ND STATE MILL HVAC UPGRADES

1823 MILL ROAD
GRAND FORKS, ND 58203

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PROJECT LOCATION MAP

STAMPS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Architect under the laws of the State of North Dakota.

Signature:

Date: 05/13/2026 REG. NO. : 3331

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CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550

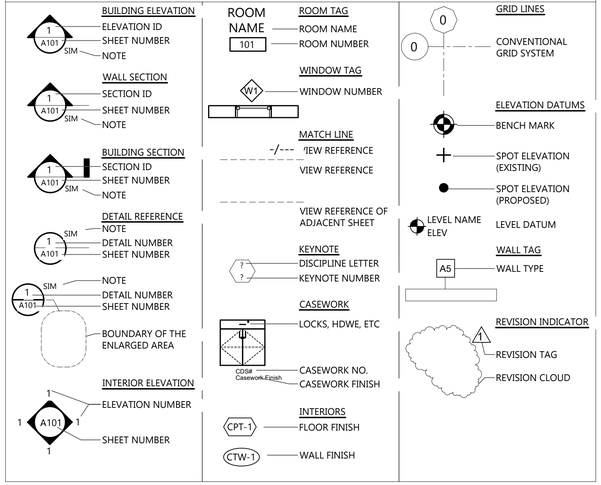
DRAWN BY: JC
CHECKED BY: CLH

DRAWING TITLE
COVER SHEET

G001

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-G001.dwg
Plot Date:13-May-26

GRAPHIC SYMBOLS



A	
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ACC	ACCESSIBLE
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICAN WITH DISABILITIES ACT
ADD	ADDENDUM
ADJ	ADJACENT / ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APL	ACRYLIC PANEL
APPROX	APPROXIMATE
APT	APARTMENT
ARCH	ARCHITECT / ARCHITECTURAL
AVE	AVENUE
AVG	AVERAGE
AWP	ACOUSTIC WALL PANEL
B	
BD	BOARD
BFD	BI-FOLD DOOR
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BLVD	BOULEVARD
BM	BEAM
BO	BOTTOM OF / BY OTHERS
BOT	BOTTOM
BR	BEDROOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
C	
CAB	CABINET
CC	CUBICAL CURTAINS
CD	CONSTRUCTION DOCUMENTS
CF	CUBIC FOOT
CFCI	CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED
CFS	CORK FLOOR SHEET / CONCRETE FLOOR SYSTEM
CFT	CORK FLOOR TILE
CG	CORNER GUARD
CG	CORNER GUARDS
CHRL	CHAIR RAIL
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COIL	COILING DOOR
COL	COLUMN
COMP	COMPOSITE / COMPOSITION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET
CPTD	COMMON PATH TRAVEL DISTANCE
CR	CURTAIN ROD
CT	CERAMIC TILE
CTOP	COUNTER TOP
CTR	CENTER
CU	CUBIC
CY	CUBIC YARD

D	
D	DEPTH / CLOTHES DRYER
d	PENNY (NAILS)
dB	DECIBLE
DBL	DOUBLE
DEMO	DEMOLISH / DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN / DECORATIVE FILM
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER
E	
E	EAST
EA	EACH
EB	EXPANSION BOLT
EC	ELECTRICAL CONTRACTOR
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EP	ELECTRICAL PANEL / END PANEL
EPS	EXPANDED POLYSTYRENE
EQ	EQUAL
EQUIP	EQUIPMENT
ESD	ELECTRO STATIC DISCHARGE VINYL TILE
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXA	EXIT ACCESS
EXD	EXIT DISCHARGE
EXT	EXTERIOR
F	
F	FAHRENHEIT
F/R	FIRE RATED
FB	FIRE BARRIER
FBD	FIBER BOARD
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FG	FLOAT GLASS
FIN	FINISH
FLASH	FLASHING
FLR	FLOOR
FOF	FACE OF FINISH
FOS	FACE OF STUDS
FOW	FACE OF WALL
FP	FIRE PROTECTION / FIRE PARTITION
FR	FIRE RESISTANT
FRMG	FRAMING
FRP	FIBERGLASS REINFORCED PANEL
FRZ	FREEZER
FT	FEET / FIRE TREATED
FTG	FOOTING
FURN	FURNISH / FURNISHINGS
FURR	FURRING
FUT	FUTURE
FW	FIRE WALL
FWP	FABRIC WRAP PANEL
G	
G	GENERAL
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GDC	GYMNASIUM DIVIDER CURTAINS
GL	GLASS / GLAZING / GLAZED
GLAM	GLUE-LAMINATED WOOD
GWB	GYPSUM WALL BOARD
GYP	GYPSUM

H	
H	HIGH
HC	HOLLOW CORE
HDBD	HARDBOARD
HDR	HEADER
HDWD	HARDWOOD
HDWE	HARDWARE
HEX	HORIZONTAL EXIT
HM	HOLLOW METAL
HNR	HANDRAILS
HOLD	HOLD TO INDICATED DIMENSION
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HSKP	HOUSEKEEPING
HT	HEIGHT
I	
ID	INSIDE DIAMETER / INSIDE DIMENSION
IG	INSULATING GLASS
IJ	ISOLATION JOINT
IN	INCHES
INFO	INFORMATION
INSP	INSPECTION / INSPECTOR
INST	INSTALLATION
INSUL	INSULATION
INT	INTERIOR
INT STN	INTERIOR STONEWORK
IR	IMPACT RESISTANT
ISO	ISOLATION / INTERNATIONAL STANDARDS ORGANIZATION
J	
JAN	JANITOR
JBE	JOIST BEARING ELEVATION
JST	JOIST
JT	JOINT
K	
KIT	KITCHEN
KO	KNOCK OUT
KP	KICK PLATE
L	
L	LEFT / LENGTH
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LGSF	LIGHT GAUGE STEEL FRAMING
LH	LEFT-HAND
LHR	LEFT-HAND REVERSED
LKR	LOCKER
LP	LOW POINT
LR	LIVING ROOM
LSC	NFPA 101 LIFE SAFETY CODE
LSG	LAMINATED SAFETY GLASS
LT	LIGHT
LTWT	LIGHTWEIGHT
LVT	LUXURY VINYL TILE
M	
MA	MEDICAL AIR
MACH	MACHINE
MAINT	MAINTENANCE / MAINTAIN
MAS	MASONRY
MAX	MAXIMUM
MBR	MASTER BEDROOM
MC	MECHANICAL CONTRACTOR
MCW	MINERAL CORE WOOD
MDF	MEDIUM-DENSITY FIBERBOARD
MECH	MECHANICAL
MED	MEDICAL / MEDICINE
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER / MANUFACTURING
MIN	MINIMUM / MINUTE
MIRR	MIRROR
MISC	MISCELLANEOUS
MKBD	MARKER BOARD
MO	MASONRY OPENING
MOD	MODIFY / MODULE
MP	METAL PANEL
MTC	METAL TOILET COMPARTMENT
MTD	MOUNTED
MTL	METAL
MTRL	MATERIAL
MULL	MULLION
MULT	MULTIPLE
MWP	MODULAR/FOLDING PARTITION

N	
N	NORTH / NITROGEN
N2O	NITROUS OXIDE
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NR	NOT RATED
NTS	NOT-TO-SCALE
O	
O2	OXYGEN
O/C	ON-CENTER
OA	OVERALL
OD	OUTSIDE DIAMETER / OUTSIDE DIMENSION
OFCI	OWNER FURNISHED AND CONTRACTOR INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OFOI	OWNER FURNISHED AND OWNER INSTALLED
OH	OVERHEAD
OL	OCCUPANT LOAD
OLF	OCCUPANT LOAD FACTOR
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OZ	OUNCE
P	
P	POWER
PA	PUBLIC ADDRESS
PB	PARTICLE BOARD
PC	PRECAST
PERF	PERFORATED
PERP	PERPENDICULAR
PG	PLATE GLASS
PH	PHASE
PIR	POLYISOCYANURATE RIGID INSULATION
PL	PLASTIC LAMINATE / PLATE / PROPERTY LINE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT
POL	POLISH
PP	PUSH PLATE
PPT	PORCELAIN PAVER TILE
PR	PAIR
PREFAB	PREFABRICATE
PROV(D)	PROVIDE(D)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESERVATIVE TREATED / POINT / POST-TENSIONED
PTC	PLASTIC TOILET COMPARTMENT
PTD	PAPER TOWEL DISPENSER
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWC	PROTECTIVE WALL COVERING
Q	
QT	QUARRY TILE
QTR	QUARTER
QZ	QUARTZ
R	
R	RISER / RADIUS
R&S	ROD & SHELF
RAD	RADIUS
RAF	RESILIENT ATHLETIC FLOORING
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN / ROAD
REBAR	REINFORCING BAR
REC	RECESSED
RECEP	RECEPTION
RECEPT	RECEPTACLE
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTRATION / REGISTER
REINF	REINFORCED
REM	REMOVE / REMOTE
REQ(D)	REQUIRE(D)
RES	RESINOUS FLOORING
RET	RETAINING / RETURN
REV	REVERSE / REVISION
RH	RIGHT HAND
RL	RAINLEADER
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RSF	RESILIENT SHEET FLOOR
RTF	RESILIENT TILE FLOOR

S	
S	SOUTH / SHELF
SAFB	SOUND ATTENUATION FIRE BLANKET
SB	SMOKE BARRIER
SC	SOLID CORE / SHOWER CURTAINS / SMOKE COMPARTMENT
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SCR	SHOWER CURTAIN ROD
SCS	SPECIALTY CEILING SYSTEM
SCWD	SOLID CORE WOOD DOOR
SCX	SMOKE COMPARTMENT EXIT
SD	SOAP DISPENSER / SEE DETAIL
SEC	SECOND
SECT	SECTION
SF	SQUARE FEET
SGC	STAGE CURTAINS
SHT	SHEET
SHTG	SHEATHING
SHWR	SHOWER
SIM	SIMILAR
SL	SLOPE
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNW	SANITARY NAPKIN WASTE RECEPTICAL
SP	SPANDREL PANEL / SMOKE PARTITION
SPEC	SPECIFICATION
SQ	SQUARE
SSF	SOLID SURFACE
SSTL	STAINLESS STEEL
ST	STONE
STA	STATION
STC	SOUND-TRANSMISSION CLASS
STD	STANDARD
STE	SUITE
STL	STEEL
STN	WOOD STAINING
STOR	STORAGE
STR	STAIR TREADS/RISERS
STRUCT	STRUCTURE / STRUCTURAL
STX	SUITE EXIT
SURF	SURFACE
SUSP	SUSPENDED
SYM	SYMMETRICAL
T	
T	TOP / TREAD / TILE
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TA	TOILET ACCESSORIES
TB	TOWEL BAR
TBD	TO BE DETERMINED
TDX	TRAVEL DISTANCE TO EXIT
TEL	TELEPHONE
TEMP	TEMPERED / TEMPORARY / TEMPERATE
TER	TERRAZZO
TFE	TOP OF FOOTING ELEVATION
TFF	TOP OF FINISH FLOOR
TG	TEMPERED GLASS
THK	THICK
THS	THRESHOLD
TJE	TOP OF JOIST ELEVATION
TKBD	TACK BOARD
TLT	TOILET
TO	TOP OF
TOL	TOLERANCE
TOPO	TOPOGRAPHICAL
TPD	TOILET PAPER DISPENSER
TS	TRANSITION STRIPS
TSE	TOP OF SLAB ELEVATION
TWE	TOP OF WALL ELEVATOIN
TYP	TYPICAL
U	
UC	UNDER COUNTER
UG	UNDERGROUND
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPH	FABRIC/VINYL
UTIL	UTILITY
V	
V	VINYL
VAC	VACUUM
VAR	VARIABLE / VARNISH / VARIES
VCT	VINYL-COMPOSITION TILE
VER	VERIFY
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOL	VOLUME
VWC	VINYL WALL COVERING

W	
W	WEST / WIDE / CLOTHES WASHER
W/	WITH / WHERE
W/O	WITHOUT
WAIN	WAINSCOT
WC	WATER CLOSET
WD	WOOD
WDF	WOOD FLOORING
WDT	WINDOW TREATMENTS
WDW	WINDOW
WG	WALL GUARD
WH	WATER HEATER / WALL HYDRANT
WP	WATER PROOF
WR	WASTE RECEPTICALE
WRL	WALL RAIL
WS	WEATHER STRIPPING
WT	WEIGHT
X	
XFMR	POWER TRANSFORMER
XPS	EXTRUDED POLYSTYRENE
Y	
YD	YARD

SPECIAL SYMBOLS	
#	POUND / NUMBER
/	PER
@	AT
°	DEGREE
Ø	DIAMETER
℄	CENTERLINE
∠	ANGLE
⊥	PERPINDICULAR

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STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: JC
CHECKED BY: CLH

STAMP

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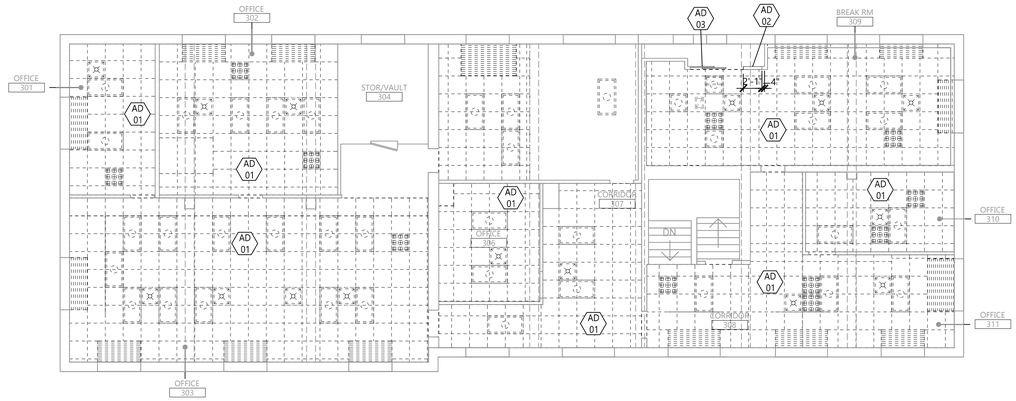
DRAWING TITLE
GENERAL ARCHITECTURAL INFORMATION

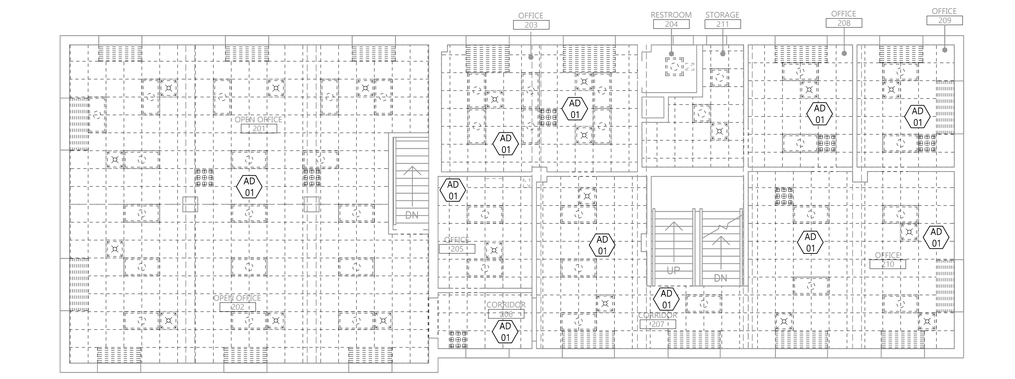
A001

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-A001.dwg
Plot Date:13-May-26



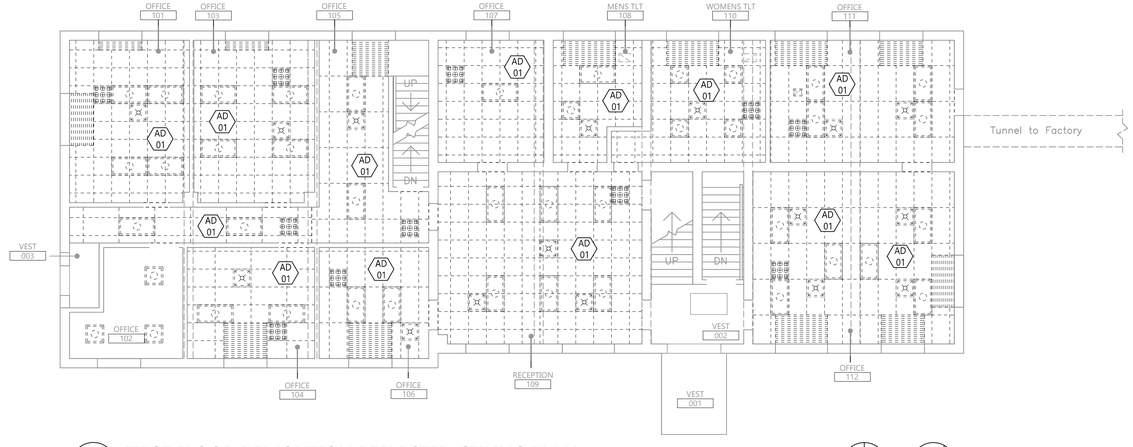
3 A101 THIRD FLOOR DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"



2 A101 SECOND FLOOR DEMOLITION CEILING PLAN

1/8" = 1'-0"



1 A101 FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. DASHED LINES INDICATE DEMOLITION ITEMS, SOLID LINES INDICATE EXISTING ITEMS TO REMAIN. ALSO REFER TO SHEET A001 FOR SYMBOLS AND ABBREVIATIONS.
2. ALL DEMOLITION WORK AND TEMPORARY INSTALLATIONS SHALL BE ACCOMPLISHED AS SPECIFIED.
3. CONTRACTOR TO PROVIDE SECURE DOORS IN TEMP PARTITIONS AS NECESSARY TO MAINTAIN BUILDING SECURITY. PROVIDE CLEAR ROUTES TO EXITS FROM WORK AREA.
4. FIELD VERIFY EXISTING CONDITIONS OF EACH FLOOR AND AREA TO BE DEMOLISHED.
5. FIELD VERIFY EXISTING MATERIALS IN AREAS OF DEMOLITION.
6. REMOVE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, DEVICES AND ASSOCIATED ELEMENTS AS INDICATED IN MECH AND ELEC DRAWINGS. FIELD VERIFY THE PRESENCE OF MECHANICAL AND ELECTRICAL PIPES, CONDUIT, ETC. IN ALL WALLS TO BE DEMOLISHED.
7. CONTRACTOR TO PROVIDE DEMOLITION IMPLEMENTATION PLANS AND SCHEDULE. NOTIFY OWNER IF ANY OPERATIONAL DISRUPTIONS OF ADJACENT OCCUPANTS ARE REQUIRED TO PERFORM NEW WORK (INCLUDING BUT NOT LIMITED TO: MECHANICAL, PLUMBING, FIRE SUPPRESSION, AND ELECTRICAL DISRUPTIONS).
8. CONTAIN DUST AND DEBRIS WITHIN THE DEMOLITION AREA.
9. DEMOLISH AND REMOVE SUSPENDED ACOUSTIC LAY-IN, CEILING INCLUSIVE OF HANGERS AND CARRYING CHANNELS, WIRES, CABLES, CONDUIT, ADHERED CEILING TILES, FLEX CONDUIT, ELECTRICAL BOXES, SMOKE DETECTORS, LIGHT FIXTURES, AND WIRING, DUCT WORK, PIPING AND SUPPORT HANGERS. CUT HANGERS SPACES RECEIVING WALL DEMOLITION WILL ALSO HAVE CEILING DEMOLITION UNO.
10. PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS, CONTRACTOR SHALL IDENTIFY ALL UTILITIES TO REMAIN.
11. ALL DEMOLITION MATERIALS AND DEBRIS SHALL BE DISPOSED OF ACCORDING TO FEDERAL STATE AND LOCAL REGULATIONS.
12. CONTRACTOR SHALL PERFORM WORK IN A MANNER THAT DOES NOT DAMAGE THE EXISTING STRUCTURE. DEMOLITION SHALL NOT COMPROMISE THE STRUCTURAL INTEGRITY OF ANY WALLS, FLOORS, CEILING, SUPPORTS, STRUCTURE, ETC. TO REMAIN.
13. THE OWNER HAS FIRST RIGHT TO REFUSAL FOR SALVAGEABLE ITEMS. RELOCATED SUCH SALVAGED ITEMS TO STORAGE LOCATION AS OWNER MAY DESIGNATE WITHIN PROJECT SITE.
14. ALL EXISTING MOVABLE FURNITURE/EQUIPMENT WILL BE MOVED BY OWNER PRIOR TO CONSTRUCTION UNLESS OTHERWISE NOTED.
15. DEMOLITION ITEMS SHALL INCLUDE, BUT NOT BE LIMITED TO ITEMS IDENTIFIED ON THESE DRAWINGS. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND BE FAMILIAR WITH THE WORK REQUIRED.

KEYNOTE LEGEND:

AD ## < < < INDICATES KEYNOTE ON PLAN

AD 01	DEMOLISH CEILING TILES AND GRID IN ITS ENTIRETY. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DEMOLITION OF FIXTURES.
AD 02	DEMOLISH WALL AND PREP FOR NEW WORK.
AD 03	DEMOLISH DOOR AND FRAME IN ITS ENTIRETY AND PREP FOR NEW WORK.

CEILING SYMBOLS:

- 2'x2' CEILING TILE
- 2'x4' CEILING TILE
- ANGLED CEILING TILE SOFFIT
- 2'x2' LAY-IN LIGHT
- 2'x4' LAY-IN LIGHT
- DIFFUSERS

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A101

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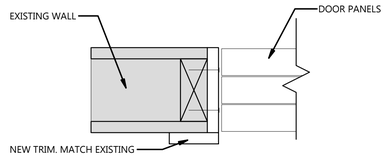
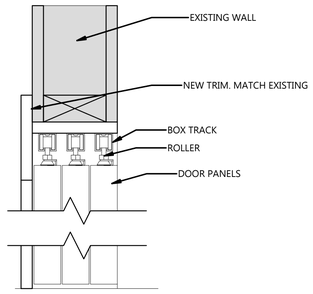
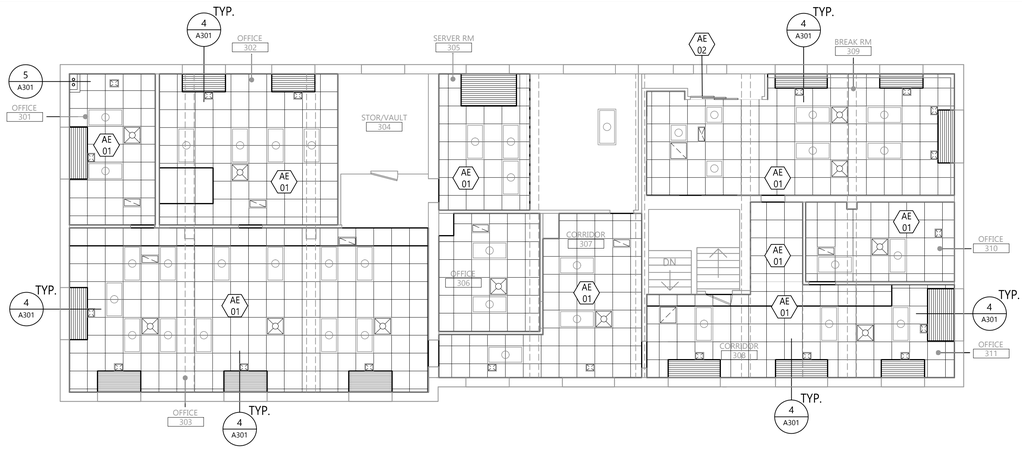
Plot Date:13-May-26



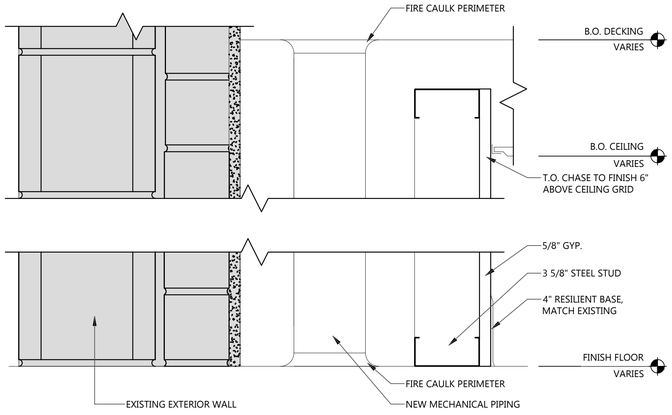
7 A301 DOOR JAMB DETAIL
3" = 1'-0"



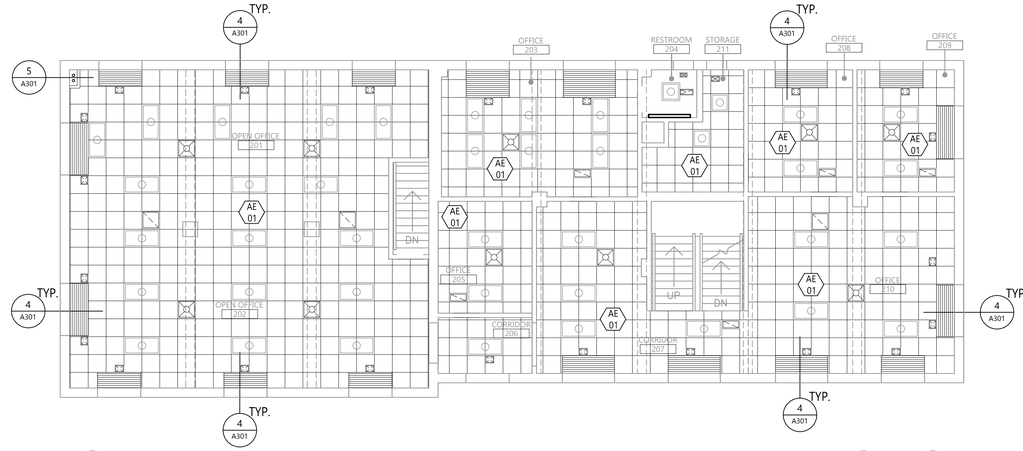
6 A301 DOOR HEAD DETAIL
3" = 1'-0"



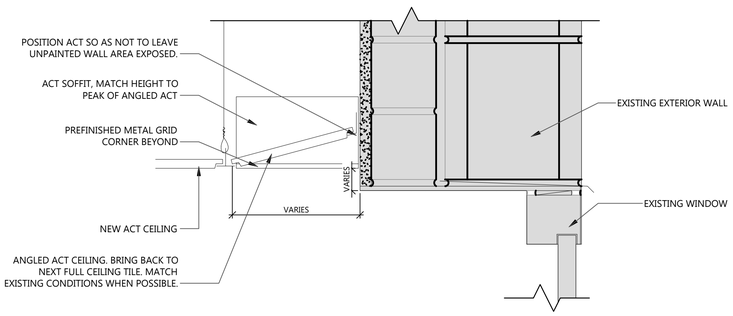
3 A301 THIRD FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



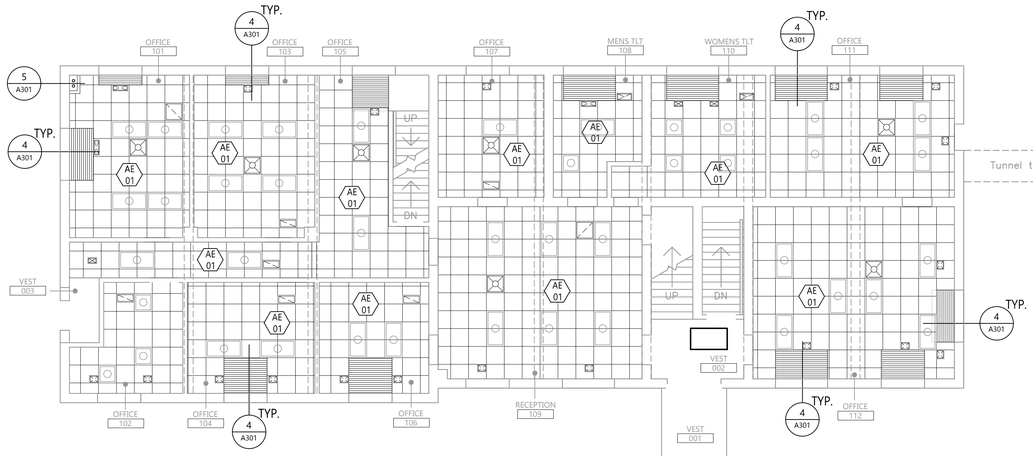
5 A301 CHASE DETAIL
3" = 1'-0"



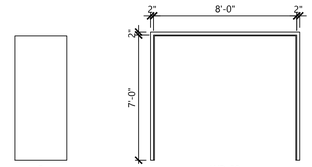
2 A301 SECOND FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



4 A301 CEILING SOFFIT DETAIL
3" = 1'-0"



1 A301 FIRST FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



DOOR PANEL AND FRAME TYPES
1/4" = 1'-0"

GENERAL CEILING NOTES

1. REFER TO MECHANICAL DRAWINGS FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN GRILLES AND EXHAUST GRILLES, ETC. SCRIBE CEILING MATERIALS FOR A TIGHT FIT.
2. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS FOR A TIGHT FIT. WHERE DEVICES ARE NOT SHOWN ON PLAN, FIELD VERIFY LOCATION AND QUANTITY PRIOR TO REMOVAL. THESE DEVICES WILL BE RELOCATED INTO NEW PLAN.
3. GENERAL CONTRACTOR TO COORDINATE CEILING MOUNTED EQUIPMENT SUPPORT REQUIREMENTS, LOCATIONS, DIMENSIONS, ETC. WITH EQUIPMENT SUPPLER AND OWNER PRIOR TO INSTALLATION.
4. CEILING MOUNTED ITEMS SUCH AS LIGHT FIXTURES, GRILLES, DIFFUSERS, SPEAKERS, EXIT LIGHTS, ETC. SHALL BE LOCATED IN THE CENTER OF CEILING PANELS, GYPSUM BOARD SOFFITS, AND/OR PLASTER SOFFIT BAYS UNLESS NOTED OTHERWISE. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS.
5. ACCESS PANELS SIZE, LOCATION AND QUANTITY COORDINATE WITH MECHANICAL

CEILING PLAN SYMBOLS:

- 2'x2' CEILING TILE
- 2'x4' CEILING TILE
- ANGLED CEILING TILE SOFFIT
- 2'x2' LAY-IN LIGHT
- 2'x4' LAY-IN LIGHT
- DIFFUSERS

KEYNOTE LEGEND:

AE ## < < < INDICATES KEYNOTE ON PLAN

AE 01 NEW ACT TILE AND GRID. NEW CEILING HEIGHT TO BE NO HIGHER THAN EXISTING. COORDINATE FINAL HEIGHT WITH NEW MECHANICAL AND ELECTRICAL WORK AS SOME AREAS MAY NEED TO BE LOWERED.

AE 02 PROVIDE NEW THREE-PANEL BYPASS SLIDING DOOR ASSEMBLY. SEE 6/A301 AND 7/A301 FOR DETAILING. REFER TO ARCHITECTURAL SLIDING DOOR SPECIFICATION FOR DOOR CONSTRUCTION, FINISH, HARDWARE, AND TRACK SYSTEM.

NEW CEILING BASIS OF DESIGN:

- COLOR: WHITE
- SIZE: 24"x24"
- THICKNESS: 5/8"
- EDGE: ANGLED TEGULAR 15/16"
- ACOUSTICS: 0.5 NRC / 35 CAC
- GRID: 5/16" EXPOSED TEE
- MANUFACTURER: ARMSTRONG, OR AS APPROVED BY ARCH.
- TILE TYPE: DUNE, OR AS APPROVED BY ARCH.
- GRID TYPE: PRELUDE PLUS XL ALUMINUM, OR AS APPROVED BY ARCH.

ARCHITECTURAL SLIDING DOOR SPECIFICATION:

DOOR TYPE: FLUSH WOOD SLIDING DOOR
DOOR CONFIGURATION: THREE-PANEL BYPASS SYSTEM; THREE HORIZONTAL SLIDING DOOR PANELS

DOOR CONSTRUCTION: FLUSH WOOD DOOR WITH PARTICLEBOARD CORE, OAK VENEER, PLAIN SLICED
DOOR FINISH: MANUFACTURER'S STANDARD FINISH; COLOR SELECTED BY ARCHITECT
DOOR THICKNESS: 1 3/8" INCHES

OPERATION: MANUAL
TRACK SYSTEM: WALL MOUNTED, TOP-HUNG SLIDING DOOR TRACK SYSTEM SUITABLE FOR BYPASS OPERATION; CONCEALED OR EXPOSED TRACK AS REQUIRED FOR INSTALLATION
HARDWARE: PULL HANDLE AT EACH DOOR PANEL. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD RANGE. BASIS OF DESIGN: JOHNSON HARDWARE 111 MD MULTI-PASS SERIES, OR AS APPROVED BY ARCHITECT.

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: JC
CHECKED BY: CLH

STAMP

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Architect under the laws of the State of North Dakota.
Signature:
Date: 05/13/2026 REG. NO. : 3331

DRAWING TITLE
REFLECTED CEILING PLANS AND DETAILS

A301

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-A301.dwg
Plot Date:13-May-26

MECHANICAL LEGEND

LEGEND

	ANGLE RELIEF VALVE
	ARROW INDICATES DIRECTION OF FLOW
A	AUTOMATIC AIR VENT
	AUTOMATIC 2-WAY CONTROL VALVE
	AUTOMATIC 3-WAY CONTROL VALVE
	AUTOMATIC FLOW CONTROL VALVE
	BACK FLOW PREVENTER-RPZ
	BALANCING VALVE
	BALL VALVE
	BOTTOM PIPE CONNECTION
	BUTTERFLY VALVE
	CAPPED PIPE WITH SHUT-OFF VALVE
	CHECK VALVE, FLOW DIRECTION
	CONCENTRIC REDUCER
	DIRT POCKET
	ECCENTRIC REDUCER (E.R.)
	FLOOR CLEANOUT/GRADE CLEANOUT
P	FLOW MEASURING STATION
	GAS COCK VALVE
	GAS PRESSURE REGULATOR
	GATE VALVE
	GLOBE VALVE
	MANUAL AIR VENT
M	METER
A	MEDICAL GAS OUTLET (TYPICAL)
	MIXING VALVE
	OS&Y (OUTSIDE SCREW & YOKE) VALVE
	PIPE ANCHOR
	PIPE DOWN
	PIPE EXPANSION JOINT
	PIPE GUIDE
	PIPE UP
	PIPING FLEXIBLE CONNECTION
	PITCH PIPE DOWN IN DIRECTION OF FLOW
	PRESSURE GAUGE AND GAUGE COCK
	PRESSURE REDUCING VALVE (PRV)
	PUMP
	SHOCK ABSORBER
	SLEEVE
	SOLENOID VALVE
	STEAM TRAP
	TEMPERATURE-PRESSURE TEST FITTING
	TEMPERATURE SENSOR
	THERMOMETER
	THERMOMETER WELL
	TOP PIPE CONNECTION
	UNION
	VACUUM BREAKER
P	VALVE WITH TAMPER SWITCH
	WALL CLEANOUT
	WATER FLOW SWITCH
	"Y" TYPE STRAINER
	"Y" TYPE STRAINER WITH HOSE END BLOW OFF VALVE
	ZONE VALVE

MEDICAL GAS

	CARBON DIOXIDE
	INSTRUMENT AIR
	MEDICAL AIR
	MEDICAL VACUUM
	NITROGEN
	NITROUS OXIDE
	OXYGEN
	WASTE ANETHESIA GAS DISPOSAL

LEGEND

A	COMPRESSED AIR LINE
CD	CONDENSATE DRAIN OR RETURN
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CWR	CONDENSER WATER RETURN
CW	CONDENSER WATER SUPPLY
FOR	FUEL OIL RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
FOV	FUEL OIL VENT PIPING
G	NATURAL GAS PIPING
HPC	HIGH PRESSURE CONDENSATE RETURN
HPR	HIGH PRESSURE STEAM RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LPR	LOW PRESSURE STEAM RETURN
LPS	LOW PRESSURE STEAM SUPPLY
MPS	MEDIUM PRESSURE STEAM
PC	PUMPED CONDENSATE RETURN
RL	RAIN LEADER PIPING (BELOW GRADE)
SRL	STORM DRAIN PIPING (ABOVE GRADE)
V	VENT PIPING (AV-ACID VENT)
•	DOMESTIC COLD WATER
••	DOMESTIC HOT WATER
•••	DOMESTIC HOT WATER CIRCULATION
	SANITARY WASTE, UNDERGROUND (AW - ACID WASTE UNDERGROUND)
	SANITARY WASTE, ABOVE GRADE (AW - ACID WASTE ABOVE GRADE)
MA	MEDICAL AIR
OX	OXYGEN
VAC	MEDICAL VACUUM
NO	NITROUS OXIDE
W	WASTE ANESTHESIA GAS
N	NITROGEN
V-EX	VACUUM EXHAUST
IA	INSTRUMENT AIR
C02	CARBON DIOXIDE
MA-IN	MEDICAL AIR INTAKE

SYMBOLS

EWC	ELECTRIC WATER COOLER
MB	MOP BASIN
L	LAVATORY
S	SINK
U	URINAL
WC	WATER CLOSET
FD	FLOOR DRAIN, AREA DRAIN
	HATCH INDICATES ITEM(S) TO BE REMOVED
	INTERNALLY LINED DUCTWORK
	POINT OF CONNECTION (NEW TO EXISTING)
1 / M2.1	DETAIL DESIGNATION — DETAIL NUMBER / DRAWING NUMBER
2 / M3.1	SECTION DESIGNATION — SECTION NUMBER / DRAWING NUMBER
1	SHEET / CONSTRUCTION NOTE NUMBER
1	REVISION NUMBER
NO. S-1 100 2	S-SUPPLY, R-RETURN, E-EXHAUST, T-TRANSFER; CFM; QUANTITY IN ROOM

LEGEND

R / D	SLOPING RISE (R) OR DROP (D) IN DUCTWORK
18X12	DUCT SIZE (CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
18ø	ROUND DUCT DIAMETER SIZE
	FLEXIBLE CONNECTION IN DUCT
	FLEXIBLE DUCT
	VOLUME DAMPER IN DUCT (VD)
F/S RD FD SD	(FD) FIRE DAMPER, (SD) SMOKE DAMPER, (F/S) COMBINATION FIRE SMOKE DAMPER, (BDD) BACK DRAFT DAMPER
	DUCT ACCESS DOOR
	ELBOW WITH TURNING VANES
18X12	DUCT SPLIT WITH SPLIT SIZE
	BRANCH TAKEOFF WITH VOLUME DAMPER
	RADIUS ELBOW
	DUCT MOUNTED HEATING COIL, WITH DUCT ACCESS DOOR UPSTREAM OF HEATING COIL.
	SLOT DIFFUSER
ACCESS AREA	TERMINAL UNIT WITH HEATING COIL
	CEILING DIFFUSER
	RETURN REGISTER OR GRILLE
TRG 12X12	TRANSFER GRILLES ON BOTH SIDES OF PARTITION OR WALL (SIZE)
	SUPPLY REGISTER WITH AIR OUTLET DEVICE DESIGNATION (100 CFM)
	RETURN OR EXHAUST REGISTER OR GRILLE WITH AIR INLET DEVICE DESIGNATION (100 CFM)
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR SUPPLY DUCT DOWN
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR RETURN DUCT DOWN
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR EXHAUST DUCT DOWN
	ROUND DUCT, UP
	ROUND DUCT, DOWN
	SQUARE FEET
T2	THERMOSTAT WITH ZONE OR EQUIPMENT DESIGNATION
S	DUCT SMOKE DETECTOR SUPPLIED BY ELECTRICAL TRADE, INSTALLED BY MECHANICAL TRADE.
	FLOW SWITCH
H	HUMIDISTAT

FIRE PROTECTION

ACV	ALARM CHECK VALVE W/ ALL RELATED APPURTENANCES
BPA	BACK FLOW PREVENTER ASSEMBLY
	UPRIGHT SPRINKLER HEAD
DCVA	DOUBLE CHECK VALVE
DPV	DRY PIPE VALVE W/ ALL RELATED APPURTENANCES
	EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
	FIRE DEPARTMENT CONNECTION WALL MOUNTED
	FIRE DEPT. HOSE VALVE W/ CAP & CHAIN
	FIRE HOSE VALVE
	FIRE HOSE VALVE CABINET
	HOSE BIBB
	PENDANT SPRINKLER HEAD
PAV	PRE-ACTION VALVE W/ ALL RELATED APPURTENANCES
RPBP	REDUCED PRESSURE BACK FLOW PREVENTER ASSEMBLY
	ROOF MANIFOLD
	SIDEWALL SPRINKLER HEAD
	SPRINKLER FLOOR CONTROL VALVE ASSEMBLY
T	SPRINKLER INSPECTOR TEST STATION

DUCT CONSTRUCTION STANDARDS

H= HEIGHT REFERRED TO IN DIMENSIONS

(A)	DRIVE SLIP
AIR FLOW (B)	PLAIN "S" SLIP
AIR FLOW (C)	HEMMED "S" SLIP
H AIR FLOW (E)	BAR SLIP
H AIR FLOW (F)	ALTERNATE BAR SLIP (STANDARD "S" SLIP)
H AIR FLOW (G)	REINFORCED BAR SLIP (CLEAT)
H AIR FLOW (H)	ANGLE SLIP
H-1/8" (I)	STANDING SEAM
H (J)	ANGLE REINFORCED STANDING SEAM

DUCT DIMENSION	GAUGES STEEL/ALUMINUM		TYPE JOINTS	JOINT SPACING (MAXIMUM)	"H" DIMENSION (MINIMUM)
UP THRU 18"	26	24(.020)	A & B	8'-0"	- - - - - -
19" THRU 24"	24	22(.025)	C	5'-0"	- - - - - -
25" THRU 36"	24	22(.025)	E OR I	5'-0"	1"
37" THRU 54"	22	20(.032)	E OR I	4'-0"	1 1/8"
55" THRU 80"	20	18(.040)	F OR G	3'-0"	1 1/2"X1/8"L
81" THRU 96"	18	16(.051)	H OR J	2'-6"	1 1/2"X1/8"L
OVER 96"	18	16(.051)	H OR J	2'-0"	2"X1/4"L

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR OR AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFFF	AQUEOUS FILM FORMING FOAM
AHU	AIR HANDLING UNIT
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BOB	BOTTOM OF THE BEAM
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BV	BALANCING VALVE
C	CONVECTOR
CC	COOLING COIL
CD	CEILING DIFFUSER OR CONDENSATE DRAIN
CEF	CEILING EXHAUST FAN
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CUH	CABINET HEATER
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
CLG	CEILING
CO	CLEANOUT
CONT	CONTINUATION
CONV	CONVECTOR
CP	CONDENSATE PUMP OR CIRCULATING PUMP
CR	CEILING REGISTER
CT	COOLING TOWER
CV	CHECK VALVE
CW	COLD WATER & CONDENSER WATER
DB	DRY BULB
DIA ø	DIAMETER
DN	DOWN
DR	DRAIN
DWG	DRAWING
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ECH	ELECTRIC CABINET HEATER
EDB	ENTERING DRY BULB
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
EHC	ELECTRIC HEATING COIL
EL	ELEVATION
ELEV	ELEVATOR
ER	EXHAUST RESISTER
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
°F	DEGREES FAHRENHEIT
FBO	FURNISHED BY OTHERS
FC	FLEXIBLE CONNECTION
FCC	FIRE CONTROL CENTER
FD	FLOOR DRAIN OR FIRE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FHC	FIRE HOSE CABINET
FLA	FULL LOAD AMPERES
FLR	FLOOR
FOR	FUEL OIL RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
FOV	FUEL OIL VENT PIPING
FP	FUEL OIL PUMP OR FIRE PUMP
FS	FLOW SWITCH OR FLOOR SINK
FSD	COMBINATION FIRE AND SMOKE DAMPER
FT	FEET
FTR	FIN TUBE RADIATION
FU	FIXTURE UNIT
G	LOW PRESSURE NATURAL GAS
GAL	GALLONS
GLY	GLYCOL
GHWS	GLYCOL HOT WATER SUPPLY
GHWR	GLYCOL HOT WATER RETURN
GCWS	GLYCOL CHILLED WATER SUPPLY
GCWR	GLYCOL CHILLED WATER RETURN
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB

ABBREVIATIONS

HC	HEATING COIL
HP	HORSE POWER
HVU	HEATING AND VENTILATING UNIT
HW	HOT WATER
HWS & HWR	HOT WATER SUPPLY AND RETURN
HX	HEAT EXCHANGER
ID	INSIDE DIMENSION
IN	INCHES
IJS	IN JOIST SPACE
JS	JANITOR'S SINK
JP	JOCKEY PUMP
L	LAVATORY
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LDR	LEADER
LSD	LINEAR SLOT DIFFUSER (CEILING, WALL, SILL, & FLOOR)
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MS	MOP SINK
MUA	MAKE UP AIR UNIT
N/E	NEW TO EXISTING CONNECTION
NC	NORMALLY CLOSED
NFA	NET FREE AREA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIMENSION
OST	OVERFLOW STORM PIPING
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
P	PUMP
PD	PRESSURE DROP OR PUMP DISCHARGE
P/FT	PITCH PER FOOT
PHX	PLATE AND FRAME HEAT EXCHANGER
PG	PRESSURE GAUGE
PHC	PREHEAT COIL
PIV	POST INDICATING VALVE
PRV	PRESSURE REDUCING VALVE OR POWER ROOF VENT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH (GAUGE)
RA	RETURN AIR
RD	ROOF DRAIN
RAF	RETURN AIR FAN
RHW	RECIRCULATING HOT WATER
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S	SINK
SA	SUPPLY AIR
SAN	SANITARY
SD	SMOKE DAMPER OR SMOKE DETECTOR
SE	SEWAGE EJECTOR
SENS	SENSIBLE
SF	SUPPLY FAN OR SQUARE FEET
SP	STATIC PRESSURE OR SUMP PUMP
SPKR	SPRINKLER
SS	SERVICE SINK
ST	STORM PIPING OR SOUND TRAP (SOUND ATTENUATOR)
TC-1	TERMINAL COIL - (COIL NUMBER)
TOP	TOP OF PIPE
TS	TAMPER SWITCH
TYP	TYPICAL
UH	UNIT HEATER
UR	URINAL
VTR	VENT THRU ROOF
VAR	VARIABLE
VAV	VARIABLE AIR VOLUME TERMINAL UNIT
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WC	WATER CLOSET
WH	WALL HYDRANT
WO 12X12	WALL OPENING (SIZE)

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PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: MCH
CHECKED BY: DJL

STAMP

REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MECHANICAL LEGEND

M000

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M000.dwg
Plot Date:12-May-26

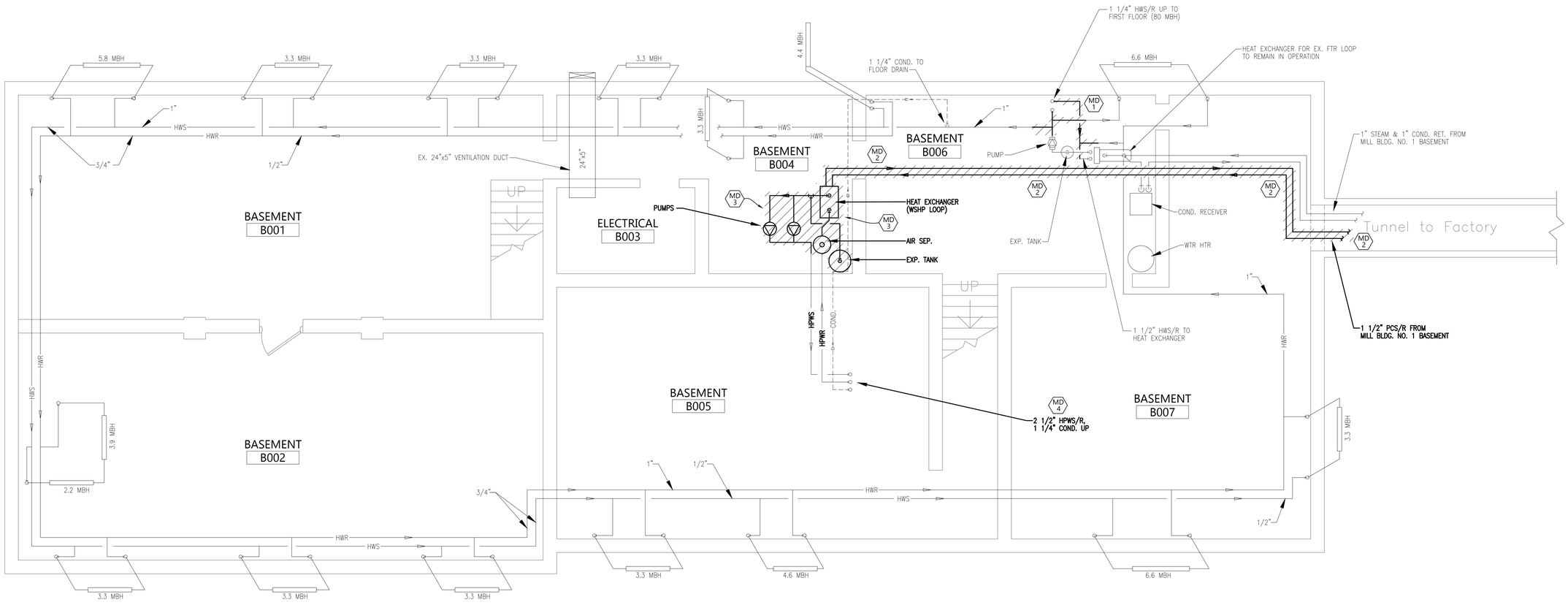
DEMOLITION NOTES:

MD 1 — MODIFY EXISTING FTR LOOP PIPING AS REQUIRED TO SEPARATE LOOP INTO TWO ZONES (FIRST FLOOR AND SECOND FLOOR). REMOVE EXISTING HWS/R PIPING AS INDICATED BY HATCH. PREPARE FOR NEW PIPING AND CONTROL VALVES. REFER TO DETAIL 4/M601.

MD 2 — REMOVE EXISTING PCS/R LOOP PIPING.

MD 3 — REMOVE EXISTING HEAT EXCHANGER, PUMPS, AIR SEPARATOR, EXPANSION TANK, AND ASSOCIATED PIPING, VALVES, ETC. AS INDICATED BY HATCH. REFER TO DETAIL 3/M601.

MD 4 — EXISTING HPWS/R PIPING WILL BE CONVERTED TO USE AS HWS/R PIPING TO NEW FAN COIL UNITS.



1 / M100 BASEMENT MECHANICAL DEMO PLAN

1/4" = 1'-0"

PLAN N — ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M100.dwg
Plot Date:12-May-26

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PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
BASEMENT MECHANICAL DEMO PLAN

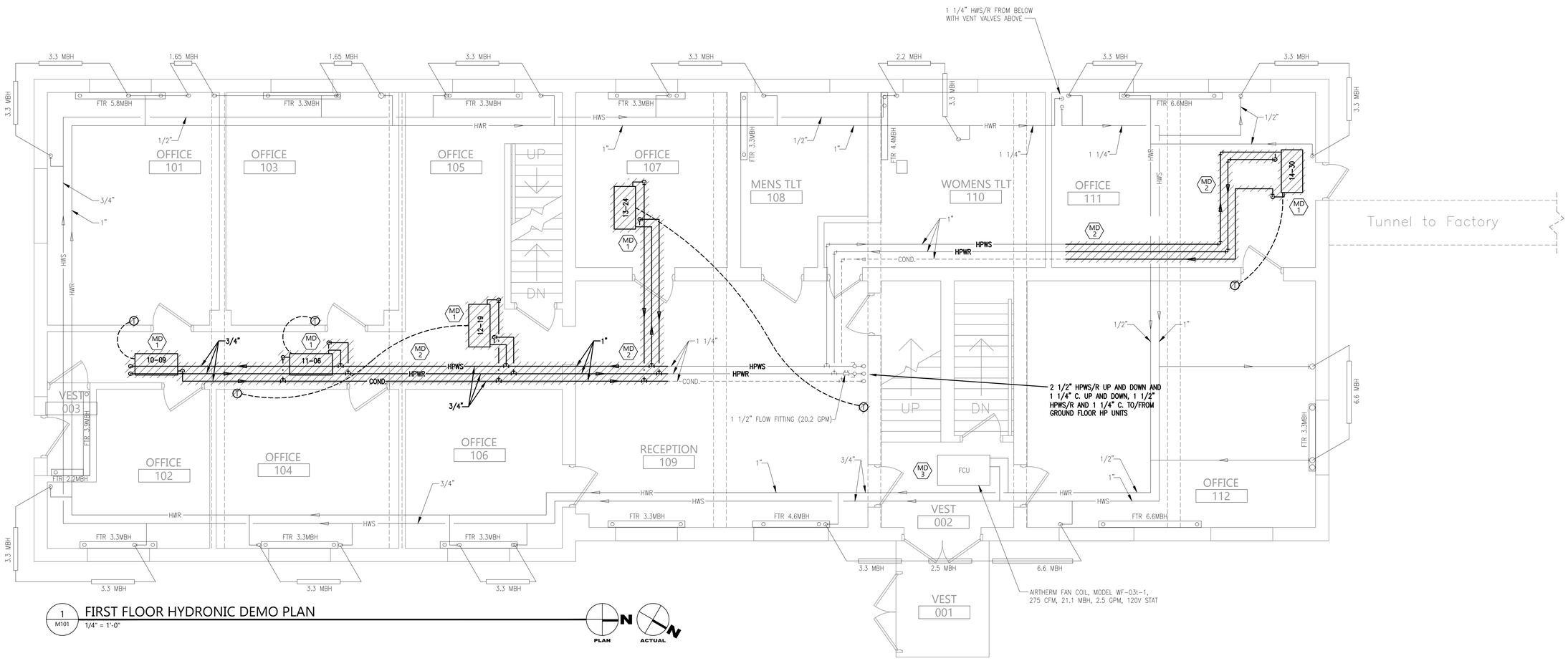
M100

DEMOLITION NOTES:

MD 1 — REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED PIPING, VALVES, INSULATION, CONTROLS, ETC.

MD 2 — REMOVE EXISTING HPWS/R AND CONDENSATE DRAIN PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, ETC. AS INDICATED BY HATCH. PREPARE EXISTING PIPING TO REMAIN FOR NEW CONNECTIONS.

MD 3 — EXISTING FAN COIL UNIT TO REMAIN.



1 / M101 FIRST FLOOR HYDRONIC DEMO PLAN
1/4" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
FIRST FLOOR HYDRONIC DEMO PLAN

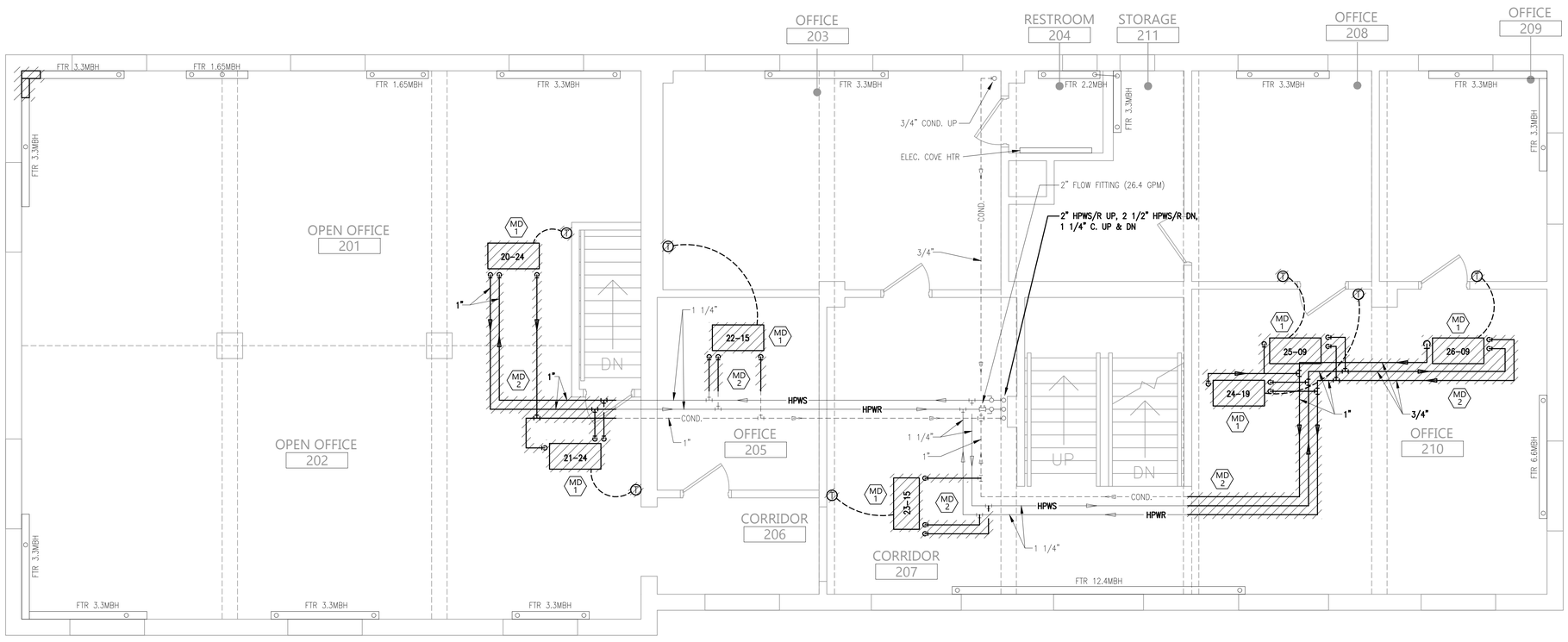
M101

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M101.dwg
Plot Date:12-May-26

DEMOLITION NOTES:

MD 1 REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED PIPING, VALVES, INSULATION, CONTROLS, ETC.

MD 2 REMOVE EXISTING HPWS/R AND CONDENSATE DRAIN PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, ETC. AS INDICATED BY HATCH. PREPARE EXISTING PIPING TO REMAIN FOR NEW CONNECTIONS.



1 / M102 SECOND FLOOR HYDRONIC DEMO PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M102.dwg
Plot Date:12-May-26

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PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
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PROJECT NO: 20255550
DRAWN BY: MCH
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TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
SECOND FLOOR HYDRONIC DEMO PLAN

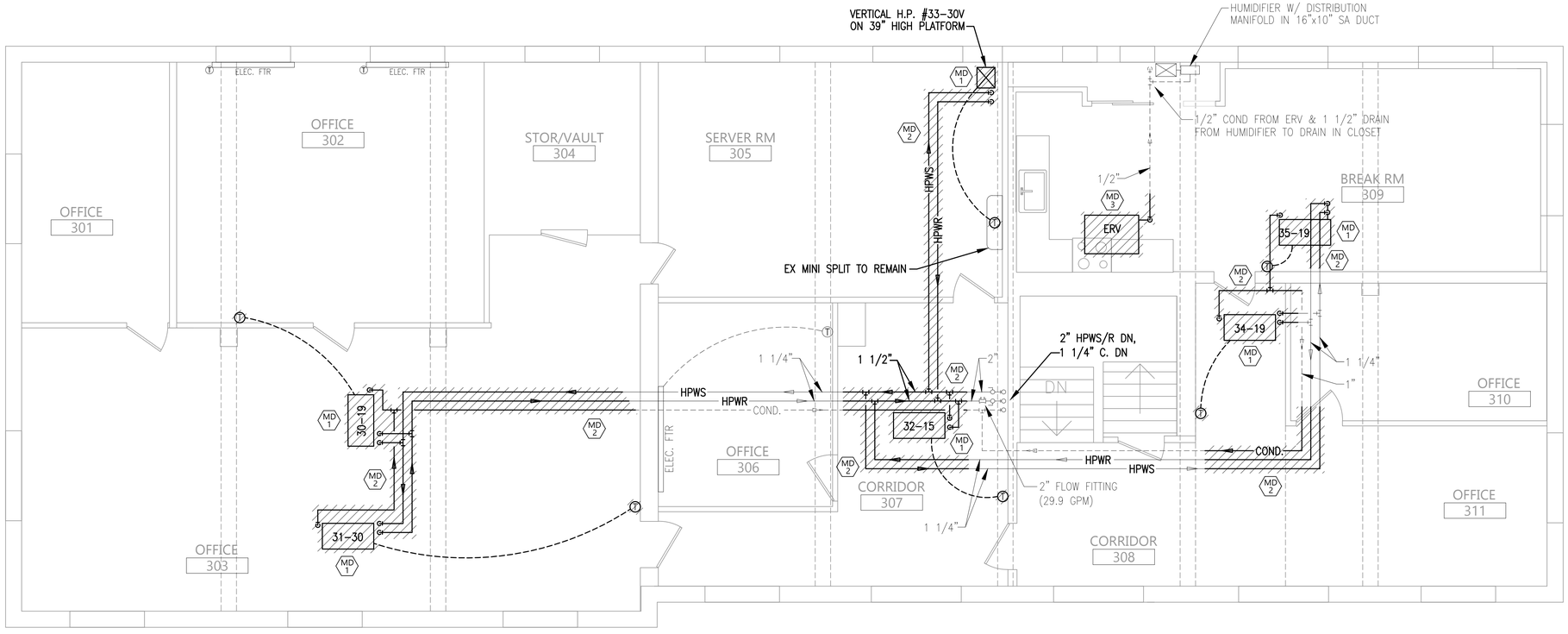
M102

DEMOLITION NOTES:

MD 1 REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED PIPING, VALVES, INSULATION, CONTROLS, ETC.

MD 2 REMOVE EXISTING HPWS/R AND CONDENSATE DRAIN PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, ETC. AS INDICATED BY HATCH. PREPARE EXISTING PIPING TO REMAIN FOR NEW CONNECTIONS.

MD 3 REMOVE EXISTING ENERGY RECOVERY VENTILATOR AND ASSOCIATED PIPING, VALVES, INSULATION, CONTROLS, ETC.



1 / M103 THIRD FLOOR HYDRONIC DEMO PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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DRAWN BY: MCH

CHECKED BY: DJL

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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE

THIRD FLOOR HYDRONIC DEMO PLAN

M103

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M103.dwg
Plot Date:12-May-26

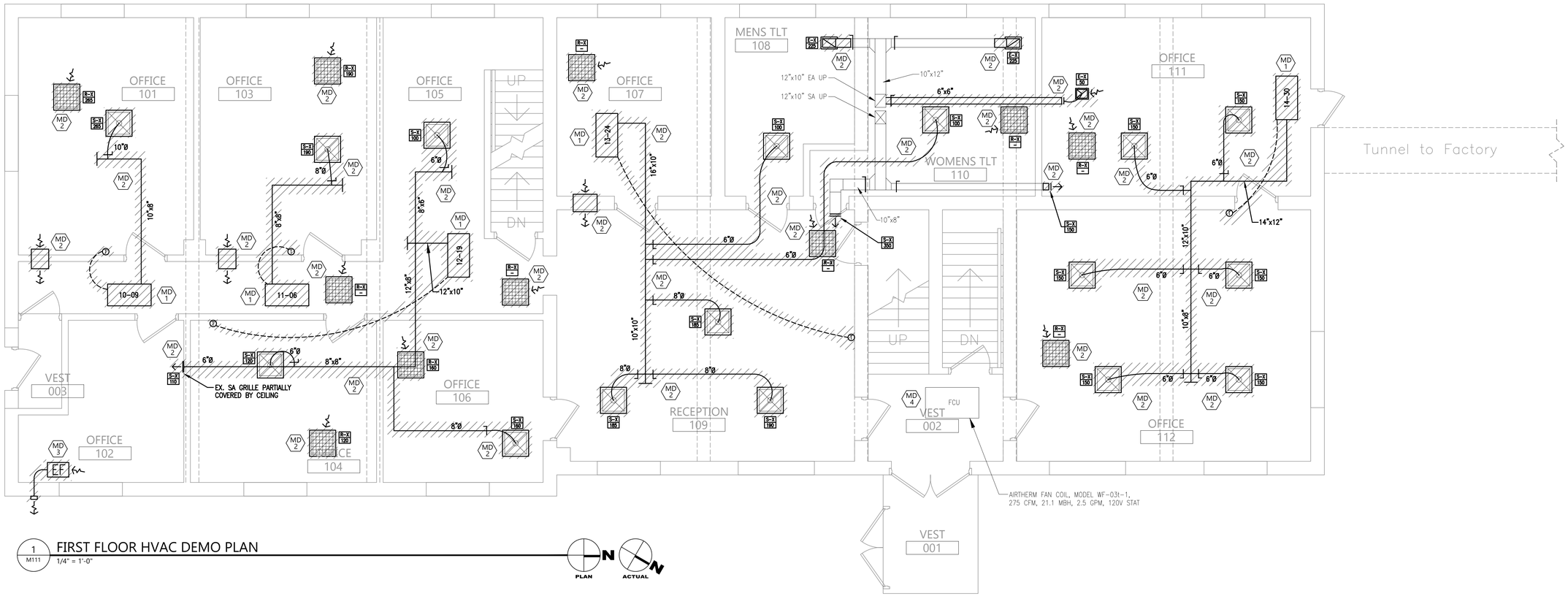
DEMOLITION NOTES:

MD 1 REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED DUCTWORK, INSULATION, CONTROLS, ETC.

MD 2 REMOVE EXISTING DUCTWORK OR GRILLE/REGISTER/DIFFUSER AND ALL ASSOCIATED INSULATION, HANGERS, ETC. AS INDICATED BY HATCH.

MD 3 REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED DUCTWORK, INSULATION, HANGERS, CONTROLS, ETC.

MD 4 EXISTING FAN COIL UNIT TO REMAIN.



1 M111 FIRST FLOOR HVAC DEMO PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

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NORTH DAKOTA

DRAWING TITLE
FIRST FLOOR HVAC DEMO PLAN

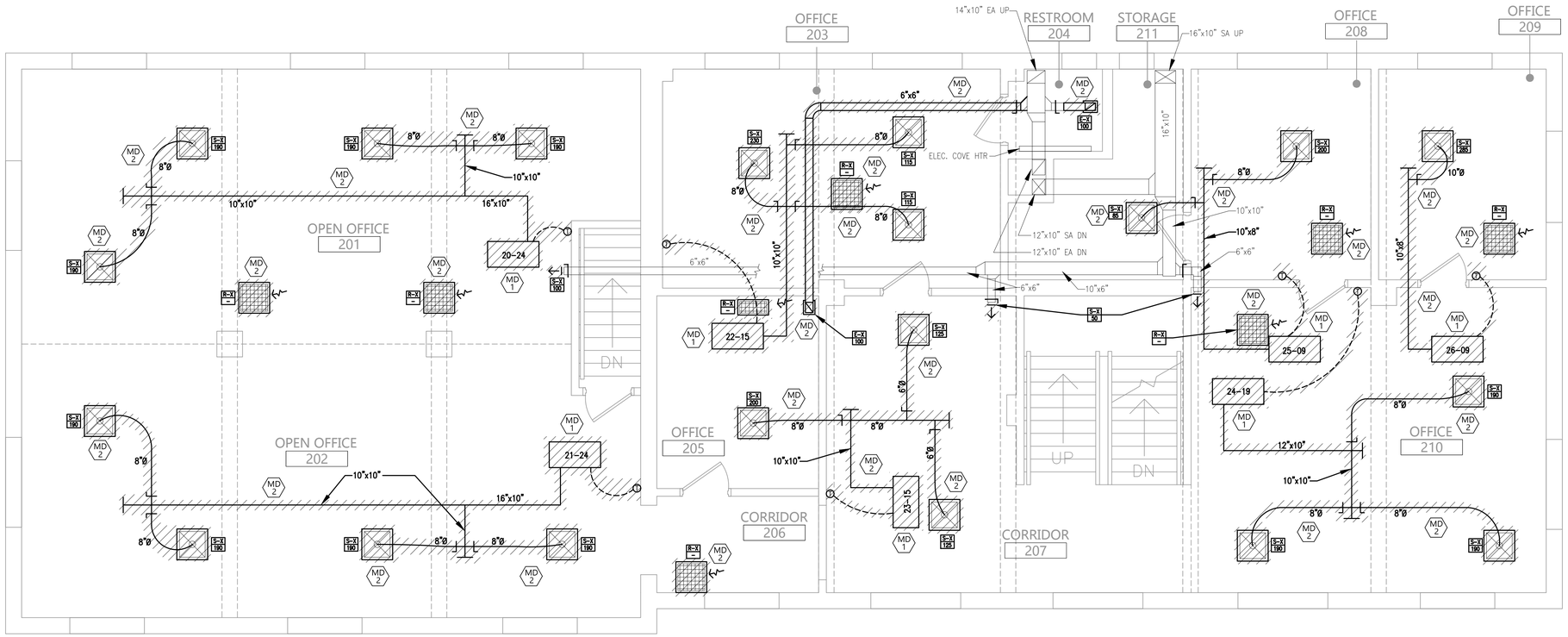
M111

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M111.dwg
Plot Date:12-May-26

DEMOLITION NOTES:

MD 1 REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED DUCTWORK, INSULATION, CONTROLS, ETC.

MD 2 REMOVE EXISTING DUCTWORK OR GRILLE/REGISTER/DIFFUSER AND ALL ASSOCIATED INSULATION, HANGERS, ETC. AS INDICATED BY HATCH.



1 M112 SECOND FLOOR HVAC DEMO PLAN

1/4" = 1'-0"

PLAN ACTUAL

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M112.dwg
Plot Date:12-May-26

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DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
SECOND FLOOR HVAC DEMO PLAN

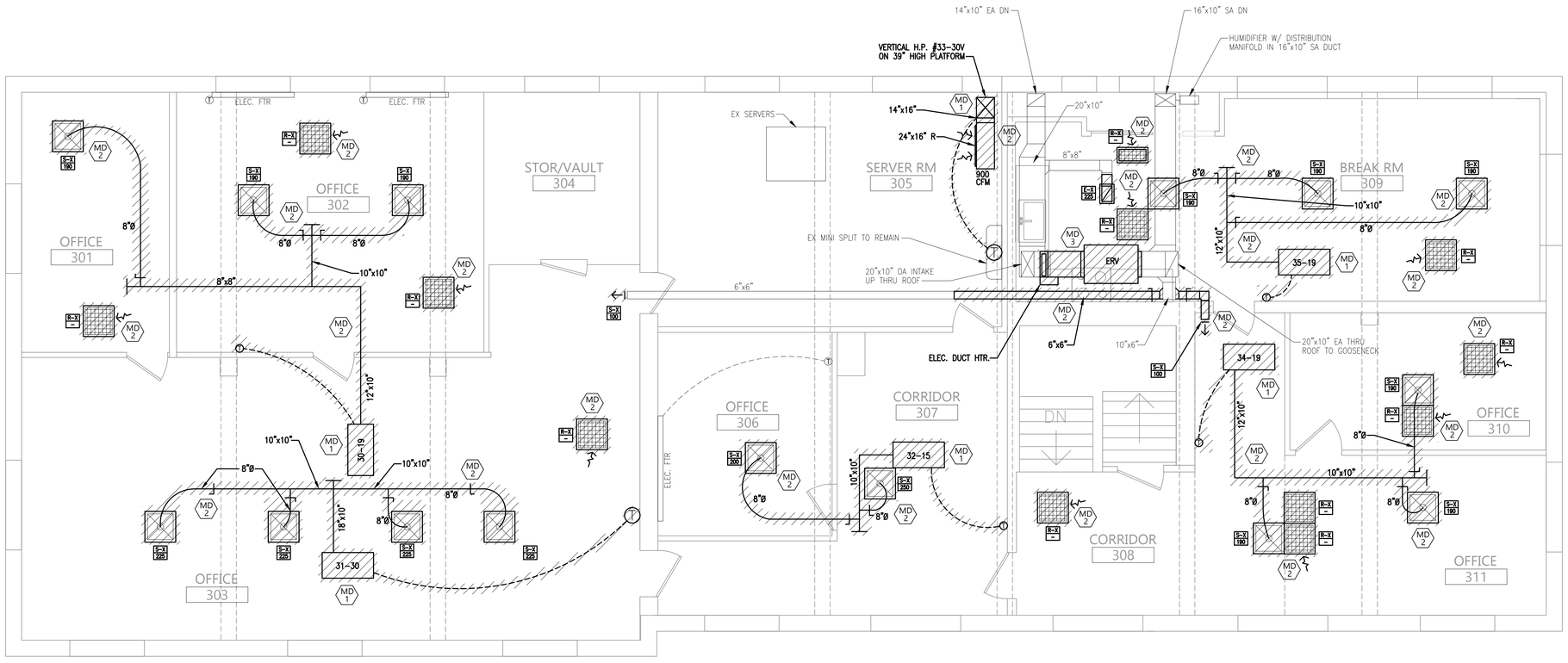
M112

DEMOLITION NOTES:

MD 1 REMOVE EXISTING HEAT PUMP UNIT AND ASSOCIATED DUCTWORK, INSULATION, CONTROLS, ETC.

MD 2 REMOVE EXISTING DUCTWORK OR GRILLE/REGISTER/DIFFUSER AND ALL ASSOCIATED INSULATION, HANGERS, ETC. AS INDICATED BY HATCH.

MD 3 REMOVE EXISTING ENERGY RECOVERY VENTILATOR AND ASSOCIATED ELECTRIC DUCT HEATER, HANGERS, SUPPORTS, CONTROLS, AND DUCTWORK AS INDICATED BY HATCH. PREPARE FOR NEW ERV.



1 M113 THIRD FLOOR HVAC DEMO PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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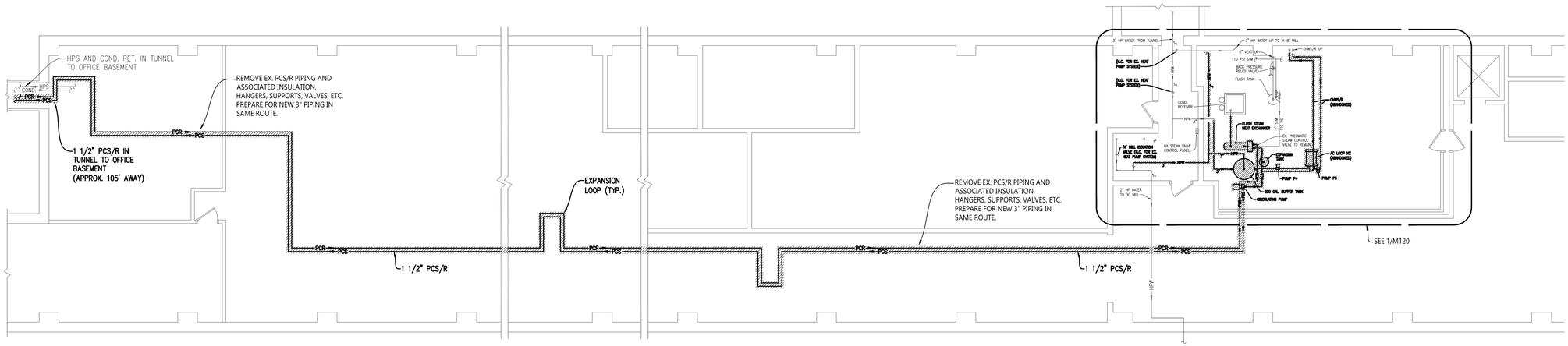
DRAWING TITLE

THIRD FLOOR HVAC DEMO PLAN

M113

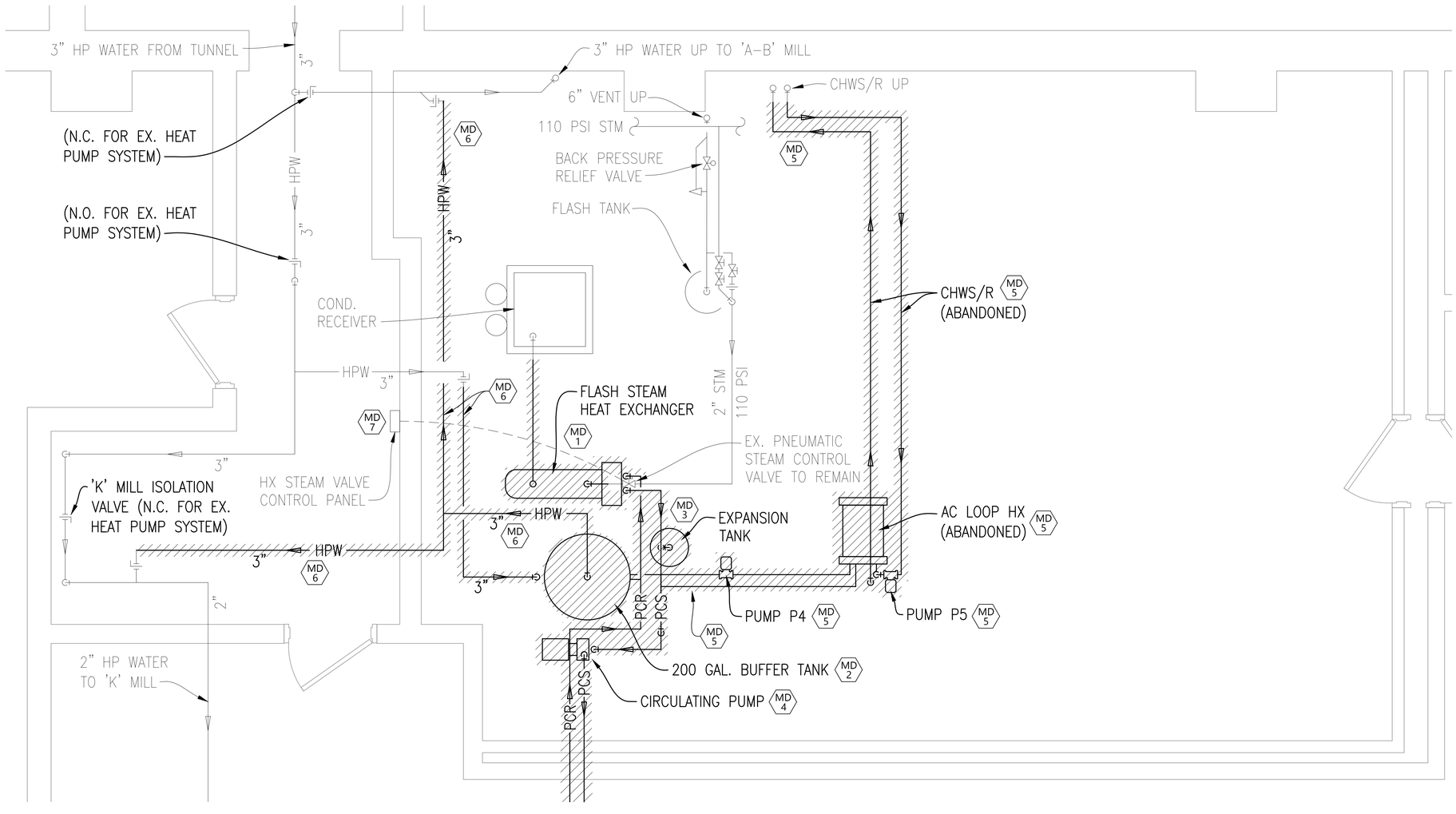
File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M113.dwg
Plot Date:12-May-26



2 / M120 MILL BUILDING No.1 PARTIAL BASEMENT MECHANICAL DEMO PLAN

1/16" = 1'-0"

PLAN ACTUAL



1 / M120 MILL BUILDING No.1 ENLARGED MECHANICAL ROOM DEMO PLAN

1/4" = 1'-0"

PLAN ACTUAL

DEMOLITION NOTES:

MD 1 REMOVE EX. HEAT EXCHANGER AND ASSOCIATED INSULATION, SUPPORT STAND, AND STEAM, CONDENSATE, & PCS/R PIPING AS INDICATED BY HATCH. EX. PNEUMATIC CONTROL VALVE TO REMAIN. REFER TO DETAIL 2/M601.

MD 2 REMOVE EX. 200 GALLON BUFFER TANK AND ASSOCIATED INSULATION, PIPING, VALVES, ETC. AS INDICATED BY HATCH. REFER TO DETAILS 1/M601 AND 2/M601.

MD 3 REMOVE EX. EXPANSION TANK AND ASSOCIATED PIPING, VALVES, ETC. AS INDICATED BY HATCH. REFER TO DETAIL 2/M601.

MD 4 REMOVE EX. CIRCULATING PUMP AND ASSOCIATED PIPING, VALVES, CONTROLS, ETC. AS INDICATED BY HATCH. REFER TO DETAIL 2/M601.

MD 5 REMOVE EX. ABANDONED CHILLED WATER LOOP SECTION INCLUDING: HEAT EXCHANGER, CIRCULATING PUMPS P-4 & P-5, CHILLED WATER PIPING, AND ALL ASSOCIATED INSULATION, HANGERS, SUPPORTS, VALVES, AND CONTROLS. CAP EX. ABANDONED CHILLED WATER PIPING NEAR THE VERTICAL RISERS TO FIRST FLOOR. REFER TO DETAIL 2/M601.

MD 6 REMOVE EX. HPW (HIGH-PRESSURE WATER) PIPING AND ASSOCIATED INSULATION, HANGERS, SUPPORTS, VALVES, ETC. AS INDICATED BY HATCH. CAP PIPING AS REQUIRED. REFER TO DETAIL 1/M601.

MD 7 TEMPERATURE CONTROLS CONTRACTOR TO CONNECT TO EXISTING PNEUMATIC CONTROL VALVE RELAY TO TAKE OVER CONTROL OF EXISTING STEAM VALVE. EXISTING PNEUMATIC STEAM CONTROL VALVE TO BE REUSED.

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DRAWING TITLE
MILL BUILDING No. 1 PARTIAL BASEMENT MECHANICAL DEMO PLANS

M120

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M120.dwg
Plot Date:12-May-26

GENERAL NOTES:

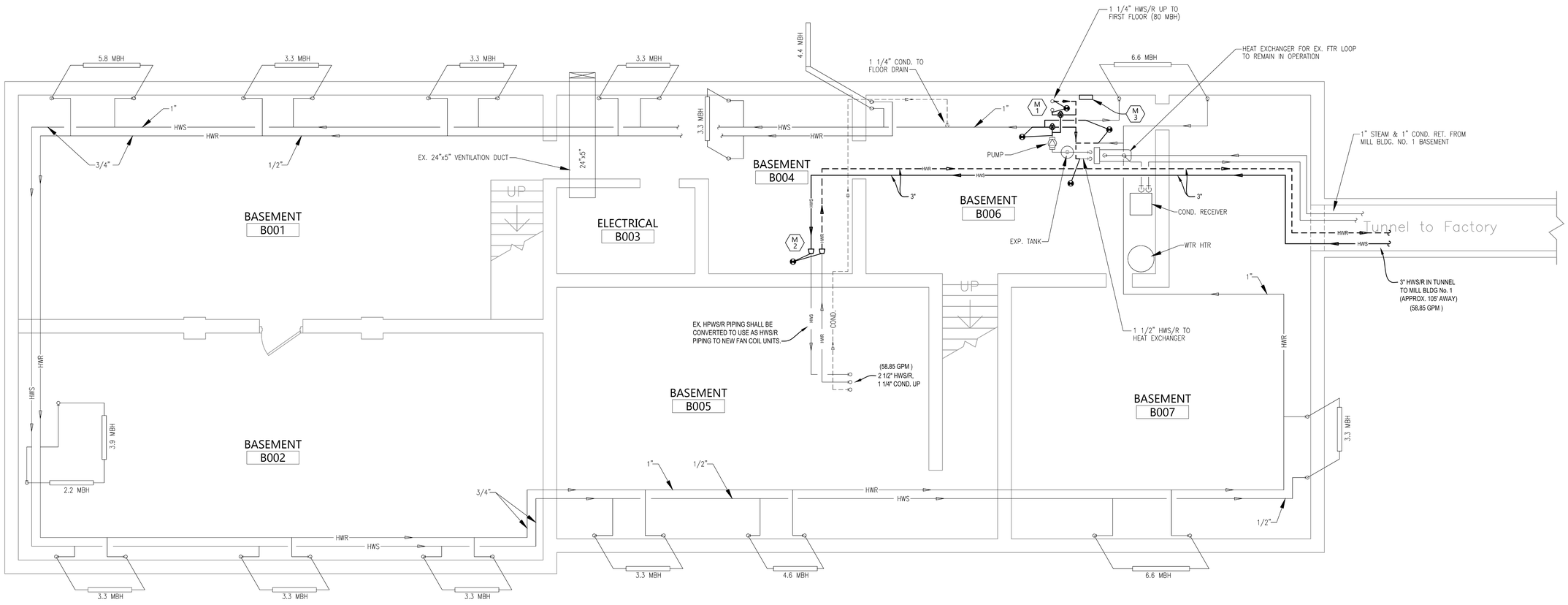
1. FOR ALL REUSED HPWS/R PIPING: REPAIR OR REPLACE EXISTING INSULATION, HANGERS, AND SUPPORTS WHEREVER REQUIRED. RE-LABEL FROM "HPWS / HPWR" TO "HWS / HWR" AS REQUIRED. ALL REUSED PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO BEING PLACED BACK INTO SERVICE.
2. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M1 MODIFY EXISTING FTR LOOP PIPING AS REQUIRED TO SEPARATE LOOP INTO TWO ZONES (FIRST FLOOR AND SECOND FLOOR). PROVIDE NEW PIPING AND CONTROL VALVES AS SHOWN. REFER TO DETAIL 4/M602.

M2 CONNECT 3" HWS/R PIPING TO EXISTING 2-1/2" PIPING AS REQUIRED. REFER TO DETAIL 3/M602. EXISTING HPWS/R PIPING SHALL BE CONVERTED TO USE AS HWS/R PIPING TO NEW FAN COIL UNITS.

M3 APPROXIMATE LOCATION OF MAIN HVAC CONTROLS PANEL, COORDINATE WITH OWNER AND EXISTING CONDITIONS.



1 M200 BASEMENT MECHANICAL PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M200.dwg
Plot Date:12-May-26

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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
BASEMENT MECHANICAL PLAN

M200

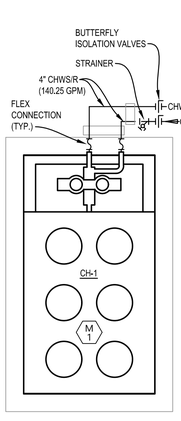
GENERAL NOTES:

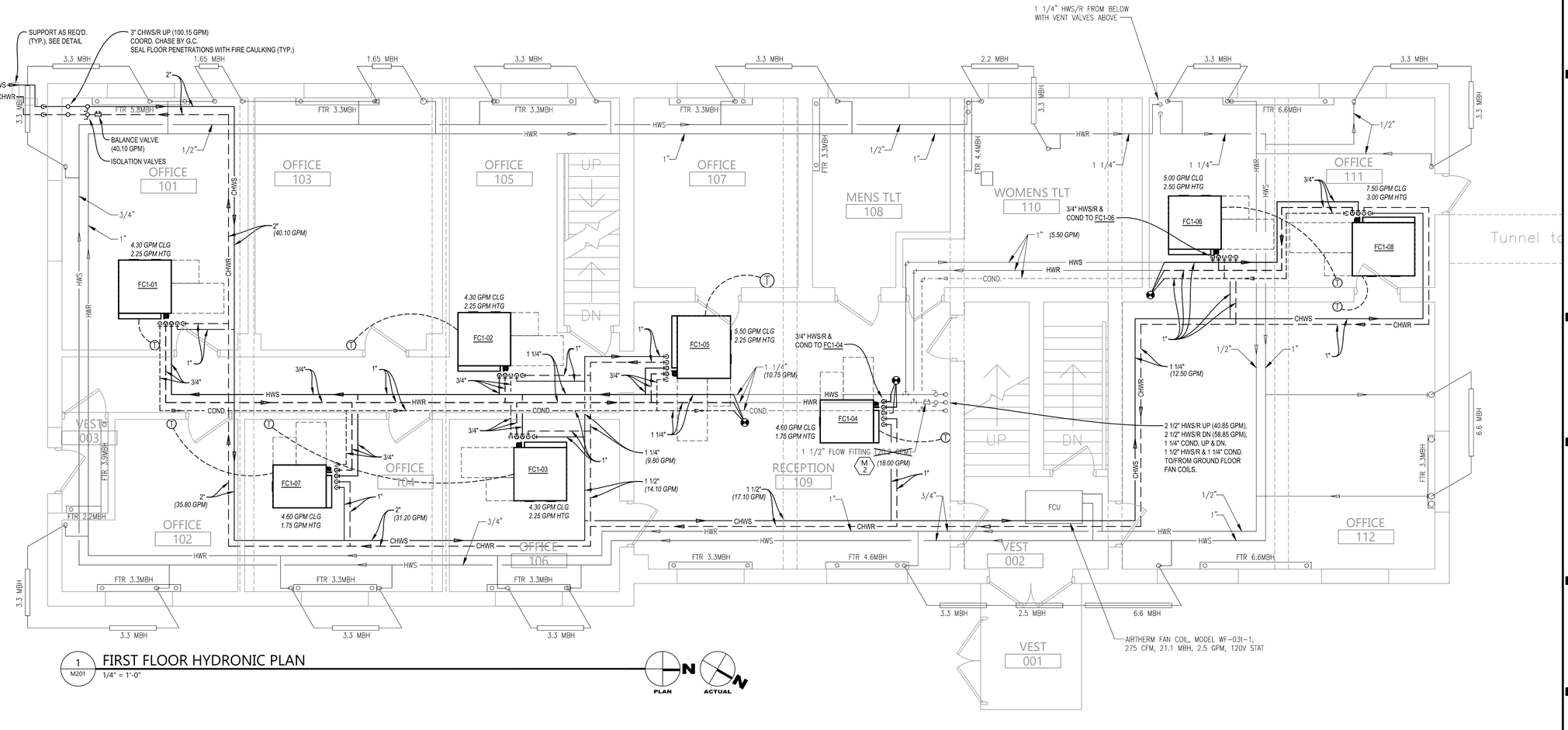
1. FOR ALL REUSED HPWS/R PIPING: REPAIR OR REPLACE EXISTING INSULATION, HANGERS, AND SUPPORTS WHEREVER REQUIRED. RE-LABEL FROM "HPWS / HPWR" TO "HWS / HWR" AS REQUIRED. ALL REUSED PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO BEING PLACED BACK INTO SERVICE.
2. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
3. NEW CEILINGS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR. NEW CEILINGS TO BE INSTALLED AT APPROXIMATELY THE SAME HEIGHT AS EXISTING CEILINGS. COORDINATE WITH G.C. TO LOWER CEILINGS AS NECESSARY IF MORE PLENUM SPACE IS REQUIRED IN CERTAIN AREAS. ANY NEW CEILINGS LOWER THAN 8'-0" A.F.F. MUST GET PRIOR APPROVAL FROM OWNER/ARCHITECT.
4. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M1 PROVIDE PACKAGED CHILLER CH-1 AS SCHEDULED. MOUNT UNIT ON CONCRETE PAD (BY M.C.) AS RECOMMENDED BY MFGR. COORDINATE EXACT LOCATION AND DIMENSIONS.

M2 RELABEL EXISTING BALANCING VALVE GPM SETTINGS AS REQUIRED.





1 M201 FIRST FLOOR HYDRONIC PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M201.dwg
Plot Date:12-May-26

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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
FIRST FLOOR HYDRONIC PLAN

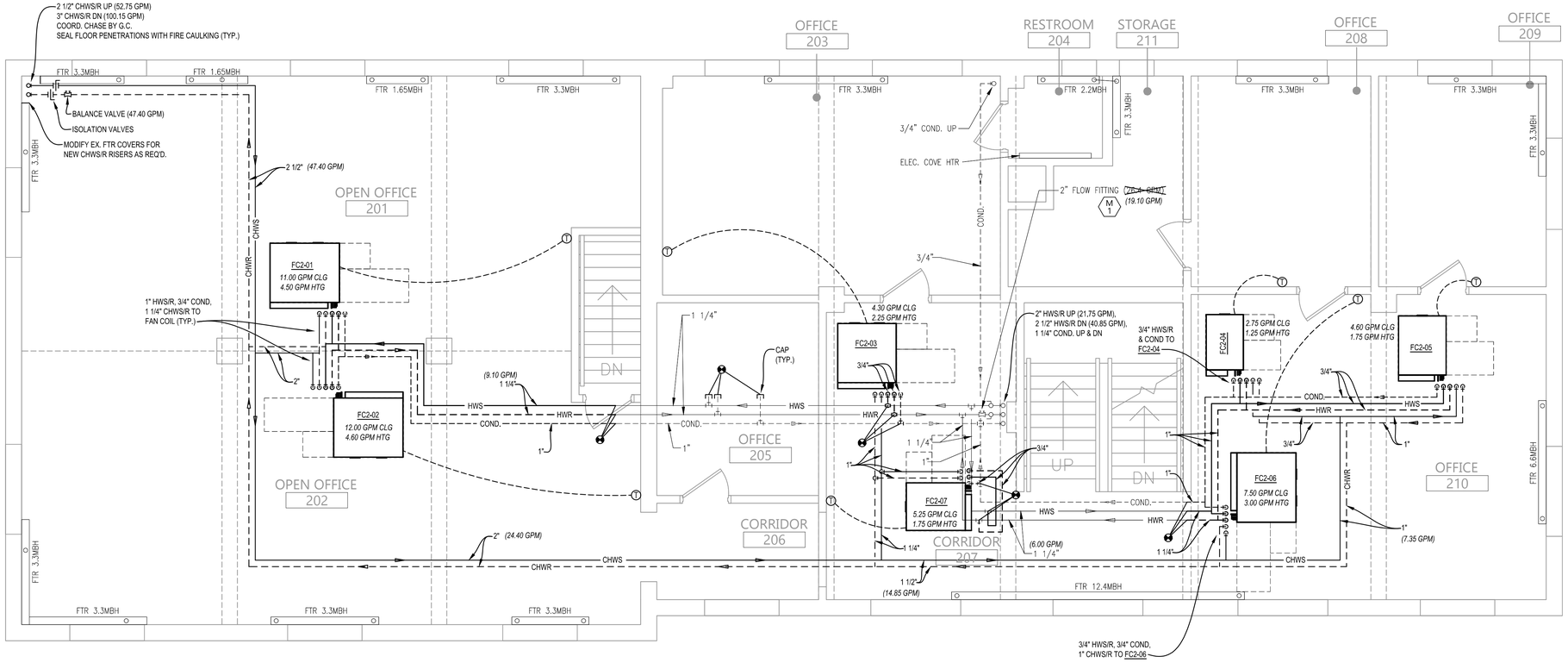
M201

GENERAL NOTES:

1. FOR ALL REUSED HPWS/R PIPING: REPAIR OR REPLACE EXISTING INSULATION, HANGERS, AND SUPPORTS WHEREVER REQUIRED. RE-LABEL FROM "HPWS / HPWR" TO "HWS / HWR" AS REQUIRED. ALL REUSED PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO BEING PLACED BACK INTO SERVICE.
2. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
3. NEW CEILINGS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR. NEW CEILINGS TO BE INSTALLED AT APPROXIMATELY THE SAME HEIGHT AS EXISTING CEILINGS. COORDINATE WITH G.C. TO LOWER CEILINGS AS NECESSARY IF MORE PLENUM SPACE IS REQUIRED IN CERTAIN AREAS. ANY NEW CEILINGS LOWER THAN 8'-0" A.F.F. MUST GET PRIOR APPROVAL FROM OWNER/ARCHITECT.
4. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M 1 — RELABEL EXISTING BALANCING VALVE GPM SETTINGS AS REQUIRED.



1 / M202 SECOND FLOOR HYDRONIC PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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DRAWING TITLE
SECOND FLOOR HYDRONIC PLAN

M202

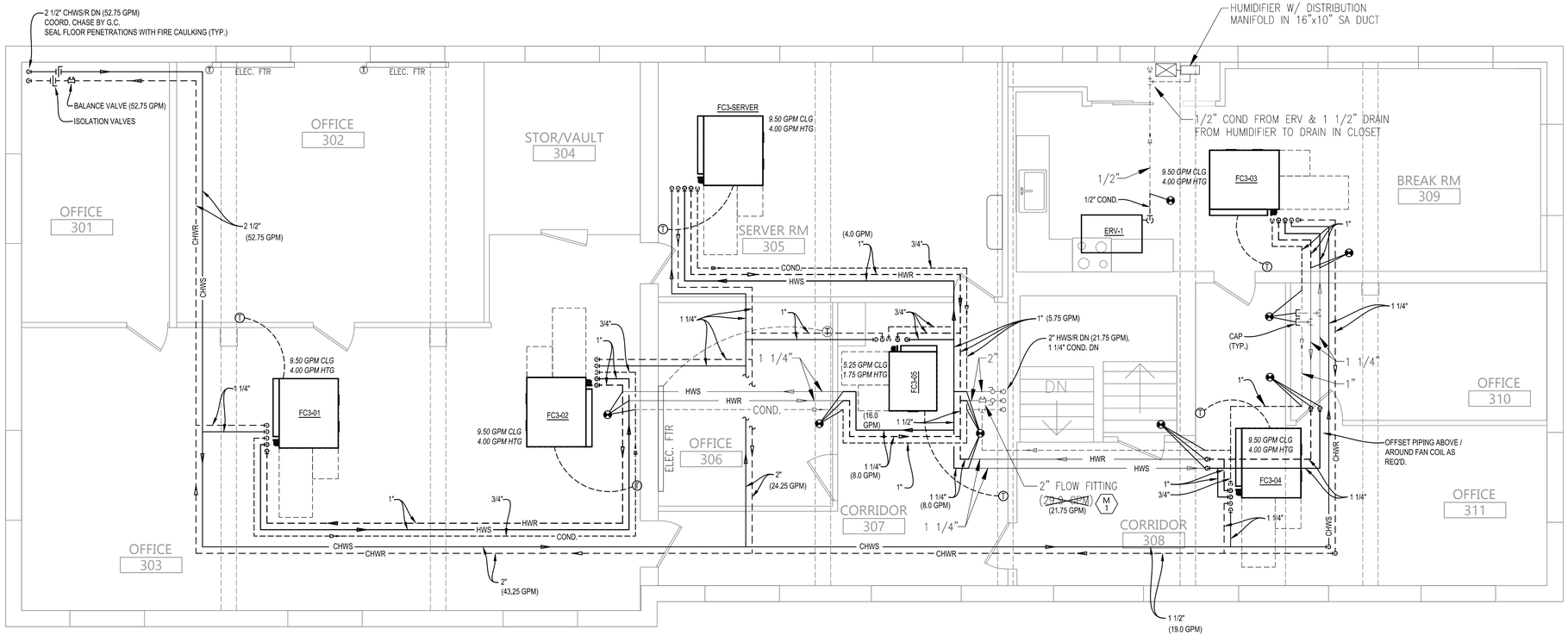
File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M202.dwg
Plot Date:12-May-26

GENERAL NOTES:

1. FOR ALL REUSED HPWS/R PIPING: REPAIR OR REPLACE EXISTING INSULATION, HANGERS, AND SUPPORTS WHEREVER REQUIRED. RE-LABEL FROM "HPWS / HPWR" TO "HWS / HWR" AS REQUIRED. ALL REUSED PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO BEING PLACED BACK INTO SERVICE.
2. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
3. NEW CEILINGS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR. NEW CEILINGS TO BE INSTALLED AT APPROXIMATELY THE SAME HEIGHT AS EXISTING CEILINGS. COORDINATE WITH G.C. TO LOWER CEILINGS AS NECESSARY IF MORE PLENUM SPACE IS REQUIRED IN CERTAIN AREAS. ANY NEW CEILINGS LOWER THAN 8'-0" A.F.F. MUST GET PRIOR APPROVAL FROM OWNER/ARCHITECT.
4. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M 1 — RELABEL EXISTING BALANCING VALVE GPM SETTINGS AS REQUIRED.



1 / M203 THIRD FLOOR HYDRONIC PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrade\Drawings\20255550-M203.dwg
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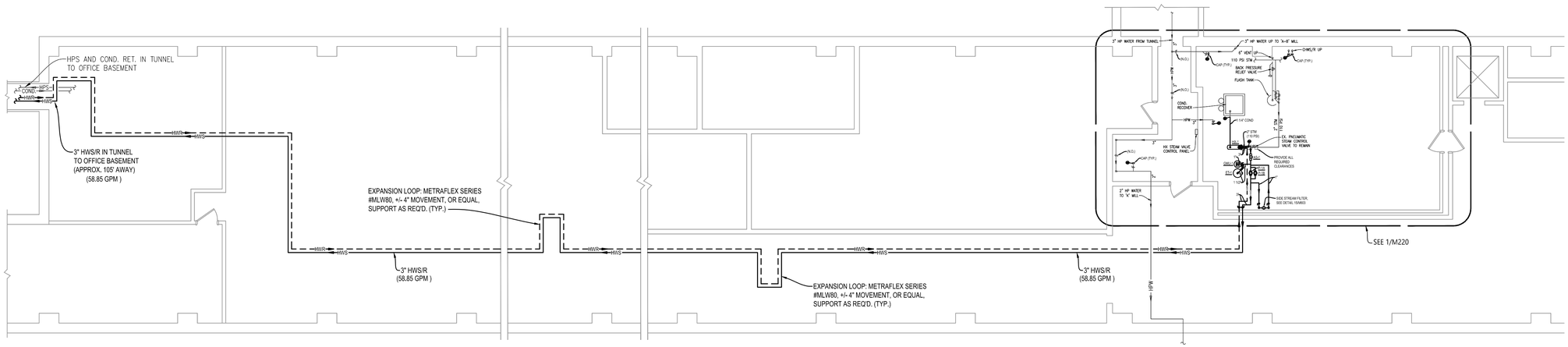
NORTH DAKOTA

DRAWING TITLE
THIRD FLOOR HYDRONIC PLAN

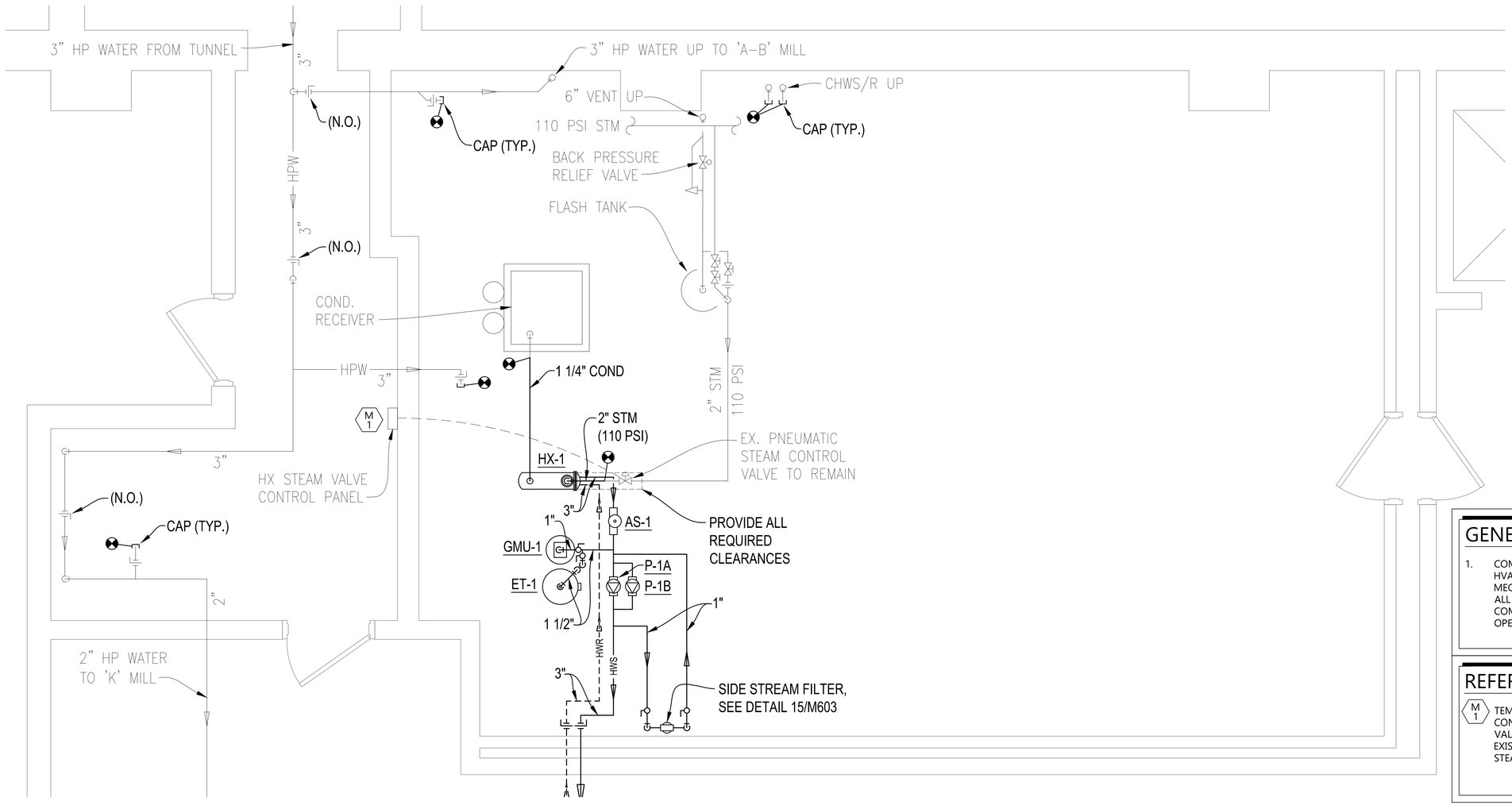
M203



2 M220 MILL BUILDING No.1 PARTIAL BASEMENT MECHANICAL PLAN

1/16" = 1'-0"

PLAN ACTUAL



1 M220 MILL BUILDING No.1 ENLARGED MECHANICAL ROOM PLAN

1/4" = 1'-0"

PLAN ACTUAL

GENERAL NOTES:

1. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M 1 TEMPERATURE CONTROLS CONTRACTOR TO CONNECT TO EXISTING PNEUMATIC CONTROL VALVE RELAY TO TAKE OVER CONTROL OF EXISTING STEAM VALVE. EXISTING PNEUMATIC STEAM CONTROL VALVE TO BE REUSED.

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PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

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STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: MCH
CHECKED BY: DJL

STAMP

REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

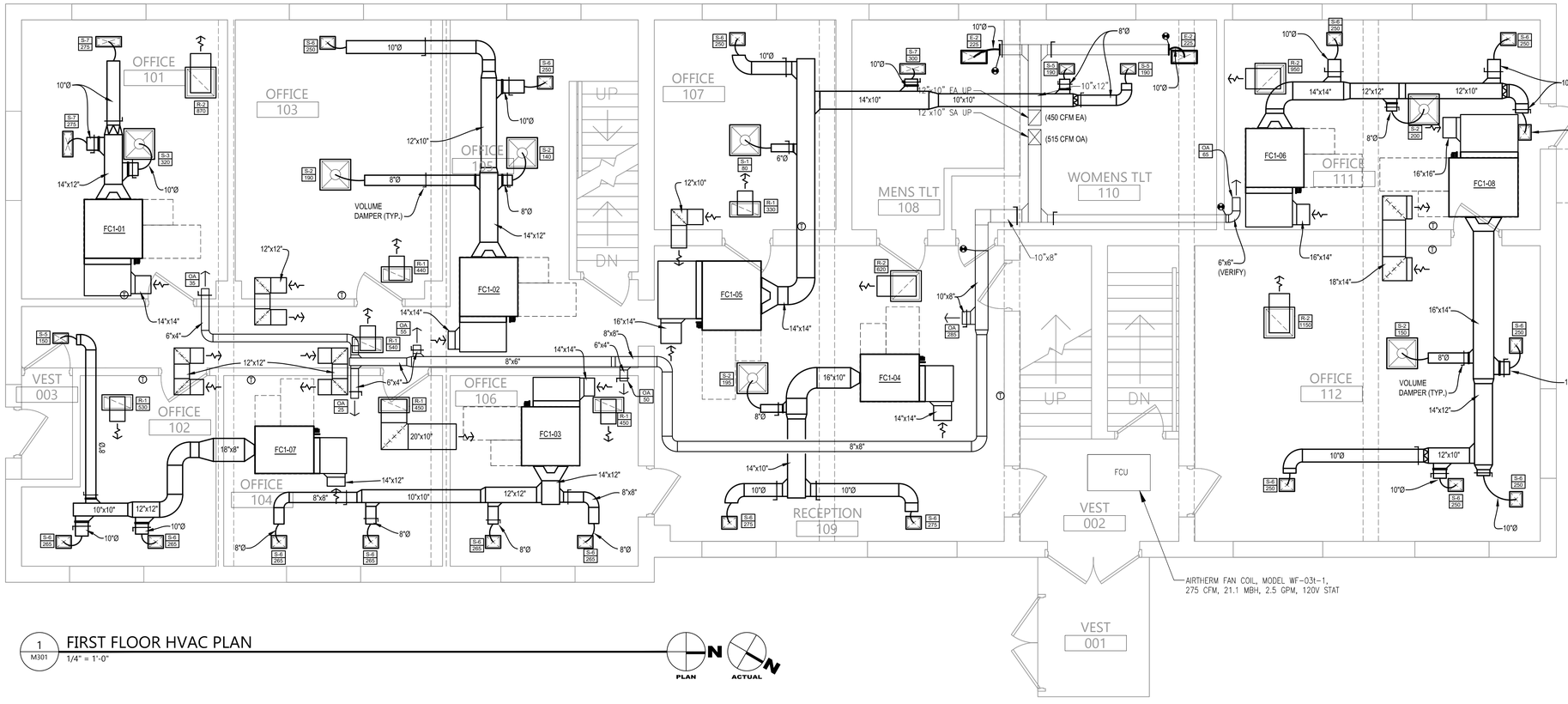
DRAWING TITLE
MILL BUILDING No. 1 PARTIAL BASEMENT MECHANICAL PLANS

M220

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M220.dwg
Plot Date:12-May-26

GENERAL NOTES:

1. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
2. NEW CEILINGS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR. NEW CEILINGS TO BE INSTALLED AT APPROXIMATELY THE SAME HEIGHT AS EXISTING CEILINGS. COORDINATE WITH G.C. TO LOWER CEILINGS AS NECESSARY IF MORE PLENUM SPACE IS REQUIRED IN CERTAIN AREAS. ANY NEW CEILINGS LOWER THAN 8'-0" A.F.F. MUST GET PRIOR APPROVAL FROM OWNER/ARCHITECT.
3. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.



1 M301 FIRST FLOOR HVAC PLAN
1/4" = 1'-0"

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TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
FIRST FLOOR HVAC PLAN

M301

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M301.dwg
Plot Date:12-May-26

GENERAL NOTES:

1. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
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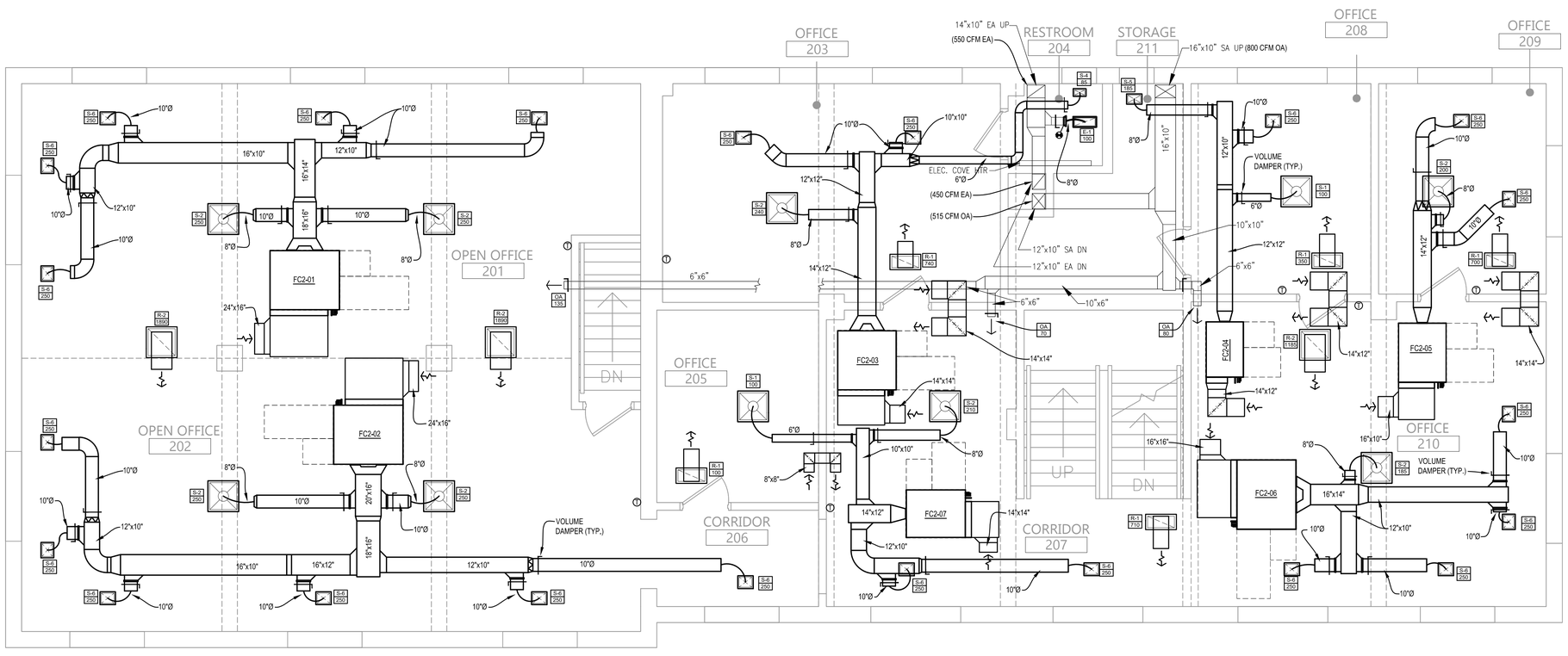

1 M302 SECOND FLOOR HVAC PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M302.dwg
Plot Date:12-May-26

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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
SECOND FLOOR HVAC PLAN

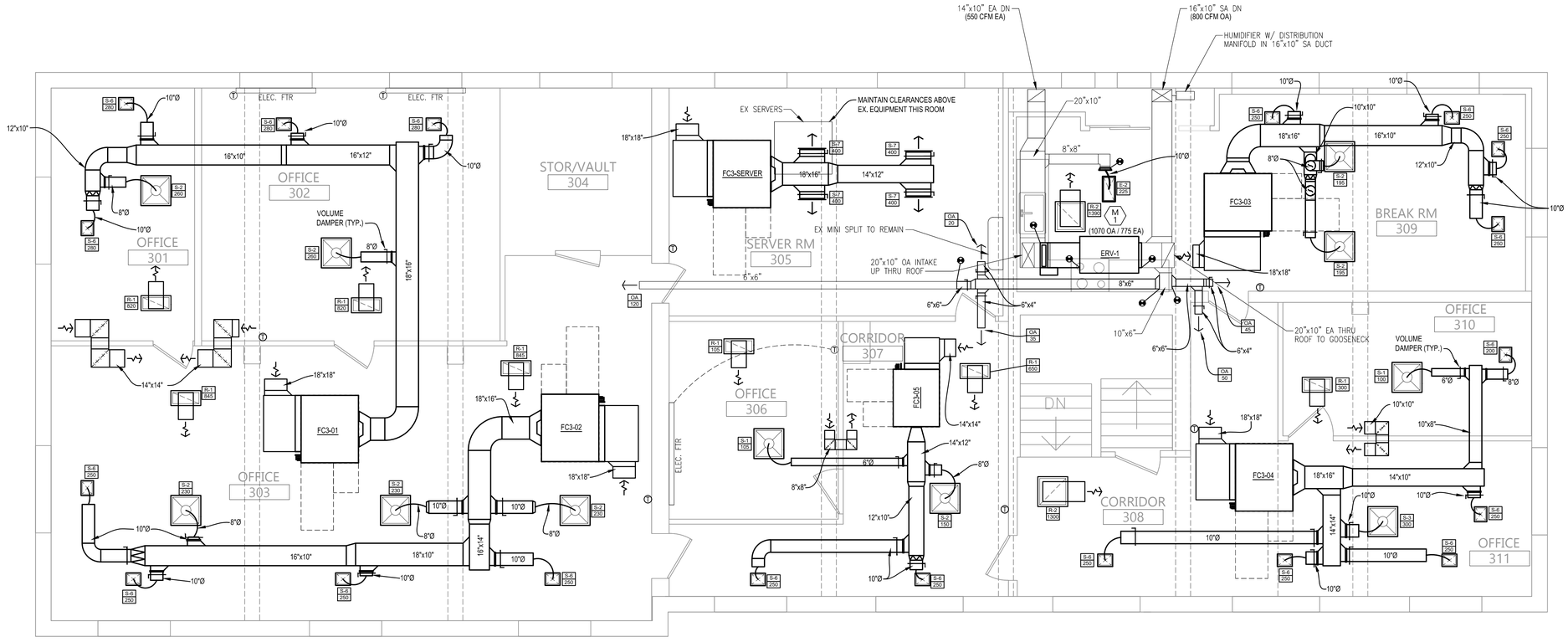
M302

GENERAL NOTES:

1. PROVIDE ALL REQUIRED CLEARANCES AROUND FAN COILS SO THAT FILTERS, COILS, AND CONTROLS CAN BE EASILY ACCESSED AND MAINTAINED.
2. NEW CEILINGS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR. NEW CEILINGS TO BE INSTALLED AT APPROXIMATELY THE SAME HEIGHT AS EXISTING CEILINGS. COORDINATE WITH G.C. TO LOWER CEILINGS AS NECESSARY IF MORE PLENUM SPACE IS REQUIRED IN CERTAIN AREAS. ANY NEW CEILINGS LOWER THAN 8'-0" A.F.F. MUST GET PRIOR APPROVAL FROM OWNER/ARCHITECT.
3. COMPLETE CONTROLS FOR THE ENTIRE NEW HVAC SYSTEM ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. THIS INCLUDES ALL CONTROL WIRING, CONDUIT, AND OTHER COMPONENTS AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

REFERENCE NOTES:

M 1 PROVIDE ERV-1 AND ELECTRIC DUCT HEATER. CONNECT TO EXISTING DUCTWORK AS REQUIRED. SEE DETAIL 5/M603.



1 M303 THIRD FLOOR HVAC PLAN

1/4" = 1'-0"

PLAN ACTUAL

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DATE 05/13/2026
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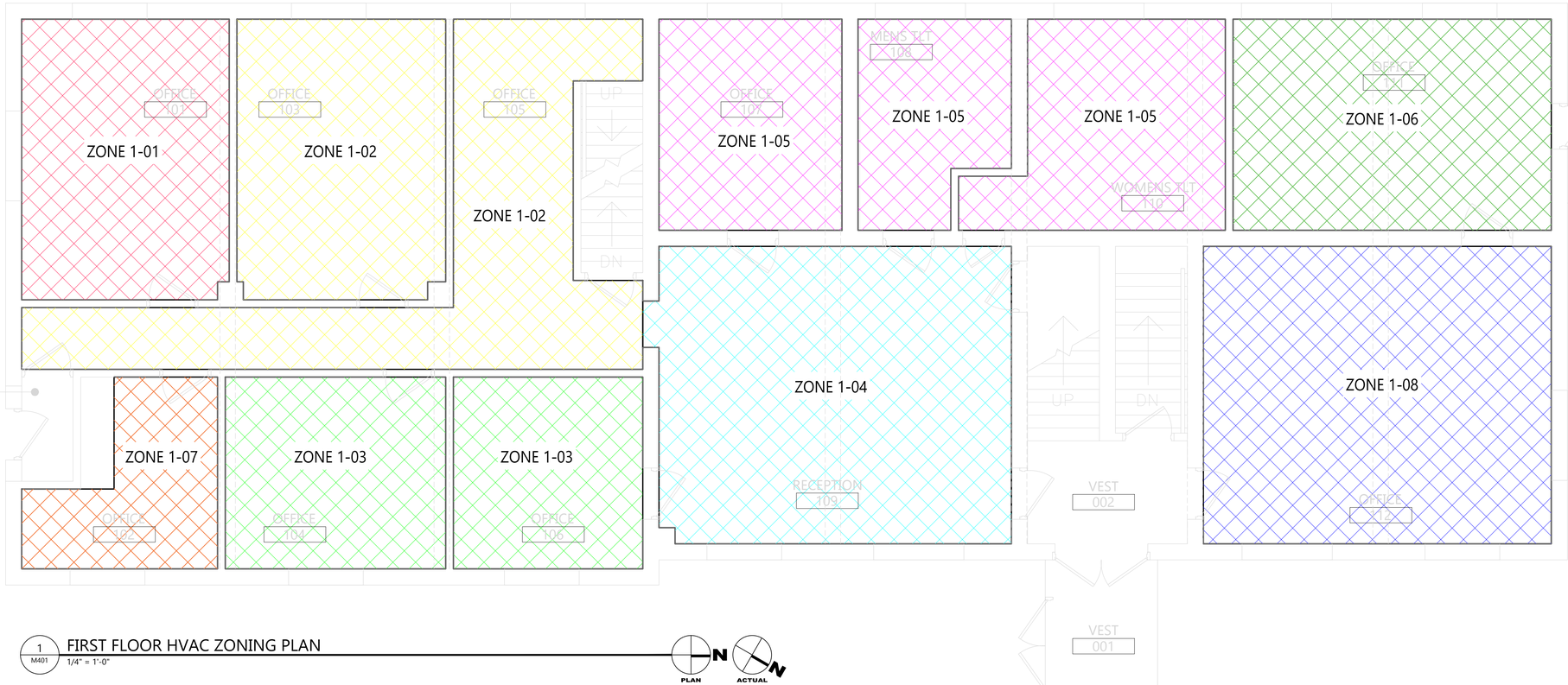
DRAWING TITLE

THIRD FLOOR HVAC PLAN

M303

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M303.dwg
Plot Date:12-May-26



1 M401 FIRST FLOOR HVAC ZONING PLAN

1/4" = 1'-0"

PLAN ACTUAL

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M401.dwg
Plot Date:12-May-26

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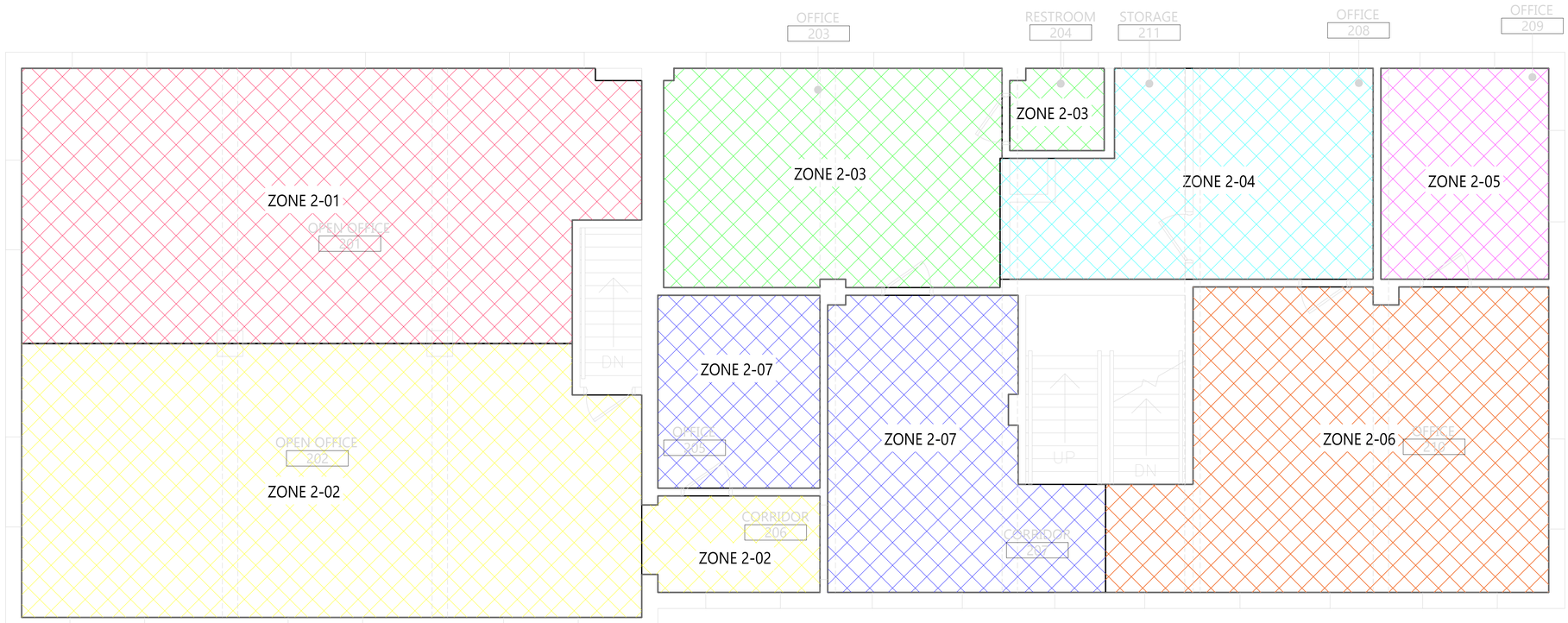
DRAWING TITLE
FIRST FLOOR HVAC ZONING PLAN

M401



1 M402 SECOND FLOOR HVAC ZONING PLAN

1/4" = 1'-0"

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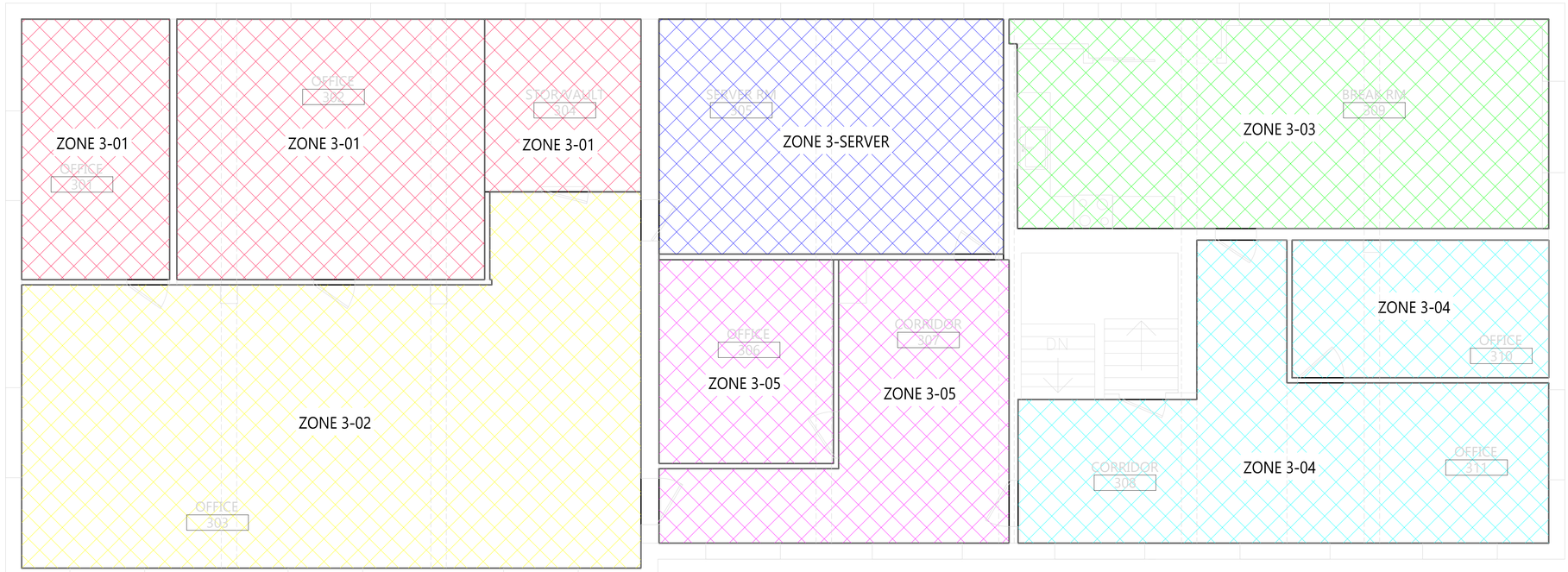
DRAWING TITLE
SECOND FLOOR HVAC ZONING PLAN

M402

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M402.dwg
Plot Date:12-May-26



1 M403 THIRD FLOOR HVAC ZONING PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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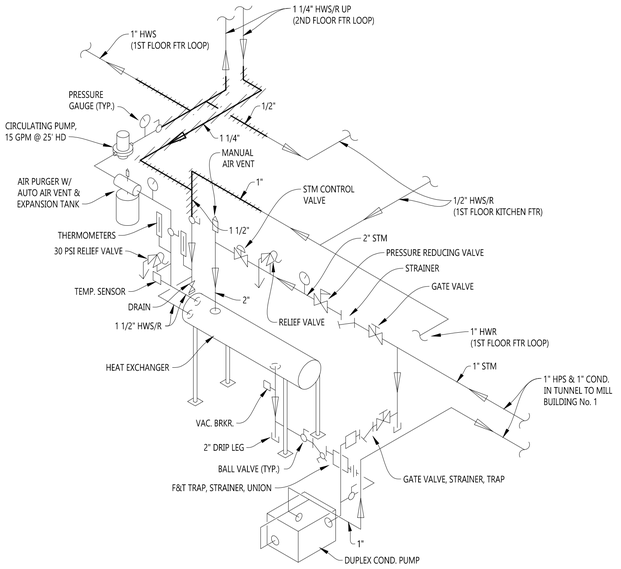
DRAWING TITLE
THIRD FLOOR HVAC ZONING PLAN

M403

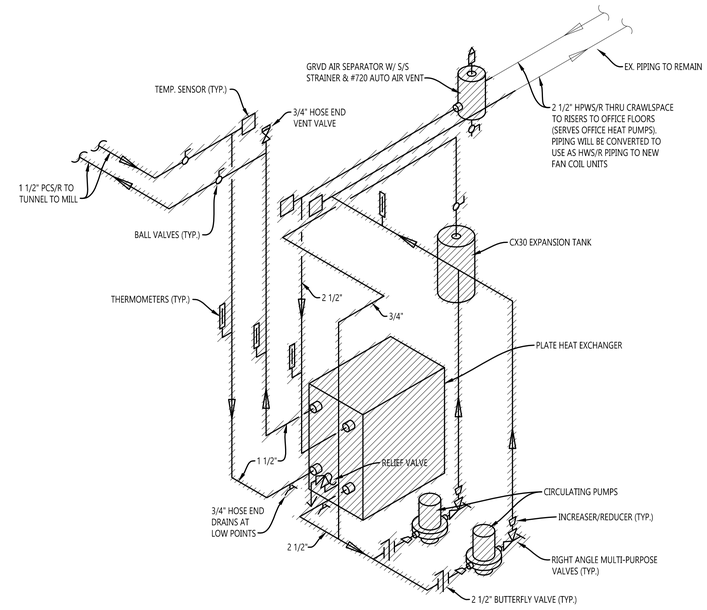
File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M403.dwg
Plot Date:12-May-26



4 M601 OFFICE BUILDING FTR LOOP HEAT EXCHANGER ISOMETRIC - DEMO

NOT TO SCALE

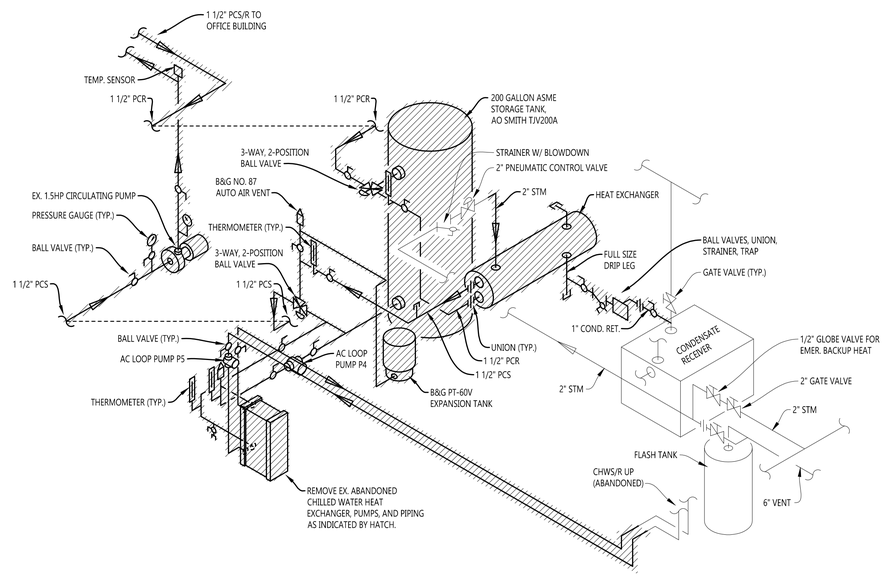
LOOKING PLAN NORTH-WEST



3 M601 OFFICE BUILDING HPWS/R HEAT EXCHANGER ISOMETRIC - DEMO

NOT TO SCALE

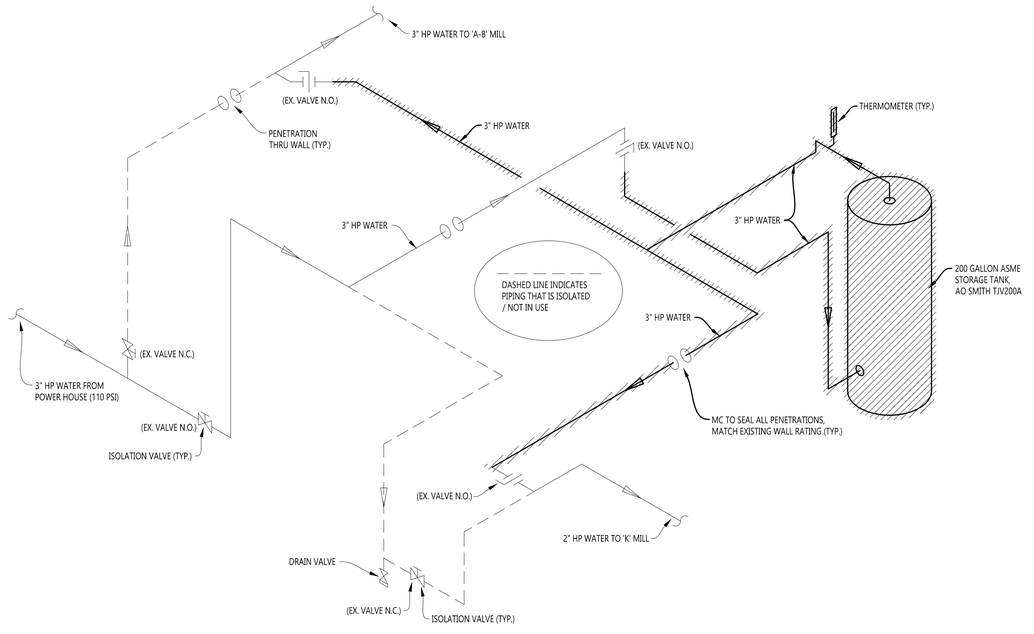
LOOKING PLAN SOUTH-EAST



2 M601 MILL BUILDING No. 1 STEAM HEAT EXCHANGER ISOMETRIC - DEMO

NOT TO SCALE

LOOKING PLAN SOUTH-WEST



1 M601 MILL BUILDING No. 1 HP WATER ISOMETRIC - DEMO

NOT TO SCALE

LOOKING PLAN NORTH-EAST

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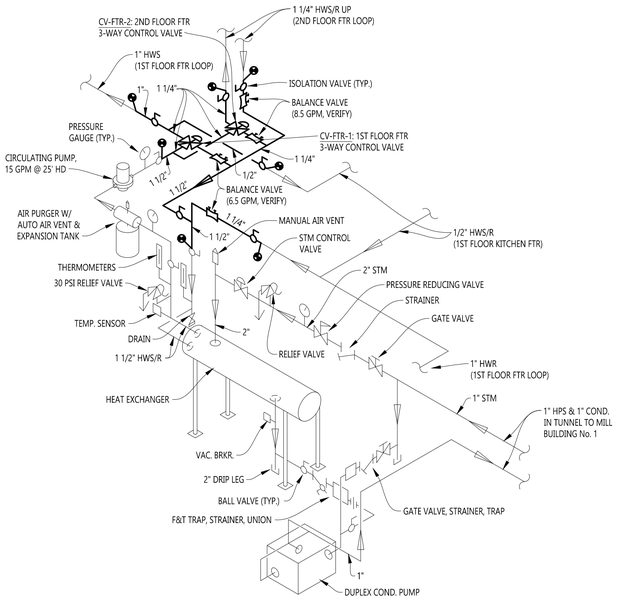
DRAWING TITLE
MECHANICAL ISOMETRICS - DEMO

M601

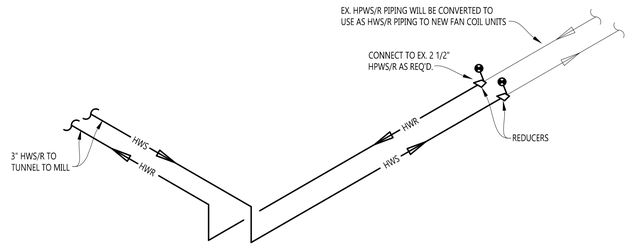
File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M601.dwg
Plot Date:12-May-26

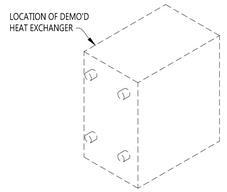


4 M602 OFFICE BUILDING FTR LOOP HEAT EXCHANGER ISOMETRIC

NOT TO SCALE

LOOKING PLAN NORTH-WEST

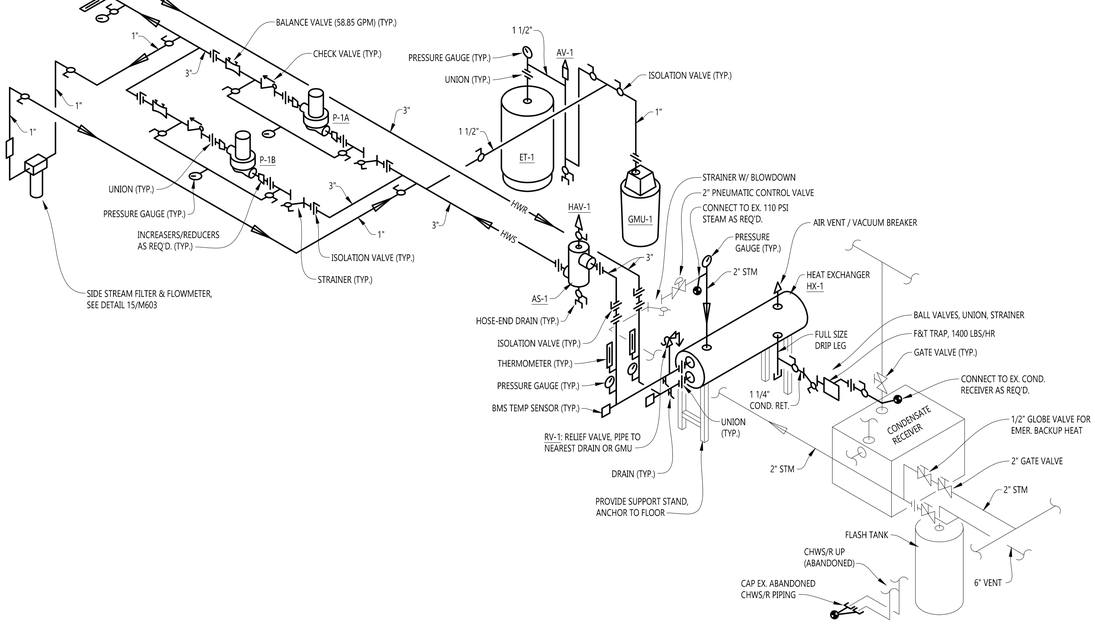




3 M602 OFFICE BUILDING HPWS/R HEAT EXCHANGER ISOMETRIC

NOT TO SCALE

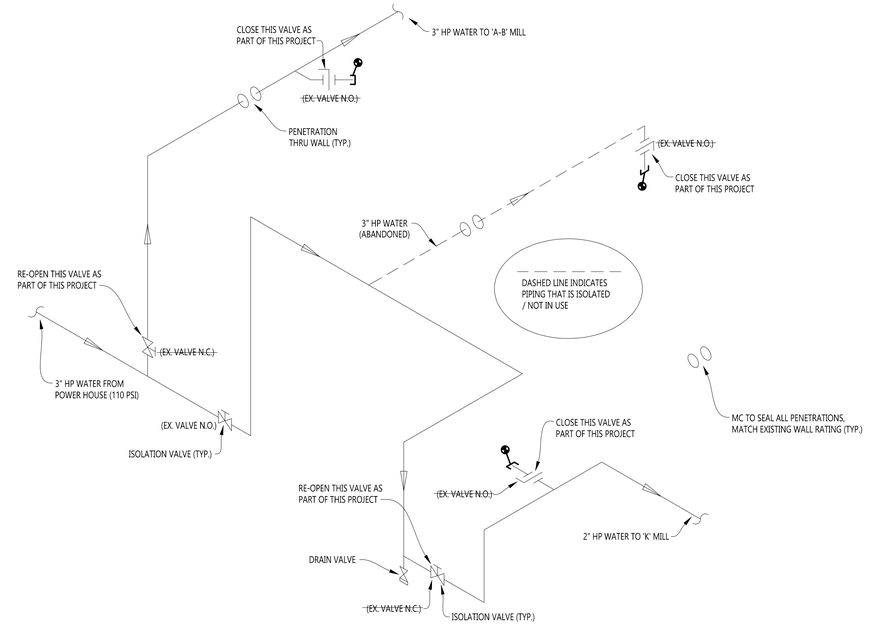
LOOKING PLAN SOUTH-EAST



2 M602 MILL BUILDING No. 1 STEAM HEAT EXCHANGER ISOMETRIC

NOT TO SCALE

LOOKING PLAN SOUTH-WEST



1 M602 MILL BUILDING No. 1 HP WATER ISOMETRIC

NOT TO SCALE

LOOKING PLAN NORTH-EAST

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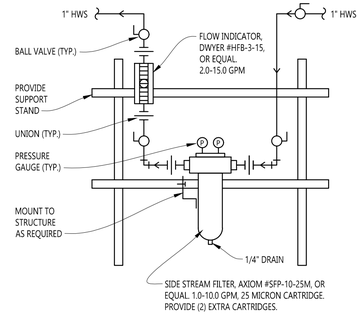
NORTH DAKOTA

DRAWING TITLE

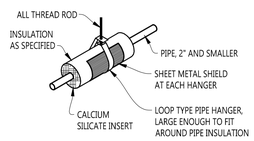
MECHANICAL ISOMETRICS

M602

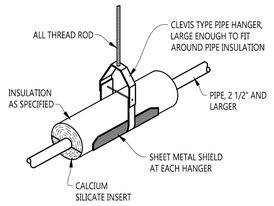
File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M602.dwg
Plot Date:12-May-26



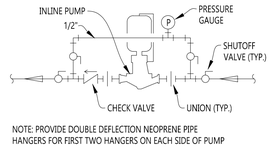
15 M603 SIDE STREAM FILTER DETAIL
NOT TO SCALE



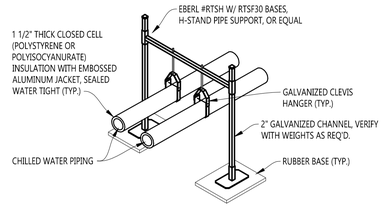
14 M603 INTERIOR HANGER - SMALL PIPE
NOT TO SCALE



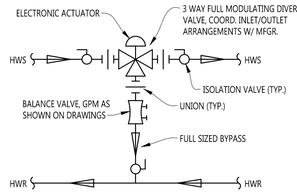
13 M603 INTERIOR HANGER - LARGE PIPE
NOT TO SCALE



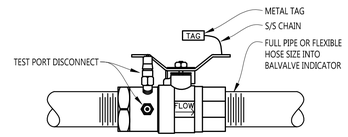
12 M603 TYPICAL INLINE PUMP DETAIL
NOT TO SCALE



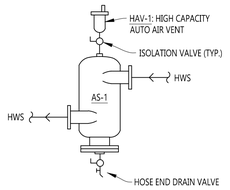
11 M603 EXTERIOR PIPING SUPPORT DETAIL
NOT TO SCALE



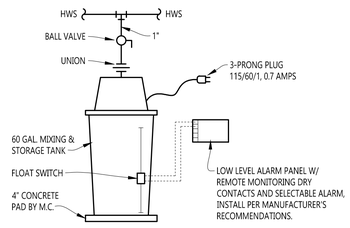
10 M603 THREE-WAY VALVE DETAIL
NOT TO SCALE



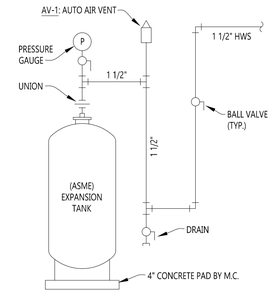
9 M603 BALL VALVE VENTURI DETAIL
NOT TO SCALE



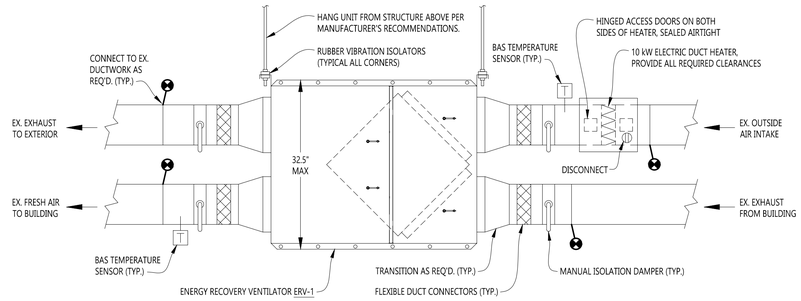
8 M603 AIR SEPARATOR DETAIL
NOT TO SCALE



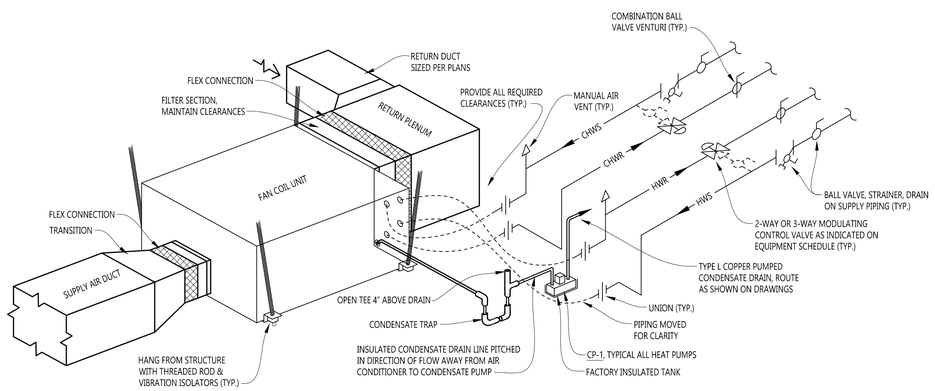
7 M603 GLYCOL MAKE UP UNIT DETAIL
NOT TO SCALE



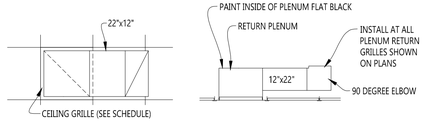
6 M603 EXPANSION TANK DETAIL
NOT TO SCALE



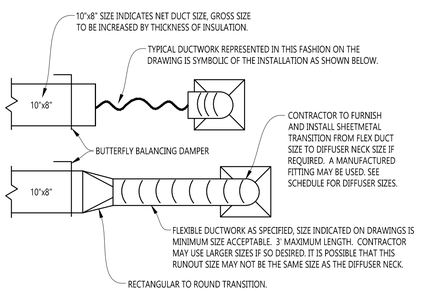
5 M603 TYPICAL ERV DETAIL
NOT TO SCALE



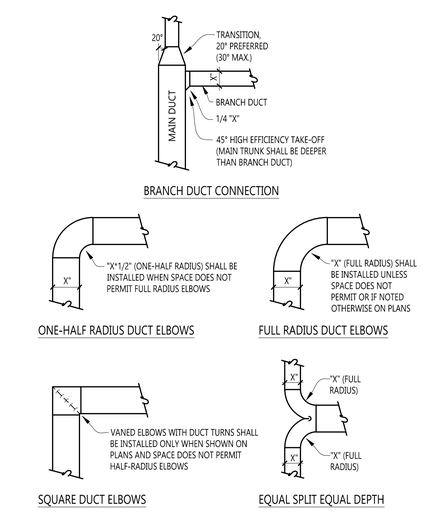
3 M603 4-PIPE HOT WATER HEATING / CHILLED WATER COOLING FAN COIL UNIT
NOT TO SCALE



4 M603 PLENUM RETURN DETAIL
NOT TO SCALE



2 M603 FLEX DUCT INSTALLATION DETAIL
NOT TO SCALE



1 M603 DUCT DETAILS
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ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: MCH
CHECKED BY: DJL

STAMP
REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE
PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MECHANICAL DETAILS

M603

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M603.dwg
Plot Date:12-May-26

HYDRONIC SPECIALTIES SCHEDULE

HVAC SYSTEM	DESCRIPTION	MANUFACTURER	MODEL NUMBER	FLUID TYPE	ASME CERTIFIED	CONNECTION SIZE	DIMENSIONS (INCHES)	OPERATING WEIGHT	DESIGN CAPACITY	COMMENTS
HWS	AS-1 ROLARTROL AIR SEPARATOR	ITT BELL & GOSSETT	RL-3F	40% PG	YES	3"	10.75" DIA x 22.75" L x 26.88" H	173 LBS	65 GPM @ 0.21' PD	1,2
HWS	AV-1 AUTO AIR VENT	ITT BELL & GOSSETT	NO. 87	40% PG	YES	3/4"	-	-	150 PSI / 240 F	1
HWS	HAV-1 HIGH CAP AUTO AIR VENT	ITT BELL & GOSSETT	NO. 107A	40% PG	YES	3/4"	-	-	150 PSI / 250 F	1
HWS	ET-1 EXPANSION TANK	ITT BELL & GOSSETT	B400	40% PG	YES	1-1/2"	30" DIA x 49" H	1183 LBS FLOODED	106 GALLON TANK & ACCEPTANCE VOLUME	1,3,4
HWS	RV-1 RELIEF VALVE	ITT BELL & GOSSETT	1170-75	40% PG	YES	1"	-	-	75 PSI 2385 MBH	1
HWS	GMU-1 GLYCOL MAKEUP UNIT	AXIOM	SF100	40% PG	-	3/4"	24" DIA x 49" H	540 LBS FLOODED	60 GALLON, 115V/60/1, 0.7 AMPS	1,5,6

COMMENTS:

40%PG - 40% PROPYLENE GLYCOL / 60% DI WATER

1. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
2. ROLAIRTROL AIR SEPARATOR, SUPPORT FROM STRUCTURE AS REQUIRED.
3. ASME, REPLACEABLE BLADDER TYPE, FULL ACCEPTANCE, GAUGE, BLADDER INTEGRITY MONITOR, CHARGING VALVE, SIGHT GLASS.
4. COORDINATE CHARGE PRESSURE.
5. 1.0 GPM @ 50PSIG, LOW LEVEL ALARM PANEL W/ REMOTE MONITORING DRY CONTACTS AND SELECTABLE ALARM (RIA10-1-SAA).
6. PROVIDE WITH 115V 3-PRONG PLUG. VERIFY IF AN EXISTING OUTLET IS NEARBY. IF NOT, COORDINATE WITH DIV. 26 TO PROVIDE ONE.

SHELL AND TUBE HEAT EXCHANGER SCHEDULE

TAG	MANUFACTURER	MODEL #	SHELL (SOURCE) SIDE							TUBE (LOAD) SIDE							DIMENSIONS		LBS	COMMENTS
			MBH	FLUID	LB/HR	PSI	PD (PSIG)	INLET SIZE	OUTLET SIZE	FLUID	GPM	EWT	LWT	PD (PSIG)	INLET SIZE	OUTLET SIZE	DIAMETER	LENGTH		
HX-1	B&G	SU-64-2	1200.12	STEAM	1379.5	110.0	0.10	2.5"	1"	40%PG	65.0	140	180	1.11	2"	2"	6.625"	52.125"	118	1, 2

COMMENTS:

40%PG - 40% PROPYLENE GLYCOL / 60% WATER

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. FACTORY INSULATION KIT.

HYDRONIC PUMP SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SERVES	PUMP TYPE	FLUID TYPE	GPM	TOTAL HEAD (FT)	TEMP F	CONNECTIONS		IMPELLER			MOTOR CHARACTERISTICS					DIMENSIONS			WEIGHT LBS	COMMENTS
									SUCTION	DISCHARGE	DIA.	TYPE	RPM	% EFF.	*HP	BHP	VOLT/PH	AMPS	L	W	H		
P-1A	B&G	e-80 1.5x1.5x7C	OFFICE BLDG HWS	IN-LINE	40%PG	65.00	125	180	1.5"	1.5"	5.5"	S/S	3550	56.9%	7.5	3.55	208-230/460 / 3PH		16"	11.75"	25.5"	260	1, 2, 3, 4
P-1B	B&G	e-80 1.5x1.5x7C	OFFICE BLDG HWS	IN-LINE	40%PG	65.00	125	180	1.5"	1.5"	5.5"	S/S	3550	56.9%	7.5	3.55	208-230/460 / 3PH		16"	11.75"	25.5"	260	1, 2, 3, 4

COMMENTS:

* NON-OVERLOADING MOTOR.

1. ODP, PREMIUM EFFICIENCY (NON-OVERLOADING) MOTOR.
2. FACTORY DISCONNECT, NO VFD.
3. PROVIDE REDUCERS AS REQUIRED.
4. INSTALL PER MANUFACTURERS REQUIREMENTS.

40%PG - 40% PROPYLENE GLYCOL / 60% DISTILLED WATER MIX

AIR COOLED CHILLER SCHEDULE

TAG	MFGR	MODEL #	AREA SERVED	CHILLER TYPE	NOM. TONS	RATED TONS	TOTAL POWER	COMP #	TONS / COMP	NUMB. REF. CIRCUITS	REFRIG. TYPE	REFRIG. CHARGE LBS	NUMB. COND. FANS	AMB. AIR F	SAT. EVAP F	EVAP CONFIG	EFFICIENCY			FLUID					EVAP FLOW		PUMP PACKAGE									ELECTRICAL				SOUND		DIMENSIONS			UNIT WEIGHT LBS	COMMENTS
																	EER Btu/W-h	IPLV Btu/W-h	NPLV Btu/W-h	EWT F	LWT F	GPM	PD FT	TYPE	MIN GPM	MAX GPM	PUMP TYPE	MANUF	SERIES MODEL #	PUMP GPM	PUMP HEAD	POWER SUPPLY	MOTOR FLA (A)	MOTOR HP	MOTOR RPM	VFD	VOLT / PH	MIN CIR AMPS	MOP AMPS	SCCR	POWER DBA	PRESSURE DBA	L (IN)	W (IN)	H (IN)		
CH-1	DIAKIN	AGZ006F	OFFICE	SCROLL	75.3	82.4	83.82 kW	4	20.6	2	R32	64.0	6	95.0	45.0	MICROCHANNEL	10.79	18.67	-	54.0	40.0	140.3	8.4	40%PG	114.4	381.5	DUAL MOTOR	ARMSTRONG	-	140.3	113.7	UNIT SUPPLIED	14.0	10.0	4500	YES	460 / 3	188.0	225.0	65 KA	89	62	160.0	88.0	99.0	5,750	1,2,3,4,5,6,7,8,9,10,11,12

COMMENTS:

40%PG - 40% PROPYLENE GLYCOL / 60% DI WATER MIX

1 INTERNAL UNIT CONTROLS.
2 VARIABLE SPEED DRIVE ON FIRST FAN.
3 HERMETIC GAS COOLED SCROLL COMPRESSORS WITH INTERNAL HEATERS.
4 PROVIDE INLET STRAINER AND FLEXIBLE CONNECTIONS.
5 INSTALL COMPONENTS PER MANUFACTURERS RECOMMENDATIONS.
6 COORDINATE WITH CONCRETE PAD DIMENSIONS AND MODIFY AS REQUIRED.
7 COORDINATE PIPING AND POWER CONNECTION LOCATION WITH HYDRONIC PIPING LAYOUT.
8 FACTORY PROVIDED 115 VOLT CONVENIENCE OUTLET.
9 FACTORY AUTHORIZED START-UP.
10 FACTORY PROVIDED PUMP SKID SYSTEM COMPLETE WITH 14 GALLON EXPANSION TANK AND AIR SEPARATOR.
11 FACTORY PROVIDED RELIEF VALVE, 50 PSI.
12 FACTORY SOUND PACKAGE - COMPRESSOR BLANKETS.

EWT - ENTERING WATER TEMPERATURE
LWT - LEAVING WATER TEMPERATURE

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
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REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MECHANICAL SCHEDULES

M801

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\20255550-M801.dwg
Plot Date:12-May-26

CONDENSATE PUMP SCHEDULE

TAG	MANUFACTURER	MODEL	STYLE	GPM CAP.	DISH. PRESS. PSI	MOTOR HP	DISH. SIZE	RECEIVER CAPACITY	ELECTRICAL VOLT/PH	ELECTRICAL MCA	ELECTRICAL MOP	DIMENSIONS LENGTH	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	COMMENTS
CP-1	LITTLE GIANT	VCCA-20-P	LOW PROFILE	1.3	8.6	1/30	3/8"	1/2 GAL	120/1	1.5		12"	5.0"	5.25"	1,2,3,4,5

1 INSTALL PER MANUFACTURERS RECOMMENDATIONS, PROVIDE CHECK VALVE ON DISCHARGE PIPE.
2 INTERGRAL CHECK VALVE, AUTOMATIC FLOAT CONTROL.
3 INTERGRAL OVERFLOW SWITCH AND ALARM CONTACT. CONNECT TO BMS.
4 FACTORY INSULATED TANK FOR CONDENSATE PROTECTION.
5 HARD WIRED ABOVE CEILING PLENUM.

REGISTER-GRILLE-DIFFUSER SCHEDULE

TAG	MFGR	SERIES	TYPE	FACE SIZE	NECK SIZE	FRAME	CFM RANGE	MATERIAL 1 = STEEL 2 = ALUM	FINISH 1 = OFFWHITE 2 = CLEAR ALUM	ACCESS.	COMMENTS
S-1	PRICE	SCD	SCD	24X24	6"	LIT	100-135	1	1	-	-
S-2	PRICE	SCD	SCD	24X24	8"	LIT	135-300	1	1	-	-
S-3	PRICE	SCD	SCD	24X24	10"	LIT	300-425	1	1	-	-
S-4	PRICE	520	REG	10X6	8X4	SUR	0-100	1	1	DMP	-
S-5	PRICE	520	REG	12X8	10X6	SUR	175-240	1	1	DMP	
S-6	PRICE	520	REG	12X10	10X8	SUR	200-300	1	1	DMP	-
S-7	PRICE	520	REG	20X8	18X6	SUR	300-400	1	1	DMP	-
R-1	PRICE	80	ECG	24X12	24X12	LIT	0-900	2	1	-	-
R-2	PRICE	80	ECG	24X24	24X24	LIT	900-1800	2	1	-	-
E-1	PRICE	530	GRL	18X8	16X6	SUR	100-200	1	1	-	-
E-2	PRICE	530	GRL	20X10	18X8	SUR	200-400	1	1	-	-

SCD - SQUARE CEILING DIFFUSERS
ECG - EGG CRATE GRILLE
REG - REGISTER
GRL - GRILLE
LSD - LINIER SLOT DIFFUSER
DRM - DRUM DIFFUSER
LIT - LAY-IN-TILE
SUR - SURFACE
DMP - DAMPER

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	MANUFACTURER	MODEL NUMBER	SUPPLY FAN CFM	SUPPLY FAN "ESP	EXHAUST FAN CFM	EXHAUST FAN "ESP	STATIC PLATE EFFECTIVENESS WINTER / SUMMER	WINTER PERFORMANCE IAT F	WINTER PERFORMANCE OAI* F	WINTER PERFORMANCE LAT F	WINTER PERFORMANCE HEATING CAPACITY	SUMMER PERFORMANCE IAT F	SUMMER PERFORMANCE OAI F	SUMMER PERFORMANCE LAT F	SUMMER PERFORMANCE COOLING CAPACITY	ELECTRICAL VOLT	ELECTRICAL PH	ELECTRICAL TOTAL FAN WATTS	ELECTRICAL MCA	ELECTRICAL MOP	ACCESSORY ELECTRIC DUCT HEATER MFGR	ACCESSORY ELECTRIC DUCT HEATER MODEL	ACCESSORY ELECTRIC DUCT HEATER AIRFLOW CFM	ACCESSORY ELECTRIC DUCT HEATER CAPACITY kW	ACCESSORY ELECTRIC DUCT HEATER EAT / LAT F	ACCESSORY ELECTRIC DUCT HEATER DUCT DIMENSIONS	ACCESSORY ELECTRIC DUCT HEATER NUMBER OF STEPS	ACCESSORY ELECTRIC DUCT HEATER ELECTRICAL V/PH/HZ	ACCESSORY ELECTRIC DUCT HEATER ELECTRICAL AMPS	UNIT DIMENSIONS L	UNIT DIMENSIONS W	UNIT DIMENSIONS H	UNIT WEIGHT LBS	COMMENTS
ERV-1	LIFEBREATH	1200FD	1070	0.75	775	0.75	75% / 59%	70 / 50	-0.5 / -0.5	37.8 / 26.9	45 MBH	75 / 63	95 / 76	86.5 / 70.4	25 MBH	120	1	2256	23.5	30	INDEECO	QUA	1070	10.0	-30 / -0.5	20"x10"	2	480/3/60	12.03	32.25"	42"	32.25"	253	1, 2, 3, 4, 5, 6, 7, 8

1 DESIGN BASED ON AMBIENT CONDITIONS OF -30F WINTER / 95/76F SUMMER.
2 SUPPLY SIDE: ISOLATION DAMPER, MERV 6 FILTER, PLATE HEAT EXCHANGER, FAN WITH PSC 3-SPEED MOTOR
3 EXHAUST SIDE: MERV 6 FILTER, PLATE HEAT EXCHANGER, FAN WITH PSC 3-SPEED MOTOR, ISOLATION DAMPER.
4 NON-FUSED DISCONNECT, INSULATED 22GA CASING, GALVANIZED DRAIN PAN.
5 SUSPEND WITHIN SPACE AS REQUIRED. PROVIDE SPRING VIBRATION ISOLATION.
6 FACTORY CONTROLS, CONNECT TO BACNET AS REQUIRED.
7 FACTORY DEFROST CONTROL.
8 PROVIDE ELECTRIC DUCT HEATER ON OUTDOOR AIR INTAKE DUCT. 2 STAGE WITH DUCT THERMOSTAT CONTROL. PROVIDE WITH FACTORY CONTROLS AND SAFETY LIMIT SWITCHES.

IAT - INDOOR AIR TEMPERATURE
OAI - OUTDOOR AIR INTAKE TEMPERATURE
LAT - LEAVING AIR TEMPERATURE

* AFTER ELECTRIC DUCT HEATER

FLA - FULL LOAD AMPS
MCA - MINIMUM CIRCUIT AMPS
MOP - MAXIMUM OVERCURRENT CIRCUIT PROTECTION

VARIABLE AIR VOLUME FAN COIL SCHEDULE - CHILLED WATER COOLING WITH HOT WATER HEATING

TAG	MFGR	MODEL #	AREA SERVED	MAX S.A. CFM	MIN S.A. CFM	O.A. CFM	ESP "WC	COOLING TONS	COOLING TOTAL MBH	COOLING SENS MBH	COOLING TYPE	COOLING * GPM	COOLING WPD FT	COOLING EAT F DB/WB	COOLING LAT F DB/WB	COOLING EWT F	COOLING LWT F	COOLING CLG CONTROL VALVE	HEATING MBH	HEATING TYPE	HEATING * GPM	HEATING WPD FT	HEATING EAT F	HEATING LAT F	HEATING EWT F	HEATING LWT F	HEATING HTG CONTROL VALVE	SUPPLY FAN MOTOR QTY	SUPPLY FAN MOTOR TYPE	SUPPLY FAN MOTOR BHP	SUPPLY FAN MOTOR HP	ELECTRICAL VOLT/PH	ELECTRICAL FLA	ELECTRICAL MCA	ELECTRICAL MOP	ELECTRICAL SCCR	DIMENSIONS LENGTH	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	WEIGHT LBS	COMMENTS
FC1- 01	DAIKIN	BCHD0161	101	870	348	25	1.0"	2.3	27.40	20.10	CWS	4.30	4.3	77 / 65	55.0/54.6	40	54.6	3-WAY	40.0	HWS	2.25	1.0	68	110.6	180	140	3-WAY	2	ECM	(2) 0.4	(2) 0.5	208/1	4.2	9.4	15.0	5kA	46.0"	45.5"	18.0"	500	1,2,3,4,5,6,7,8,9,10
FC1- 02	DAIKIN	BCHD0161	103 105	830	332	45	1.0"	2.3	27.40	20.10	CWS	4.30	4.3	77 / 65	55.0/54.6	40	54.6	3-WAY	40.0	HWS	2.25	1.0	68	112.6	180	140	3-WAY	2	ECM	(2) 0.4	(2) 0.5	208/1	4.2	9.4	15.0	5kA	46.0"	45.5"	18.0"	500	1,2,3,4,5,6,7,8,9,10
FC1- 03	DAIKIN	BCHD0161	104 106	900	360	30	1.0"	2.3	27.40	20.10	CWS	4.30	4.3	77 / 65	55.0/54.6	40	54.6	3-WAY	40.0	HWS	2.25	1.0	68	109.2	180	140	3-WAY	2	ECM	(2) 0.4	(2) 0.5	208/1	4.2	9.4	15.0	5kA	46.0"	45.5"	18.0"	500	1,2,3,4,5,6,7,8,9,10
FC1- 04	DAIKIN	BCHD0101	002 109	745	298	40	1.0"	2.1	25.20	19.40	CWS	4.60	8.6	77 / 65	55.0/54.6	40	52.5	3-WAY	28.0	HWS	1.75	1.5	68	102.8	180	145	3-WAY	1	ECM	0.4	0.75	208/1	5.9	7.4	15.0	5kA	46.0"	37.0"	18.0"	380	1,2,3,4,5,6,7,8,9,10
FC1- 05	DAIKIN	BCHD0181	107 108 110	1040	416	15	1.0"	2.8	34.00	25.70	CWS	5.50	6.5	77 / 65	54.4/54.2	40	54.5	3-WAY	40.6	HWS	2.25	2.3	68	104.1	180	140	2-WAY	2	ECM	(2) 0.45	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC1- 06	DAIKIN	BCHD0161	111	950	380	25	1.0"	2.7	32.00	23.60	CWS	5.00	10.5	77 / 65	54.3/53.8	40	54.6	3-WAY	45.6	HWS	2.50	1.0	68	112.4	180	140	2-WAY	2	ECM	(2) 0.45	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	45.5"	18.0"	500	1,2,3,4,5,6,7,8,9,10
FC1- 07	DAIKIN	BCHD0101	102	680	272	15	1.0"	2.1	25.20	19.40	CWS	4.60	8.6	77 / 65	55.0/54.6	40	52.5	3-WAY	28.0	HWS	1.75	1.5	68	106.1	180	145	3-WAY	1	ECM	0.4	0.75	208/1	5.9	7.4	15.0	5kA	46.0"	37.0"	18.0"	380	1,2,3,4,5,6,7,8,9,10
FC1- 08	DAIKIN	BCHD0181	112	1150	460	40	1.0"	3.1	37.60	28.50	CWS	7.50	9.5	77 / 65	54.3/54.1	40	51.5	3-WAY	48.3	HWS	3.00	5.0	68	106.9	180	145	2-WAY	2	ECM	(2) 0.45	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
				7165		235		19.7	236.2			40.1							310.5		18																			
FC2- 01	DAIKIN	BCHD0181	201	1750	700	75	1.0"	4.2	50.60	40.70	CWS	11.00	14.8	77 / 65	55.7/55.5	40	50.5	3-WAY	71.0	HWS	4.50	8.5	68	105.6	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC2- 02	DAIKIN	BCHD0181	202 206	1999	800	60	1.0"	4.5	54.00	45.20	CWS	12.00	17	77 / 65	56.5/56.3	40	50.5	3-WAY	75.5	HWS	4.60	9.1	68	103.0	180	145	3-WAY	2	ECM	(2) 0.75	(2) 1.0	208/1	15.4	17.3	25.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC2- 03	DAIKIN	BCHD0161	203 204	825	330	30	1.0"	2.3	27.40	20.10	CWS	4.30	4.3	77 / 65	55.0/54.6	40	54.6	3-WAY	40.0	HWS	2.25	1.0	68	112.9	180	140	3-WAY	2	ECM	(2) 0.4	(2) 0.5	208/1	4.2	9.4	15.0	5kA	46.0"	45.5"	18.0"	500	1,2,3,4,5,6,7,8,9,10
FC2- 04	DAIKIN	BCHD0081	208 211	535	214	25	1.0"	1.4	17.00	12.90	CWS	2.75	4.2	77 / 65	54.8/54.4	40	53.4	3-WAY	21.5	HWS	1.25	9.1	68	105.2	180	140	2-WAY	1	ECM	0.3	0.5	208/1	4.2	5.2	15.0	5kA	43.0"	29.0"	18.0"	300	1,2,3,4,5,6,7,8,9,10
FC2- 05	DAIKIN	BCHD0101	209	700	280	15	1.0"	2.1	25.20	19.40	CWS	4.60	8.6	77 / 65	55.0/54.6	40	52.5	3-WAY	28.0	HWS	1.75	1.5	68	105.0	180	145	3-WAY	1	ECM	0.4	0.75	208/1	5.9	7.4	15.0	5kA	46.0"	37.0"	18.0"	380	1,2,3,4,5,6,7,8,9,10
FC2- 06	DAIKIN	BCHD0181	210	1185	474	40	1.0"	3.1	37.60	28.50	CWS	7.50	9.5	77 / 65	54.3/54.1	40	51.5	3-WAY	48.3	HWS	3.00	5.0	68	105.7	180	145	2-WAY	2	ECM	(2) 0.45	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC2- 07	DAIKIN	BCHD0101	205 207	810	324	40	1.0"	2.2	26.30	20.00	CWS	5.25	10.2	77 / 65	54.5/54.2	40	51.5	3-WAY	28.1	HWS	1.75	1.2	68	100.1	180	145	3-WAY	1	ECM	0.4	0.75	208/1	5.9	7.4	15.0	5kA	46.0"	37.0"	18.0"	380	1,2,3,4,5,6,7,8,9,10
				7804		285		19.8	238.1			47.4							312.4		19.1																			
FC3- 01	DAIKIN	BCHD0181	301 302 304	1640	656	50	1.0"	3.9	47.30	38.10	CWS	9.50	11.5	77 / 65	55.8/55.6	40	51.5	3-WAY	69.0	HWS	4.00	7.5	68	107.0	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC3- 02	DAIKIN	BCHD0181	303	1690	676	70	1.0"	3.9	47.30	38.10	CWS	9.50	11.5	77 / 65	55.8/55.6	40	51.5	3-WAY	69.0	HWS	4.00	7.5	68	105.8	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC3- 03	DAIKIN	BCHD0181	309	1390	556	45	1.0"	3.9	47.30	38.10	CWS	9.50	11.5	77 / 65	55.8/55.6	40	51.5	3-WAY	69.0	HWS	4.00	7.5	68	114.0	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC3- 04	DAIKIN	BCHD0181	308 310 311	1600	640	50	1.0"	3.9	47.30	38.10	CWS	9.50	11.5	77 / 65	55.8/55.6	40	51.5	3-WAY	69.0	HWS	4.00	7.5	68	107.9	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
FC3- 05	DAIKIN	BCHD0101	306 307	755	302	35	1.0"	2.2	26.30	20.00	CWS	5.25	10.2	77 / 65	54.5/54.2	40	51.5	3-WAY	28.1	HWS	1.75	1.2	68	102.5	180	145	3-WAY	1	ECM	0.4	0.75	208/1	5.9	7.4	15.0	5kA	46.0"	37.0"	18.0"	380	1,2,3,4,5,6,7,8,9,10
FC3- SERVER	DAIKIN	BCHD0181	305	1600	640	20	1.0"	3.9	47.30	38.10	CWS	9.50	11.5	77 / 65	55.8/55.6	40	51.5	3-WAY	69.0	HWS	4.00	7.5	68	107.9	180	145	3-WAY	2	ECM	(2) 0.50	(2) 0.75	208/1	11.8	13.4	15.0	5kA	46.0"	54.0"	18.0"	610	1,2,3,4,5,6,7,8,9,10
				8675		270		21.9	262.8			52.75							373.1		21.75																			
				23644.0	9457.6	790.0		61.4	737.1			140.3							996.0		58.9						19.35													

COMMENTS:
1 HORIZONTAL MOUNT, RETURN AIR, MERV-8 FILTER, VARIABLE SPEED SUPPLY FAN, COOLING COIL, CONDENSATE DRAIN, HEATING COIL, DISCHARGE.
2 MERV-8 FILTER WITH BOTTOM ACCESS.
3 COMPLETE FACTORY CONTROLS, UNIT INTERFACE, TIME CLOCK, MOTOR SPEED CONTROLLER.
4 TEMPERATURE SETPOINT, NIGHT SETBACK, NIGHT OVERRIDE CONTROL.
5 DISCHARGE AIR TEMPERATURE SENSOR.
6 FACTORY PROVIDED FULL MODULATING WATER CONTROL VALVES.
7 PROVIDE ALL REQUIRED CLEARANCES.
8 INSTALL PER MANUFACTURERS RECOMMENDATIONS.
9 FIELD-INSTALLED CONDENSATE PUMP, CP-1.
10 FACTORY PROVIDED DISCONNECT.

CWS - GLYCOL CHILLED WATER
HWS - GLYCOL HOT WATER
WPD - WATER PRESSURE DROP (FT)
EAT - ENTERING AIR TEMPERATURE
LAT - LEAVING AIR TEMPERATURE
EWT - ENTERING WATER TEMPERATURE (F)
LWT - LEAVING WATER TEMPERATURE (F)
* 40%PG - 40%PROPYLENE GLYCOL / 60% DI WATER

BHP - BAKE HORSE POWER
HP - HORSE POWER
SCCR - SHORT CIRCUIT CURRENT RATING

COOLING CAPACITY BASED ON 40F EWT / 54F LWT, 14F TEMP RISE.
HEATING CAPACITY BASED ON 180F EWT / 140F LWT, 40F TEMP DROP.

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NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

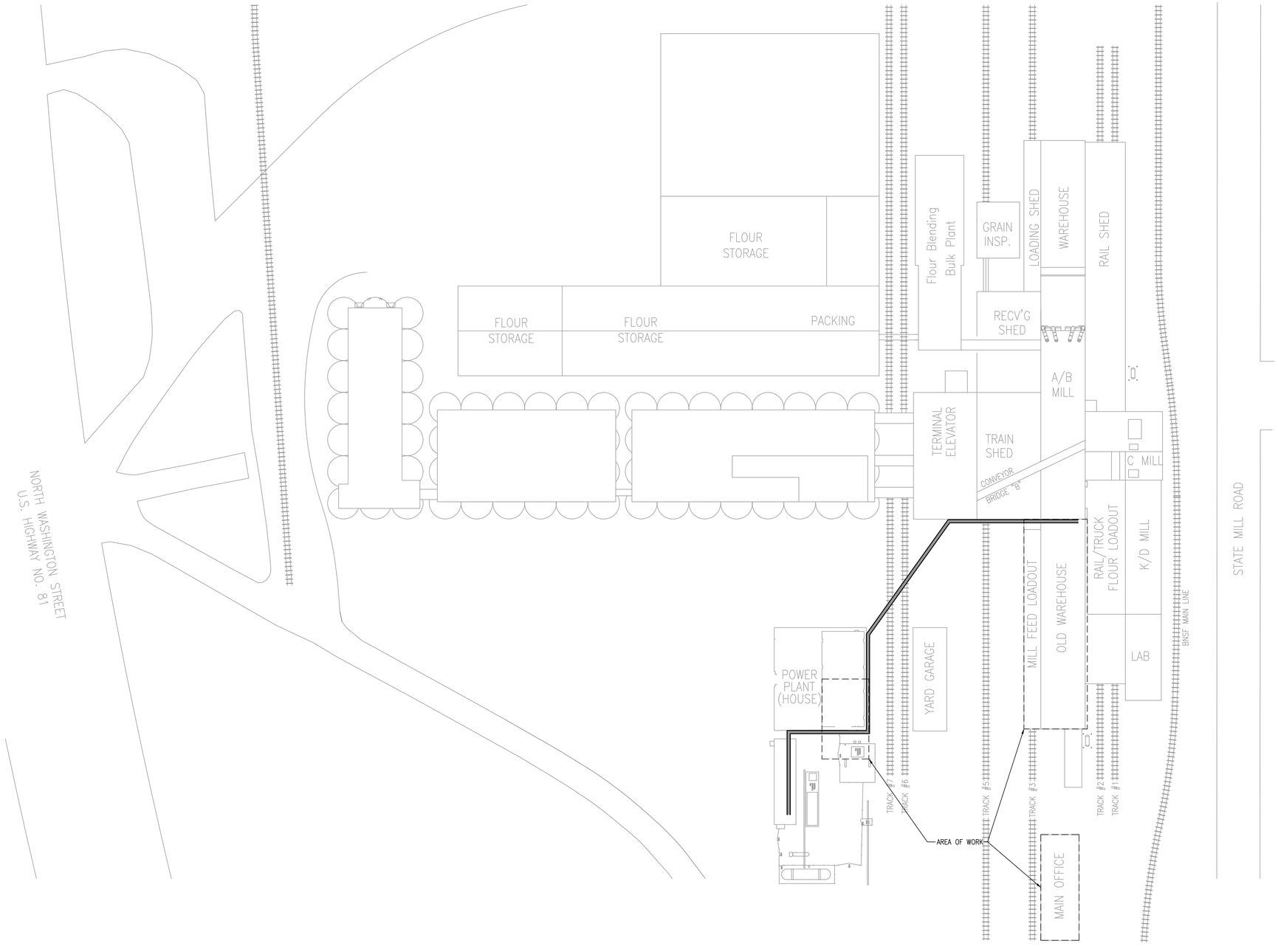
PROJECT NO: 20255550
DRAWN BY: MCH
CHECKED BY: DJL

STAMP

REGISTERED PROFESSIONAL ENGINEER
TYLER COULOMBE PE-7492
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MECHANICAL SCHEDULES

M802



TRUE NORTH PLAN NORTH

1 / L001 ELECTRICAL SITE PLAN
1"=50'-0"

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PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-8419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
ELECTRICAL SITE PLAN

L001

ELECTRICAL LEGEND

ABBREVIATIONS

A	– AMPERES
AC	– ABOVE COUNTER
ACCU	– AIR COOLED CONDENSING UNIT
AF	– AMP–FUSE
AFF	– ABOVE FINISHED FLOOR
AFC	– AVAILABLE FAULT CURRENT
ATS	– AUTOMATIC TRANSFER SWITCH
BB	– BACK BOX
BDD	– BACK DRAFT DAMPER
BHP	– BRAKE HORSEPOWER
BTU	– BRITISH THERMAL UNIT
C	– CONDUIT
CB	– CIRCUIT BREAKER
CBIC	– CIRCUIT BREAKER INTERRUPTING CURRENT
CG	– CEILING GRILLE
CUH	– CABINET UNIT HEATER
CKT	– CIRCUIT
CLG	– CEILING
CONT	– CONTINUATION
CR	– CEILING REGISTER
C/T	– CURRENT TRANSFORMER
CW	– COLD WATER & CONDENSER WATER
CMD	– CARBON MONOXIDE DETECTOR
DIA	– DIAMETER
DN	– DOWN
DWG	– DRAWING
EC	– ELECTRICAL CONTRACTOR
ECH	– ELECTRIC CABINET HEATER
EF	– EXHAUST FAN
EFF	– EFFICIENCY
EG	– EXHAUST GRILLE
EHC	– ELECTRIC HEATING COIL
EL	– ELEVATION
ELEV	– ELEVATOR
EM	– EMERGENCY
ER	– EXHAUST REGISTER
EUH	– ELECTRIC UNIT HEATER
EWC	– ELECTRIC WATER COOLER
EWH	– ELECTRIC WATER HEATER
EX	– EXISTING
°F	– DEGREES FAHRENHEIT
F	– FUSE
FAAN	– FIRE ALARM ANNUNCIATOR PANEL
FACP	– FIRE ALARM CONTROL PANEL
FA	– FIRE ALARM
FBO	– FURNISHED BY OTHERS
FD	– FIRE DAMPER
FDC	– FIRE DEPARTMENT CONNECTION
FDS	– FUSED DISCONNECT SWITCH
FHC	– FIRE HOSE CABINET
FLA	– FULL LOAD AMPERES
FL	– FLOOR
FP	– FUEL OIL PUMP OR FIRE PUMP
FS	– FLOW SWITCH OR FLOOR SINK
FSD	– COMBINATION FIRE AND SMOKE DAMPER
FT	– FEET, FLOW TRANSMITTER
FUT	– FUTURE
G	– LOW PRESSURE NATURAL GAS, GROUND
GAL	– GALLONS
GC	– GENERAL CONTRACTOR
GD	– GARBAGE DISPOSAL
GEN	– GENERATOR
GFI	– GROUND FAULT CIRCUIT INTERRUPTER
GPM	– GALLONS PER MINUTE
H	– HIGH, HOT
HC	– HEATING COIL
HD	– HEAVY DUTY
HP	– HORSE POWER
HPS	– HIGH PRESSURE SODIUM
HOA	– HAND–OFF–AUTO
HS	– HAND STATION
HT	– HEIGHT

ABBREVIATIONS

HVU	– HEATING AND VENTILATING UNIT
HW	– HOT WATER
HX	– HEAT EXCHANGER
ID	– INSIDE DIMENSION
IN	– INCHES
INC	– INCANDESCENT
INFO	– INFORMATION
INST	– INSTALLATION
KVA	– KILOVOLT–AMPERES
KW	– KILOWATT(S)
LBS	– POUNDS
LCL	– LOCAL
LL	– LIVE LOAD
LOC	– LOCATION
LT	– LIGHT(S)
LV	– LOW VOLTAGE
MAX	– MAXIMUM
MC	– MECHANICAL CONTRACTOR
MCC	– MOTOR CONTROL CENTER
MCB	– MAIN CIRCUIT BREAKER
MDP	– MAIN DISTRIBUTION PANEL
MFR	– MANUFACTURER
MH	– METAL HALIDE
MIN	– MINIMUM
MLO	– MAIN LUG ONLY
MTG	– MOUNTING
MTR	– MOTOR
N	– NEUTRAL
ND	– NORTH DAKOTA
N1	– NEMA 1
N3R	– NEMA 3R
N/E	– NEW TO EXISTING CONNECTION
NC	– NORMALLY CLOSED
NEC	– NATIONAL ELECTRIC CODE
NL	– NIGHT LIGHT
NO	– NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIMENSION, OUTSIDE DIAMETER
P	PUMP, POLE
PG	PRESSURE GAUGE
#, PH	PHASE
PHC	PREHEAT COIL
PIV	POST INDICATING VALVE
PNL	PANEL
PRV	PRESS REDUCING VALVE PWR ROOF VENT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH (GAUGE)
REC	RECEPTACLE
REQ	REQUIRED
REV	REVISION
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SAN	SANITARY
SD	SMOKE DAMPER OR SMOKE DETECTOR
SCH	SCHEDULE
SECT	SECTION
SES	SERVICE ENTRANCE SECTION
SF	SQUARE FEET
SHT	SHEET
SM	SURFACE MOUNT
SP	STATIC PRESSURE OR SUMP PUMP
SPEC	SPECIFICATION
SKR	SPEAKER
SPKR	SPRINKLER
SQ	SQUARE
STD	STANDARD
ST	STORM PIPING OR SOUND TRAP
SYS	SYSTEM
TCP	TEMPERATURE CONTROL PANEL
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TTL	TOTAL
TMB	TELEPHONE MOUNTING BOARD
TS	TAMPER SWITCH
TV	TELEVISION
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UH	UNIT HEATER
U/G	UNDER GROUND
V	VOLT
VO	VIDEO OUTLET
VA	VOLT–AMPS
VAR	VARIABLE
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W	WASTE, WIRE
WP	WEATHERPROOF
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER

SYMBOLS

FIRE ALARM

		MOUNTING HEIGHT
FACP	FIRE ALARM CONTROL PANEL	
FAN	FIRE ALARM ANNUNCIATOR PANEL	
SUB	FIRE ALARM AUDIO DEVICE SUB= SUBSCRIPT AS FOLLOWS: WG–WIREGUARD WP–WEATHERPROOF	90"
SUB	FIRE ALARM AUDIO/VISUAL SUB= SUBSCRIPT AS FOLLOWS: WG–WIREGUARD H–HORN MH–MINI–HORN WP–WEATHERPROOF	90"
F	MANUAL PULL STATION	48"
SUB	FIRE ALARM VISUAL SUB= SUBSCRIPT AS FOLLOWS: NO SUB–75 CANDELA	90"
SUB	AUTOMATIC SMOKE DETECTOR SUB= SUBSCRIPT AS FOLLOWS: ID–IONIZATION E–ELEVATOR RECALL L–LOCAL SC–SELF CONTAINED LSR–LASER WG–WIRE GUARD D–DUCT SMOKE DETECTOR W/2 AUX CONTACTS	CEILING
S	AUTOMATIC SMOKE DETECTOR–WALL MOUNT	AS REQUIRED
SUB	AUTOMATIC HEAT DETECTOR–CEILING MOUNT SUB= SUBSCRIPT AS FOLLOWS: NONE–FIXED TEMP & 135°F RATE OF RISE F–FIXED TEMP 190°F	
RTI	REMOTE INDICATOR	
M	FIRE ALARM MAGNETIC DOOR HOLDER	AS REQUIRED
FS	MAIN SPRINKLER VALVE SUPERVISION TAMPER SWITCH	
FS	SPRINKLER OR HOSE FLOW ALARM SWITCH	
FAR	FIRE ALARM RELAY	
FR	FIRE ALARM SHUTDOWN RELAY	AS REQUIRED
NAC	NOTIFICATION APPLIANCE CIRCUIT PANEL	
ZAM	ZONE ADAPTER MODULE	
	FIRE ALARM BELL	90"
TRP	TRANSPONDER	
FAJB	FIRE ALARM JUNCTION BOX	
IAM	INDIVIDUAL ADDRESSABLE ALARM	
SUB	BEAM DETECTOR SUB= SUBSCRIPT AS FOLLOWS: S–SENDING UNIT R–RECEIVER	
PS	LOW PRESSURE SWITCH	

PAGING/SOUND/DATA/SURVEILLANCE

		MOUNTING HEIGHT
SUB	SPEAKER SUB= SUBSCRIPT AS FOLLOWS: H–HORN SPEAKER N–NURSE CALL P–SPEAKER WITH PUSHBUTTON WG–WIREGUARD WP–WEATHERPROOF	48" 48"
MI	MASTER INTERCOM AND DIRECTORY UNIT	
M	MICROPHONE OUTLET	18"
VC	VOLUME CONTROL	
SUB	INTERCOM HANDSET SUB= SUBSCRIPT AS FOLLOWS: DM–DESK MOUNTED M–MASTER MD–MASTER DESK MOUNT W–WALL MOUNTED	48"
A	AUXILARY INPUT	
VB	VIDEO OUTLET	
SPP	SOUND SYS. PATCH PNL	
TV	TELEVISION OUTLET	18" OR 80"

TELEPHONE/DATA

		MOUNTING HEIGHT
SUB	DATA SUB= SUBSCRIPT AS FOLLOWS: #–INDICATES NUMBER OF PORTS	18"
SUB	DATA/TELEPHONE OUTLET SUB= SUBSCRIPT AS FOLLOWS: #–INDICATES NUMBER OF DATA/TELE PORTS EACH	18"
F	DATA/TELEPHONE/QUADPLEX FLOOR BOX	FLOOR
T F	DATA/TELEPHONE/DUPLEX FLOOR BOX	FLOOR
F	DATA OUTLET FLOOR BOX	FLOOR
F	DATA/TELEPHONE OUTLET FLOOR BOX	FLOOR
SUB	TELEPHONE OUTLET SUB= SUBSCRIPT AS FOLLOWS: M–TELEPHONE OUTLET/MULTI P–TELEPHONE OUTLET/PUBLIC W–TELEPHONE OUTLET/WALL	18" 48" 60"
WAP	WIRELESS ACCESS POINT	
TCI	TERMINAL CABINET	
DPP	DIGITAL COMMUNICATIONS PATCH PANEL VOICE/DATA/VIDEO	
TMB/G	TELEPHONE TERMINAL BLOCK UTILITY DEMARK	
	3/4" PLYWOOD BACKBOARD W/ 2 COATS RETARDANT	
	EQUIPMENT RACK – FREE STANDING	
	EQUIPMENT RACK – WALL MOUNTED	

DOOR SECURITY/SECURITY EXIT

		MOUNTING HEIGHT
	PUSHBUTTON	48"
	HAND STATION (NORMALLY PUSH BUTTONS)	48"
	BELL SUB= SUBSCRIPT AS FOLLOWS: B–BUZZER D–DOOR CHIME/BELL E–ELEVATOR CHIME P–PROGRAM BELL	90" 90"
DO	DOOR OPENER	
K	DOOR KEYPAD	48"
ES	ELECTRIC STRIKE DOOR LATCH	
MD	MOTION DETECTOR	
BG	BREAK GLASS DETECTOR	
C	SECURITY CAMERA SUB= SUBSCRIPT AS FOLLOWS: HS–HIGH SECURITY C–CEILING W–WALL WP–WEATHERPROOF PTZ–PAN TILT ZOOM	
REX	REQUEST TO EXIT	
IC	INTERCOM	
DC	SECURITY DOOR CONTACTS	
CR SUB	CARD READER SUB= SUBSCRIPT AS FOLLOWS: I–INTERCOM WP–WEATHERPROOF	
P	PANIC BAR	
ML	MAGNETIC LOCK	
CCTV	CCTV CABLE OUTLET	

CLOCK/PROGRAM

		MOUNTING HEIGHT
C SUB	WALL MOUNTED CLOCK SUB= SUBSCRIPT AS FOLLOWS: B–WITH BUZZER R–RECESSED WG–WITH WIREGUARD	94"
MC	MASTER CLOCK	
TC	TIME CLOCK	
CS	CLOCK WITH SPEAKER	94"

NURSE CALL

		MOUNTING HEIGHT
NCMC	NURSE CALL MASTER CONSOLE	
NCTC	NURSES CALL TERMINAL CABINET	
N1	SINGLE PATIENT BED STATION	
N2	DOUBLE PATIENT BED STATION	
N3	EMERGENCY/BATH STATION PUSH BUTTON	
N4	EMERGENCY/BATH PULL CORD STATION	
N5	STAFF ASSIST STATION	
DS	DUTY STATION	
SS	STAFF REGISTRATION STATION(IN ROOMS)	
CB	CODE BLUE STATION	
MP	MULTIPLE PURPOSE STATION	
	CORRIDOR DOME LIGHT Z–ZONE ADDRESSABLE	VERIFY
SN	SPEAKER	
NCA	NURSE CALL ANNUNCIATOR	

MISCELLANEOUS

		MOUNTING HEIGHT
	GROUND/ROD CONNECTION POINT	
CO	CARBON MONOXIDE DETECTORS SUB=SUBSCRIPT AS FOLLOWS: A–AUDIBLE ALARM L–LOCAL V–VISUAL	
OE	OVERHEAD ELECTRICAL	
UE	UNDERGROUND ELECTRICAL	
	GUY WIRE	
	POST	
	FAN	
PP	EXTERIOR UTILITY POWER POLE	
PP T	EXTERIOR UTILITY POWER POLE W/XFMR	
SCP	SOUND CONTROL PANEL	
LCP	LIGHTING CONTROL PANEL	

INTERIOR LIGHTING

ALL LIGHTING FIXTURES ARE IDENTIFIED BY A LETTER(S) – COORDINATE WITH LIGHT FIXTURE SCHEDULE AS TO THE FIXTURES; IDENTIFICATION, MANUFACTURER, CATALOG NUMBER, LAMPS, MOUNTING, LOCATION AND COMMENTS.

A	RECESSED TROFFER
E	RECESSED TROFFER EMERGENCY
A	SURFACE MOUNTED LIGHT FIXTURE
E	SURFACE MOUNTED LIGHT FIXT EMERGENCY
A	PENDANT MOUNTED

INTERIOR LIGHTING

A	PENDANT MOUNTED EMERGENCY
A	UNDER CABINET
A	WALL MOUNTED FIXTURE
A	STRIP LIGHT OR INDUSTRIAL FIXTURE
E	RECESSED DOWN LIGHT EMERGENCY
A	RECESSED DOWN LIGHT
A	RECESSED DOWN LIGHT WALL WASH
W	WALL MOUNTED FIXTURE
WE	WALL MOUNTED FIXTURE EMERGENCY
A	RECESSED WALL
E	RECESSED WALL EMERGENCY
A	SURFACE MOUNTED LIGHT FIXTURE
A	PENDANT MOUNT FIXTURE

EXIT – EMERGENCY

	WALL MOUNTED EXIT LIGHT
	CEILING MOUNTED EXIT LIGHT
A	SURFACE MOUNTED EMERGENCY MIN. 80" AFF TO BOTTOM
A	RECESSED EMERGENCY LIGHT
	REMOTE HEAD FOR EMERGENCY FIXTURE

SPECIAL LIGHTING

	TRACK LIGHTING
	COMBINATION FAN/LIGHT

EXTERIOR/SITE

A	POLE WITH LIGHT FIXTURE(S) FIXTURE SHOWN DEFINE QUANTITY AND ORIENTATION.
A	BOLLARD
A	SPOT LIGHT
A	FLOOD LIGHT

SWITCHES

		MOUNTING HEIGHT
PC	PHOTO CELL	
$ SUB	SINGLE POLE SWITCH, 120V, 20A SUB= SUBSCRIPT AS FOLLOWS: NONE–SINGLE–POLE, 120V, 20A 2–TWO–POLE, 120V, 20A 3–THREE–WAY, 120V, 20A 4–FOUR–WAY, 120V,20A D–DIMMER SWITCH, 120V, 1200W F–FUSED K–KEYED TYPE L–LIGHTED TOGGLE LV–LOW VOLTAGE MC–MOMENTARY CONTACT P–SWITCH W/PILOT LIGHT PROJ–MOTORIZED PROJECTION SCREEN RAISE/LOWER RC–REMOTE CONTROLLED T–TIMER V–VARIABLE FAN CONTROL WP–WEATHERPROOF WF–WEATHERPROOF FUSED SWITCH	48"
	OCCUPANCY SENSOR WALL MOUNTED	
P	OCCUPANCY SENSOR P–MULTIPLE SWITCHES WIRE IN PARALLEL	
DS	DAYLIGHT SENSOR CONTROL	

MOTORS AND HVAC EQUIPMENT AND CONTROLS

#	MOTOR–# INDICATES MOTOR NUMBER
XX	SMALL MOTOR–XX LETTERS INDICATE SERVICE SUB AS FOLLOWS: EF–BATHROOM EXHAUST FAN SD–SMOKE DAMPER GD–GARBAGE DISPOSAL
$M	MANUAL MOTOR STARTER
$DI	MANUAL MOTOR DISCONNECT W/THERMAL PROTECTION
	MAGNETIC MOTOR STARTER
	STARTER/DISCONNECT COMBINATION UNIT
	DISCONNECT SWITCH
TCP	TEMPERATURE CONTROL PANEL
T	THERMOSTAT
R	RELAY
C	MAGNETIC CONTACTOR
ESD	EMERGENCY SHUNT TRIP

PANELS/EQUIPMENT

MDP	MAIN DISTRIBUTION PANEL
	PLYWOOD BACKBOARD
	FLUSH MOUNTED PANELBOARD
	SURFACE MOUNTED PANELBOARD
T	DRY TRANSFORMER
MCC	MOTOR CONTROL CENTER
M M	METER
H	ELECTRIC HEATER/REHEATER
BB	BACK BOX FOR FUTURE WIRING DEVICE

RACEWAY

A(1,3,5)	HOMERUN–TEXT DESIGNATES PANEL AND CIRCUIT BREAKER NUMBER. HASH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS IN A 3/4" CONDUIT. NO HASH MARKS INDICATE 2 #12 AWG IN A 3/4" CONDUIT UNLESS NOTED OTHERWISE. PROVIDE A CODE SIZED GROUND IN EACH CONDUIT.
W	WIRE MOLD
	PLUG MOLD – MULTI OUTLET ASSEMBLY
3	CONDUIT STUB
	CONDUIT UP
	CONDUIT DOWN
	EXPLOSION PROOF SEAL OFF
	FLEX CONDUIT
	CONDUIT/BRANCH CIRCUIT

RECEPTACLES

		MOUNTING HEIGHT
SUB	DUPLEX RECEPTACLE – 20A, 125V	18"
SUB	ISOLATED GROUND	18"
SUB	SINGLE RECEPTACLE	18"
SUB	DOUBLE DUPLEX RECEPTACLE–20A, 125V	18"
SUB	HALF–SWITCHED RECEPTACLE–20A, 120V	18"
SUB	SPECIAL RECEPTACLE	18"
SUB	BOX SURROUNDING DEVICE DEPICTS FLOOR MOUNTED	
SUB	CEILING DUPLEX – 20A, 125V	
SUB	CEILING DOUBLE DUPLEX –20A, 125V	
	SUB= SUBSCRIPT AS FOLLOWS: AC–ABOVE COUNTER CLG–CEILING OUTLET EM–EMERGENCY EWC–ELECTRIC WATER COOLER F–FLOOR GFI–GROUND FAULT INTERRUPTER H–HORIZONTALLY MOUNTED P–PLUG MOLD S–SURFACE MOUNTED SS–SURGE SUPPRESSION RECEPTACLE TP–TAMPER PROOF W–WELDING RECEPTACLE GFI/WP IN USE–DIECAST WEATHERPROOF COVER XP–EXPLOSION PROOF 10–NUMBER INDICATES CIRCUIT NUMBER –WALL MOUNTED HEIGHTS UNLESS NOTED OTHERWISE	VERIFY 33"

JUNCTION BOXES

J	JUNCTION BOX
J	FLOOR MOUNTED JUNCTION BOX
J	LARGE JUNCTION BOX

REFERENCE SYMBOLS

	HATCH INDICATES ITEM(S) TO BE REMOVED
N/E	POINT OF CONNECTION (NEW TO EXISTING)
1 1	ENCLOSE THE ENLARGED AREA
	SECTION NUMBER DRAWING NUMBER
XX XX XX	MATCH LINE
	SHEET NO FOR PLAN
	SHEET NO FOR PLAN
	SHEET NUMBER OF ADJACENT DRAWING
XX XXX XX	ROOM NAME ROOM NUMBER

REFERENCE SYMBOLS

1 E200	DETAIL DESIGNATION
	DETAIL NUMBER DRAWING NUMBER
2 E200	SECTION DESIGNATION
	SECTION NUMBER DRAWING NUMBER
1	REFERENCE NOTE
1	REVISION NUMBER
	REVISION INDICATOR
2 1 3 1	INTERIOR ELEVATION
	DRAWING NUMBER
	ELEVATION NUMBER

NOTE:

NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

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PE-8419
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NORTH DAKOTA

DRAWING TITLE
ELECTRICAL LEGEND

E001

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

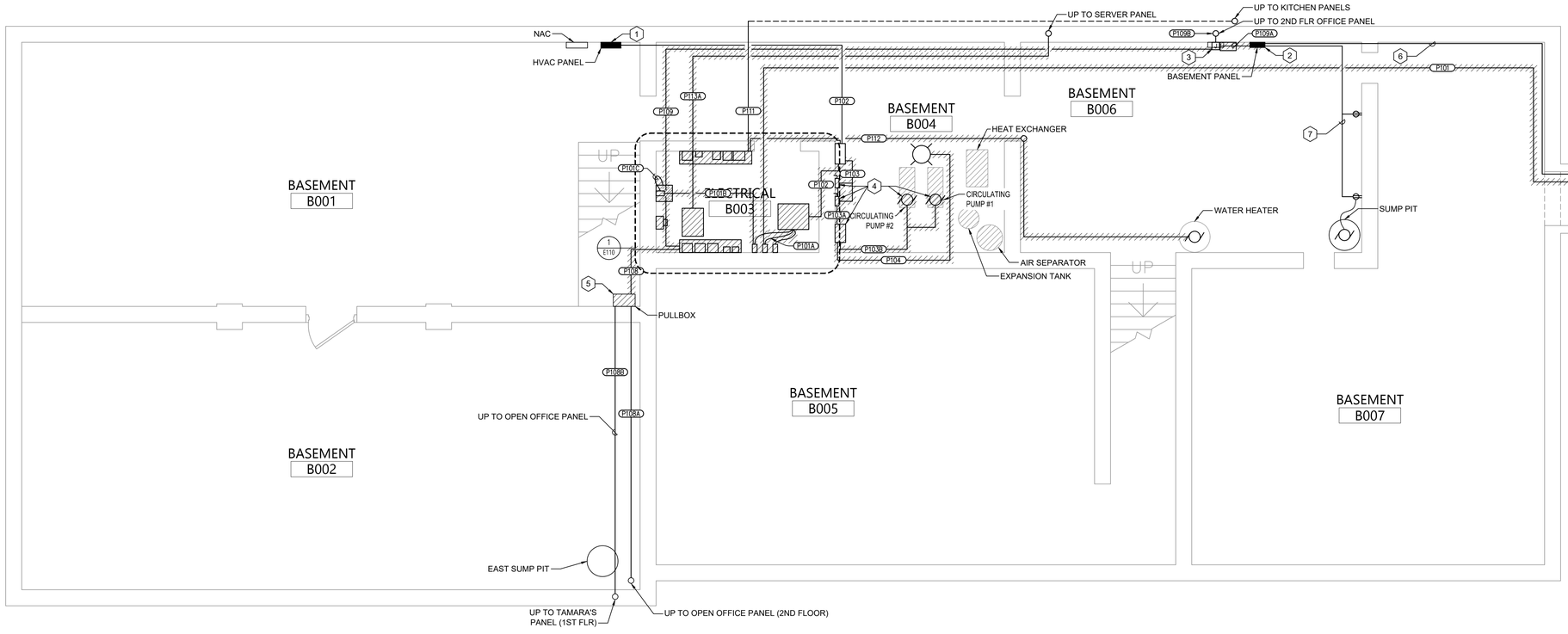
F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TOO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

1. EXISTING HVAC PANEL TO BE REMOVED AND REPLACED WITH A NEW PANEL IN THE SAME LOCATION AND AN ADDITIONAL SUB-FED PANEL, SEE DRAWING E200 FOR NEW PANEL INFORMATION. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. THE MAJORITY OF THE LOADS (HEAT PUMPS) ARE BEING REMOVED AND NEW HVAC EQUIPMENT WILL BE FED FROM THE NEW PANELS. A HANDFUL OF OTHER LOADS TO REMAIN AND BE REFED. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.
2. EXISTING BASEMENT PANEL TO BE REMOVED, A NEW PANEL 'LB' TO BE INSTALLED ON THE EAST SIDE OF THE ROOM, SEE DRAWING E200. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. EXISTING CIRCUITS TO BE REROUTED OR SPLICED AND EXTENDED TO NEW PANEL LOCATION. A JUNCTION BOX TO BE ADDED IN THIS PANEL LOCATION FOR CIRCUITS REQUIRING SPLICING. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.
3. EXISTING J-BOX TO BE REMOVED, REPLACE IF REQUIRED TO REFEED P109B (2ND FLOOR PANEL).
4. EXISTING CIRCULATING PUMPS TO BE REMOVED, EC TO REMOVE ALL CONDUIT/WIRING, STARTER BOX, AND DISCONNECTS ASSOCIATED WITH THEM.
5. REPLACE EXISTING ~24"x24"x10" PULL BOX WITH NEW HINGED ENCLOSURE.
6. EXTEND CIRCUIT TO NEW PANEL LB.
7. REFEED RECEPTACLES FROM NEW PANEL LB.



1 E100 BASEMENT ELECTRICAL DEMO PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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

0' 5' 10' 15'

SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION

OFFICE HVAC UPGRADES

CITY GRAND FORKS

STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550

DRAWN BY: EJV

CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-8419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE

BASEMENT ELECTRICAL DEMO PLAN

E100

REFERENCE NOTES:

1. GC/MC TO REMOVE HEAT PUMP, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISN'T REUSED
2. EXISTING FAN COIL UNIT (120VAC) TO REMAIN. COORDINATE ANY DISCONNECTION/RECONNECTION OF CIRCUITRY WITH THE MC/GC.
3. GC/MC TO REMOVE EXHAUST FAN, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISN'T REUSED.
4. EXISTING TAMARA'S PANEL (RECESSED) TO BE REMOVED, A NEW SURFACE MOUNTED PANEL 'L1S' TO BE INSTALLED ON THE NORTH WALL, SEE DRAWING E201. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. EXISTING CIRCUITS TO BE REMOVED AND REPLACED WITH NEW, SEE REFERENCE NOTE 5. A JUNCTION BOX TO BE ADDED IN PLACE OF THIS RECESSED PANEL LOCATION TO EXTEND CONDUITS TO NEW PANEL. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.
5. ALL TWELVE (12) EXISTING CIRCUITS FROM TAMARA'S PANEL TO BE REMOVED AND REPLACED WITH NEW WIRING. EXISTING WIRING IS OLD CLOTH TYPE WIRING. INCLUDE IN BID 30 LABOR HOURS TO DOCUMENT AND TRACK EXISTING CIRCUITS. INCLUDE IN BID 160 LABOR HOURS AND MATERIALS FOR REPLACING 300' OF #10 120VAC CKTS AND 100' OF #12 120VAC CIRCUITS. IDENTIFY THIS PRICE SEPARATELY WITHIN BID. THE ASSUMPTION IS THESE WIRES ARE ROUTED IN CONDUITS WITHIN THE WALL, IF THIS ISN'T TRUE, A NEW PLAN WILL BE DEVELOPED.

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

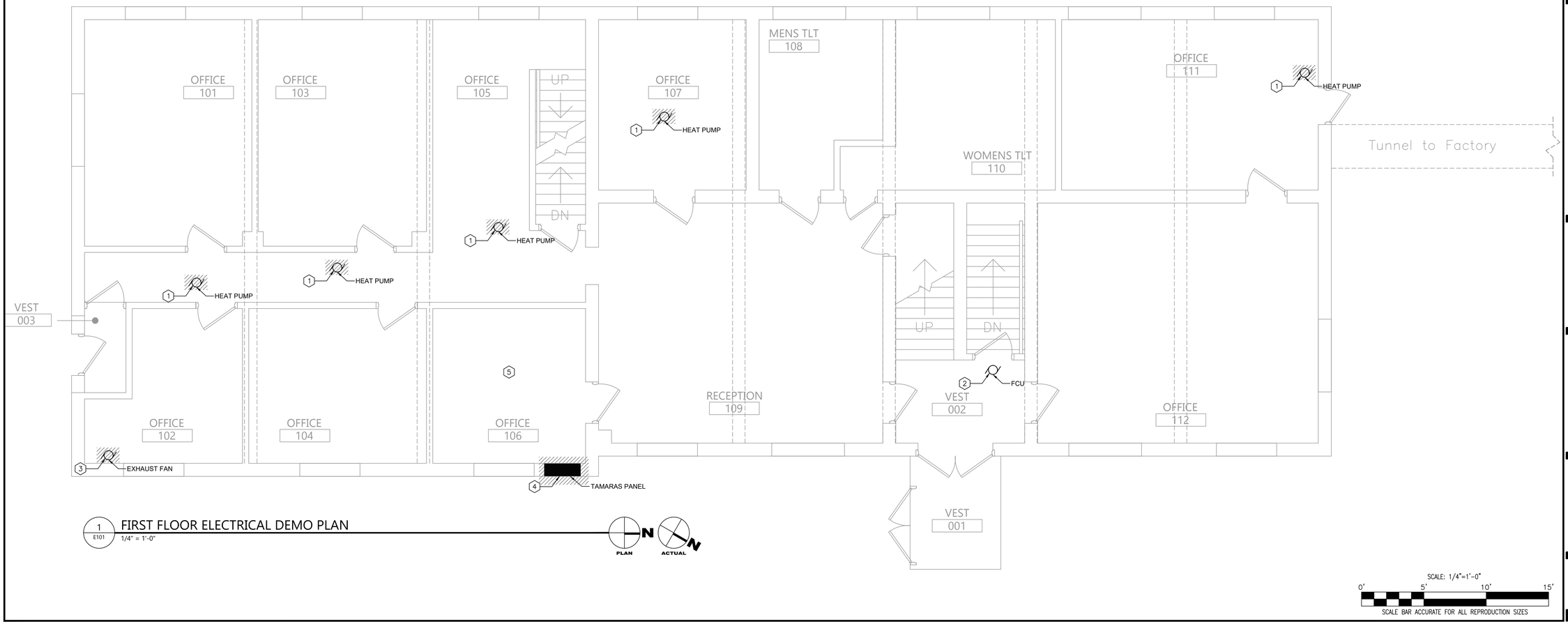
D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.



1 / E101 FIRST FLOOR ELECTRICAL DEMO PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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

0' 5' 10' 15'

SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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DRAWN BY: EJV

CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VANORNY
PE-8419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE

FIRST FLOOR ELECTRICAL DEMO PLAN

E101

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

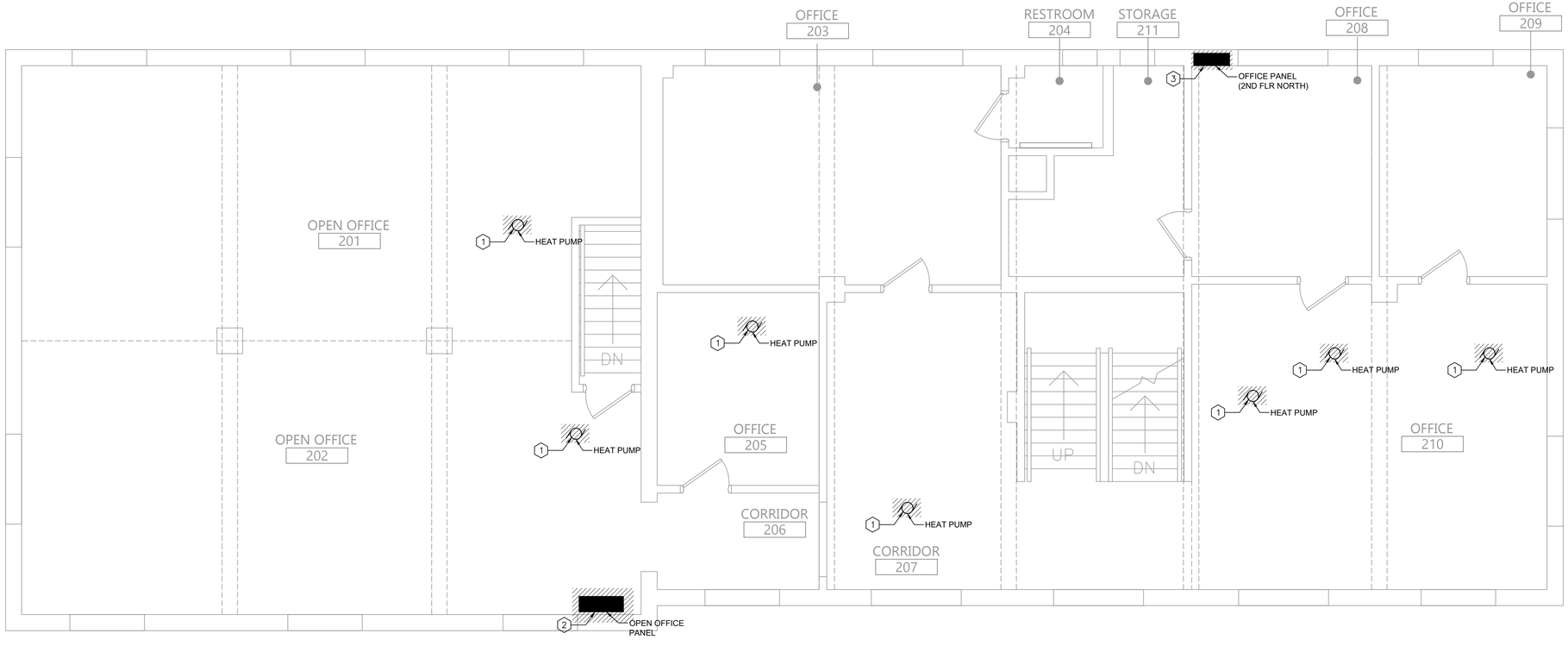
F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

1. GC/MC TO REMOVE HEAT PUMP, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISN'T REUSED.
2. EXISTING OPEN OFFICE PANEL (2ND FLR) TO BE REMOVED AND REPLACED WITH A NEW PANEL IN THE SAME LOCATION. SEE DRAWING E202 FOR NEW PANEL INFORMATION. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. ALL OF THE EXISTING CIRCUITS TO REMAIN AND BE RECONNECTED TO THE NEW PANEL. TRACK, VERIFY, AND UPDATE ANY UNLABELED CIRCUITS. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.
3. EXISTING RECESSED OFFICE PANEL (2ND FLR NORTH) TO BE REMOVED AND REPLACED WITH A NEW RECESSED PANEL IN THE SAME LOCATION, SEE DRAWING E202. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. ALL OF THE EXISTING CIRCUITS TO REMAIN AND BE RECONNECTED TO THE NEW PANEL. TRACK, VERIFY, AND UPDATE ANY UNLABELED CIRCUITS. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.



1 E102 SECOND FLOOR ELECTRICAL DEMO PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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STATE NORTH DAKOTA

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PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-11819
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
SECOND FLOOR ELECTRICAL DEMO PLAN

E102

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

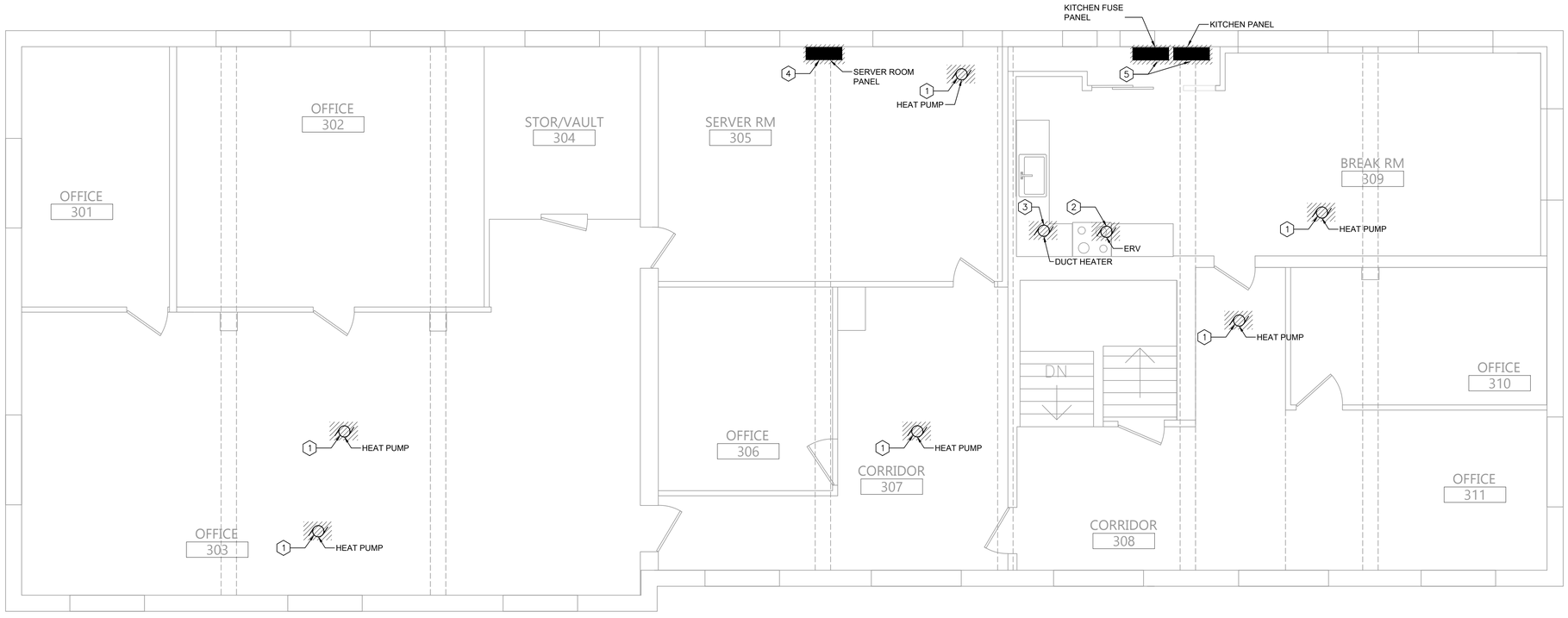
F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

1. GC/MC TO REMOVE HEAT PUMP, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISNT REUSED.
2. GC/MC TO REMOVE HEAT PUMP, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISNT REUSED.
3. GC/MC TO REMOVE DUCT HEATER, EC TO DISCONNECT. EC TO REMOVE WIRING COMPLETELY AND ANY CONDUIT THAT ISNT REUSED.
4. EXISTING SERVER ROOM PANEL TO BE REMOVED AND REPLACED WITH A NEW PANEL IN THE SAME LOCATION. SEE DRAWING E203 FOR NEW PANEL INFORMATION. SEE EXISTING PANEL SCHEDULE ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. ALL OF THE EXISTING CIRCUITS TO REMAIN AND BE RECONNECTED TO THE NEW PANEL. TRACK, VERIFY, AND UPDATE ANY UNLABELED CIRCUITS. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANEL.
5. EXISTING KITCHEN PANEL AND KITCHEN FUSE PANEL TO BE REMOVED AND REPLACED WITH A SINGLE PANEL IN THE SAME LOCATION, SEE DRAWING E203. SEE EXISTING PANEL SCHEDULES ON DRAWINGS E801/E802 FOR INFORMATION ON EXISTING PANEL LOADS. MOST OF THE EXISTING CIRCUITS TO REMAIN AND BE RECONNECTED TO THE NEW PANEL. TRACK, VERIFY, AND UPDATE ANY UNLABELED CIRCUITS. THE KITCHEN 120VAC CIRCUITS TO BE REPLACED WITH NEW, AS SHOWN ON E203. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANELS. WIREWAY ABOVE PANELS AND ALLEN-BRADLEY CONTACTOR TO REMAIN.



1 E103 THIRD FLOOR ELECTRICAL DEMO PLAN
1/4" = 1'-0"

PLAN ACTUAL

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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STATE NORTH DAKOTA

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PROJECT NO: 20255550
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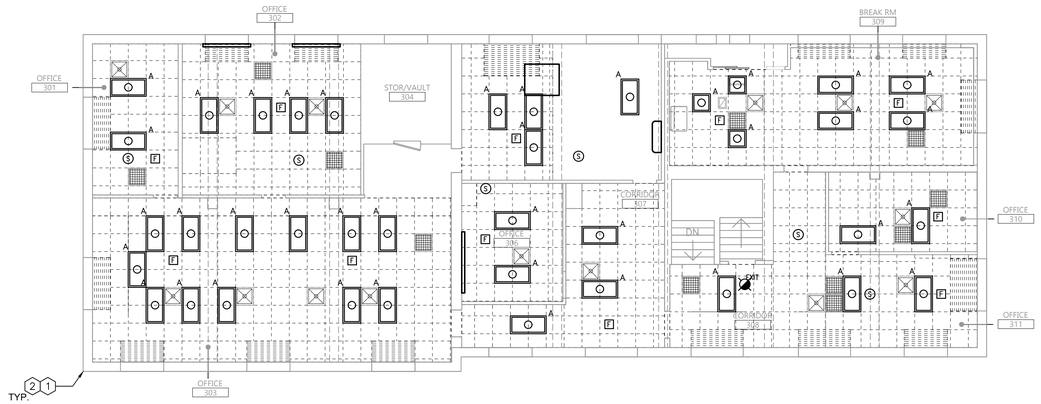
STAMP
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

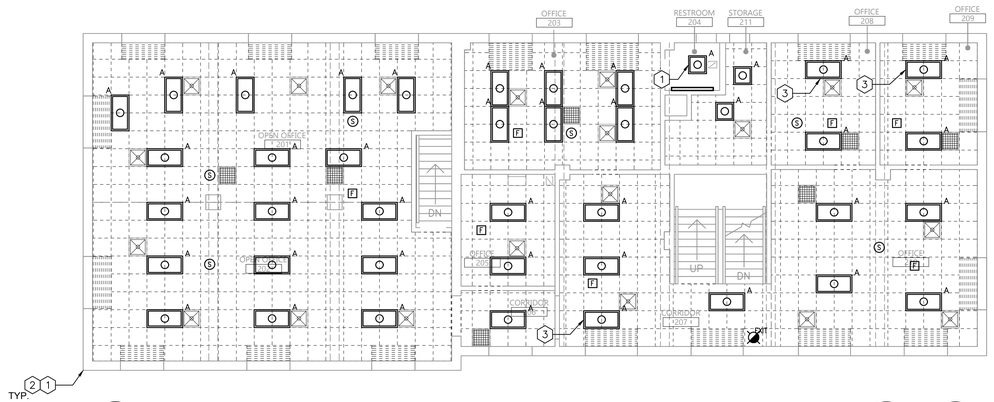
DRAWING TITLE
THIRD FLOOR ELECTRICAL DEMO PLAN

E103



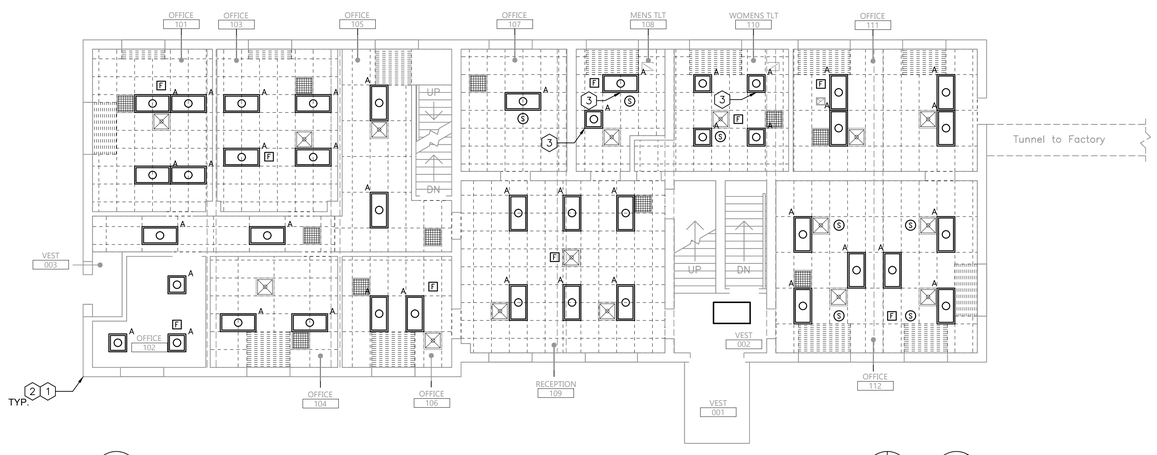
3 E104 THIRD FLOOR ELECTRICAL DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"



2 E104 SECOND FLOOR ELECTRICAL DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"



1 E104 FIRST FLOOR ELECTRICAL DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

1. EXISTING ACT CEILING SHALL BE REMOVED BY GC/MC FOR MECHANICAL DUCTWORK AND PIPING DEMOLITION WORK. EC SHALL COORDINATE THE TEMPORARY SUPPORT (OR REMOVAL AND REINSTALLATION) OF LUMINAIRES, FIRE ALARM DEVICES, AND SPEAKERS UNTIL NEW ACT CEILING IS IN PLACE. PROVIDE J-HOOKS TO SUPPORT ANY NETWORK OR LOOSE CABLING LAYING ON THE TOP OF THE CEILING GRID. PROVIDE LUMINAIRE SUPPORT WIRES CONNECTED TO STRUCTURE ABOVE IF NOT ALREADY IN PLACE. MAINTAIN EXISTING CIRCUITRY UNLESS OTHERWISE NOTED. EC TO VERIFY PLACEMENT AND QUANTITY OF DEVICES IN ACT CEILING. TYPICAL FOR ALL FLOORS. COORDINATE DISCONNECTION OF FIRE ALARM DEVICES WITH JCI/OWNER.
2. COORDINATE INSTALLATION LOCATION OF EXISTING LIGHTING AND EQUIPMENT WITHIN NEW ACT CEILING WITH ND MILL. EXTEND CONDUIT AND WIRING TO REINSTALLED DEVICE LOCATION AS NEEDED. TYPICAL FOR ALL FLOORS.
3. LIGHTS MOVED FROM THEIR EXISTING LOCATION. EXTEND CONDUIT AND WIRING AS NEEDED. RESUPPORT THE LIGHT FROM THE CEILING. COORDINATE FINAL LOCATION WITH NDM.

SCALE: 1/8"=1'-0"

0' 5' 10' 20' 30'

SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

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CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
REFLECTED CEILING ELECTRICAL DEMOLITION PLANS

E104

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

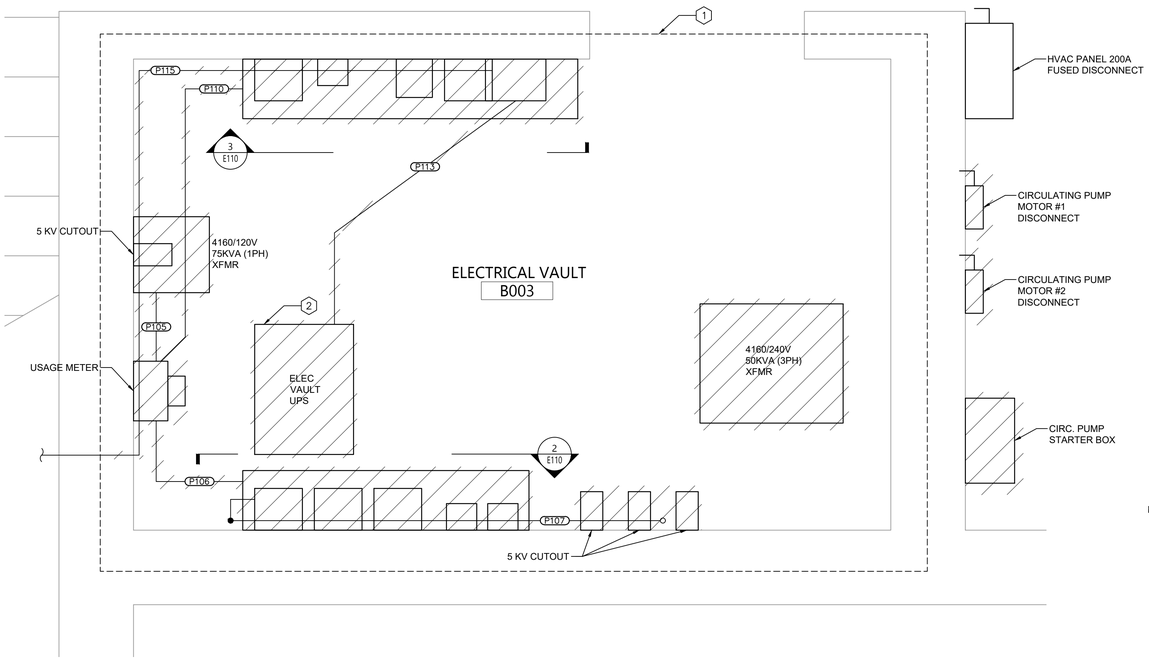
F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

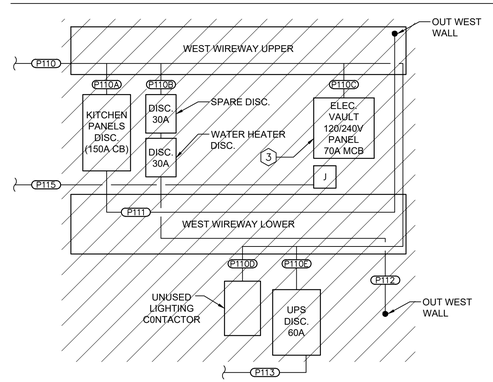
1. ALL ELECTRICAL EQUIPMENT WITHIN ELECTRICAL VAULT TO BE REMOVED, INCLUDING CONDUIT AND WIRING. SEE CONDUIT AND WIRING REMOVAL SCHEDULE ON DRAWING E701 FOR FURTHER DETAIL ON CONDUIT/WIRING MODIFICATIONS. SEE DRAWING E601 FOR EXISTING POWER RISER.
2. EC TO REMOVE EXISTING UPS AND TURN OVER TO NDM.
3. REFEED EXISTING CIRCUITS FROM NEW HVAC PANEL (EAST) AS SHOWN ON E801/E803. SPLICE AND EXTEND WIRING IF IT WILL NOT REACH.
4. REFEED EXISTING CIRCUITS FROM NEW PANEL LB, SEE CONDUIT REMOVAL SCHEDULE FOR FURTHER INFORMATION.



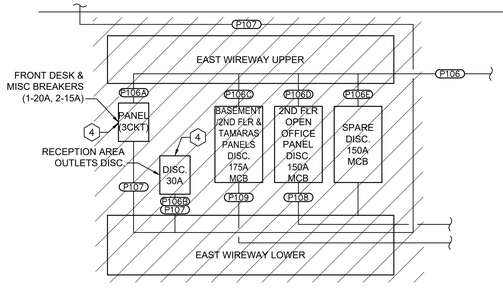
1 E110 BASEMENT ELECTRICAL ROOM DEMO PLAN
1" = 1'-0"

PLAN

ACTUAL



3 E110 BASEMENT ELECTRICAL ROOM DEMO ELEVATION
NOT TO SCALE — LOOKING WEST



2 E110 BASEMENT ELECTRICAL ROOM DEMO ELEVATION
NOT TO SCALE — LOOKING EAST

SCALE: 1"=1'-0"
0' 1' 2' 4'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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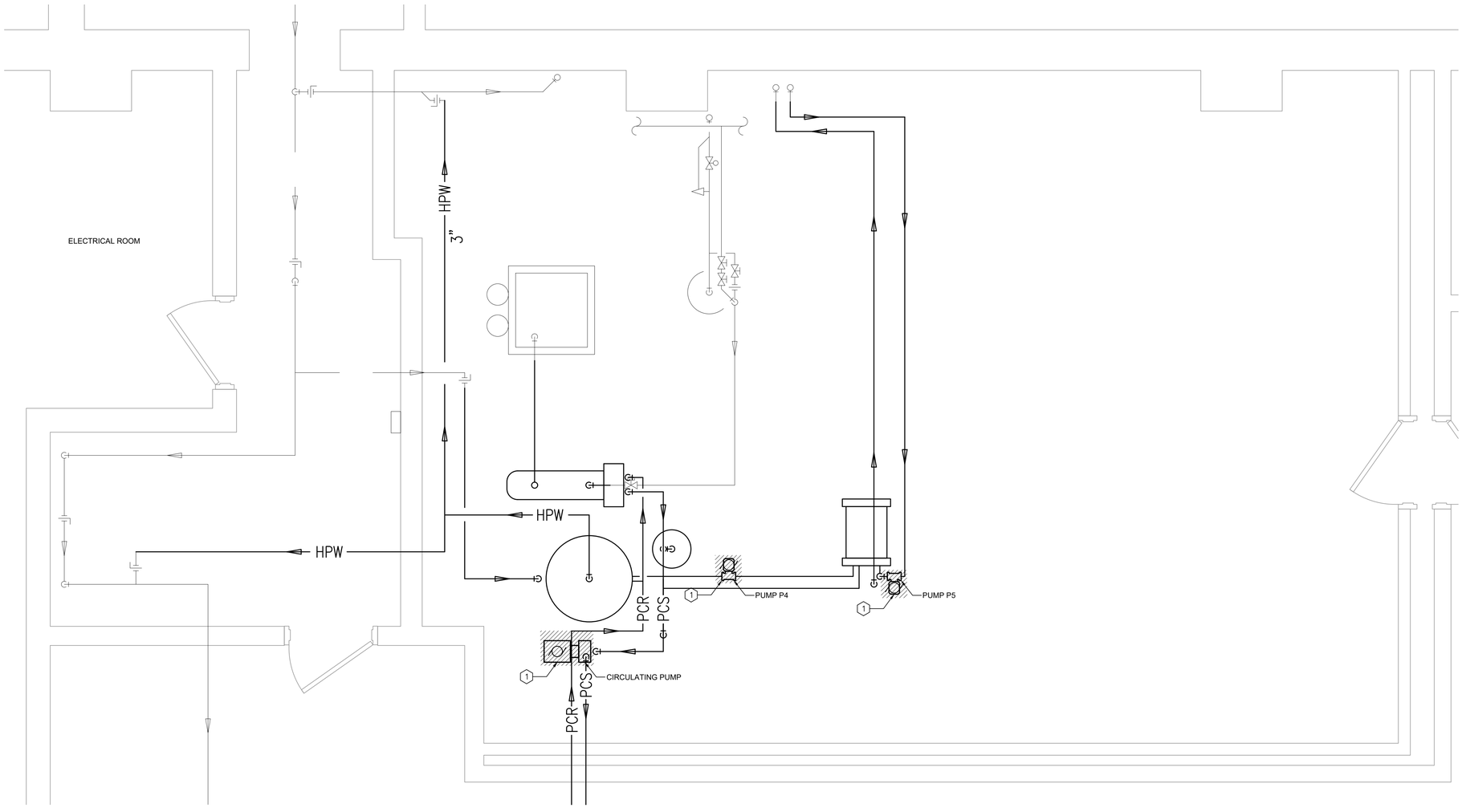
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9179
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
BASEMENT ELECTRICAL ROOM DEMO PLAN

E110



1 E120 MILL BUILDING No.1 ENLARGED MECHANICAL ROOM ELECTRICAL DEMO PLAN
1/4" = 1'-0"

PLAN ACTUAL

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. ////// INDICATES ITEMS TO BE REMOVED, REMOVE ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE SOURCE IF POSSIBLE, IF CONDUIT/WIRING CANNOT BE REMOVED ENTIRELY, REMOVE AS MUCH AS POSSIBLE AND TAPE/LABEL WIRES IN FIELD.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

D. COORDINATE LOCKOUT/TAGOUT WITH OWNER.

E. SEE DRAWING E701 FOR CONDUIT AND WIRING REMOVAL SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR ADDITIONAL REMOVAL REQUIRED.

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOME RUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

REFERENCE NOTES:

1. MC TO REMOVE MOTOR. EC TO DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO SOURCE. ASSUME 100' OF CONDUIT AND WIRING, FIELD VERIFY EXISTING CONDUIT AND WIRING.

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MILL BUILDING No. 1 ENLARGED MECHANICAL ROOM ELECTRICAL DEMO PLAN

E120

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR CONDUIT/WIRING AND WORK REQUIRED.

C. SEE DRAWING E603 FOR MOTOR AND EQUIPMENT SCHEDULE.

D. EC IS RESPONSIBLE TO PROVIDE ALL REQUIRED CONDUITS AND WIRING FROM PANELBOARDS TO FEED NEW AND EXISTING LOADS. EC TO FIELD VERIFY CONDITIONS (FLOOR AND WALL TYPES, ETC.) AND INCLUDE IN BID TO PROVIDE ANY REQUIRED NEW CONDUITS AND ALL ASSOCIATED LABOR/WORK TO ACCOMMODATE INSTALLATION INTO THIS EXISTING BUILDING IN AN ACCEPTABLE AND CLEAN MANNER. EC MAY UTILIZE EXISTING CONDUITS. EC RESPONSIBLE TO FOLLOW THE NEC FOR CONDUIT FILL, DE-RATING OF CONDUCTORS, AND OTHER CODE REQUIREMENTS.

E. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

F. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

G. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

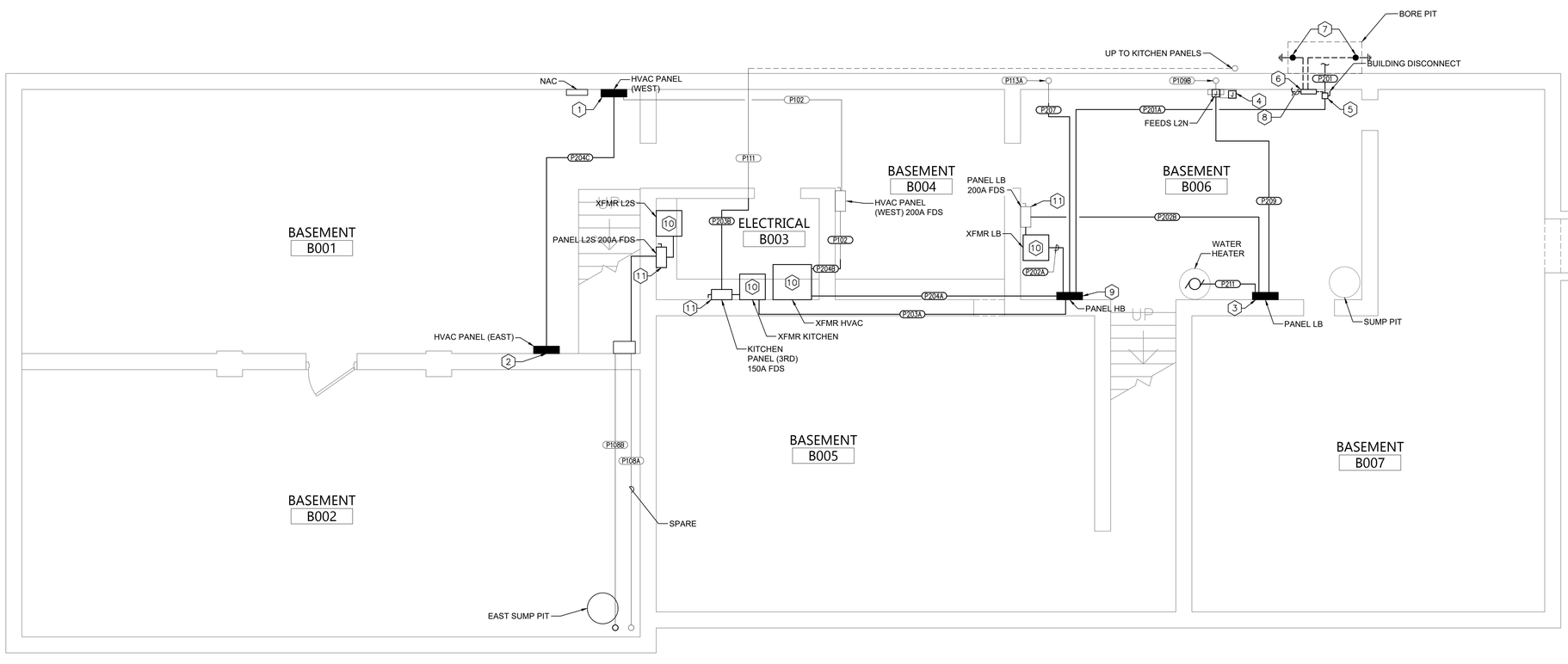
H. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

I. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

J. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.

REFERENCE NOTES:

1. PROVIDE NEW HVAC PANEL (WEST) TO REPLACE THE EXISTING HVAC PANEL, IN THE SAME LOCATION, MAKE ANY MODIFICATIONS REQUIRED FOR INSTALLATION. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES. PANEL TO HAVE SUB-FEED LUGS TO FEED HVAC PANEL (EAST).
2. PROVIDE NEW HVAC PANEL (EAST), PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES.
3. PROVIDE NEW PANEL LB. PANEL LB REPLACES EXISTING BASEMENT PANEL. EXTEND/REROUTE CIRCUITS TO NEW PANEL LOCATION AS NOTED ELSEWHERE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES.
4. PROVIDE A JUNCTION BOX ON WALL WHERE EXISTING BASEMENT PANEL LOCATED TO SPLICE AND EXTEND CIRCUITS THAT WILL NOT REACH THE NEW PANEL LB.
5. PROVIDE A 600V HEAVY DUTY 400A NON-FUSED DISCONNECT (MINIMUM 25KAIC RATING) ON THE WALL TO SERVE AS THE BUILDING'S DISCONNECT SWITCH, VERIFY EXACT LOCATION. SWITCH TO COMPLY WITH NEC 225.31.
6. PROVIDE A 1/4" THICK COPPER GROUND BUS (NRTL LISTED ASSEMBLY) WITH ISOLATED STAND OFFS. PROVIDE #1/0 CU CONDUCTOR FORM BUILDING DISCONNECT GROUND TO GROUNDING BUS BAR. PROVIDE GROUNDING LUGS IN DISCONNECT AS REQUIRED.
7. PROVIDE AND INSTALL TWO (2) 10' CU GROUND RODS (MIN. 6' APART) AND NEC SIZED GROUNDING ELECTRODE CONDUCTOR (GEC) TO GROUND BUS.
8. PROVIDE GEC'S FROM GROUND BUS TO ALL AVAILABLE GROUNDING ELECTRODES (METAL WATER PIPE, ECT.). FIELD VERIFY PRIOR TO BIDDING.
9. PROVIDE NEW PANEL HB, PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES.
10. PROVIDE TRANSFORMER, MOUNT TO FLOOR, SEE DRAWING E805 FOR TRANSFORMER SCHEDULE. FOR TRANSFORMERS IN VAULTS, PROVIDE STAINLESS STRUT (OR EQUAL) TO SUPPORT FRONT OF TRANSFORMERS NOT SITTING ON EXISTING CONCRETE HOUSEKEEPING PAD.
11. PROVIDE 240V 3 WIRE FUSED (2 BLADE AND FUSE HOLDER) DISCONNECT SWITCH. PROVIDE ALL MOUNTING HARDWARE.



1 E200 BASEMENT NEW ELECTRICAL PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-8419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
BASEMENT NEW ELECTRICAL PLAN

E200

REFERENCE NOTES:

1. PROVIDE NEW PANEL L1S, PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES. BRANCH CIRCUITS PREVIOUSLY FED FROM TAMARA'S PANEL TO BE REFED WITH ALL NEW WIRING, AS NOTED ON E101.
2. EC TO PROVIDE ENCLOSURE (PULLBOX) WITHIN WALL (OR SIMILAR) TO EXTEND CONDUITS THAT END WITHIN WALL TO THE NEW PANEL LOCATION, AS NOTED ON E101. EC TO MODIFY EXISTING WALL TO ACCOMMODATE AS REQUIRED. WALL TYPE IS SOME SORT OF CEMENT PANEL, FIELD VERIFY.
3. CHILLER IS A SINGLE POINT POWER CONNECTION, EC TO ROUTE FEEDER TO MAINTAIN ACCESS AROUND CHILLER.
4. EC TO RECONNECT TO EXISTING FAN COIL UNIT. COORDINATE WITH MC ON TIMELINE.
5. PROVIDE A GFCI/WP IN-USE RECEPTACLE OUTLET WITH DIECAST COVER AS MANUFACTURED BY INTERMATIC MODEL WP1250MVXD OR EQUAL.

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR CONDUIT/WIRING AND WORK REQUIRED.

C. SEE DRAWING E603 FOR MOTOR AND EQUIPMENT SCHEDULE.

D. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

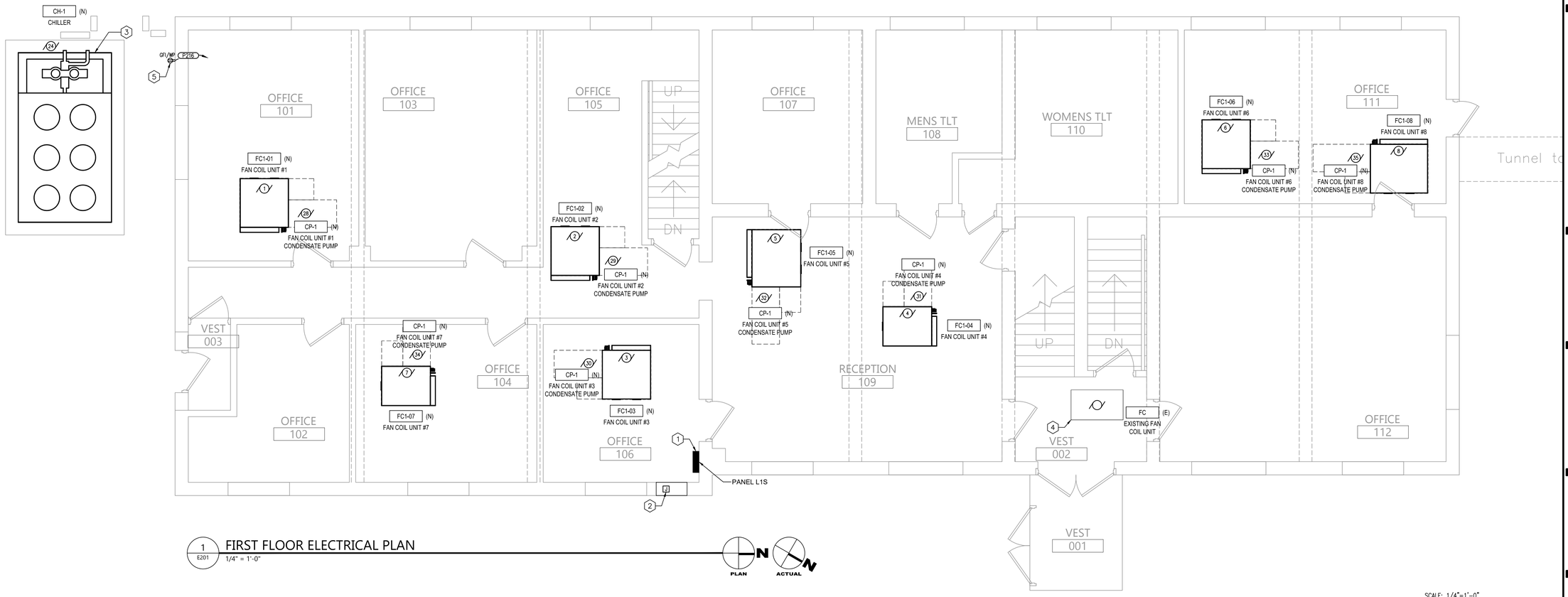
E. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

F. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

G. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

H. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

I. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.



1 E201 FIRST FLOOR ELECTRICAL PLAN

1/4" = 1'-0"

PLAN ACTUAL

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

0' 5' 10' 15'

SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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NORTH DAKOTA STATE MILL

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CITY GRAND FORKS

STATE NORTH DAKOTA

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PROJECT NO: 20255550

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CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-11819
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE

FIRST FLOOR ELECTRICAL PLAN

E201

REFERENCE NOTES:

1. PROVIDE NEW PANEL L2N, PROVIDE ALL MOUNTING HARDWARE, PANEL TO BE RECESSED AND BE INSTALLED WERE THE PREVIOUS PANEL WAS LOCATED. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES. EC TO MODIFY EXISTING WALL TO ACCOMMODATE AS REQUIRED. WALL TYPE IS SOME SORT OF CEMENT PANEL, FIELD VERIFY.
2. PROVIDE NEW PANEL L2S, PROVIDE ALL MOUNTING HARDWARE. PANEL L2S IS REPLACING THE PREVIOUS PANEL IN THE SAME LOCATION, MODIFY CONDUITS TO ACCOMMODATE NEW PANEL, AS REQUIRED. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES.

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR CONDUIT/WIRING AND WORK REQUIRED.

C. SEE DRAWING E603 FOR MOTOR AND EQUIPMENT SCHEDULE.

D. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

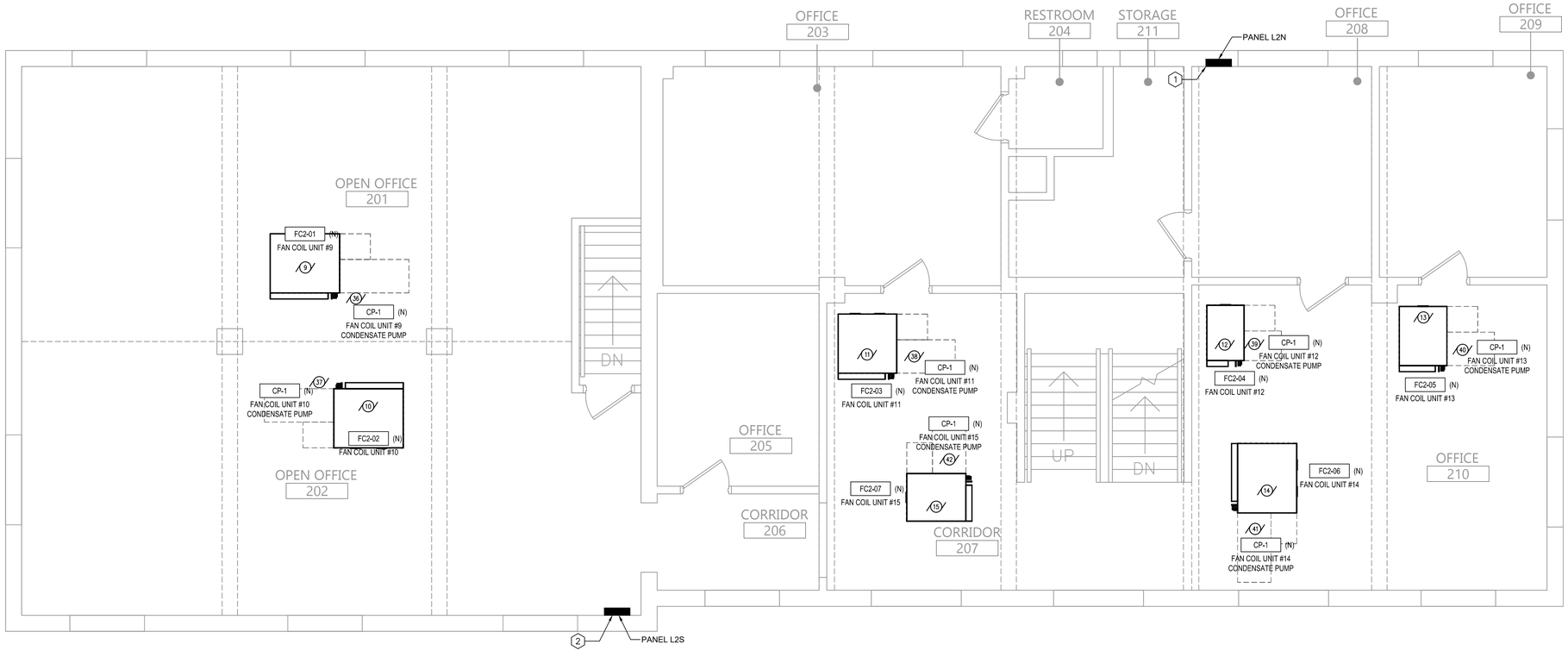
E. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

F. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

G. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

H. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

I. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.



1 / E202 SECOND FLOOR ELECTRICAL PLAN

1/4" = 1'-0"

PLAN N ACTUAL N

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

0' 5' 10' 15'

SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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NORTH DAKOTA STATE MILL

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OFFICE HVAC UPGRADES

CITY GRAND FORKS

STATE NORTH DAKOTA

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REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE

SECOND FLOOR ELECTRICAL PLAN

E202

REFERENCE NOTES:

1. PROVIDE NEW PANEL L3N, PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES. PANEL L3N IS REPLACING THE TWO EXISTING PANELS IN THE SAME ROUGH LOCATION.
2. PROVIDE NEW PANEL H3, PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES.
3. PROVIDE TRANSFORMER, MOUNT TO FLOOR, SEE DRAWING E805 FOR TRANSFORMER SCHEDULE. IF TRANSFORMER SECONDARY CONDUCTORS ARE OVER 10', PROVIDE 100/2 240V CB AND MAKE SERVER ROOM PANEL MLO.
4. PROVIDE NEW SERVER ROOM PANEL, PROVIDE ALL MOUNTING HARDWARE. SEE DRAWINGS E803/E804 FOR NEW PANEL SCHEDULES. THE NEW SERVER ROOM PANEL IS REPLACING AN EXISTING PANEL IN THE SAME LOCATION.
5. INSTALL DEAD-FRONT GFCI FOR NON GFCI REFRIGERATOR OUTLET.
6. REMOVE EXISTING 120V RECEPTACLE AND REPLACE WITH 120V GFCI RECEPTACLE.

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR CONDUIT/WIRING AND WORK REQUIRED.

C. SEE DRAWING E603 FOR MOTOR AND EQUIPMENT SCHEDULE.

D. RECEPTACLES IN THE KITCHEN AREA TO BE GFCI. WHERE GFCI RECEPTACLES ARE NOT READILY ACCESSIBLE, GFCI DEAD FRONTS ARE TO BE INSTALLED.

E. PROVIDE ADHESIVE LABELS ON 120V RECEPTACLES, AND OTHER EQUIPMENT.

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

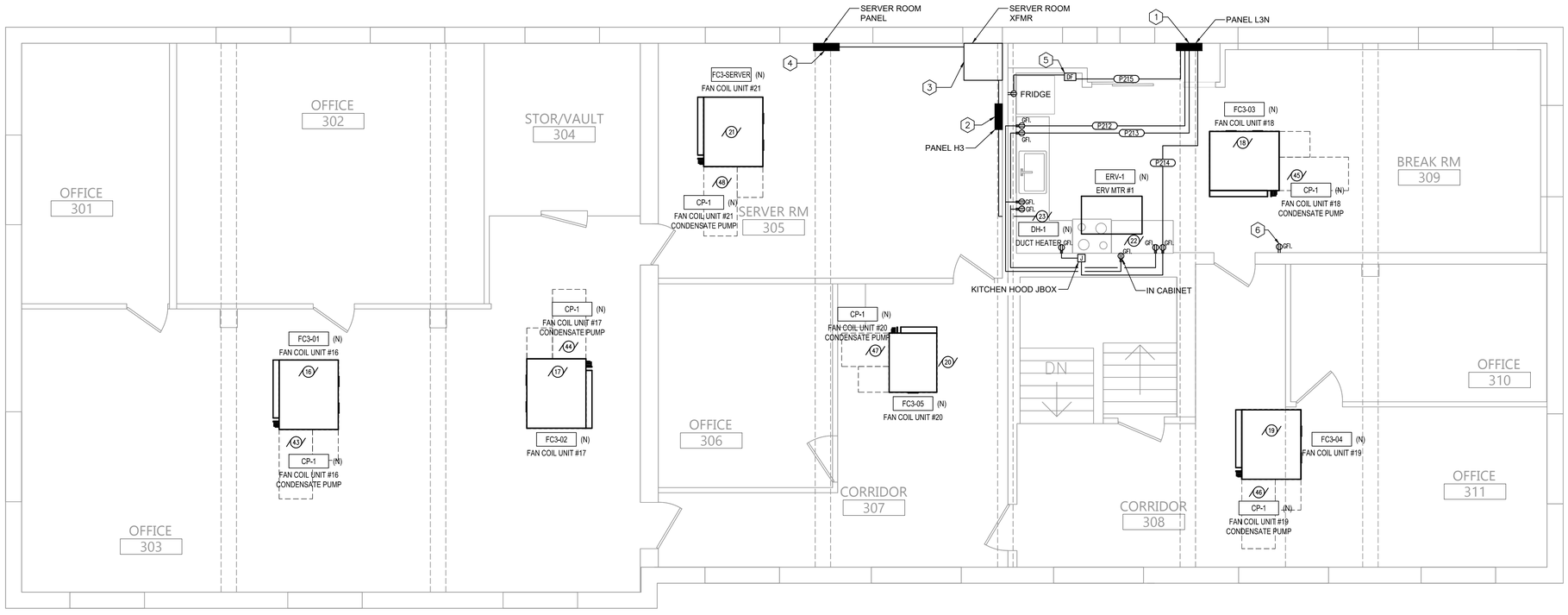
G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

I. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

J. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

K. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.



1 E203 THIRD FLOOR ELECTRICAL PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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NORTH DAKOTA STATE MILL

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OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

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PROJECT NO: 20255550
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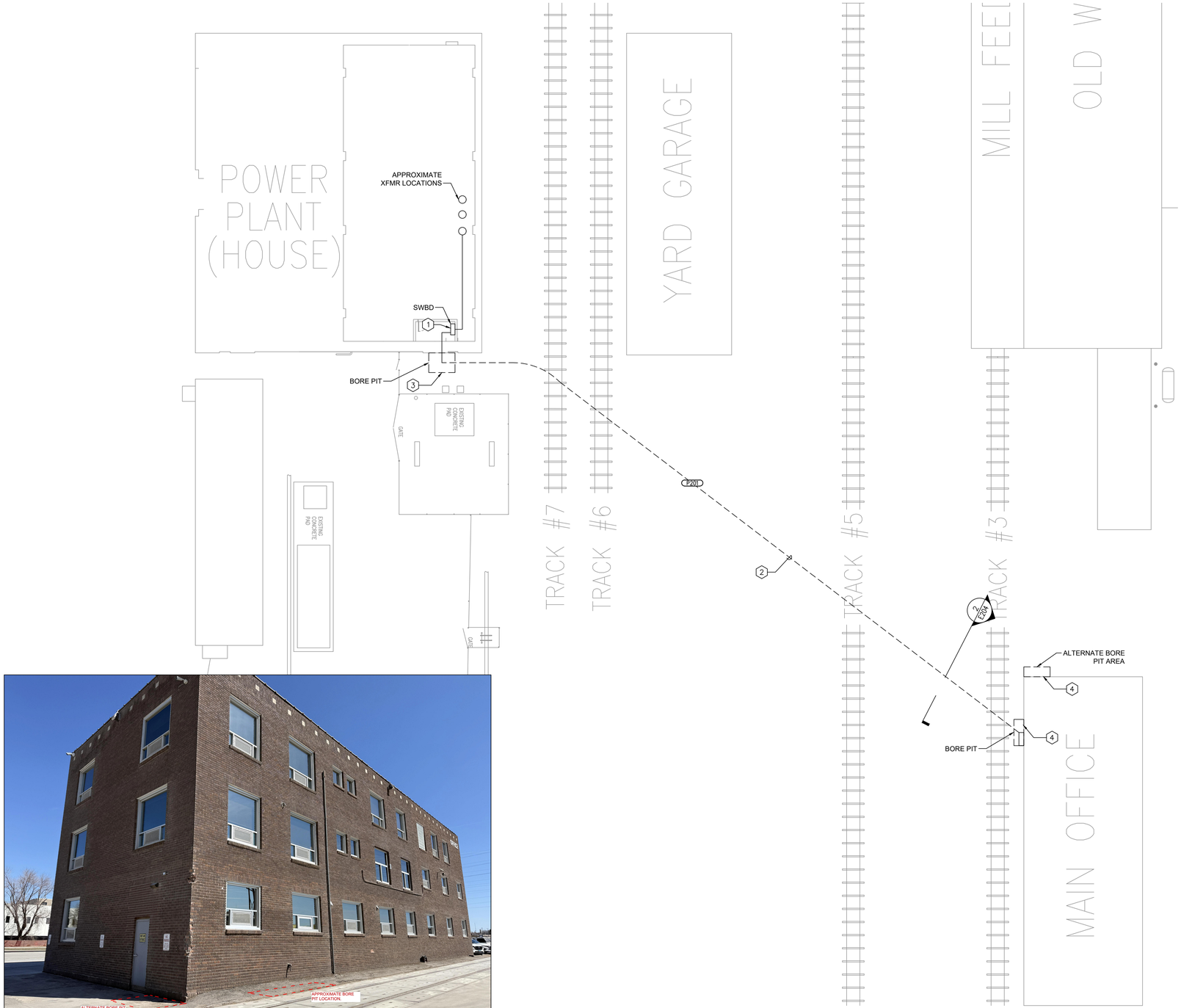
CHECKED BY: TWV

STAMP
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-11419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
THIRD FLOOR ELECTRICAL PLAN

E203



2 E204 APPROXIMATE BORE PIT LOCATION/DETAIL
NTS

TRUE NORTH PLAN NORTH

1 E204 UNDERGROUND BORING PLAN
1/16"=1'-0"

SCALE: 1/16"=1'-0"
0' 5' 10' 20' 30' 40' 50' 60'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH ND STATE MILL.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE.

C. PROPOSED FEEDER ROUTE IS SUGGESTED AND APPROXIMATE, EC TO VERIFY AND ALLOWED TO PROPOSE ALTERNATE ROUTE.

D. SUBMIT WRITTEN UNDERGROUND BORING/DIGGING PLAN AND SUBMIT TO NDM PRIOR TO BEGINNING OF WORK. DEPTH OF BORE TO BE ALTERED BASED ON UNDERGROUND UTILITIES. EC TO POTHOLE EXISTING UNDERGROUND UTILITIES, WHERE NOT UNDER PAVEMENT/CEMENT. PROVIDE LOCATES FOR UNDERGROUND UTILITIES.

E. SUBMIT WRITTEN PLAN TO THE NDM FOR WORK IMMEDIATELY OUTSIDE OF THE OFFICE BUILDING INCLUDING REQUIRED EQUIPMENT, SPACE AND TIMING, PRIOR TO BEGINNING. THERE IS SIGNIFICANT TRUCK TRAFFIC IN THIS AREA, MINIMIZE THE AFFECT ON THE TRAFFIC. PROVIDE BARRIERS AROUND WORK AREA AND MINIMIZE TIMELINE TO LIMIT AFFECT ON TRAFFIC.

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

I. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

J. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

K. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.

REFERENCE NOTES:

1. EXISTING 480V SWITCHBOARD. EC TO PROVIDE AND INSTALL A NEW 400A CIRCUIT BREAKER, COORDINATE AND SCHEDULE SHUTDOWN OF SWBD WITH THE NDM AND LOTO PROCEDURES. VERIFY DE-ENERGIZATION. SEE SUPPLEMENTAL INFORMATION FOR EXISTING SWITCHBOARD PHOTOS AND PRELIMINARY QUOTES (FOR A NEW 400A/3P). REMOVE EXISTING BLANK COVERS AND/OR UNUSED BREAKER(S) TO ACCOMMODATE THE NEW 400A BREAKER.
2. EC TO PROVIDE UG BORED FEEDER AT APPROXIMATELY 6' DEPTH, SEE GENERAL NOTES.
3. EC TO PROVIDE BORE PIT. PROVIDE BACKHOE/EQUIPMENT TO EXCAVATE, REPLACE SOIL IN KIND. EXISTING SUBSTATION LOCATED JUST TO THE SOUTH, USE EXTREME CAUTION.
4. EC TO PROVIDE BORE PIT. PROVIDE BACKHOE/EQUIPMENT TO EXCAVATE, EXISTING AREA IS CONCRETE/PAVEMENT, SAW CUT CONCRETE/PAVEMENT TO REMOVE. BACKFILL FOR THE EXCAVATION SHOULD BE CLASS 5 GRANULAR FILL, COMPACTED TO 95% STANDARD DENSITY. PROVIDE COMPACTION TESTS ON THE BACKFILL. REPLACE WITH PAVEMENT OF EQUAL THICKNESS, CONCRETE: 4000PSI CONCRETE. ENSURE EXISTING TRAIN TRACK CONCRETE, RAIL, AND SUBSTRATE REMAIN UNAFFECTED. IF ALTERNATE BORE PIT AREA IS SELECTED, ADJUST BUILDING DISCONNECT LOCATION AND FEEDERS ACCORDINGLY.

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9418
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
UNDERGROUND BORING PLAN

E204

REFERENCE NOTES:

1. PROVIDE 120VAC RECEPTACLE AND BOX. RECEPTACLE TO BE GFCI. SEE GENERAL NOTE E.
2. NDM TO PROVIDE TWO MCC STARTER BUCKETS FOR THE TWO HYDRONIC PUMPS. EC TO PROVIDE FUSES. EC TO PROVIDE FUSES. EC TO PROVIDE CONDUIT AND CONTROL WIRING FROM MCC BUCKETS TO A NEARBY CONTROLLER, VERIFY WITH MC. EC TO INCLUDE 100' OF IMC AND 8-#14.

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE NORTH DAKOTA MILL AND THE OTHER PRIME CONTRACTORS.

B. SEE DRAWING E702 FOR POWER CONDUIT AND WIRING SCHEDULE. THIS SCHEDULE SHOWS THE MAJOR CONDUITS, SEE DRAWINGS FOR CONDUIT/WIRING AND WORK REQUIRED.

C. SEE DRAWING E603 FOR MOTOR AND EQUIPMENT SCHEDULE.

D. ALL ENCLOSURE, FITTINGS, AND OTHER DEVICES ARE TO BE NEMA 4/12 UNLESS NOTED OTHERWISE.

E. PROVIDE ADHESIVE LABELS ON 120V RECEPTACLES, AND OTHER ELECTRICAL DEVICES.

GENERAL NOTES:

F. RECONNECT ANY LIGHTING OR POWER CIRCUIT INADVERTENTLY DISCONNECTED BY DEMOLITION.

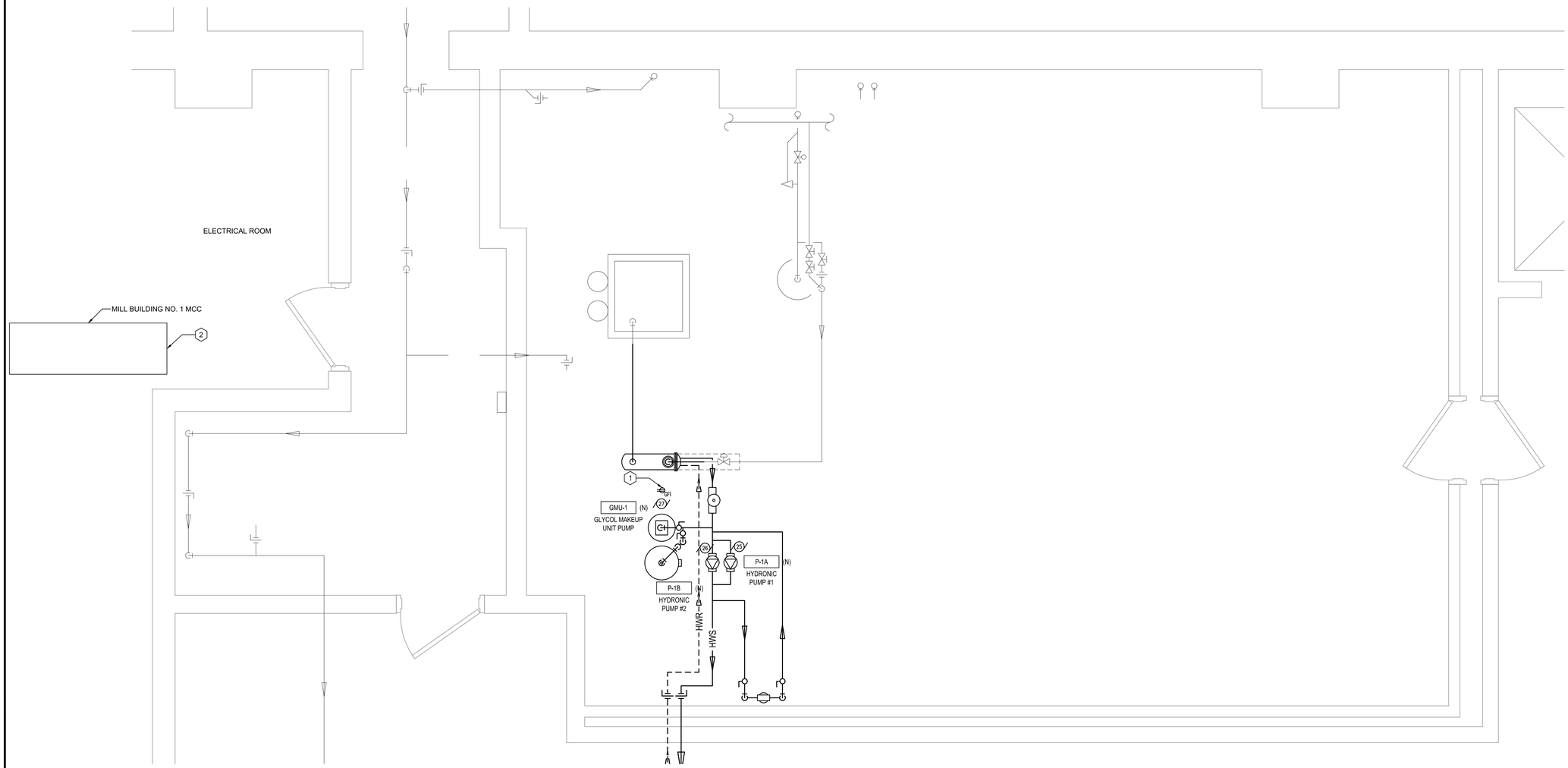
G. LABEL ALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

H. LABEL ALL HOMERUNS WITH INDELIBLE INK TO INDICATE PANEL AND CIRCUIT.

I. LABEL ALL DEVICES, INCLUDING SWITCHES, TO INDICATE PANEL AND CIRCUIT. USE ADHESIVE MYLAR TAPE.

J. PROVIDE #10 CONDUCTORS THROUGHOUT ALL 120V, 20A BRANCH CIRCUITS OF 100'-0" OR GREATER IN LENGTH.

K. PROVIDE ALL DEVICES AND ASSOCIATED WIRING AS SHOWN.



1 / E220 MILL BUILDING No.1 ENLARGED ELECTRICAL ROOM PLAN
1/4" = 1'-0"

PLAN N ACTUAL N

SCALE: 1/4"=1'-0"
0' 5' 10' 15'
SCALE BAR ACCURATE FOR ALL REPRODUCTION SIZES

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CLIENT
NORTH DAKOTA STATE MILL

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OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

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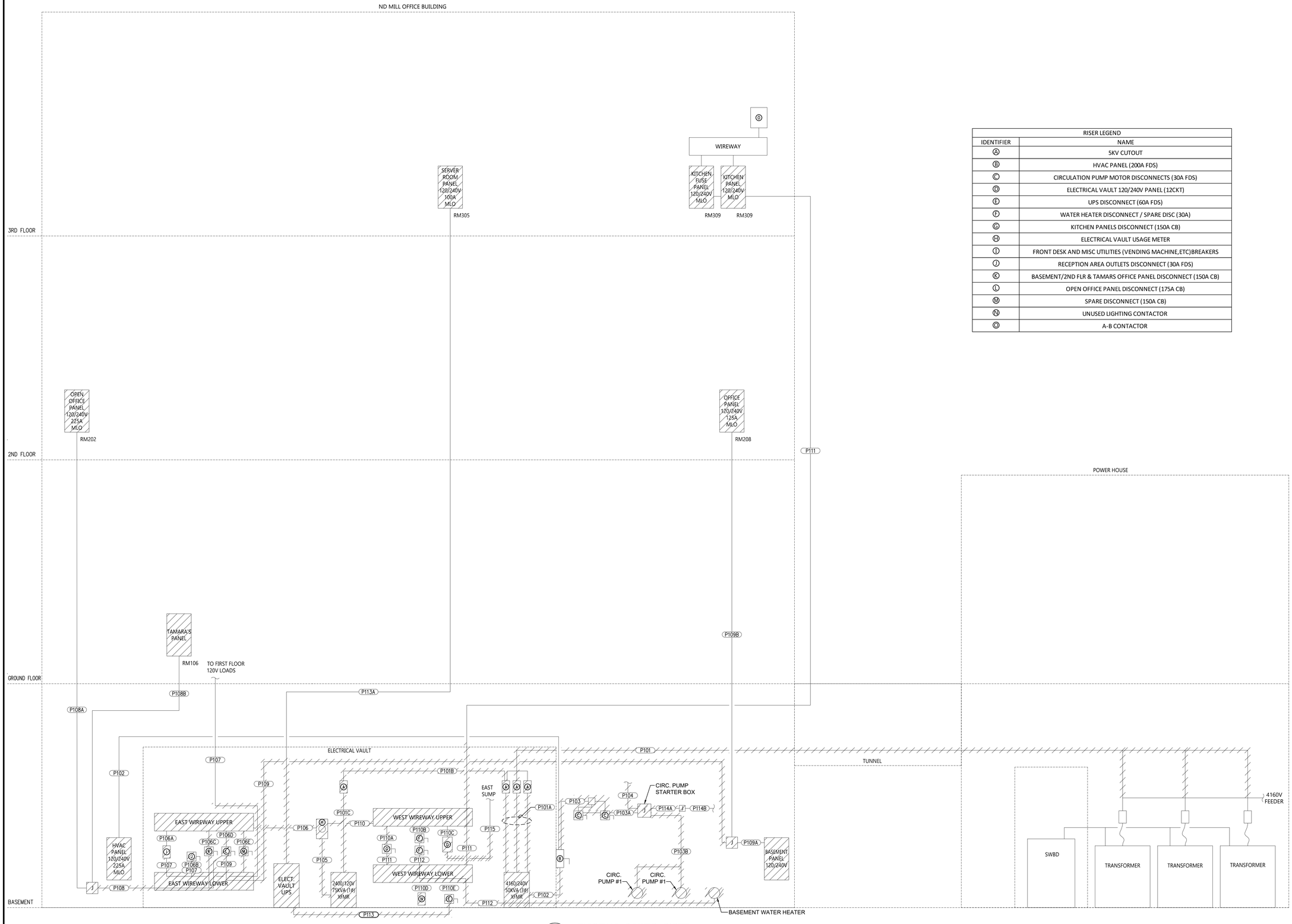
REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9411
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MILL BUILDING No. 1 PARTIAL BASEMENT ELECTRICAL PLANS

E220



1 E601 EXISTING POWER RISER

RISER LEGEND	
IDENTIFIER	NAME
Ⓐ	5KV CUTOUT
Ⓑ	HVAC PANEL (200A FDS)
Ⓒ	CIRCULATION PUMP MOTOR DISCONNECTS (30A FDS)
Ⓓ	ELECTRICAL VAULT 120/240V PANEL (12CKT)
Ⓔ	UPS DISCONNECT (60A FDS)
Ⓕ	WATER HEATER DISCONNECT / SPARE DISC (30A)
Ⓖ	KITCHEN PANELS DISCONNECT (150A CB)
Ⓗ	ELECTRICAL VAULT USAGE METER
Ⓘ	FRONT DESK AND MISC UTILITIES (VENDING MACHINE,ETC)BREAKERS
Ⓙ	RECEPTION AREA OUTLETS DISCONNECT (30A FDS)
Ⓚ	BASEMENT/2ND FLR & TAMARS OFFICE PANEL DISCONNECT (150A CB)
Ⓛ	OPEN OFFICE PANEL DISCONNECT (175A CB)
Ⓜ	SPARE DISCONNECT (150A CB)
Ⓝ	UNUSED LIGHTING CONTACTOR
Ⓞ	A-B CONTACTOR

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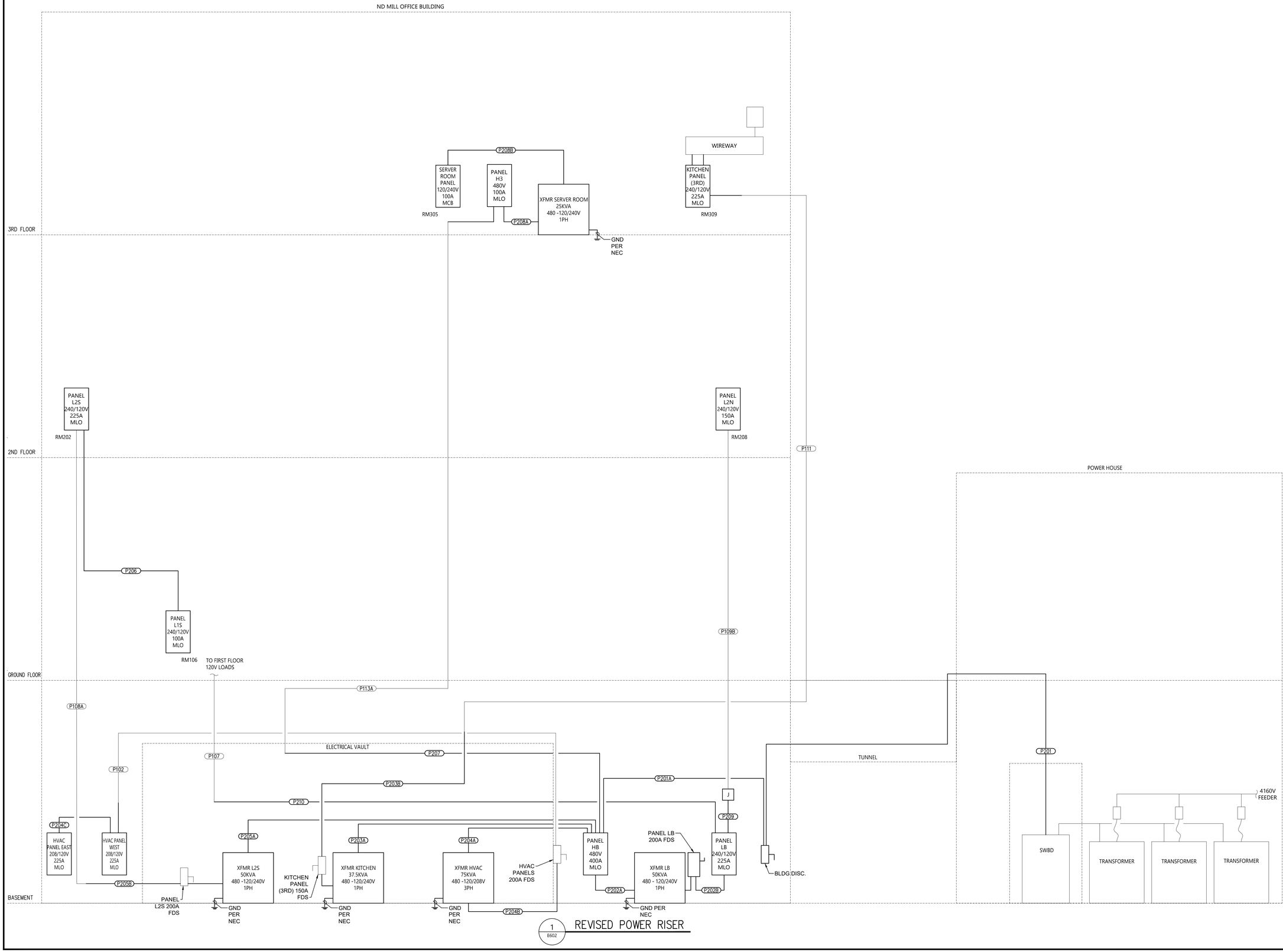
DRAWING TITLE
EXISTING POWER RISER

E601



1 E602 REVISED POWER RISER

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STATE NORTH DAKOTA

ISSUE DATES

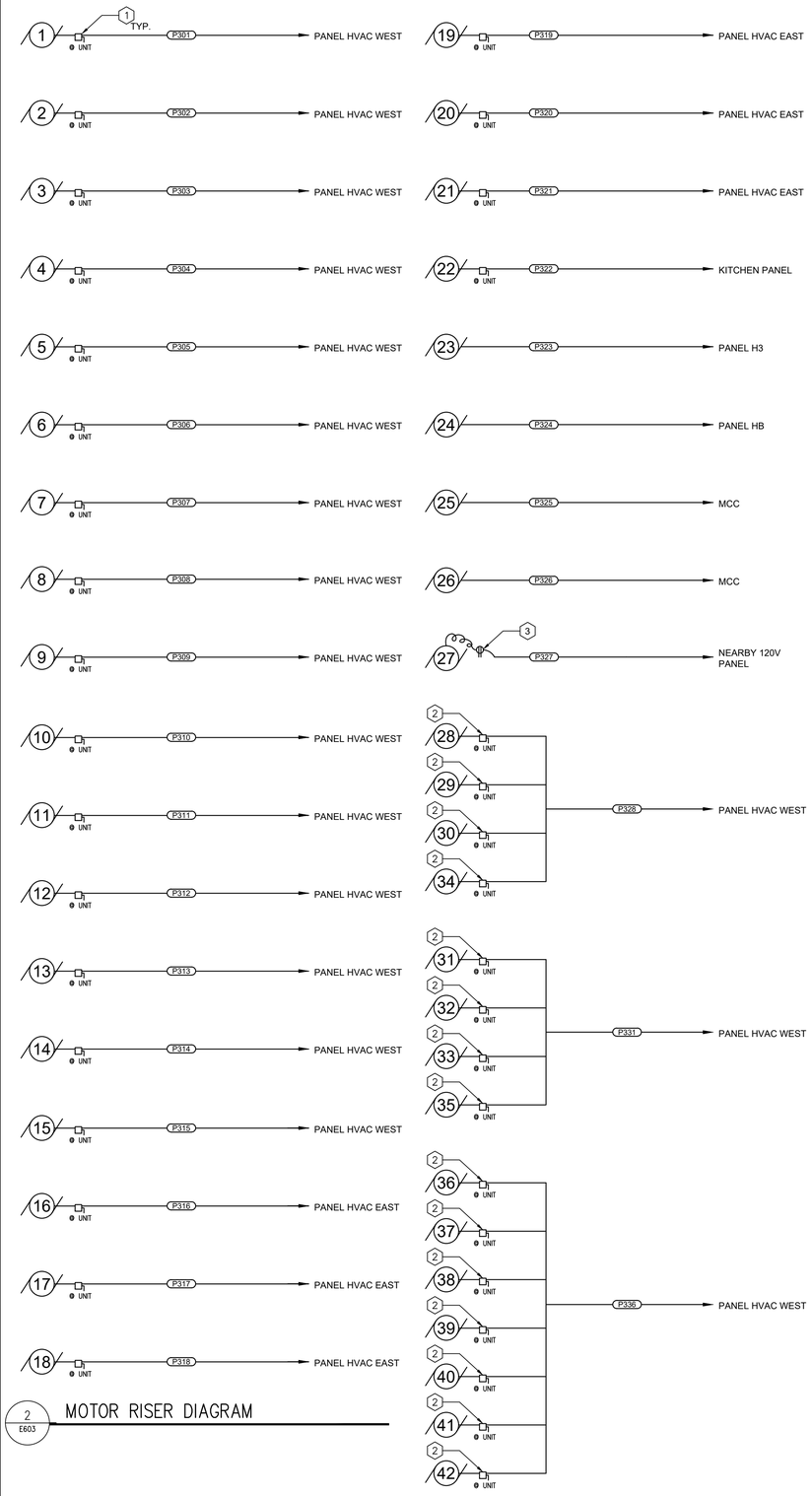
MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

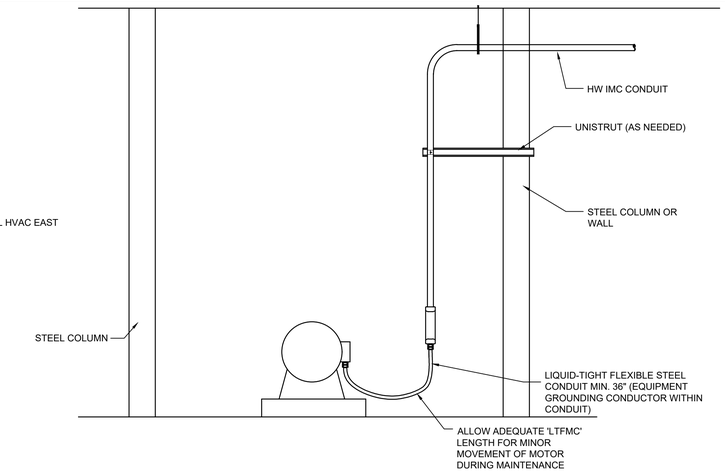
STAMP
REGISTERED PROFESSIONAL ENGINEER
TRAVIS N. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
REVISED POWER RISER

E602



2 E603 MOTOR RISER DIAGRAM



3 E603 TYPICAL MOTOR CONNECTION DETAIL

NONE

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH NDM.

B. MOTOR CONNECTIONS TO BE DONE WITH 'LTFMC' UNLESS NOTED OTHERWISE. LIMIT 'LTFMC' LENGTH TO 6'. PROVIDE ALL CONDUIT ADAPTERS FOR CONNECTION TO MOTORS AS REQUIRED. FAN COIL UNITS, CONDENSATE PUMPS, AND DUCT HEATER, WITHIN THE OFFICE BUILDING CAN UTILIZE FLEXIBLE METAL CONDUIT.

C. PROVIDE AND INSTALL ALL CONDUIT AND WIRING AS SHOWN ON THIS DRAWING.

D. PROVIDE POLARIS LUGS RATED FOR MOTOR WIRING FOR 480V MOTOR TERMINATIONS WITH WIRING #8AWG AND LARGER. TAPE END CAPS.

E. PROVIDE WIRE NUTS FOR 480V MOTOR TERMINATIONS WITH WIRING #10AWG AND SMALLER. TAPE WIRE NUTS.

REFERENCE NOTES:

1. EC TO PROVIDE NON-FUSED LOCKABLE DISCONNECT (208V RATED) AT FAN COIL LOCATION. TYPICAL FOR EACH FAN COIL UNIT.
2. EC TO PROVIDE LOCKABLE DISCONNECT SWITCH (TOGGLE 120 RATED) AT CONDENSATE PUMP LOCATION.
3. EC TO PROVIDE GFCI 120VAC RECEPTACLE AT GMU LOCATION.

MOTOR AND EQUIPMENT SCHEDULE

LEGEND: M-MAGNETIC MM-MANUAL NA-NOT APPLICABLE RPB-REMOTE PUSHBUTTON WP-WEATHERPROOFED MC-MECHANICAL CONTRACTOR F-FUSED NF-NON FUSED SC-SELF CONTAINED CM-COMBINATION CB-CIRCUIT BREAKER EC-ELECTRICAL CONTRACTOR M2-MAGNETIC TWO SPEED TC-TEMPERATURE CONTROL CONTRACTOR VC-VENTILATION CONTRACTOR RF-ROOF RM-ROOM OW-OWNER EX-EXISTING FVNR- FULL VOLTAGE (DIRECT ON LINE)

DESCRIPTION	MOTOR NO.	EQUIPMENT NO.	FURN BY	STATUS	P&ID	DRAWINGS	HP	KW	MCA	FLA	VOLT	PH	STARTER		CONTROL			POWER WIRING	DISCONNECT			NOTES
													TYPE	SIZE	BY	IN BY	WIRING		BY	SIZE/TYPE	NEMA	
FAN COIL UNIT #1	1	FC1-01	OW	NEW	-	E201			9.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #2	2	FC1-02	OW	NEW	-	E201			9.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #3	3	FC1-03	OW	NEW	-	E201			9.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #4	4	FC1-04	OW	NEW	-	E201			7.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #5	5	FC1-05	OW	NEW	-	E201			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #6	6	FC1-06	OW	NEW	-	E201			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #7	7	FC1-07	OW	NEW	-	E201			7.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #8	8	FC1-08	OW	NEW	-	E201			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #9	9	FC2-01	OW	NEW	-	E202			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #10	10	FC2-02	OW	NEW	-	E202			17.3		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #11	11	FC2-03	OW	NEW	-	E202			9.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #12	12	FC2-04	OW	NEW	-	E202			5.2		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #13	13	FC2-05	OW	NEW	-	E202			7.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #14	14	FC2-06	OW	NEW	-	E202			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #15	15	FC2-07	OW	NEW	-	E202			7.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #16	16	FC3-01	OW	NEW	-	E203			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #17	17	FC3-02	OW	NEW	-	E203			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #18	18	FC3-03	OW	NEW	-	E203			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #19	19	FC3-04	OW	NEW	-	E203			13.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #20	20	FC3-05	OW	NEW	-	E203			7.4		208	1			OW	EC		EC	EC	30/NF	1	
FAN COIL UNIT #21	21	FC3-SERVER	OW	NEW	-	E203			13.4		208	1			OW	EC		EC	EC	30/NF	1	
ERV MTR #1	22	ERV-1	OW	NEW	-	E203			23.5		120	1			OW	EC		EC	SC	30/NF	1	
DUCT HEATER	23	DH-1	OW	NEW	-	E203				12	460	3			OW	EC		EC	SC			
CHILLER	24	CH-1	OW	NEW	-	E201			188		460	3			OW	EC		EC	SC			
HYDRONIC PUMP #1	25	P-1A	OW	NEW	-	E220	7.5			11	460	3	FVNR	1	OW	EC		EC				
HYDRONIC PUMP #2	26	P-1B	OW	NEW	-	E220	7.5			11	460	3	FVNR	1	OW	EC		EC				
GLYCOL MAKEUP UNIT PUMP	27	GMU-1	OW	NEW	-	E220					120	1			OW	EC		EC				
FAN COIL UNIT #1 CONDENSATE PUMP	28	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #2 CONDENSATE PUMP	29	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #3 CONDENSATE PUMP	30	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #4 CONDENSATE PUMP	31	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #5 CONDENSATE PUMP	32	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #6 CONDENSATE PUMP	33	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #7 CONDENSATE PUMP	34	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #8 CONDENSATE PUMP	35	CP-1	OW	NEW	-	E201				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #9 CONDENSATE PUMP	36	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #10 CONDENSATE PUMP	37	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #11 CONDENSATE PUMP	38	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #12 CONDENSATE PUMP	39	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #13 CONDENSATE PUMP	40	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #14 CONDENSATE PUMP	41	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #15 CONDENSATE PUMP	42	CP-1	OW	NEW	-	E202				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #16 CONDENSATE PUMP	43	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #17 CONDENSATE PUMP	44	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #18 CONDENSATE PUMP	45	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #19 CONDENSATE PUMP	46	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #20 CONDENSATE PUMP	47	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	
FAN COIL UNIT #21 CONDENSATE PUMP	48	CP-1	OW	NEW	-	E203				1.5	120	1			OW	EC		EC	EC	TOGGLE	1	

1 E603 MOTOR AND EQUIPMENT SCHEDULE

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

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REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
MOTOR RISER DIAGRAM AND SCHEDULE

E603

GENERAL NOTES:

A. PROVIDE ALL WORK, CONDUIT, AND WIRING AS DEFINED IN THE SCHEDULE.

CONDUIT & WIRING REMOVAL SCHEDULE

CONDUIT/TRENCH			POWER	CONDUCTORS				RUN				REMARKS
NUMBER	SIZE	KIND		NO. OF COND.	SIZE	GROUND SIZE	SYSTEM VOLTAGE	DRAWING #	FROM	VIA	TO	
P-101	2-1/2"	IMC	X	3	#1/0 (VERIFY)	#2	4160V	E100/E601	POWER HOUSE 4160V TRANSFORMERS	CONDUIT	ELEC VAULT 4160/240V 3PH XFMR 5KV CUTOUTS	REMOVE COMPLETELY, INCLUDING CUTOUTS. COORDINATE SCHEDULING AND LOCKOUT/TAGOUT WITH OWNER. VERIFY DE-ENGERGIZATION.
P-101A	-	FREE AIR	X	3	#2 (VERIFY)	#4	4160V	E100/E601	ELEC VAULT 4160/240V 3PH XFMR 5KV CUTOUTS	FREE AIR	ELEC VAULT 4160/240V 3PH XFMR	REMOVE COMPLETELY. COORDINATE SCHEDULING AND LOCKOUT/TAGOUT WITH OWNER. VERIFY DE-ENGERGIZATION.
P-101B	1-1/2"	IMC	X	1	#2 (VERIFY)	#4	2400V	E100/E601	ELEC VAULT 4160/240V 3PH XFMR 5KV CUTOUT	CONDUIT	ELEC VAULT 2400/120V 1PH XFMR 5KV CUTOUT	REMOVE COMPLETELY, INCLUDING CUTOUT. COORDINATE SCHEDULING AND LOCKOUT/TAGOUT WITH OWNER. VERIFY DE-ENGERGIZATION.
P-101C	1-1/2"	IMC	X	1	#2 (VERIFY)	#4	2400V	E100/E601	ELEC VAULT 2400/120V 1PH XFMR 5KV CUTOUT	CONDUIT	ELEC VAULT 2400/120V 1PH XFMR	REMOVE COMPLETELY. COORDINATE SCHEDULING AND LOCKOUT/TAGOUT WITH OWNER. VERIFY DE-ENGERGIZATION.
P-102	2-1/2"	EMT	X	4	#3/0	#4	120/240V	E100/E601	ELEC VAULT 4160/240V 3PH XFMR	CONDUIT	HVAC PANEL	REMOVE WIRING COMPLETELY,DISCONNECT TO REMAIN. CONDUIT TO BE EXTENDED TO NEW TRANSFORMER HVAC. SEE CONDUIT P-204B.
P-103	1"	EMT	X	3	#6	#10	240V	E100/E601	200A FUSED DISCONNECT	CONDUIT	CIRCULATING PUMPS #1 & #2 FUSED DISCONNECTS	REMOVE COMPLETELY, INCLUDING FUSED DISCONNECTS AND J-BOX. PROVIDE PLUG IN DISCONNECT WHERE CONDUIT WAS REMOVED.
P-103A	1"	EMT	X	6	#12	(2) #12	240V	E100/E601	CIRCULATING PUMPS #1 & #2 FUSED DISCONNECTS	CONDUIT	CIRCULATING PUMPS #1 & #2 STARTER BOX	REMOVE COMPLETELY, INCLUDING 30A FUSED DISCONNECTS.
P-103B	1"	EMT	X	6	#12	(2) #12	240V	E100/E601	CIRCULATING PUMPS #1 & #2 STARTER BOX	CONDUIT	CIRCULATING PUMPS #1 & #2	REMOVE COMPLETELY, INCLUDING STARTER BOX
P-104	3/4"	EMT	X	2	#12	#12	120V	E601	HVAC PANEL (CKT #17)	FREE AIR	CIRCULATING PUMPS #1 & #2 STARTER CNTRL CKT POWER	REMOVE COMPLETELY, BACK TO NEARBY LIGHT FIXTURE J-BOX.
P-105	3"	IMC	X	3	#350	#3	120/240V	E110/E601	ELEC VAULT 2400/120V 1PH XFMR	CONDUIT	ELEC VAULT USAGE METER	REMOVE COMPLETELY.
P-106	2-1/2"	IMC	X	3	#250	#3	120/240V	E110/E601	ELEC VAULT USAGE METER	CONDUIT	EAST WIREWAY UPPER	REMOVE COMPLETELY. TAPPED TO MULTIPLE OTHER CIRCUITS WITHIN THE WIREWAY.
P-106A	3/4"	IMC	X	3	#12	#10	120/240V	E110/E601	LINE SIDE 175A DISC.	CONDUIT	RECEPTION DESK AND MISC POWER CIRCUIT BREAKERS	REMOVE COMPLETELY.
P-106B	3/4"	IMC	X	3	#12	#8	120/240V	E110/E601	LOAD SIDE 175A DISC.	CONDUIT	RECEPTION DESK OUTLETS DISCONNECT	REMOVE COMPLETELY.
P-106C	1-1/2"	IMC	X	3	#2/0	#6	120/240V	E110/E601	EAST WIREWAY UPPER	CONDUIT	BASEMENT/2ND FLR & TAMARA'S PANEL DISCONNECT	REMOVE COMPLETELY.
P-106D	1-1/2"	IMC	X	3	#2/0	#6	120/240V	E110/E601	EAST WIREWAY UPPER	CONDUIT	OPEN OFFICE PANEL DISCONNECT	REMOVE COMPLETELY.
P-106E	1-1/2"	IMC	X	3	#2/0	#6	120/240V	E110/E601	EAST WIREWAY UPPER	CONDUIT	SPARE DISCONNECT	REMOVE COMPLETELY.
P-107	3/4"	IMC	X	6	#12	#12	120/240V	E110/E601	FRONT DESK & MISC BREAKERS & RECEPTION AREA DISC.	CONDUIT	1ST FLOOR RECEPTACLES AND EQUIPMENT	REMOVE WIRING COMPLETELY, REMOVE CONDUIT AS SHOWN. CONDUIT TO BE EXTENDED TO NEW PANEL LB. SEE CONDUIT P-210.
P-108	2"	IMC	X	6	#2/0	(2) #6	120/240V	E100/E110/E601	150A & 175A DISCONNECTS	CONDUIT	PULL BOX SOUTH OF ELECTRICAL VAULT	REMOVE COMPLETELY INCLUDING PULLBOX
P-108A	2"	IMC	X	3	#2/0	#6	120/240V	E100/E110/E601	PULL BOX SOUTH OF ELECTRICAL VAULT	CONDUIT	2ND FLR OPEN OFFICE PANEL (150A DISC.)	REMOVE WIRING COMPLETELY, CONDUIT TO BE EXTENDED TO NEW TRANSFORMER L2S FDS, SEE CONDUIT P-205B.
P-108B	1"	IMC	X	3	#1	#6	120/240V	E100/E110/E601	PULL BOX SOUTH OF ELECTRICAL VAULT	CONDUIT	TAMARA'S PANEL (175A DISC.)	REMOVE WIRING COMPLETELY, EMPTY CONDUIT TO REMAIN.
P-109	1-1/4"	IMC	X	3	#2	#6	120/240V	E100/E110/E601	175A DISCONNECT	CONDUIT	BASEMENT & 2ND FLR OFFICE PANEL J-BOX	REMOVE COMPLETELY, INCLUDING J-BOX. (WIRING SPLICED/TAPPED IN THIS J-BOX TO P-109A & P-109B)
P-109A	1-1/4"	IMC	X	3	#2	#6	120/240V	E100/E601	BASEMENT & 2ND FLR OFFICE PANEL J-BOX	CONDUIT	BASEMENT PANEL	REMOVE COMPLETELY, PANEL TO BE REPLACED WITH NEW.
P-109B	1-1/4"	IMC	X	3	#2	-	120/240V	E100/E601	BASEMENT & 2ND FLR OFFICE PANEL J-BOX	CONDUIT	2ND FLR OFFICE PANEL	REMOVE WIRING COMPLETELY, CONDUIT TO BE EXTENDED TO NEW PANEL LB. SEE CONDUIT P-209 FOR NEW WIRING.
P-110	2-1/2"	IMC	X	3	#250	#3	120/240V	E110/E601	ELEC VAULT USAGE METER	CONDUIT	WEST WIREWAY UPPER	REMOVE COMPLETELY. TAPPED TO MULTIPLE OTHER CIRCUITS WITHIN THE WIREWAY.
P-110A	1-1/2"	IMC	X	3	#3/0	#6	120/240V	E110/E601	WEST WIREWAY UPPPER	CONDUIT	KITCHEN PANELS DISCONNECT	REMOVE COMPLETELY.
P-110B	3/4"	IMC	X	3	#10	#10	120/240V	E110/E601	WEST WIREWAY UPPPER	CONDUIT	WATER HEATER AND SPARE DISCONNECT	REMOVE COMPLETELY.
P-110C	1"	IMC	X	3	#6	#8	120/240V	E110/E601	WEST WIREWAY UPPPER	CONDUIT	ELEC VAULT 120/240V PANEL	REMOVE COMPLETELY.
P-110D	3/4"	IMC	X	3	#10	#10	120/240V	E110/E601	WEST WIREWAY UPPPER	CONDUIT	A-B CONTACTOR	REMOVE COMPLETELY.
P-110E	1"	IMC	X	3	#6	#10	120/240V	E110/E601	WEST WIREWAY UPPPER	CONDUIT	UPS DISCONNECT	REMOVE COMPLETELY.
P-111	2"	IMC	X	3	#3/0 (AL)	#4	120/240V	E100/E110/E601	KITCHEN PANEL DISCONNECT (150A)	CONDUIT	KITCHEN PANEL AND KITCHEN FUSE PANEL	REMOVE WIRING COMPLETELY, CONDUIT TO BE EXTENDED TO NEW KITCHEN XFMR FDS. SEE CONDUIT P-203B FOR NEW WIRING.
P-112	3/4"	IMC/EMT	X	2	#10	#10	120/240V	E100/E110/E601	WEST WIREWAY LOWER	CONDUIT	BASEMENT WATER HEATER	REMOVE COMPLETELY.WATER HEATER TO BE FED FROM NEW PANEL LB.
P-113	3/4"	FLEX	X	3	#8	#10	120/240V	E110/E601	UPS DISCONNECT	CONDUIT	ELEC VAULT UPS	REMOVE COMPLETELY, INCLUDING UPS.
P-113A	3/4"	FLEX/EMT	X	3	#8	#10	120/240V	E100/E601	ELEC VAULT UPS	CONDUIT	SERVER ROOM PANEL	REMOVE WIRING COMPLETELY, REMOVE CONDUIT FROM ELECTRICAL VAULT AS SHOWN, CONDUIT TO BE EXTENDED TO NEW PANEL HB.SEE CONDUIT P-207.
P-114A	1/2"	EMT		3	#14	-	-	E601	CIRC. PUMPS #1 & #2 STARTER CONTACTS (N.O.)	CONDUIT	SMALL J-BOX (TIMER UNIT #1 BIG UNIT)	REMOVE COMPLETELY.
P-114B	-	FREE AIR		1	3 COND. CABLE	-	-	E601	SMALL J-BOX (TIMER UNIT #1 BIG UNIT)	FREE AIR	TO MILL BLDG #1 BASEMENT EQUIPMENT	ROUTES THROUGH UG TUNNEL. (KEEP AND REUSE WIRE FOR ANY SIGNALS BETWEEN BUILDINGS?)
P-115	3/4"	EMT	X	10	8-#12, 2-#10		120/240V	E110/E601	ELEC VAULT 120/240V PANEL	CONDUIT	EAST SUMP PUMP	ONLY 2-#12'S USED FOR SUMP PUMP, OTHERS ARE UNUSED. REFEED ALL NEW WIRING FROM NEW HVAC PANEL EAST.

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TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
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DRAWING TITLE
REMOVAL CONDUIT & WIRING SCHEDULE

E701

GENERAL NOTES:

A. PROVIDE ALL WORK, CONDUIT, AND WIRING AS DEFINED IN THE SCHEDULE.

POWER CONDUIT AND WIRING SCHEDULE

CONDUIT/TRENCH			UNDER GROUND	POWER	CONDUCTORS				RUN			REMARKS
NUMBER	SIZE	KIND			NO. OF COND.	SIZE	GROUND SIZE	SYSTEM VOLTAGE	DRAWING NUMBER	FROM	VIA	TO	
P-201	3-1/2"	HDPE	X	X	3	#500	#1	480V	E200/E204/E602	POWER HOUSE SWITCHBOARD	CONDUIT	OFFICE BUILDING DISCONNECT	
P-201A	3"	EMT	X	X	3	#500	#1	480V	E200/E602	OFFICE BUILDING DISCONNECT	CONDUIT	PANEL HB	
P-202A	1-1/4"	EMT		X	2	#1	#6	480V	E200/E602	PANEL HB	CONDUIT	XFMR LB	
P-202B	2"	EMT		X	3	#4/0	#2	120/240V	E200/E602	XFMR LB	CONDUIT	PANEL LB	
P-203A	1-1/4"	EMT		X	2	#1	#8	480V	E200/E602	PANEL HB	CONDUIT	XFMR KITCHEN	
P-203B	2"	IMC		X	3	#1/0	#6	120/240V	E200/E602	XFMR KITCHEN	CONDUIT	KITCHEN PANEL	EXTEND CONDUIT P-111, ALL NEW WIRING.
P-204A	1-1/4"	EMT		X	3	#1	#6	480V	E200/E602	PANEL HB	CONDUIT	XFMR HVAC	
P-204B	2-1/2"	EMT		X	4	#4/0	#2	120/208V	E200/E602	XFMR HVAC	CONDUIT	HVAC PANEL (WEST)	EXTEND CONDUIT P-102, ALL NEW WIRING.
P-204C	2-1/2"	EMT		X	4	#4/0	#2	120/208V	E200/E602	HVAC PANEL (WEST)	CONDUIT	HVAC PANEL (EAST)	FED FROM HVAC PANEL (WEST) SUB FEED LUGS.
P-205A	1-1/4"	EMT		X	2	#1	#6	480V	E200/E602	PANEL HB	CONDUIT	XFMR L2S	
P-205B	2"	IMC		X	3	#4/0	#2	120/240V	E200/E602	XFMR L2S	CONDUIT	PANEL L2S	EXTEND CONDUIT P-108A, ALL NEW WIRING.
P-206	1-1/2"	EMT		X	3	#1	#6	120/240V	E602	PANEL L2S	CONDUIT	PANEL L1S	
P-207	3/4"	IMC		X	3	#6	#10	480V	E200/E602	PANEL HB	CONDUIT	PANEL H3	EXTEND CONDUIT P-113A, ALL NEW WIRING.
P-208A	3/4"	EMT		X	2	#6	#10	480V	E203/E602	PANEL H3	CONDUIT	XFMR SERVER ROOM	
P-208B	1-1/4"	EMT		X	3	#1	#6	120/240V	E203/E602	XFMR SERVER ROOM	CONDUIT	SERVER ROOM PANEL	
P-209	1-1/4"	IMC		X	3	#1/0	#6	120/240V	E602	PANEL LB	CONDUIT	PANEL L2N	UTILIZE AND EXTEND CONDUIT P109B, ALL NEW WIRING. SUBFEED FROM PANEL LB TO PANEL L2N.
P-210	3/4"	IMC		X	6	#12	#12	120V	E203	PANEL LB	CONDUIT	FRONT DESK & RECEPTION AREA 120V LOADS	EXTEND CONDUIT P-107, ALL NEW WIRING.
P-211	3/4"	EMT		X	2	#10	#10	240V	E200	PANEL LB	CONDUIT	BASEMENT WATER HEATER	
P-212	1/2"	EMT		X	2	#12	#12	120V	E203	KITCHEN PANEL	CONDUIT	3RD FLOOR KITCHEN OUTLETS BNK 1	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-213	1/2"	EMT		X	2	#12	#12	120V	E203	KITCHEN PANEL	CONDUIT	3RD FLOOR KITCHEN OUTLETS BNK 2	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-214	1/2"	EMT		X	2	#12	#12	120V	E203	KITCHEN PANEL	CONDUIT	3RD FLOOR KITCHEN OUTLETS BNK 3	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-215	1/2"	EMT		X	2	#12	#12	120V	E203	KITCHEN PANEL	CONDUIT	3RD FLOOR KITCHEN REFRIGERATOR	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-216	1/2"	EMT		X	2	#12	#12	120V	E201	PANEL HVAC WEST	CONDUIT	OUTDOOR CHILLER SERVICE RECEPTACLE	
P-301	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #1 (MTR# 1)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-302	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #2 (MTR# 2)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-303	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #3 (MTR# 3)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-304	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #4 (MTR# 4)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-305	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #5 (MTR# 5)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-306	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #6 (MTR# 6)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-307	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #7 (MTR# 7)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-308	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #8 (MTR# 8)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-309	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #9 (MTR# 9)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-310	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #10 (MTR# 10)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-311	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #11 (MTR# 11)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-312	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #12 (MTR# 12)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-313	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #13 (MTR# 13)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-314	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #14 (MTR# 14)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-315	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #15 (MTR# 15)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-316	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #16 (MTR# 16)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-317	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #17 (MTR# 17)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-318	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #18 (MTR# 18)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-319	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #19 (MTR# 19)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-320	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #20 (MTR# 20)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-321	TBD	EMT		X	3	#12	#12	208V	E603	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #21 (MTR# 21)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-322	TBD	EMT		X	2	#10	#10	120V	E603	KITCHEN PANEL	CONDUIT	ERV MTR #1 (MTR# 22)	CONDUIT SHOWN PRIMARILY FOR CIRCUITING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
P-323	TBD	EMT		X	3	#12	#12	480V	E203/E603	PANEL H3	CONDUIT	DUCT HEATER (MTR# 23)	
P-324	2"	EMT		X	3	#4/0	#4	480V	E603	PANEL HB	CONDUIT	CHILLER (MTR# 24)	
P-325	3/4"	IMC		X	3	#12	#12	480V	E220/E603	MILL BUILDING NO. 1 MCC	CONDUIT	HYDRONIC PUMP #1 (MTR# 25)	
P-326	3/4"	IMC		X	3	#12	#12	480V	E220/E603	MILL BUILDING NO. 1 MCC	CONDUIT	HYDRONIC PUMP #2 (MTR# 26)	
P-327	3/4"	IMC		X	2	#12	#12	120V	E220/E603	NEARBY 120VAC PANEL	CONDUIT	GLYCOL MAKEUP UNIT PUMP (MTR# 27)	ASSUME 100' OF CONDUIT AND WIRING FROM EXISTING PANEL, COORDINATE WITH NDM. PROVIDE 20/1 CB IN EXISTING PANEL.
P-328	3/4"	EMT		X	2	#12	#12	120V	E201	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #1 CONDENSATE PUMP (MTR# 28)	ONE CIRCUIT FOR MOTOR FEEDERS, EC TO PROVIDE DISCONNECTS AT EACH MOTOR. SPLICE AND EXISTING CIRCUIT TO EACH CONDENSATE PUMP. CONDUIT SHOWN PRIMARILY FOR CIRCUTING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
												FAN COIL UNIT #2 CONDENSATE PUMP (MTR# 29)	
												FAN COIL UNIT #3 CONDENSATE PUMP (MTR# 30)	
												FAN COIL UNIT #7 CONDENSATE PUMP (MTR# 34)	
P-331	3/4"	EMT		X	2	#12	#12	120V	E201	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #4 CONDENSATE PUMP (MTR# 31)	ONE CIRCUIT FOR MOTOR FEEDERS, EC TO PROVIDE DISCONNECTS AT EACH MOTOR. SPLICE AND EXISTING CIRCUIT TO EACH CONDENSATE PUMP. CONDUIT SHOWN PRIMARILY FOR CIRCUTING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
												FAN COIL UNIT #5 CONDENSATE PUMP (MTR# 32)	
												FAN COIL UNIT #6 CONDENSATE PUMP (MTR# 33)	
												FAN COIL UNIT #8 CONDENSATE PUMP (MTR# 35)	
P-336	3/4"	EMT		X	2	#12	#12	120V	E202	PANEL HVAC WEST	CONDUIT	FAN COIL UNIT #9 CONDENSATE PUMP (MTR# 36)	ONE CIRCUIT FOR MOTOR FEEDERS, EC TO PROVIDE DISCONNECTS AT EACH MOTOR. SPLICE AND EXISTING CIRCUIT TO EACH CONDENSATE PUMP. CONDUIT SHOWN PRIMARILY FOR CIRCUTING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
												FAN COIL UNIT #10 CONDENSATE PUMP (MTR# 37)	
												FAN COIL UNIT #11 CONDENSATE PUMP (MTR# 38)	
												FAN COIL UNIT #12 CONDENSATE PUMP (MTR# 39)	
												FAN COIL UNIT #13 CONDENSATE PUMP (MTR# 40)	
												FAN COIL UNIT #14 CONDENSATE PUMP (MTR# 41)	
												FAN COIL UNIT #15 CONDENSATE PUMP (MTR# 42)	
P-343	3/4"	EMT		X	2	#12	#12	120V	E203	PANEL HVAC EAST	CONDUIT	FAN COIL UNIT #16 CONDENSATE PUMP (MTR# 43)	ONE CIRCUIT FOR MOTOR FEEDERS, EC TO PROVIDE DISCONNECTS AT EACH MOTOR. SPLICE AND EXISTING CIRCUIT TO EACH CONDENSATE PUMP. CONDUIT SHOWN PRIMARILY FOR CIRCUTING, EC CAN COMBINE IN CONDUITS AS SEEN FIT, PER NEC.
												FAN COIL UNIT #17 CONDENSATE PUMP (MTR# 44)	
												FAN COIL UNIT #18 CONDENSATE PUMP (MTR# 45)	
												FAN COIL UNIT #19 CONDENSATE PUMP (MTR# 46)	
												FAN COIL UNIT #20 CONDENSATE PUMP (MTR# 47)	
												FAN COIL UNIT #21 CONDENSATE PUMP (MTR# 48)	

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-10819
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
POWER CONDUIT & WIRING SCHEDULE

E702

EXISTING PANEL SCHEDULE - BASEMENT PANEL B006

BUS:	80	AMP MCB																	LOCATION: BASEMENT - OFFICE BUILDING - ROOM B006			
VOLTAGE:	240	/120V, 1PH, 3W				LOAD-VA						PHASE-VA				LOAD-VA					MOUNTING: SURFACE		
PANEL TYPE:	TYPE 1																				MINIMUM AIC: N/A		
LOAD SERVED			CKT BKR	CKT NO.	LTG.	RECP	HEAT	COOL	MOTOR	MISC	A	B	LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION	
(3) HEATER 2ND FLOOR STAIRWAY			20/2	12							0								11	80/2	MAIN	
				10								0							9			
(3)(3) TANDEN BKR - COMPRESS ROOM LIGHTS AND RECEPT			20/1 X2	8							0								7	20/1	(3) FRONT DOOR OUTSIDE OUTLET & PROJECTOR	
(3) CONFERENCE ROOM OUTLETS			15/1	6								0							5	20/1	(3) TRACK LIGHTS	
(3) LIGHTS CONFERENCE ROOM			15/1	4							0								3	20/1	(3) KITCHEN COUNTER OUTLETS 1ST FLR	
(3) LIGHTS FOR KITCHEN BELOW PANEL 1ST FLR			15/1	2								0							1	20/1 X2	(3) TANDEM BKR - AHU'S CONFERENCE ROOM	
		CONN. LOAD			0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD			
											0	0							Calculated A.I.C = N/A			

EXISITING PANEL SCHEDULE - ELECTRICAL VAULT PANEL B003

BUS:	70	AMP MCB																	LOCATION: BASEMENT - OFFICE BUILDING - ROOM B006			
VOLTAGE:	240	/120V, 1PH, 3W				LOAD-VA						PHASE-VA				LOAD-VA					MOUNTING: SURFACE		
PANEL TYPE:	TYPE 1																				MINIMUM AIC: N/A		
LOAD SERVED			CKT BKR	CKT NO.	LTG.	RECP	HEAT	COOL	MOTOR	MISC	A	B	LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION	
SPACE			MT	1							0								2	70/2	MAIN	
				3								0							4			
(4) SOUTH SUMP PUMP			20/1	5							0								6	20/1		
(4)(4) POP MACHINE/TIME CLOCK			20/1	7								0							8	20/1	(4)(4) TIED TOGETHER - OUTSIDE LIGHTS (NOT USED)	
(4) EAST SUMP PUMP			20/1	9							0								10	20/1 X2	(4)(4) TANDEM BREAKER - HEATER MENS RESTROOM	
(4)(4) CONTROL HOT, LIGHTS OUTSIDE			20/1	11								0							12	20/1 X2	(4)(4) TANDEM BREAKER - HEATER MENS RESTROOM	
		CONN. LOAD			0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD			
											0	0							Calculated A.I.C = N/A			

PANEL SCHEDULE - HVAC PANEL B001

BUS:	225	AMP MLO (Top)																		LOCATION: BASEMENT - OFFICE BUILDING - ROOM B001			
VOLTAGE:	240	/120V, 3PH, 4W			LOAD-VA						PHASE-VA			LOAD-VA						MOUNTING: SURFACE			
PANEL TYPE:	TYPE 1																			MINIMUM AIC: 22kA			
LOAD SERVED			CKT BKR	CKT NO.	LTG.	RECP	HEAT	COOL	MOTOR	MISC	A	B	C	LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION	
(1) 1ST FLR - SPARE TO 1ST			15/2	1							0									2			
				3								0								4	15/3	(1) 1ST FLR - RECEPTION AREA	
(1) 1ST FLR - JEFF'S OFFICE			15/2	5									0							6			
				7							0									8			
(1) 2ND FLR - NORTH OFFICE AREA			15/2	9								0								10	15/3	(1) 1ST FLR - LUNCH ROOM	
				11									0							12			
(1) 2ND FLR - DEBS, COPY ROOM, VANCE'S OFFICE (OFF)			20/2	13							0									14			
				15								0								16	20/3	(1) 2ND FLR - SOUTH OFFICES	
(2) OUTSIDE RECEPT SE CORNER			20/1	17									0							18			
(2) BASEMENT - S.E. SUMP PUMP AND AC CONTROL			20/1	19							0									20			
(1) 3RD FLR - SOUTH HALL 3RD			15/2	21								0								22	50/3	(1) 3RD FLR - AIR EXCHANGER	
				23									0							24			
(1) 3RD FLR - SOUTH WEST OFFICES			15/2	25							0									26			
				27								0								28	15/3	(1) 3RD FLR - SOUTH OFFICE AREA	
(2) PARKING LOT - SOUTH RECEPTACLES (OFF)			50/2	29									0							30			
				31							0									32			
(1) 3RD FLR - KITCHEN			15/2	33								0								34	15/3	(1) 3RD FLR - SERVER ROOM	
				35									0							36			
(1) 3RD FLR - NORTH HALL			15/2	37							0									38	20/1	(1) 3RD FLR - AIR EXCHANGER	
				39								0								40	15/2	(1) 2ND FLR - NORTH OFFICE	
(2) PARKING LOT - NORTH RECEPTACLES (OFF)			20/1	41									0							42			
		CONN. LOAD			0	0	0	0	0	0	VA / PHASE			0	0	0	0	0	0	CONN. LOAD			
											0	0	0							Calculated A.I.C =			

EXISTING PANEL SCHEDULE - OFFICE PANEL (2ND FLR NORTH)

BUS:	150	AMP MLO (TOP)																	LOCATION: 2ND FLR - OFFICE BUILDING - ROOM 208			
VOLTAGE:	240	/120V, 1PH, 3W			LOAD-VA						PHASE-VA		LOAD-VA							MOUNTING: RECESSED			
PANEL TYPE:	TYPE 1																			MINIMUM AIC: N/A			
LOAD SERVED			CKT BKR	CKT NO.	LTG.	RECP	HEAT	COOL	MOTOR	MISC	A	B	LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION	
(5) EXISTING LOAD			30/1	1							0								2	20/1	EXISTING LOAD (5)	
(5)(5) EXISTING LOAD			20/1	3								0							4	20/1	EXISTING LOAD (5)	
(5) EXISTING LOAD			20/1	5							0								6	20/1	EXISTING LOAD (5)	
(5)(5) EXISTING LOAD			20/1	7								0							8	20/1	EXISTING LOAD (5)	
(5) EXISTING LOAD			15/1	9							0								10	20/1	EXISTING LOAD (5)	
(5)(5) EXISTING LOAD			20/1	11								0							12	20/2	EXISTING LOAD (5)	
(5)(5) EXISTING LOAD			20/1	13							0								14			
(5)(5) EXISTING LOAD			20/1	15								0							16	20/1	EXISTING LOAD (5)	
(5) EXISTING LOAD			20/1	17							0								18	20/1	EXISTING LOAD (5)	
(5)(5) EXISTING LOAD			20/1	19								0							20		SPACE	
(5) EXISTING LOAD			20/1	21							0								22		SPACE	
(5)(5) EXISTING LOAD			20/1	23								0							24		SPACE	
SPACE				25							0								26		SPACE	
SPACE				27								0							28		SPACE	
		CONN. LOAD			0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD			
											0	0							Calculated A.I.C = N/A			

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED WITH THE OWNER AND THE OTHER CONTRACTORS.

B. EC TO DOCUMENT AND LABEL EXISTING WIRING FOR CONNECTION TO NEW PANELS.

C. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANELS.

REFERENCE NOTES:

(1) EXISTING LOAD BEING REMOVED, DISCONNECT AND REMOVE WIRING COMPLETELY. EC MAY REUSE CONDUIT.

(2) EXISTING LOAD TO REMAIN AND BE REFED FROM NEW HVAC PANEL WEST, NEW HVAC PANEL WEST TO BE PLACED IN THE SAME LOCATION AS THIS EXISTING PANEL.

(3) EXISTING LOAD TO BE REFED FROM NEW PANEL LB. WHERE POSSIBLE EXTEND/REROUTE CONDUIT AND WIRING TO NEW PANEL (IF WIRING CAN REACH), OTHERWISE SPLICE, EXTEND, AND LABEL EXISTING CIRCUIT WITHIN NEW J-BOX.

(4) EXISTING LOAD TO BE REFED FROM NEW HVAC PANEL EAST. WHERE POSSIBLE EXTEND/REROUTE CONDUIT AND WIRING TO NEW PANEL (IF WIRING CAN REACH), OTHERWISE SPLICE, EXTEND, AND LABEL EXISTING CIRCUIT WITHIN NEW J-BOX(ES).

(5) EXISTING LOAD TO REMAIN AND BE REFED FROM NEW PANEL L2N. NEW PANEL L2N TO BE PLACED IN THE SAME LOCATION AS EXISTING PANEL. EC TO IDENTIFY EXISTING CIRCUITS AND POPULATE NEW PANEL SCHEDULE.

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
REMOVAL PANEL SCHEDULE (SHEET 1 OF 2)

E801

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\Electrical\20255550-E801.dwg
Plot Date:13-May-26

EXISTING PANEL SCHEDULE - SERVER ROOM RM305

BUS: 100 AMP MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: BASEMENT - OFFICE BUILDING - ROOM ROOM 305
MOUNTING: SURFACE
MINIMUM AIC: N/A

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B
(2) EXISTING LOAD	20/1	1							0	
(2) EXISTING LOAD	20/1	2								0
(2) ISOLATED GROUND NORTH, SOUTH WEST LOWER	40/2	3							0	
		4								0
(2) OUTLET SOUTH LOWER	20/1	5							0	
(2) OUTLET ISOLATED SOUTH WALL EAST UPPER	20/1	6								0
CONN. LOAD			0	0	0	0	0	0	VA / PHASE 0	0

CONN. LOAD

EXISTING PANEL SCHEDULE - TAMARAS PANEL RM 106

BUS: 100A AMP MLO
VOLTAGE: 120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: 1ST FLOOR - OFFICE BUILDING - ROOM 106
MOUNTING: RECESSED
MINIMUM AIC: N/A

LOAD SERVED	FUSE	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	FUSE	LOAD DESCRIPTION
(1) EXISTING LOAD	20A	1							0								2	30A	(1) EXISTING LOAD
(1) EXISTING LOAD	30A	3															4	20A	(1) EXISTING LOAD
(1) EXISTING LOAD	30A	5															6	30A	(1) EXISTING LOAD
(1) EXISTING LOAD	30A	7															8	30A	(1) EXISTING LOAD
(1) EXISTING LOAD	30A	9								0							10	30A	(1) EXISTING LOAD
(1) EXISTING LOAD	30A	11							0								12	30A	(1) EXISTING LOAD
CONN. LOAD			0	0	0	0	0	0	VA / PHASE 0	0	0	0	0	0	0	0	CONN. LOAD		

Calculated A.I.C = N/A

EXISTING PANEL SCHEDULE - OPEN OFFICE PANEL RM202

BUS: 225 AMP MLO (BOTTOM)
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: 2ND FLR - OFFICE BUILDING - ROOM 202
MOUNTING: SURFACE
MINIMUM AIC: N/A

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION (3)
(3) OUTLET 3RD FLOOR	20/1	1							0								22	20/2	HEAT 3RD FLOOR (3)
(3) LIGHTS NORTH	20/1	2								0							23		
(3) LIGHTS CENTER	20/1	3							0								24	20/2	HEAT 3RD FLOOR (3)
(3) EXISTING LOAD	20/1	4								0							25		
(3) OUTLETS	20/1	5							0								26	20/1	OUTLETS (3)
(3) KITCHEN OVEN OUTLETS	20/1	6								0							27	20/1	OUTLETS (3)
(3) AIR HANDLER	20/1	7							0								28	20/2	SPARE (3)
(3) OUTLET UNDER CABINET	15/1	8								0							29		
(3) SOUTH LIGHTS	20/1	9							0								30	15/1	2ND FLOOR EXIT SOUTH (3)
(3) SOUTH LIGHTS	20/1	10								0							31	20/1	COPIER RECEPT (3)
(3) LASER PRINTER	20/1	11							0								32	20/1	EXISTING LOAD (3)
(3) EXISTING LOAD	20/1	12								0							33	20/1	EXISTING LOAD (3)
(3) EXISTING LOAD	20/1	13							0								34	20/1	EXISTING LOAD (3)
(3) EXISTING LOAD	20/1	14								0							35	20/1	COMPUTER OUTLETS, LIGHTS (3)
(3) EXISTING LOAD	20/1	15							0								36	20/1	EXISTING LOAD (3)
SPACE		16								0							37		SPACE
SPACE		17							0								38		SPACE
SPACE		18								0							39		SPACE
SPACE		19							0								40		SPACE
SPACE		20								0							41		SPACE
SPACE		21							0								42		SPACE
CONN. LOAD			0	0	0	0	0	0	VA / PHASE 0	0	0	0	0	0	0	0	CONN. LOAD		

Calculated A.I.C = N/A

EXISTING PANEL SCHEDULE - KITCHEN RANGE FUSE PANEL RM309

BUS: 60 AMP MAIN FUSE
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: 3RD FLOOR - OFFICE BUILDING - ROOM 309
MOUNTING: SURFACE
MINIMUM AIC: N/A

LOAD SERVED	FUSE	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	FUSE	LOAD DESCRIPTION
MAIN FUSE	60A	1&3							0								2&4	40A	RANGE (VERIFY FUSE SIZE) (4)
										0									
(4) REC. EAST WALL & COOLER FAN	20A	5							0								6	20A	CABINET RECEPTACLE (4)
(4) CABINET RECEPTACLE	20A	7								0							8	20A	LIGHTS AND REC. ON WEST WALL (4)
CONN. LOAD			0	0	0	0	0	0	VA / PHASE 0	0	0	0	0	0	0	0	CONN. LOAD		

Calculated A.I.C = N/A

EXISTING PANEL SCHEDULE - KITCHEN PANEL RM309

BUS: 125 AMP MLO (BOTTOM)
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: 3RD FLR - OFFICE BUILDING - ROOM 309
MOUNTING: SURFACE
MINIMUM AIC: N/A

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
(4) TRAFFIC MANAGER LIGHTS	20/1	1							0								2	20/1	TRAFFIC DEPT. RECEPT. (4)
(4) SPARE	15/1	3								0							4	30/2	SANYO AC IN COMPUTER ROOM (4)
(4) HUMIDIFIER	40/2	5							0								6		
		7								0							8	20/1	ROOFTOP RECEPTS (4)
(4) REST ROOM HEATER, COMPUTER ROOM HEAT	20/2	9							0								10	20/2	? (4)
		11								0							12		
CONN. LOAD			0	0	0	0	0	0	VA / PHASE 0	0	0	0	0	0	0	0	CONN. LOAD		

Calculated A.I.C = N/A

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED WITH THE OWNER AND THE OTHER CONTRACTORS.

B. EC TO DOCUMENT AND LABEL EXISTING WIRING FOR CONNECTION TO NEW PANELS.

C. SEE THE SUPPLEMENTAL INFORMATION FOR MARKED UP PHOTOS OF THIS EXISTING PANELS.

REFERENCE NOTES:

(1) EXISTING LOAD TO REMAIN BUT THE BRANCH CIRCUIT WIRING TO BE REPLACED COMPLETELY AND BE REFED FROM NEW PANEL L1S, A FEW FEET TO THE NORTH.

(2) EXISTING LOAD TO REMAIN AND BE REFED FROM THE NEW SERVER ROOM PANEL, IN THE SAME LOCATION. PULL NEW WIRING TO EXISTING LOADS IF WIRING WILL NOT REACH. EC TO IDENTIFY EXISTING CIRCUITS AND POPULATE NEW PANEL SCHEDULE.

(3) EXISTING LOAD TO REMAIN AND BE REFED FROM THE NEW PANEL L2S, IN THE SAME LOCATION. EC TO IDENTIFY EXISTING CIRCUITS AND POPULATE NEW PANEL SCHEDULE.

(4) EXISTING LOAD TO REMAIN AND BE REFED FROM THE NEW PANEL KITCHEN (3RD FLR), IN ROUGHLY THE SAME LOCATION. SPLICE AND EXTEND CIRCUITS THAT DON'T REACH. EC TO IDENTIFY EXISTING CIRCUITS AND POPULATE NEW PANEL SCHEDULE.

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

DRAWING TITLE
REMOVAL PANEL SCHEDULE (SHEET 2 OF 2)

E802

PANEL SCHEDULE HB

BUS: 400 A MLO (Top) ENCLOSURE NEMA 3R/12
VOLTAGE: 480 3 PHASE, 3W
PANEL TYPE: NEMA 3R/12
LOCATION BASEMENT OFFICE BUILDING (RM B006)
MOUNTING SURFACE
C.B.I.C. 35KA

LOAD DESCRIPTION	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	PHASE-VA øA	øB	øC	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
SPARE	100/3	1							0									2	50/3	SERVER ROOM PANEL H3 (P-207)
		3								0								4		
		5									0							6		
SPARE	60/3	7							0									8	125/2	BASEMENT XFMR L2S (P-205A)
		9								0								10		
		11									0							12		
SPARE	60/3	13							0									14	125/2	BASEMENT XFMR LB (P-202A)
		15								0								16		
		17									0							18		
SPARE	20/3	19							0									20	100/2	BASEMENT XFMR KITCHEN (P-203A)
		21								0								22		
		23									0							24		
SPARE	20/3	25							0									26	125/3	BASEMENT XFMR HVAC (P-204A)
		27								0								28		
		29									0							30		
SPARE	30/3	31							0									32	60/3	SPARE
		33								0								34		
		35									0							36		
SPARE	15/3	37							0									38	20/3	SPARE
		39								0								40		
		41									0							42		
	CONN. LOAD		0	0	0	0	0	0	TOTAL VA PER PHASE			0	0	0	0	0	0	0 CONN. LOAD		
									0	0	0	Calculated A.I.C = 18251 AMPERES								

NEW PANEL SCHEDULE - L2N

BUS: 150 AMP MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1
LOCATION: OFFICE BUILDING - 2ND FLOOR OFFICE (RM208)
MOUNTING: RECESSED
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	1							0								2	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	3								0							4	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	5							0								6	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	7								0							8	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	15/1	9							0								10	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	11								0							12	20/2	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	13							0								14		
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	15								0							16	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	17							0								18	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	19								0							20	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	21							0								22	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	23								0							24	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	15/1	25							0								26	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	15/1	27								0							28	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	15/1	29							0								30	20/1	SPARE
CONN. LOAD			0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD		
									0	0	Calculated A.I.C = 2,932								

NEW PANEL SCHEDULE - LB

BUS: 225 AMP MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 3R/12
LOCATION: OFFICE BUILDING - BASEMENT (RM B006)
MOUNTING: SURFACE
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
PANEL L2N (P-109B/P-209)	150/2	1							0								2	20/1	FRONT DESK RECEPTACLES (P-107/P-210)
		3								0							4	20/1	RECEPTION AREA RECPT. (P-107/P-210)
		5							0								6	20/1	FRONT DESK & RECEPTION AREA
		7								0							8	20/1	SPARE
HEATER 2ND FLOOR STAIRWAY	20/2	9							0								10	20/2	SPARE
		11								0							12		
COMPRESS ROOM LIGHTS	20/1	13							0								14	20/1	SPARE
COMPRESS ROOM RECEPTS	20/1	15								0							16	20/1	SPARE
CONFERENCE ROOM OUTLETS	15/1	17							0								18	20/1	SPARE
CONFERENCE ROOM LIGHTS	15/1	19								0							20	20/1	SPARE
1ST FLOOR KITCHEN LIGHTS BELOW PANEL	15/1	21							0								22	20/1	BASEMENT RECEPTACLES (GFI)
FRONT DOOR OUTSIDE OUTLETS AND PROJECTOR	20/1	23								0							24	20/1	SPARE (GFI)
TRACK LIGHTS	20/1	25							0								26	20/1	SPARE (GFI)
KITCHEN COUNTER OUTLETS 1ST FLR	20/1	27								0							28	20/1	SPARE (GFI)
AHU #1 KITCHEN 1ST	20/1	29							0								30	20/1	SPARE
AHU #2 KITCHEN 1ST	20/1	31								0							32	20/1	SPARE
SPARE	15/1	33							0								34	15/1	SPARE
SPARE	20/2	35								0							36	15/1	SPARE
		37							0								38	15/1	SPARE
SPARE	20/2	39								0							40	30/2	BASEMENT WATER HEATER
		41							0								42		
CONN. LOAD			0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD		
									0	0	Calculated A.I.C = 5,309								

PANEL SCHEDULE HVAC WEST (INCLUDE SUB FEED LUGS)

BUS: 225 A MAIN LUG ONLY
VOLTAGE: 208 / 120V, 3 PHASE, 4W
PANEL ENCLOSURE TYPE: NEMA 12
LOCATION: OFFICE BASEMENT - WEST (RM B001)
MOUNTING: SURFACE
C.B.I.C. 22KA

LOAD DESCRIPTION	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	PHASE-VA øA	øB	øC	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
OUTSIDE RECEPT SE CORNER	20/1	1							0									2	50/2	PARKING LOT - SOUTH RECEPTACLES (OFF)
BASEMENT - S.E. SUMP PUMP AND AC CONTROL	20/1	3								0								4		
PARKING LOT - NORTH RECEPTACLES (OFF)	20/1	5									2,455			2,455				6	15/2	2ND FLR - FAN COIL UNIT #9 (P-309)
1ST FLR S. - FAN COIL UNIT #1 (P-301)	15/2	7			874				3,329					2,455				8		
		9			874					4,077				3,203				10	25/2	2ND FLR - FAN COIL UNIT #10 (P-310)
1ST FLR S. - FAN COIL UNIT #2 (P-302)	15/2	11			874						4,077			3,203				12		
		13			874				1,748					874				14	15/2	2ND FLR - FAN COIL UNIT #11 (P-311)
1ST FLR S. - FAN COIL UNIT #3 (P-303)	15/2	15			874					1,748				874				16		
		17			874						1,748			874				18	15/2	2ND FLR - FAN COIL UNIT #12 (P-312)
1ST FLR S. - FAN COIL UNIT #7 (P-307)	15/2	19			1,228				2,102					874				20		
		21			1,228					2,456				1,228				22	15/2	2ND FLR - FAN COIL UNIT #13 (P-313)
1ST S. FCU COND. PMPS. (P-328)	15/1	23					720				1,948			1,228				24		
1ST FLR N. - FAN COIL UNIT #4 (P-304)	15/2	25			1,228				3,683					2,455				26	15/2	2ND FLR - FAN COIL UNIT #14 (P-314)
		27			1,228					3,683				2,455				28		
1ST FLR N. - FAN COIL UNIT #5 (P-305)	15/2	29			2,455						3,683			1,228				30	15/2	2ND FLR - FAN COIL UNIT #15 (P-315)
		31			2,455				3,683					1,228				32		
1ST FLR N. - FAN COIL UNIT #6 (P-306)	15/2	33			2,455					3,715						1,260		34	15/1	2ND FCU COND. PMPS. (P-336)
		35			2,455						2,635		180					36	20/1	CHILLER 120V SERVICE RECPT (P-216)
1ST FLR N. - FAN COIL UNIT #8 (P-308)	15/2	37			2,455				2,455									38	20/1	SPARE
		39			2,455					2,455								40	15/1	SPARE
1ST N. FCU COND. PMPS. (P-331)	15/1	41					720				720							42	15/1	SPARE
	CONN. LOAD		0	0	24,886	0	1,440	0	TOTAL VA PER PHASE			0	180	24,634	0	1,260	0	CONN. LOAD		
									17,000	18,134	17,266	Calculated A.I.C. = 3879								

PANEL SCHEDULE HVAC EAST

BUS: 225 A MAIN LUG ONLY
VOLTAGE: 208 / 120V, 3 PHASE, 4W
PANEL ENCLOSURE TYPE: NEMA 12
LOCATION: OFFICE BASEMENT - EAST (RM B001)
MOUNTING: SURFACE
C.B.I.C. 22KA

LOAD DESCRIPTION	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	PHASE-VA øA	øB	øC	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
3RD FLR - FAN COIL UNIT #16 (P-316)	15/2	1			2,455				2,455									2	15/2	SPARE
		3			2,455					2,455								4		
3RD FLR - FAN COIL UNIT #17 (P-317)	15/2	5			2,455						2,455							6	15/2	SPARE
		7			2,455				2,455									8		
3RD FLR - FAN COIL UNIT #18 (P-318)	15/2	9			2,455					2,455								10	15/2	SPARE
		11			2,455						2,455							12		
3RD FLR - FAN COIL UNIT #19 (P-319)	15/2	13			2,455				2,455									14	15/2	SPARE
		15			2,455					2,455								16		
3RD FLR - FAN COIL UNIT #20 (P-320)	15/2	17			1,228						1,228							18	15/2	SPARE
		19			1,228				1,228									20		
3RD FLR - FAN COIL UNIT #21 (P-321)	15/2	21			2,455					2,955					500			22	20/2	MEN'S RESTROOM HEATER
		23			2,455						2,955				500			24		
3RD FCU COND. PMPS. (P-343)	15/1	25					1,080		1,080									26	20/1	SPARE
SPARE	20/1	27								0								28	20/1	SPARE
SPARE	20/1	29									0							30	20/1	SPARE
SPARE	20/1	31							0									32	20/1	SPARE
SPARE	20/1	33								0								34	20/1	SPARE
SOUTH SUMP PUMP	20/1	35									0							36	20/1	SPARE
POP MACHINE/TIME CLOCK	20/1	37							0									38	20/1	SPARE
EAST SUMP PUMP	20/1	39								0								40	20/1	SPARE
CONTROL LIGHTING CONTACTOR	20/1	41									0							42	20/1	SPARE
	CONN. LOAD		0	0	27,006	0	1,080	0	TOTAL VA PER PHASE			0	0	1,000	0	0	0	CONN. LOAD		
									9,673	10,320	9,093	Calculated A.I.C. = 3645								

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED WITH NDM.

B. TURN OVER EXISTING EQUIPMENT TO NDM.

C. PROVIDE PRINTED PANEL SCHEDULE WITH PANEL LAYOUT.

D. FOR ALL MCB PANELS FED FROM A TRANSFORMER, INCLUDE MAIN TERMINAL COVERS.

E. PROVIDE ALL BREAKERS SHOWN ON PANEL SCHEDULES, INCLUDING SPARES. BREAKERS FEEDING HVAC EQUIPMENT TO BE "HACR" RATED. (PROVIDE GFCI BREAKERS WHERE NOTED (GFI) OR ELSEWHERE REQUIRED.

REFERENCE NOTES:

(1) PROVIDE PANEL THAT CAN ACCEPT A 225A 3 POLE BREAKER FOR THE CHILLER, ADJUST PANEL SPECIFICATIONS/SIZES ACCORDINGLY. BREAKER MAY BE SUBFEED OR EQUIVALENT.

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CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
NEW PANEL SCHEDULE (SHEET 1 OF 2)

E803

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\Electrical\20255550-E803.dwg
Plot Date:13-May-26

NEW PANEL SCHEDULE H3

BUS: 100 A MLO ENCLOSURE NEMA 3/12
VOLTAGE: 480 3 PHASE, 3W
PANEL TYPE: NEMA 1

LOCATION 3RD FLOOR SERVER ROOM (RM305)
MOUNTING SURFACE
C.B.I.C 18KA

LOAD DESCRIPTION	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	PHASE-VA øA	øB	øC	LOAD-VA LTG.	RECP.	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
SPARE	20/3	1							0									2	50/2	3RD FLOOR - SERVER ROOM SERVER ROOM XFMR (P-208A)
		3								0								4		
		5									0							6	BLNK	SPACE
SPARE	20/3	7							9,990					9,990				8		
		9								9,990				9,990				10	15/3	DUCT HEATER (P-323)
		11									9,990			9,990				12		
SPARE	20/3	13							0									14		
		15								0								16	15/3	SPARE
		17									0							18		
	CONN. LOAD		0	0	0	0	0	0	TOTAL VA PER PHASE			0	0	29,970	0	0	0	CONN. LOAD		
									9,990	9,990	9,990							Calculated A.I.C =		5781.0

NEW PANEL SCHEDULE - SERVER ROOM

BUS: 100A MCB
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: 3RD FLOOR SERVER ROOM (RM 305)
MOUNTING: SURFACE
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
ISOLATED GROUND NORTH, SOUTH WEST LOWER	40/2	1							0								2	20/1	SPARE
		3								0							4	20/1	SPARE
SPARE	20/2	5							0								6	20/1	SPARE
		7								0							8	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
SPARE	20/2	9							0								10	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
		11								0							12	20/1	OUTLET SOUTH LOWER
SPARE	20/2	13							0								14	20/1	OUTLET ISOLATED SOUTH WALL EAST UPPER
		15								0							16	20/1	SPARE
SPARE	15/1	17							0								18	20/1	SPARE
	CONN. LOAD		0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD		
									0	0							Calculated A.I.C =		2,659

NEW PANEL SCHEDULE - L2S

BUS: 225A MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: OFFICE BUILDING - 2ND FLOOR OPEN OFFICE (RM 202)
MOUNTING: SURFACE
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
1ST FLOOR - RM106 PANEL L1S (P-206)	125/2	1							0								2	20/2	HEAT 3RD FLOOR
		3								0							4		
OUTLET 3RD FLOOR	20/1	5							0								6	20/2	HEAT 3RD FLOOR
LIGHTS NORTH	20/1	7								0							8		
LIGHTS CENTER	20/1	9							0								10	20/1	OUTLETS
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	11								0							12	20/1	OUTLETS
OUTLETS	20/1	13							0								14	20/2	SPARE
KITCHEN OVEN OUTLETS- 3RD FLR KITCHEN	20/1	15								0							16		
AIR HANDLER	20/1	17							0								18	20/1	2ND FLOOR EXIT SOUTH
OUTLET UNDER CABINET- KITCHEN	15/1	19								0							20	20/1	COPIER RECEPT
SOUTH LIGHTS	20/1	21							0								22	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
SOUTH LIGHTS	20/1	23								0							24	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
LASER PRINTER	20/1	25							0								26	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	27								0							28	20/1	COMPUTER OUTLETS, LIGHTS
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	29							0								30	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	31								0							32	20/1	SPARE
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	33							0								34	20/1	SPARE
SPARE	15/1	35								0							36	20/1	SPARE
SPARE	15/1	37							0								38	20/1	SPARE
SPARE	15/1	39								0							40	20/1	SPARE
SPARE	15/1	41							0								42	20/1	SPARE
	CONN. LOAD		0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD		
									0	0							Calculated A.I.C =		4,300

NEW PANEL SCHEDULE - L1S

BUS: 100 A MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: OFFICE BUILDING - 1ST FLOOR (RM 106)
MOUNTING: SURFACE
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/1	1							0								2	30/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	3								0							4	20/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	5							0								6	30/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	7								0							8	30/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	9							0								10	30/1	EXISTING LOAD (EC TO VERIFY/UPDATE)
EXISTING LOAD (EC TO VERIFY/UPDATE)	30/1	11								0							12	20/1	SPARE
SPARE	30/1	13							0								14	20/1	SPARE
SPARE	20/1	15								0							16	20/1	SPARE
SPARE	20/1	17							0								18	20/1	SPARE
	CONN. LOAD		0	0	0	0	0	0	VA / PHASE		0	0	0	0	0	0	CONN. LOAD		
									0	0							Calculated A.I.C =		3,187

NEW PANEL SCHEDULE - KITCHEN (3RD FLR)

BUS: 225 AMP MLO
VOLTAGE: 240 /120V, 1PH, 3W
PANEL TYPE: TYPE 1

LOCATION: OFFICE BUILDING - 3RD FLOOR KITCHEN (RM 309)
MOUNTING: SURFACE
MINIMUM AIC: 22kA

LOAD SERVED	CKT BKR	CKT NO.	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	PHASE-VA A	B	LOAD-VA LTG.	RECP	HEAT	COOL	MOTOR	MISC	CKT NO.	CKT BKR	LOAD DESCRIPTION
TRAFFIC DEPT. RECEPT.	20/1	1							0								2	20/1	TRAFFIC MANAGER LIGHTS
SERVER ROOM - SANYO AC	30/2	3								0							4	40/2	HUMIDIFIER
		5							0								6		
ROOFTOP RECEPTS.	20/1	7								0							8	20/2	REST ROOM HEATER, SERVER ROOM HEATER
EXISTING LOAD (EC TO VERIFY/UPDATE)	20/2	9							0								10		
		11								0							12	20/1	CABINET RECEPTACLE- KITCHEN (VERIFY LOAD)
EAST WALL RECEPTACLE AND COOLER FAN	20/1	13							0								14	20/1	LIGHTS AND RECEPTACLE ON WEST WALL
CABINET RECEPTACLE - KITCHEN (VERIFY LOAD)	20/1	15								0							16	40/2	3RD FLOOR KITCHEN RANGE (STOVE) (VERIFY BREAKER SIZE REQUIRED)
ERV MOTOR (P-322)	30/1	17							0								18		
SPARE	20/1	19								540		540					20	20/1	3RD FLOOR KITCHEN RECEPT BNK1 (GFI) (P-212)
SPARE	15/1	21							540			540					22	20/1	3RD FLOOR KITCHEN RECEPT BNK2 (GFI) (P-213)
SPARE	15/1	23								540		540					24	20/1	3RD FLOOR KITCHEN RECEPT BNK3 (GFI) (P-214)
SPARE	15/1	25							180			180					26	20/1	3RD FLOOR KITCHEN FRIDGE RECEPT (GFI) (P-125)
SPARE	15/1	27								0							28	20/1	SPARE (GFI)
SPARE	15/1	29							0								30	20/1	SPARE (GFI)
SPARE	15/1	31								0							32	20/1	SPARE (GFI)
SPARE	15/1	33							0								34	20/1	SPARE
SPARE	20/1	35								0							36	15/1	SPARE
SPARE	20/1	37							0								38	15/1	SPARE
SPARE	20/1	39								0							40	15/1	SPARE
SPARE	20/1	41							0								42	15/1	SPARE
	CONN. LOAD		0	0	0	0	0	0	VA / PHASE		0	1,800	0	0	0	0	CONN. LOAD		
									720	1,080							Calculated A.I.C =		2,540

GENERAL NOTES:

A. ALL WORK SHALL BE COORDINATED WITH NDM.

B. TURN OVER EXISTING EQUIPMENT TO NDM.

C. PROVIDE PRINTED PANEL SCHEDULE WITH PANEL LAYOUT.

D. FOR ALL MCB PANELS FED FROM A TRANSFORMER, INCLUDE MAIN TERMINAL COVERS.

E. PROVIDE ALL BREAKERS SHOWN ON PANEL SCHEDULES, INCLUDING SPARES. BREAKERS FEEDING HVAC EQUIPMENT TO BE "HACR" RATED. (PROVIDE GFCI BREAKERS WHERE NOTED (GFI) OR ELSEWHERE REQUIRED.

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3100 DeMers Avenue, Grand Forks ND 58201
www.eapc.net

CONSULTANTS

CLIENT
NORTH DAKOTA STATE MILL

PROJECT DESCRIPTION
OFFICE HVAC UPGRADES

CITY GRAND FORKS
STATE NORTH DAKOTA

ISSUE DATES

MARK	DESCRIPTION	DATE
CD	CONSTRUCTION DOCUMENTS	05/13/2026

PROJECT NO: 20255550
DRAWN BY: EJV
CHECKED BY: TWV

STAMP

REGISTERED PROFESSIONAL ENGINEER
TRAVIS W. VAUGHN
PE-9419
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
NEW PANEL SCHEDULE (SHEET 2 OF 2)

E804

File Location:W:\2025\20255550 - GF ND Mill Office Bldg HVAC Upgrades\Drawings\Electrical\20255550-E804.dwg
Plot Date:13-May-26

TRANSFORMER SCHEDULE

NAME	KVA	PRIMARY	SECONDARY	LOCATION	NOTES
SERVER ROOM	25	480V	240/120V	3RD FLR SERVER ROOM	1
KITCHEN	37.5	480V	240/120V	BASEMENT	1
LB	50	480V	240/120V	BASEMENT	2
HVAC	75	480V	208/120V	BASEMENT	3
L2S	50	480V	240/120V	BASEMENT	2

REFERENCE NOTES:

1. APPROXIMATE DIMENSIONS & WEIGHT: 37"x20"x20" (HxWxD), 340 LBS.
2. APPROXIMATE DIMENSIONS & WEIGHT: 37"x20"x20" (HxWxD), 395 LBS.
3. APPROXIMATE DIMENSIONS & WEIGHT: 33.5"x30"x27.5" (HxWxD), 515 LBS.

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TRAVIS W. VAUGHN
PE-9879
DATE 05/13/2026
NORTH DAKOTA

DRAWING TITLE
TRANSFORMER SCHEDULE

E805

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Plot Date:13-May-26