCUPANCY AND THE PROGRAMMED TIMEOUT EXPIRES.
- THE OVERRIDE TO OCCUPIED ROOM TEMPERATURE IS MAINTAINED FOR THE FULL DURATION OF OCCUPANCY.
- PROVIDE ALL REQUIRED LOW-VOLTAGE CONTROL WIRING, POWER SUPPLIES, AND INTERFACES.

THE CONTROL LOGIC SHALL BE COMPATIBLE WITH THE BUILDING'S EXISTING BAS. PROVIDE ALL REQUIRED WIRING, CONDUITS AND DEVICES TO COMPLETE INSTALLATION. PROVIDE FIRE SEAL AROUND EACH CONDUIT AT RATED WALLS.

UPDATE BAS GRAPHICS AND ALARMS.

COMMISSION SYSTEM AND PROVIDE ON SITE TRAINING.

THE CONTROLS VIA EXISTING BUILDING AUTOMATION SYSTEM (BAS) SHALL INCLUDE THREE (3) MODES OF OPERATION FOR CONTROL OF THE HEATER:

- OCCUPIED MODE = IF TIME-OF-DAY SCHEDULE IS IN "OCCUPIED MODE" AND LOCAL OCCUPANCY IS SENSED, ZONE WILL BE CONTROLLED TO "OCCUPIED HEATING SETPOINT", SET TO 22°C
- STANDBY MODE = IF (TIME-OF-DAY SCHEDULE IS IN "OCCUPIED MODE" AND OCCUPANCY IS NOT SENSED) OR (TIME-OF-DAY SCHEDULE IS IN "UNOCCUPIED MODE" AND OCCUPANCY IS SENSED), ZONE WILL BE CONTROLLED TO "STANDBY HEATING SETPOINT", SET TO 21°C
- UNOCCUPIED MODE = IF TIME-OF-DAY SCHEDULE IS IN "UNOCCUPIED MODE" AND OCCUPANCY IS NOT SENSED, ZONE WILL BE CONTROLLED TO "UNOCCUPIED HEATING SETPOINT", SET TO 19°C.

WASHROOM EXHAUST FANS (NEW EF-1 AND TWO EXISTING WASHROOMS EXHAUST FANS)

CONNECT EACH EXHAUST FAN TO THE BAS FOR START/STOP, STATUS AND ALARM. UPDATE BAS INTERFACE GRAPHICS. THE ELECTRICAL CONTRACTOR WILL INTERLOCK EACH FAN TO START FOR OCCUPANCY SENSOR IN THE WASHROOM.

ALL DEVICES AND EQUIPMENT SHALL BE CSA AND ULC APPROVED.

SUBMIT SHOP DRAWINGS INDICATING CONTROLS SYSTEM SCHEMATICS, LIST OF DEVICES AND SEQUENCE OF CONTROL.

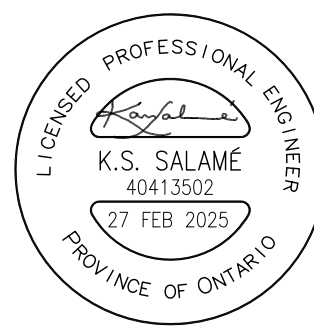
PROVIDE FOR EACH SYSTEM THE FOLLOWING INPUT/OUTPUT AT THE INTERFACE:

ROOMS 110F, 119, 114, 116, 124 AND 126

- HEATING CONTROL VALVE STATUS
- SPACE TEMPERATURE
- HEATING CONTROL VALVE ENABLE/DISABLE
- NIGHT SETBACK SCHEDULE
- ALARMS
- GRAPHICS

EXHAUST FAN EF-1 AND TWO EXISTING WASHROOMS FAN (114, 116, 124, AND 126)

- EXHAUST FAN STATUS
- EXHAUST FAN ENABLE/DISABLE
- NIGHT SET BACK SCHEDULING
- OCCUPANCY SENSOR OVERRIDE STATUS
- ROOM TEMPERATURE
- ALARMS
- GRAPHICS



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1.	FOR PERMIT	12 DEC 2025
No.	DESCRIPTION	DATE

**SHELLARD BUILDING SYSTEMS LTD.**

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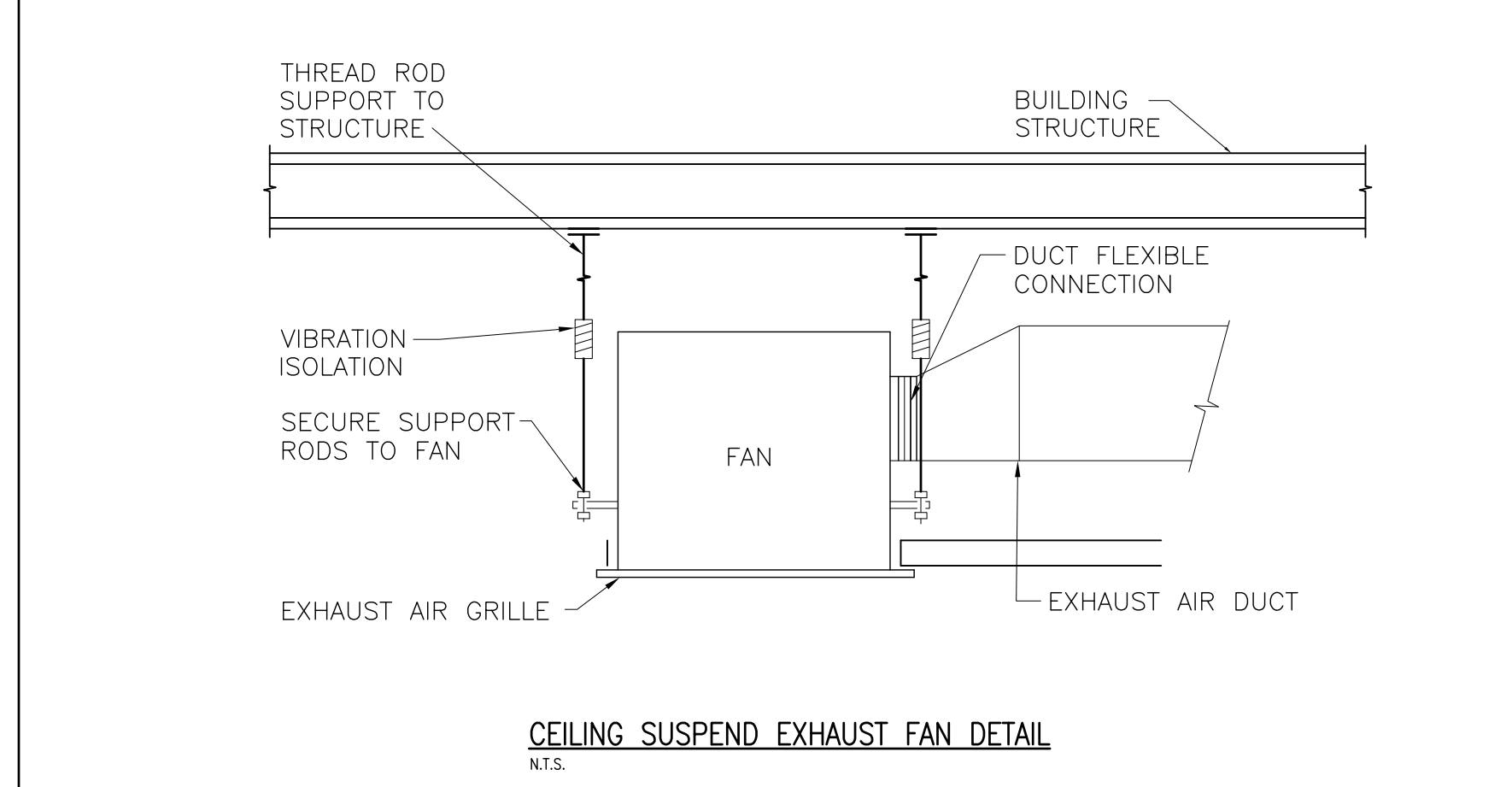
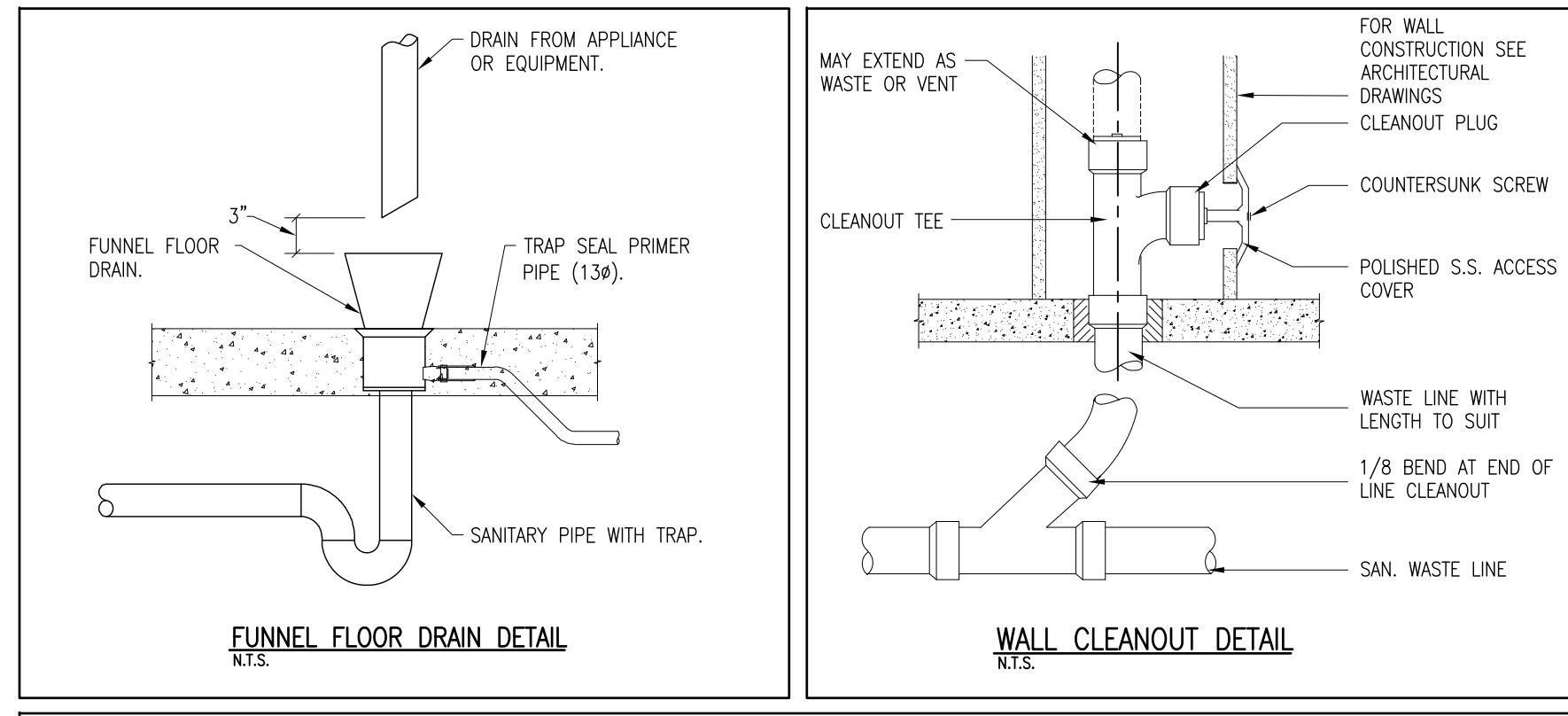
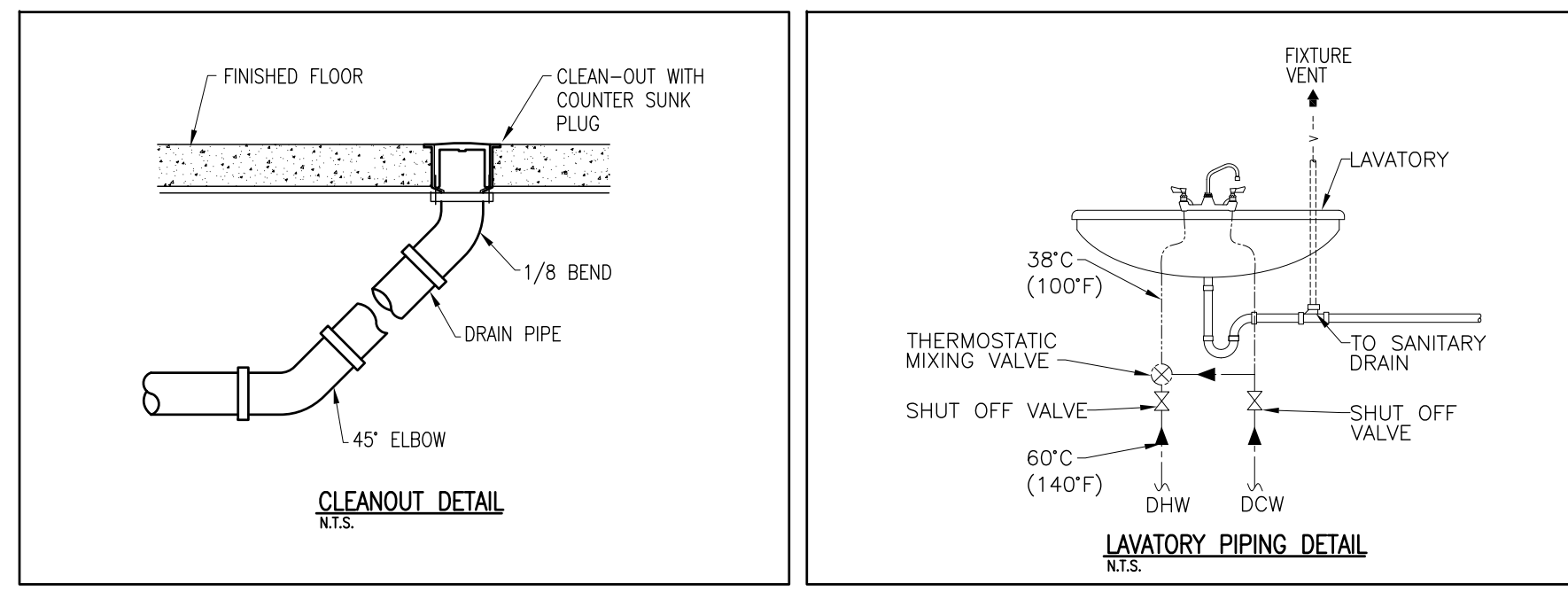
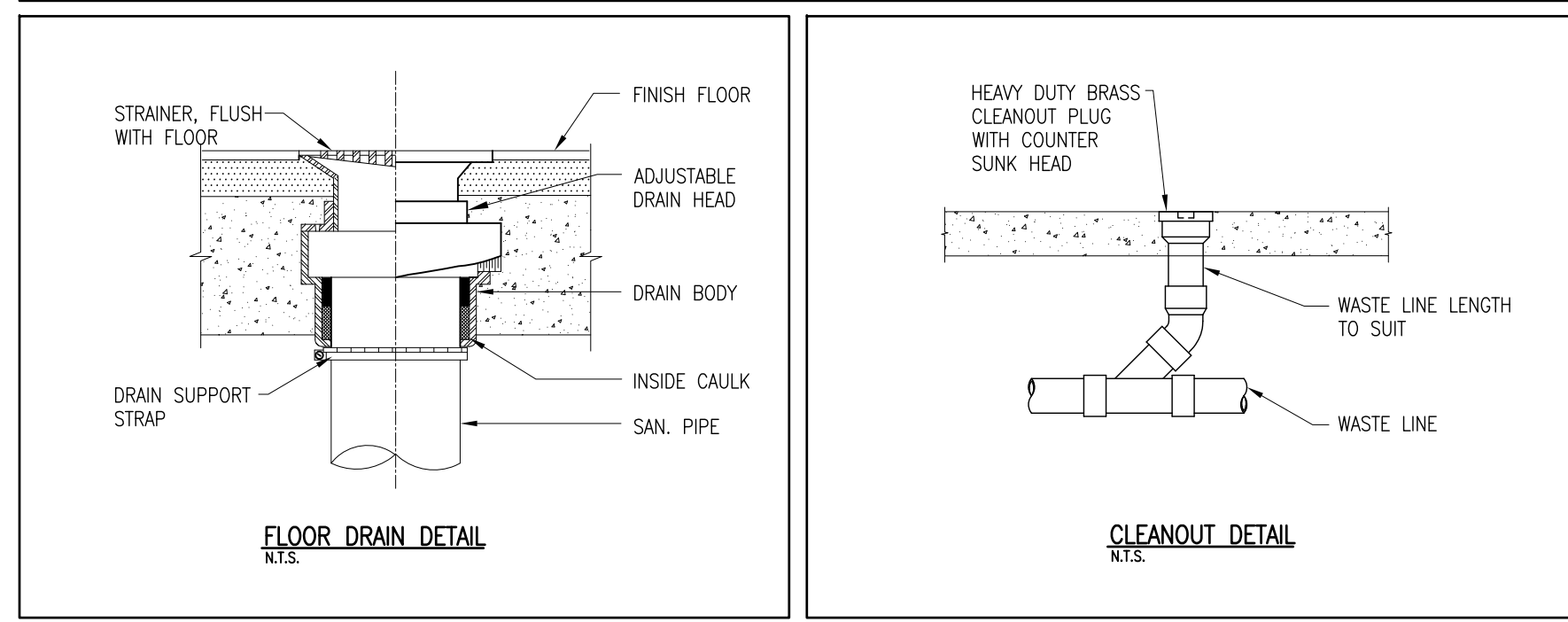
DRAWN NAME:  
**LEGEND AND SPECIFICATIONS MECHANICAL**

DRAWN BY:	CHECKED BY:
M.S.	K.S.

DATE:	JOB No.:
NOVEMBER 2025	25-104

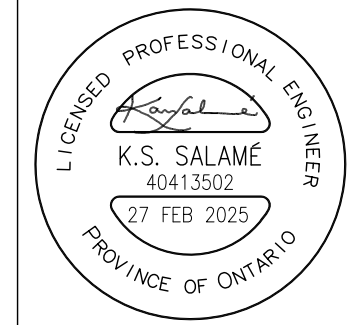
SCALE:	SHEET No.:
NOT TO SCALE	M3.01

PLUMBING FIXTURES PIPES CONNECTION SCHEDULE				
MARK	HW	CW	WASTE	REMARKS
HS / CS	1/2"	1/2"	1 1/4"	HAND SINK / COUNTER SINK
S-1	1/2"	1/2"	1-1/2"	SINK
KS	1/2"	1/2"	1-1/2"	KITCHEN SINK
DW	3/4"	-	1-1/2"	DISHWASHER
FD, FFD	-	3/8"	3"	FLOOR & FUNNEL FLOOR DRAINS
SH	3/4"	3/4"	2"	SHOWER
WC-1	-	1"	3"	FLUSH VALVE
LAV-1	1/2"	1/2"	1 1/2"	LAVATORY
WC-2	-	1"	3"	FLUSH VALVE - BARRIER FREE
LAV-2	1/2"	1/2"	1 1/2"	LAVATORY
WF	3/4"	3/4"	2"	WASH FOUNTAIN
DF	1/2"	-	1 1/2"	DRINKING FOUNTAIN
UR	-	3/4"	2"	URINAL



PLUMBING FIXTURES SCHEDULE									
TYPE	SPECIFICATION	TRIM, FAUCET AND ACCESSORIES	DCW	DHW	WASTE	VENT	REMARKS		
WC-1	WATER CLOSET - FLUSH VALVE AMERICAN STANDARD MADERA FLOWISE 15" HEIGHT, 1.28 GPF, FLUSHMETER TOILET SYSTEM WITH EVERCLEAN, MODEL 3451.001, VITREOUS CHINA, FLOOR MOUNT ELONGATED BOWL, FLUSHMETER VALVE. EACH TOILET SHALL HAVE EVERCLEAN ANTIMICROBIAL SURFACE, (4.2-6.0) PER FLUSH, 1 1/2" TOP SPUD.	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY, OPEN FRONT TOILET SEAT WITH ANTIMICROBIAL EVERCLEAN PROTECTION AND LID COVER. SUPPLY AND INSTALL FOR EACH UNIT FLUSH VALVE, DELTA MODEL 81T201, 1.5" TOP SPUD, DIAPHRAGM RETAINER, RENEWABLE SEAT, VACUUM BREAKER, COPPER SWEAT INLET ADAPTOR, PROTECTING CAP, ADJUSTABLE INLET/VALVE OUTLET CENTERS, STAINLESS STEEL WALL FLANGE, 6 LPF, (FILED ADJUSTABLE TO 4.8 LPF), APPROVED FOR MINIMUM 125 Ps (20 PSI) WATER SUPPLY PRESSURE, ASME AND CSA APPROVED.	25 (1")	-	75 (3")	50 (2")	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY OPEN FRONT TOILET SEAT WITH ANTIMICROBIAL PROTECTION AND TOILET LID COVER.		
WC-2	WATER CLOSET - FLUSH VALVE, BARRIER FREE AMERICAN STANDARD MADERA FLOWISE BARRIER FREE, 3043.001, 16 1/2" HEIGHT, 1.28 GPF, FLUSHMETER TOILET SYSTEM WITH EVERCLEAN, MODEL 3043.001, VITREOUS CHINA, FLOOR MOUNT ELONGATED BOWL, FLUSHMETER VALVE. EACH TOILET SHALL HAVE EVERCLEAN ANTIMICROBIAL SURFACE, (4.2-6.0) PER FLUSH, 1 1/2" TOP SPUD.	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY TOILET CLOSED FRONT SEAT WITH ANTIMICROBIAL EVERCLEAN PROTECTION AND LID COVER. SUPPLY AND INSTALL FOR EACH UNIT FLUSH VALVE, DELTA MODEL 81T201, 1.5" TOP SPUD, DIAPHRAGM RETAINER, RENEWABLE SEAT, VACUUM BREAKER, COPPER SWEAT INLET ADAPTOR, PROTECTING CAP, ADJUSTABLE INLET/VALVE OUTLET CENTERS, STAINLESS STEEL WALL FLANGE, 6 LPF, (FILED ADJUSTABLE TO 4.8 LPF), APPROVED FOR MINIMUM 125 Ps (20 PSI) WATER SUPPLY PRESSURE, ASME AND CSA APPROVED.	25 (1")	-	75 (3")	50 (2")	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY, CLOSE FRONT TOILET SEAT #5901 110 WITH ANTIMICROBIAL PROTECTION AND TOILET LID COVER.		
LAV-1	LAVATORY AMERICAN STANDARD MODEL MURRO UNIVERSAL DESIGN, 0955.001EC, WALL HUNG LAVATORY, 520, x 540 x 127 mm, BARRIER FREE, CENTER HOLE, VITREOUS CHINA, WHITE, SELF RIMMING, OVERFLOW, TRAP, STRAINER, VITREOUS CHINA SHROUD/KNEE CONTACT GUARD 0059.020EC, CONCEALED IN WALL STEEL CARRIER AND RECESSED STEEL CARRIER.	PROVIDE MOEN SINGLE-HANDLE METERING LAVATORY FAUCET MODEL 8884 (CHROME), SINGLE HOLE (7/8" DIAMETER), CHROME PLATED SOLID BRASS CONSTRUCTION, VANDAL RESISTANT, LEVER STYLE HANDLE, ADJUSTABLE TIME FROM 5 TO 60 SECONDS INDEPENDENT FROM WATER PRESSURE, OPERATES WITH WATER SUPPLY LINE PRESSURES OF 20 TO 125 PSI, 0.5 GPM MAX (1.9 L/MIN) VANDAL-RESISTANT MULTI-STREAM, LAMINAR FLOW LIMITS WATER DISCHARGE TO A MAXIMUM OF 0.25 GPC (0.95 L/CYCLE) AT 30 SECONDS OR 0.20GPC (0.76 L/CYCLE) AT 24 SECONDS CARTRIDGE 52100 BRASS SHELL CARTRIDGE, SELF CONTAINED METERING MECHANISM, ASME A112.18.1/CSA B125.1 APPROVED.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE WATTS OR EQUAL HYDROGUARD SERIES LFE480, LEAD FREE THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. THE TEMPERING VALVE SHALL BE CSA AND ULC APPROVED. PROVIDE C-1065 WITH OPEN STRAINER, 32 TAIL PIECE CH-8053 AND 32 MM OFFSET WASTE. PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW THE LAVATORY. INSTALL STEEL CARRIER RECESSED IN WALL. ALL PIPES AND WIRES SHALL FIT BEHIND THE LAVATORY SHROUD AND NO EXPOSED PIPES BELOW THE SHROUD. INSTALL STEEL CARRIER RECESSED IN WALL.		
LAV-2	LAVATORY AMERICAN STANDARD MODEL MURRO UNIVERSAL DESIGN, 0955.001EC, WALL HUNG LAVATORY, 520, x 540 x 127 mm, BARRIER FREE, CENTER HOLE, VITREOUS CHINA, WHITE, SELF RIMMING, OVERFLOW, TRAP, STRAINER, VITREOUS CHINA SHROUD/KNEE CONTACT GUARD 0059.020EC, CONCEALED IN WALL STEEL CARRIER AND RECESSED STEEL CARRIER.	PROVIDE DELTA ELECTRONIC LAVATORY FAUCET 591-TF HDF SERIES, SINGLE HOLE, HARD WIRED, HANDS FREE ON/OFF ACTIVATION, ALL METAL FAUCET CONSTRUCTION, FAUCET HOSE, 1.9 L/MIN (0.5 GPM), SERVICEABLE FILTER SCREEN, MAXIMUM 125 PSI WATER STATIC PRESSURE, BRUSHED NICKEL FINISH, AERATOR, VANDAL RESISTANT, ASME A112.18.1/CSA B125.1 APPROVED.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE WATTS OR EQUAL HYDROGUARD SERIES LFE480, LEAD FREE THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. THE TEMPERING VALVE SHALL BE CSA AND ULC APPROVED. PROVIDE C-1065 WITH OPEN STRAINER, 32 TAIL PIECE CH-8053 AND 32 MM OFFSET WASTE. PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW EACH LAVATORY. INSTALL STEEL CARRIER RECESSED IN WALL. ALL PIPES AND WIRES SHALL FIT BEHIND THE LAVATORY SHROUD AND NO EXPOSED PIPES BELOW THE SHROUD. COORDINATE WITH GENERAL CONTRACTOR. INSULATE ALL PIPES AND USE PRE-FORMED INSULATION FITTING.		
WF	WASH FOUNTAIN BRADLEY TERREON WALL HUNG QUADRA-FOUNT WASH FOUNTAIN MODEL MF2049, TERREON CONSTRUCTION, ONTARIO BUILDING CODE HEIGHTS, INFRARED ACTIVATION TYPE, HARD WIRED, 120V/1/60, TRANSFORMER, NEMA-15P, SOLENOID VALVE, LEAD FREE THERMOSTATIC MIXING VALVE, VANDAL RESISTANT SPRAY HEADS, ADA COMPLIANCE, 1.9 L/MIN, UP TO 4 USERS AT A TIME, HIGHLY VANDAL RESISTANT, ULTRA HIGH EFFICIENCY, WIRED INFRARED SENSOR AND NAVIGATOR THERMOSTATIC MIXING ASSEMBLY. PROVIDE UNIT COMPLETE WITH ALL ASSOCIATED PARTS AND REQUIRED HARDWARE TO COMPLETE INSTALLATION. COORDINATE WITH GENERAL CONTRACTOR FOR COLOR SELECTION. THE UNIT SHALL BE CSA, ULC, ASME AND ADA APPROVED.	PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED ACCESSORIES INCLUDING SOLENOID VALVE, TUBE FITTINGS, LEAD FREE THERMOSTATIC MIXING VALVE ASSEMBLY, CONTROL SENSORS, CONTROLLER, TRANSFORMER, PIPES COVER SHROUD, RECESSED IN WALL STEEL CARRIER AND TEMPLATE FOR PIPING ROUGH-IN.	19 (3/4")	19 (3/4")	38 (1 1/2")	50 (2")	ALL PIPES AND WIRES SHALL FIT BEHIND UNIT WASH FOUNTAIN SHROUD AND NO EXPOSED PIPES BELOW THE FOUNTAIN UNIT. INSTALL STEEL CARRIER RECESSED IN WALL AND SECURED IN PLACE TO APPROVAL. INSULATE ALL PIPES AND USE PRE-FORMED INSULATION FITTING.		
FD	SUPPLY AND INSTALL WATTS#FD-102-L, 6x6, FLOOR DRAIN - EPOXY COATED, CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY PEEPHOLES, TRAP PRIMER CONNECTION WITH PLUG, VANDAL PROOF, 3" (76 mm), NO HUB OUTLET. WATTS 6"x6" (150mm x 150mm) POLISHED BRONZE, HEAVY DUTY, SQUARE STRAINER.	PROVIDE TRAP AND TRAP SEAL PRIMER COMPLETE WITH ALL REQUIRED PIPES AND WATER FLOW CONTROLS. PROVE BRASS STRAINER/FUNNEL FOR FUNNEL FLOOR DRAIN.	10 (3/8")	-	75 (3")	50 (2")	COORDINATE WITH GENERAL CONTRACTOR TO DETERMINE EACH FLOOR DRAIN LOCATION BASED ON FLOOR SLOPE, FLOOR FINISH AND EXISTING CONDITIONS. INSTALL EACH DRAIN STRAINER FLUSH WITH FINISHED FLOOR LEVEL.		
UR	URINAL: AMERICAN STANDARD "WASHBROOK FLOWISE" UNIVERSAL URINAL, MODEL 6590.001, BARRIER FREE, WHITE VITREOUS CHINA, ULTRA HIGH EFFICIENCY (0.5 TO 3.8 LPF), FLUSHING RIM, ELONGATED 14-1/8" (360 MM) RIM FROM FINISHED WALL, 1/2" UNIVERSAL TOP SPUD CHROME PLATED, 1/2" THREADED OUTLET CONNECTION (NPT), STAINLESS STEEL STRAINER AND TWO WALL HANGERS. PROVIDE URINALS IN EACH WASHROOM COMPLETE WITH WATER MATRIX FLUSH SYSTEM.	PROVIDE EACH UNIT COMPLETE WITH STRAINER. PROVIDE ALL REQUIRED PIPES AND FITTINGS TO COMPLETE WATER MATRIX FLUSHING SYSTEM (SEE PIPING SCHEMATIC ON THIS DRAWING. EXPOSED PIPES IN THE WASHROOM (TOP SPUD) SHALL BE CHROME PLATED.	19 (3/4")	-	50 (2")	50 (2")	REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATION OF EACH URINAL (HEIGHT FROM FINISHED FLOOR).		
KS	KITCHEN DOUBLE SINK KINDRED MODEL QDUA1831/8, 17 3/4" X 30 7/8" X 8" (45 X 78 X 20 CM), DOUBLE (TWO EQUAL SIZE) BOWL, UNDER-MOUNT SINK, 20 GAUGE, 18-B STAINLESS STEEL, SILK FINISHED RIMS, SATIN FINISHED BOWLS, FULLY UNDERCOATED, TRAP, AND STRAINER. PROVIDE BASKET STRAINER, WASTE FITTING (3 1/2", 89 MM), TEMPLATE AND INSTALLATION KIT.	PROVIDE GOOSENECK KITCHEN FAUCET COMPATIBLE WITH KINDRED SINK. FAUCET SHALL BE MOEN OR EQUAL, M-DURA 8289, heavy-duty, vandal-resistant, GOOSENECK, BRASS CONSTRUCTION WITH CHROME PLATED FINISH, 1/2" IPS CONNECTIONS, 8" CENTERS WRIST BLADE STYLE HANDLES WITH HOT AND COLD COLOR INDICATORS, 1.5 GPM MAX (5.7L/MIN) AT 60 PSI, STANDARD 3/8" CONNECTIONS. PROVIDE ALL REQUIRED SUPPLY LINES, MOUNTING HARDWARE, AND SHUT OFF VALVES. INSTALL PER MANUFACTURER REQUIREMENTS COMPLETE WITH ISOLATING VALVES AND COORDINATE WITH GENERAL CONTRACTOR FOR FAUCET AND SINK CUTOUPS IN THE COUNTERTOP.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW THE SINK.		
CO	WATTS CO-204-RX-4, 4" DIAMETER, ADJUSTABLE DUCTILE IRON TOP, EPOXY COATED, CAST IRON BODY, REMOVABLE TOP, GAS TIGHT, GASKETED BRASS CLEANOUT PLUG, 4" DIAMETER OUTLET, EXTRA HEAVY DUTY AND GASKETED BRASS PLUG.						COORDINATE WITH GENERAL CONTRACTOR THE LOCATION AND ELEVATION OF EACH CLEAN-OUT AND INSTALL FLUSH WITH FINISHED FLOOR. CORE DRILLING BY THIS CONTRACTOR. PROVIDE FIRE RATED SEAL AT EACH RATED FLOOR PENETRATION.		
	TRAP SEAL PRIMERS: PROVIDE MFAB M1-500-NPB OR SYSTEM MONITORING SENSOR MODEL PRO1-500 PPP PRIME-PRO TRAP SEAL PRIMER VALVE OR APPROVED EQUAL, LEAD-FREE BRASS BODY, SERVING INDIVIDUAL OR REMOTE AREA DRAINS (PRIMER AUTOMATICALLY ACTIVATED WHEN THERE IS A PRESSURE DROP IN THE SYSTEM) WITH 1/2" (12.7MM) NPT CONNECTIONS WITH STAINLESS STEEL SCREEN AND INTEGRAL NEOPERL CHECK VALVE. (FOR 2, 3 OR 4 DRAINS PROVIDE PRIMER UNIT WITH DISTRIBUTION UNIT ASSEMBLY #DU-U).								

FAN EQUIPMENT SCHEDULE														
TAG	SERVICE AND LABEL	MAKE OF FAN	MODEL No.	VOL. FLOW (CFM)	ESP (IN)	SPEED R.P.M.	TIP SPEED F.P.M.	SONES	ELECTRICAL	ACCESSORIES & REMARKS				
									H.P.	PH	V			
EF-1	EXHAUST FAN No. EF-1 WASHROOM EXHAUST	GREENHECK	SP-A190-QD	160	0.25	1120	-	1.8	155 W	1	120	A, B, F, G AND H. COORDINATE WITH ELECTRICAL TRADE TO WIRE FAN TO OCCUPANCY SENSOR.		
EF-2	EXHAUST FAN No. EF-2 WASHROOM EXHAUST	GREENHECK	SP-B200-QD	120	0.30	880	-	4.0	172 W	1	120	A, B, F, G AND H. COORDINATE WITH ELECTRICAL TRADE TO WIRE FAN TO OCCUPANCY SENSOR.		
EF-3	EXHAUST FAN No. EF-3 WASHROOM EXHAUST	GREENHECK	SP-B200-QD	120	0.30	880	-	4.0	172 W	1	120	A, B, F, G AND H. COORDINATE WITH ELECTRICAL TRADE TO WIRE FAN TO OCCUPANCY SENSOR.		
EF-4	EXHAUST FAN No. EF-4 RANGE HOOD	GE APPLIANCES	PVX7300	300	0.25	-	-	3.5	200 W	1	120	A, B, AND G. HOOD SHALL BE COMPLETE WITH LIGHT, SWITCH AND SPEED CONTROL.		
OPTIONS AND ACCESSORIES:														
A	DISCONNECT SWITCH	C	INSULATED ROOF CURB	E	60 MINUTES TIMER	G	SPEED CONTROL AT FAN	I	HAND/OFF/AUTO STARTER					
B	BACK DRAFT DAMPER	D	WEATHER PROOF DISCONNECT	F	OCCUPANCY SENSOR	H	INLET GRILLE							



NOTES:

ALL DRAWINGS AND SPECIFICATIONS IS AN INSTRUMENT OF SERVICE AND REMAIN THE EXCLUSIVE PROPERTY OF DESIGNER AND ARE PROTECTED UNDER THE COPYRIGHT ACT. THEY MAY NOT BE REPRODUCED, DISTRIBUTED, ALTERED FOR ANY OTHER PROJECT WITHOUT WRITTEN PERMISSION OF THE DESIGNER.

DO NOT SCALE DRAWINGS. DIMENSIONS TO TAKE PRECEDENT OVER SCALE.

CONTRACTOR TO CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON DRAWINGS AND ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER AND OBTAIN CLARIFICATION PRIOR TO COMMENCING THE WORK.

THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.

ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

NOTE BEFORE COMMENCING WORK:

THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, DIFFUSERS, CONDENS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.

THE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED ON THE TITLE BLOCKS AS "ISSUED FOR CONSTRUCTION"

THE INFORMATION CONTAINED WITHIN THE DRAWINGS IS INTENDED TO PROVIDE DESIGN AND BASIC CONSTRUCTION DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY DETAILS AND PRACTICES WHICH WILL RESULT IN A QUALITY ASSURANCE AND FULLY FUNCTIONING SYSTEMS.

# HWDSB

5.		
4.		
3.		
2.	FOR TENDER	27 FEB 2026
1.	FOR PERMIT	12 DEC 2025
No.	DESCRIPTION	DATE

**SHELLARD BUILDING SYSTEMS LTD.**

1684 SHELLARD SIDE ROAD  
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ANCASTER, ONTARIO

DRAWN NAME:	
<b>SCHEDULES AND DETAILS MECHANICAL</b>	
DRAWN BY:	CHECKED BY:
M.S.	K.S.
DATE:	JOB No.:
NOVEMBER 2025	25-104
SCALE:	SHEET No.:
NOT TO SCALE	<b>M3.02</b>

