T M P ARCHITECTURE I N C
1191 WEST SQUARE LAKE ROAD · BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 EM · INFO@TMP-ARCHITECTURE.COM

TROY HIGH SCHOOL KITCHEN REMODEL

TROY SCHOOL DISTRICT - TROY, MICHIGAN

2022 Bond Program - Bid Package 6

PROJECT NUMBER 22104G

CONSTRUCTION DOCUMENTS

CONSULTANTS:

MECHANICAL ENGINEER

PETER BASSO ASSOCIATES INC.
ELECTRICAL ENGINEERS
5145 LIVERNOIS ROAD, SUITE 100
TROY, MICHIGAN 48098-3276
PHONE: (248) 879-5666
FAX: (248) 879-0007

ELECTRICAL ENGINEER

PETER BASSO ASSOCIATES INC.
ELECTRICAL ENGINEERS
5145 LIVERNOIS ROAD, SUITE 100
TROY, MICHIGAN 48098-3276
PHONE: (248) 879-5666
FAX: (248) 879-0007

CONSULTANT

CONSULTANT

LIST OF DRAWINGS

GENERAL INFORMATION

TS.1	COVER SHEET
TG.1	GENERAL INFORMATION

ARCHITECTURAL

AD.1	DOOR AND FRAME SCHEDULE
A0.2E	SECOND LEVEL DEMOLITION PLAN - ZONE E
A1.2E	SECOND LEVEL FLOOR PLAN - ZONE E
A2.2E	SECOND LEVEL REFLECTED CEILING PLAN - ZONE E
A10.2E	SECOND LEVEL FINISH PLAN - ZONE E

FOOD SERVICE EQUIPMENT

FSE.1	FOOD SERVICE EQUIPMENT SCHEDULE
FSE.2	FOOD SERVICE EQUIPMENT LAYOUT
FSE.3	FOOD SERVICE EQUIPMENT ELECTRICAL ROUGH-IN
FSE.4	FOOD SERVICE EQUIPMENT PLUMBING ROUGH-IN
FSE.5	FOOD SERVICE EQUIPMENT SPECIAL ROOF CONDITIONS
FSE.6	FOOD SERVICE EQUIPMENT REFRIGERATION RACK
FSE.7	FOOD SERVICE EQUIPMENT REFRIGERATION RACK

MECHANICAL

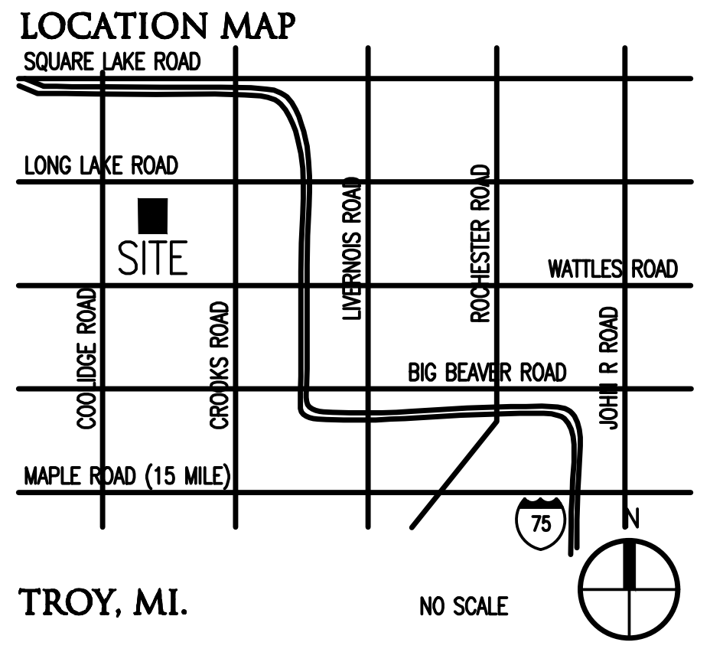
M0.1	MECHANICAL STANDARDS AND DRAWING INDEX
MD2.1E	FIRST LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'
MD2.2E	SECOND LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'
MD4.2E	SECOND LEVEL SHEET METAL DEMOLITION PLAN - ZONE 'E'
M2.1E	FIRST LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'
M2.2E	SECOND LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'
M4.2E	SECOND LEVEL SHEET METAL NEW WORK PLAN - ZONE 'E'
M6.1	MECHANICAL DETAILS
M7.1	MECHANICAL SCHEDULES

ELECTRICAL

E0.1	ELECTRICAL STANDARDS AND DRAWINGS INDEX
E0.2	ELECTRICAL STANDARDS SCHEDULES
E0.3	FOOD SERVICE EQUIPMENT SCHEDULES
E0.4	SECOND LEVEL ELECTRICAL COMPOSITE PLAN
ED1.2E	SECOND LEVEL DEMOLITION PLAN - ZONE 'E'
E2.2E	SECOND LEVEL LIGHTING PLAN - ZONE 'E'
E3.2E	SECOND LEVEL POWER AND AUXILIARY SYSTEMS PLAN - ZONE 'E'
E5.1	ONE LINE DIAGRAM
E5.2	PANEL SCHEDULES
E7.1	ELECTRICAL DETAILS AND DIAGRAMS

PROJECT DATA:

LOCATION MAP



TROY, MI.

ADDRESS: TROY HIGH SCHOOL
4777 NORTHFIELD PKWY
TROY, MI 48098

NOTE:

AREA OF WORK FALLS UNDER
- 2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS ALTERATION LEVEL 2.
- 2012 LIFE SAFETY CODE MODIFICATION.

BUILDING:

BUILDING AREA(S) =	
56,648 SQ. FT.	LEVEL 1 (EXISTING)
239,281 SQ. FT.	LEVEL 2 (EXISTING)
39,552 SQ. FT.	LEVEL 3 (EXISTING)
335,481 SQ. FT.	TOTAL (EXISTING)
3,100 SQ. FT.	(EXISTING ALTERED)

CODE:

GOVERNING CODES :

- 2016 SCHOOL FIRE SAFETY RULES
  (2012 Life Safety Code, plus amendments)
- 2015 MICHIGAN BUILDING CODE
- 2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
- 2021 MICHIGAN PLUMBING CODE
- 2021 MICHIGAN MECHANICAL CODE
- 2015 MICHIGAN ENERGY CODE
  (ANSI/ASHRAE/IES Standard 90.1-2013)
- 2023 MICHIGAN ELECTRICAL CODE (2023 NEC, plus Part 8 Rules)
- 2023 MICHIGAN ELEVATOR RULES
  (ASME A17.1-2016, ASME A18.1-2017)
- MICHIGAN BARRIER FREE CODE
  (Michigan Building Code 2015 and ICC A117.1-2009)
- 2019 MICHIGAN BOILER CODE RULES
  (ASME Boiler and Pressure Vessel Code, 2019 edition)
  (National Board Inspection Code [NBIC], 2019 edition)

CONSTRUCTION CLASSIFICATION : NFPA II (000)
MBC 2B

USE GROUP CLASSIFICATION : E - EDUCATIONAL,
A - ASSEMBLY
B - BUSINESS
MIXED USE - SEPARATED

DATE	ISSUED FOR:
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

LICENSEE'S STATEMENT:

This Document has been prepared under the supervision of the Architect, as the person in Responsible Charge with the firm of TMP ARCHITECTURE. INC. An original embossed or rubber stamp seal and original signature of the Architect is required and shall be affixed to any copy of this Document submitted to a governmental agency for approval or record. This is in conformance with the State of Michigan's PA 299, Article 20 and the General Rules of the Board of Architects.

The Architect's seal provided hereon does not take responsibility for certain portions of the Documentation or project requiring the services of a licensed Professional Engineer or other design professional. An original embossed or rubber stamp seal and original signature of the Professional Engineer is required and shall be affixed to any copy of this or other Document submitted to a governmental agency for approval or record. The engineering firms associated with this document are listed above as Consultants.

REGISTRATION SEALS

COPYRIGHT

PROJECT TITLE
Troy High School Kitchen Remodel

PROJECT NO.
22104G

DRAWING NO.
TS.1

ABBREVIATIONS

A

ABV.	ABOVE
A.F.F.	ABOVE FINISH FLOOR
A.R.F.	ABOVE REFERENCE FLOOR
ABR.	ABRASIVE
ABS.	ABSORBING
ACC.	ACCESS
ACC. PNL	ACCESS PANEL
AC.	ACOUSTIC/ACOUSTICAL
ACT	ACOUSTIC TILE
AC. INSUL.	ACOUSTIC INSULATION
ADD.	ADDENDUM
ADDN.	ADDITION
ADDNL.	ADDITIONAL
ADH.	ADHESIVE
ADJ.	ADJUSTIBLE
AGGR.	AGGREGATE
A.C.B.	AIR CIRCUIT BREAKER
A/C	AIR CONDITIONING
A.C.C.	AIR CONDITIONING COMPRESSOR
A.C.U.	AIR CONDITIONING UNIT
A.H.U.	AIR HANDLING UNIT
ALT.	ALTERNATE
ALUM./AL	ALUMINUM
AMT	AMOUNT
AMP	AMPHERE
AMPL.	AMPLIFIER
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
&	AND
ANG./ L or ∠	ANGLE
ANOD.	ANODIZED
APT.	APARTMENT
APPR.	APPROVED
APPROX.	APPROXIMATE
ARCH.	ARCHITECT/ARCHITECTURAL
A-	ARCHITECTURAL DRAWING-NO.
A.T.	ASH TRAY
ATM	AUTOMATIC TELLER MACHINE
ASPH.	ASPHALT
ASSY.	ASSEMBLY
@	AT
AUTO.	AUTOMATIC
A.S.R.	AUTOMATIC SPRINKLER RISER
AUX.	AUXILIARY
AVG.	AVERAGE

B

B/B	BACK-TO-BACK
B.F.P.	BACK FLOW PREVENTER
B.D.D.	BACK DRAFT DAMPER
B.F.	BARRIER FREE
B.B.R.	BASE BOARD RADIATION
B.PL	BASE PLATE
BSMT	BASEMENT
B.	BATH ROOM
BM	BEAM
B/C	BACK OF CURB
BRG	BEARING
B.R.	BEDROOM
B.M.	BENCH MARK
BT	BENT
BETW.	BETWEEN
BEV.	BEVEL
BIT.	BITUMINOUS
B.I.	BLACK-IRON
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BLR	BOILER
BLR. F.	BOILER FEED
BLR. H.	BOILER HOUSE
BK. SH.	BOOK SHELVES
B.S.	BOTH SIDES
B.W.	BOTH WAYS
BOT.	BOTTOM
BOT. EL.	BOTTOM ELEVATION
BLVD	BOULEVARD
BDRY	BOUNDARY
BRKT	BRACKET
BR.	BRASS
BRKR	BREAKER
BRK	BRICK
BTU	BRITISH THERMAL UNIT
BRZ	BRONZE
BLDG.	BUILDING
B.L.	BUILDING LINE
B.U.R.	BUILT-UP ROOFING
B.N.	BULLNOSE
BLKD	BULKHEAD
BULL.	BULLETIN
B.A.	BURGLAR ALARM
BUZZ.	BUZZER

C

CAB.	CABINET
C.U.H.	CABINET UNIT HEATER
CAP.	CAPACITY
CPT	CARPET
C.R.S.	CARPET REDUCER STRIP
CSMT	CASMENT
CSWRK	CASEWORK
CSG	CASING
C.I.	CAST IRON
C.I.F.	CAST IRON FRAME
C.I.P.	CAST IRON PIPE/CAST-IN-PLACE
CSTG	CASTING
CAT. NO.	CATALOG NUMBER
C.B.	CATCH BASIN
CLG.	CEILING
C.D.	CEILING DIFFUSER
CLG. HT.	CEILING HEIGHT
CEM.	CEMENT
CEM. PLAS.	CEMENT PLASTER
CTR	CENTER
℄	CENTERLINE
C/C	CENTER-TO-CENTER
CER.	CERAMIC
C.T.	CERAMIC TILE
C.BD.	CHALKBOARD
CHAM.	CHAMFER
CHG.	CHANGE
CHAN. or [	CHANNEL
CHKD. PL.	CHECKERED PLATE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHD	CHORD
CIRCUM.	CIRCUMFERENCE
CIR.	CIRCLE/CIRCULAR
CIRC.	CIRCUIT
C.BR	CIRCUIT BREAKER
C-	CIVIL DRAWING-NO.
CL.	CLASS
CLRM	CLASSROOM
C.O.	CLEAN OUT
CLR	CLEAR
CLR GL	CLEAR GLASS
CLR W.GL	CLEAR WIRE GLASS
CL.	CLOSET
CLO.	CLOSURE
C.CL.	COAT CLOSET
COEF.	COEFFICIENT
CW	COLD WATER
COL.	COLUMN
CO.	COMPANY
COMPT.	COMPARTMENT
COMPO.	COMPOSITION
CA	COMPRESSED AIR
COMPR.	COMPRESSOR
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CWR	CONDENSING WATER RETURN
CWS	CONDENSING WATER SUPPLY
COND.	CONDUIT
CONF.	CONFERENCE
CONN.	CONNECT
CONST.	CONSTRUCTION
C.J.	CONTROL JOINT
CONT.	CONTINUE/CONTINUOUS
CONTR.	CONTRACTOR
C.P.	CONTROL PANEL
CONV.	CONVECTOR
CNVYR	CONVEYOR
COR.	CORNER
C.G.	CORNER GUARD
CORR.	CORRIDOR/CORRUGATED
CPR	COPPER
CNTR	COUNTER
CTSK	COUNTERSINK
CRS.	COURSE
COV.	COVER
COV. PL.	COVER PLATE
C.C.T.	CUBICAL CURTAIN TRACK
CU.FT.	CUBIC FEET/ CUBIC FOOT
CFM	CUBIC FEET PER MINUTE
CY	CUBIC YARD
CULV.	CULVERT
C.D.	CUP DISPENSER
CYL.	CYLINDER
CYC.	CYCLES

D

DMPR	DAMPER
DMPFG	DAMPPROOFING
D.L.	DEAD LOAD
DB	DECIBLE
D.	DEEP
DWG.	DRAWING
DMT. PARTN	DEMOUNTABLE PARTITION
DEPT.	DEPARTMENT
DEPR.	DEPRESSED
DES.	DESIGN
DET.	DETAIL
D.E. CO.	DETROIT EDISON COMPANY
DIAG.	DIAGONAL
DGM	DIAGRAM
DIA.	DIAMETER
DIFF.	DIFFUSER
DIM.	DIMENSION
D.R.	DINING ROOM
DIR.	DIRECTORY
DISC.	DISCONNECT
DISCONT.	DISCONTINUOUS
DW	DISHWASHER
DISP.	DISPENSER
DIST.	DISTANCE
D.P.	DISTRIBUTION PANEL
DO	DITTO (DO OVER)
DIV.	DIVIDER/DIVISION
DR.	DOOR
D.O.	DOOR OPENING
DR. OP.	DOOR OPERATOR
DBL.	DOUBLE
D.A.	DOUBLE ACTING
D.H.	DOUBLE HUNG
DWL.	DOWEL
DN	DOWN
D.S.	DOWNSPOUT
DRN	DRAIN
D.T.	DRAIN TILE
D.T.C.	DRAIN TILE CONNECTOR
DWR	DRAWER
DWG	DRAWING
D.F.	DRINKING FOUNTAIN
D.B.	DRY BULB
D.S.P.	DRY STAND PIPE
DBWTR	DUMBWAITER
DUP.	DUPLICATE
D.DR.	DUTCH DOOR

E

EA	EACH
E.F.	EACH FACE
E.W.	EACH WAY
E	EAST
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
ELAST.	ELASTOMERIC
ELAST. FLASH.	ELASTOMERIC FLASHING
ELAST. W.P.	ELASTOMERIC WATERPROOFING
E.S.R.	ELASTOMERIC SHEET ROOFING
ELEC.	ELECTRIC/ELECTRICAL
ELEC. CL.	ELECTRICAL CLOSET
ELEC. CAB.	ELECTRICAL CABINET
E.C.	ELECTRICAL CONTRACTOR
E-	ELECTRICAL DRAWING-NO.
E.P.	ELECTRICAL PANEL
EWC	ELECTRIC WATER COOLER
ELEC. OPER.	ELECTRICALLY OPERATED
EL.	ELEVATION
ELEV.	ELEVATOR
EMERG.	EMERGENCY
ENCL.	ENCLOSURE
ENGR	ENGINEER
E/E	END-TO-END
ENTR.	ENTRANCE/ENTRY
EP.	EPOXY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
ESC.	ESCALATOR
EST.	ESTIMATE
EXC.	EXCAVATED
EXH.	EXHAUST
E.D.	EXHAUST DUCT
E.F.	EXHAUST FAN
E.G.	EXHAUST GRILLE
E.R.	EXHAUST REGISTER
EXIST.	EXISTING
EXP.	EXPANSION
EXP.B.	EXPANSION BOLT
E.J.	EXPANSION JOINT
EXPL.P.	EXPLOSION PROOF
EXP'D	EXPOSED
EXT'N	EXTENSION
EXT.	EXTERIOR
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
E.H.	EXTRA HEAVY
EXTR.	EXTRUDED
E.S.P.	EXTERNAL STATIC PRESSURE

F

FAB.	FABRICATED/FABRIC
F/F	FACE-TO-FACE
F. FIN.	FACTORY FINISH
F.C.U.	FAN COIL UNIT
F.S.	FAR SIDE
FAS.	FASTENER
FDR	FEEDER
FT or '	FEET/FOOT
FPM	FEET PER MINUTE
FN	FENCE
F.BD.	FORM BOARD
FIG.	FIGURE
FIN.	FINISH/FINISHED
FIN. FLR/F.F.	FINISH FLOOR
F.T.R.	FINNED TUBE RADIATION
F.A.	FIRE ALARM
F.A.C.P.	FIRE ALARM CONTROL PANEL
F. BRK	FIRE BRICK
F.D.	FIRE DAMPER
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C.	FIRE HOSE CABINET
F.H.	FIRE HYDRANT
F.L.	FIRE LINE
F.R.	FIRE RETARDANT/FIRE RATED
F.R.T.WD	FIRE RETARDANT TREATED WOOD
F.V.C.	FIRE VALVE CABINET
FP.	FIREPLACE
FPRFG.	FIREPROOFING
FIXT.	FIXTURE
FLASH.	FLASHING
FHMS	FLAT HEAD MACHINE SCREW
FHWS	FLAT HEAD WOOD SCREW
F.C.	FLEXIBLE CONNECTION
FLR	FLOOR
F.C.O.	FLOOR CLEAN OUT
F.D.	FLOOR DRAIN
FLR. FIN.	FLOOR FINISH
FLUOR.	FLUORESCENT
FLDG	FOLDING
FTG	FOOTING
FM. BD	FORMBOARD
FDN	FOUNDATION
FR.	FRAME
FR/COV.	FRAME AND COVER
FRMG	FRAMING
FRZR	FREEZER
F.S.	FULL SIZE
FURN.	FURNISH/FURNISHED
FURR.	FURRING/FURRED
FUT.	FUTURE

G

GA.	GAUGE
GAL.	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GALV.	GALVANIZED
GALV. I.	GALVANIZED IRON
G	GAS
GSKT	GASKET
G.V.& B.	GATE VALVE AND BOX
GEN'L.	GENERAL
GL.	GLASS
GLZ	GLAZING
G.H.T.	GLAZED HOLLOW TILE
G.B.	GRAB BAR
GR.	GRADE/GRILLE
GB	GRADE BEAM
GRAT.	GRATING
G.L.	GRID LINE
GRN	GRANITE
G.S.	GREASE SEPARATOR
G.T.	GREASE TRAP
GND	GROUND
G.F.I.	GROUND FAULT INTERRUPTOR
GT	GROUT
G.	GUTTER ELEVATION
GYP.	GYPSUM
GYP.BD.	GYPSUM BOARD

H

HNDCP	HANDICAPPED
H.R.	HANDRAIL
H.BD	HARDBOARD
HDWE	HARDWARE
HDWD	HARDWOOD
HD	HEAD
HDR	HEADER
H.A. GL.	HEAT ABSORBING GLASS
H.R.U.	HEAT RECOVERY UNIT
HTR	HEATER
HTG	HEATING
H/V	HEATING AND VENTILATING
H.V.A.C.	HEATING, VENTILATING AND AIR CONDITIONING
HHWR	HEATING HOT WATER SUPPLY
HHWS	HEATING HOT WATER RETURN
HGT	HEIGHT
HEX.	HEXAGON
H.	HIGH
H.I.D.	HIGH INTENSITY DISCHARGE
H.P.	HIGH POINT
H.PR.	HIGH PRESSURE
H.S.	HIGH STRENGTH
H.S.B.	HIGH STRENGTH BOLT
H.V.	HIGH VOLTAGE
HWY	HIGHWAY
HSTWY	HOISTWAY
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
HNYCB	HONEYCOMB
HK	HOOK
HORIZ.	HORIZONTAL
HP	HORSEPOWER
H.B.	HOSE BIBB
H.S.P.	HOSE STAND PIPE
H.V.C.	HOSE VALVE CABINET
HOSP.	HOSPITAL
H.W.	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HR.	HOUR
H.O.	HUB OUTLET
HYD.	HYDRANT/HYDRAULIC
H	HYDROGEN

I

I.D.	IDENTIFICATION
INCAND.	INCANDESCENT
IN. or "	INCH/INCHES
INCIN.	INCINERATOR
INCL.	INCLUDE/INCLUDING
I.W.	INDIRECT WASTE
INFO.	INFORMATION
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
INST'L.	INSTALL/INSTALLATION
INSUL.	INSULATE/INSULATION
INT.	INTERIOR
INTER.	INTERMEDIATE
INV.	INVERT
I.E.	INVERT ELEVATION

J

J.C.	JANITOR CLOSET
JT	JOINT
JST	JOIST
J.B.	JUNCTION BOX
JR	JUNIOR

K

K.P.	KICK PLATE
KV	KILOVOLT
KVA	KILOVOLT AMPHERE
KW	KILOWATT
K	KIP (1000#)
KIT.	KITCHEN
K.S.	KNEE SPACE
K.D.	KNOCK DOWN
K.O.P.	KNOCK-OUT PANEL

L

LBL.	LABEL
LAB.	LABORATORY
LAD.	LADDER
L.B.	LAG BOLT
LAM.	LAMINATE/LAMINATED
LDG	LANDING
L-	LANDSCAPE DRAWING-NO.
LGE	LARGE
LDRY	LAUNDRY
LAV.	LAVATORY
L.H.	LEFT HAND
L.H.R.B.	LEFT HAND REVERSE BEVEL
LGTH	LENGTH
LEV.	LEVEL
LIB.	LIBRARY
LT.	LIGHT
LPRF	LIGHTPROOF
LTG	LIGHTING
L.P.	LIGHTING PANEL
L.R.P.	LIGHTING RECEPTACLE PANEL
LTWT	LIGHTWEIGHT
LTWT. CONC.	LIGHTWEIGHT CONCRETE
LMS	LIMESTONE
LTL	LINTEL
LIN. DIFF.	LINEAR DIFFUSER
L.F.	LINEAR FEET/FOOT
LIQ	LIQUID
LPG	LIQUID PROPANE GAS
L.P.G.	LIQUID PETROLEUM GAS
L.L.	LIVE LOAD
L.R.	LIVING ROOM
LOC.	LOCATION
LKR	LOCKER
LG	LONG
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
LVR	LOUVER
L.O.	LOUVER OPENING
L.P.	LOW POINT
L.PR.	LOW PRESSURE
LBR	LUMBER
LBS. or #	POUNDS

M

MACH.	MACHINE
M.B.	MACHINE BOLT
MACH. RM	MACHINE ROOM
M.A.U.	MAKE-UP AIR UNIT
M.D.P.	MAIN DISTRIBUTION PANEL
M.S.B.	MAIN SWITCH BOARD
MAINT.	MAINTENANCE
MH.	MANHOLE
MFR	MANUFACTURER
MAR.	MARBLE
MK	MARK
MAS.	MASONRY
M.O.	MASONRY OPENING
MATL	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
M-	MECHANICAL DRAWING-NO.
M.C.	MEDICINE CABINET
MED.	MEDIUM
MEMB.	MEMBRANE
MET.	METAL
M.D.S.	METAL DIVIDER STRIP
M.E.S.	METAL EDGE STRIP
M.L.	METAL LATH
M.L.& PLAS.	METAL LATH AND PLASTER
M.T.	METAL THRESHOLD
MET. W.P.	METALLIC WATERPROOFING
MEZZ.	MEZZANINE
MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION
MWK	MILLWORK
MIN.	MINIMUM
MIR.	MIRROR
M.& S.	MIRROR AND SHELF
MISC.	MISCELLANEOUS
M.I.	MISCELLANEOUS IRON
MOD.	MODEL
MON.	MONUMENT
M.S.& S.	MOP STRIP AND SHELF
M.O.D.	MOTOR OPERATED DAMPER
MLDG	MOULDING
MTD	MOUNTED
MTG	MEETING/MOUNTING
MOV.	MOVEABLE
MOV. PARTN.	MOVEABLE PARTITION
MULL	MULLION
M	THOUSAND (1000)

N

NAT.	NATURAL
N.S.	NEAR SIDE
NEUT.	NEUTRAL
NRC	NOISE REDUCTION COEFFICIENT
NOM.	NOMINAL
NOR.	NORMAL
N	NORTH
NOS.	NOSING
N.I.C.	NOT-IN-CONTRACT
N.T.S.	NOT-TO-SCALE
NO. or #	NUMBER

O

OBS.	OBSCURE
OBS.GL.	OBSCURE GLASS
OFF.	OFFICE
O.C.	ON CENTER
OPQ.	OPAQUE
OPG.	OPENING
OPER.	OPERATOR
OPP.	OPPOSITE
OPP.HD.	OPPOSITE HAND
ORIG.	ORIGINAL
ORN.	ORNAMENTAL
OZ.	OUNCE
O/O	OUT-TO-OUT
O.A.	OUTSIDE AIR
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.S.	OVAL HEAD SCREW
O.A.	OVERALL
OHD	OVERHEAD
OHD.DR	OVERHEAD DOOR
OXY.	OXYGEN

P

PTD	PAINTED
PR	PAIR
PG.	PAGE
PNL	PANEL
P.T.D.	PAPER TOWEL DISPENSER
P.T.W.R.	PAPER TOWEL WASTE RECEPTACLE
PRL	PARALLEL
PKG	PARKING
P.BD	PARTICLE BOARD
PRTN	PARTITION
PASS.	PASSAGE
PAT.	PATENT
PVMT	PAVEMENT
PVG	PAVING
PED.	PEDESTAL
PERF.	PERFORATED
PERIM.	PERIMETER
PERM.	PERMANENT
PERP.	PERPENDICULAR
P. or ϕ	PHASE
PHOTO.	PHOTOGRAPH
P.H.	PHYSICALLY HANDICAPPED
PC.	PIECE
PCS.	PIECES
PLAS.	PLASTER
PL. LAM.	PLASTIC LAMINATE
PL.	PLATE
PL. GL.	PLATE GLASS
PLAT.	PLATFORM
PLBG	PLUMBING
PLWD	PLYWOOD
PT	POINT
P.T.	POINT OF TANGENCY
P.C.	POINT OF CURVATURE
POL.	POLISH/POLISHED
PVC	POLYVINYLCLORIDE
PORC.	PORCELAIN
PORC. ENAM.	PORCELAIN ENAMEL
POR.	POROUS
PORT.	PORTABLE
POS.	POSITION
P.I.V.	POST INDICATOR VALVE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PCF	POUNDS PER CUBIC FOOT
P.P	POWER PANEL
P/C	PRECAST
P.T.R.	PRECAST TERRAZZO RECEPTOR
PREFAB.	PREFABRICATED
PFN.	PREFINISHED
P.T.WD	PRESERVATIVE TREATED WOOD
P.G.	PRESSURE GAUGE
P.R.V.	PRESSURE REDUCING VALVE
PRIM.	PRIMARY
PROJ.	PROJECT/PROJECTION
PROP.	PROPERTY/PROPOSED
P.L.	PROPERTY LINE
P.A.	PUBLIC ADDRESS
P.S.	PURSE SHELF
P.B.	PUSH BUTTON

Q

QTY	QUANTITY
Q.T.	QUARRY TILE
QTR	QUARTER
QTR. RD	QUARTER ROUND

R

RBT	RABBET
RAD. or R.	RADIUS
R.W.C.	RAIN WATER CONDUCTOR
R.R.	RAILROAD
RECV.	RECEIVE/RECEIVING
RECPT.	RECEPTACLE
R.P.	RECEPTACLE PANEL
REC.	RECESS
RECT.	RECTANGLE/RECTANGULAR
RED.	REDUCER
RWD	REDWOOD
REF.	REFER/REFERENCE
REFL.	REFLECTED/REFLECTIVE
REFR.	REFRIGERATOR
REG.	REGISTER
REINF.	REINFORCE/REINFORCING/ REINFORCEMENT
REM.	REMOVE/REMOVABLE
REP.	REPAIR
REQ'D.	REQUIRED
RESIL.	RESILIENT
RET.	RETURN
R.A.	RETURN AIR
R.A.D.	RETURN AIR DIFFUSER
R.A.F.	RETURN AIR FAN
REV.	REVISED/REVISION
RPM	REVOLUTIONS PER MINUTE
R.	RISER
R.H.	RIGHT HAND
R.H.R.B.	RIGHT HAND REVERSE BEVEL
R.O.W.	RIGHT OF WAY
RVT	RIVET
RD	ROAD
R.S.C.	ROLLING STEEL CURTAIN
RF	ROOF
R.C.	ROOF CONDUCTOR
R.D.	ROOF DRAIN
RF.H.	ROOF HATCH
R.S.	ROOF SUMP
R.V.	ROOF VENTILATOR
RFG	ROOFING
R.T.U.	ROOF TOP UNIT
RM	ROOM
R.O.	ROUGH OPENING
RND or ϕ	ROUND
RHMS	ROUND HEAD MACHINE SCREW
RHWS	ROUND HEAD WOOD SCREW
R.T.	RUBBER TILE

S

SAN.	SANITARY
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SCHED.	SCHEDULE
SCN	SCREEN
STG	SEATING
SECT.	SECTION
SERV.	SERVICE
S.S.	SERVICE SINK
SHTHG	SHEATHING
SHT	SHEET
SHT. MET.	SHEET METAL
SH.& R.	SHELF AND ROD
SHWR	SHOWER
S.C.R.	SHOWER CURTAIN ROD
S.DR	SHOWER DOOR
S.W.	SIDEWALK
SIM.	SIMILAR
SGL.	SINGLE
SK	SINK
S.D.	SOAP DISPENSER
S.C.	SOLID CORE
STC	SOUND TRANSMISSION CLASS
S	SOUTH
SP.	SPACE
SPR.	SPARE
SPKR	SPEAKER
SPEC.	SPECIFICATIONS
S.D.	SPLITTER DAMPER
SPRYD	SPRAYED
SPKLR	SPRINKLER
SQ.	SQUARE
S.F.	SQUARE FEET/SQUARE FOOT
STAG.	STAGGERED
ST.STL	STAINLESS STEEL
STD	STANDARD
SP.	STANDPIPE
S.P.	STATIC PRESSURE
STA.	STATION
STM	STEAM
STL	STEEL
STL. PL.	STEEL PLATE
STIFF.	STIFFENER
STO. FR.	STOREFRONT
STOR.	STORAGE
STR.	STRAIGHT
ST.	STREET
STRUCT.	STRUCTURAL
S-	STRUCTURAL DRAWING-NO.
S.G.F.T.	STRUCTURAL GLAZED FACING TILE
S.STL	STRUCTURAL STEEL
SS.D.	SUBSOIL DRAIN
SS.D.C.	SUBSOIL DRAIN CONNECTION
SUB.	SUBSTATION
S.A.G.	SUPPLY AIR GRILLE
S.D.	SUPPLY DIFFUSER/ DUCT
SUBST.	SUSTITUTE
S.A.R.	SUPPLY AIR REGISTER
S.F.	SUPPLY FAN

S

SW.	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMBOL/ SYMMETRICAL
SYS.	SYSTEM
SUPP.	SUPPORT
SURF.	SURFACE/ SURFACING
SUSP.	SUSPEND/ SUSPENSION

T

T.BD	TACKBOARD
TAN.	TANGENT
TECH.	TECHNICAL
TEL.	TELEPHONE
TEL. CAB.	TELEPHONE CABINET
TV	TELEVISION
TV.M	TELEVISION MONITOR
TEMP.	TEMPERATURE
TEMP. GL.	TEMPERED GLASS
T.U.	TERMINAL UNIT
TERR.	TERRAZZO
T.B.	TEST BORING
T.	THERMOSTAT
THK	THICK/ THICKNESS
T.S.	THICKENED SLAB
THD	THREAD
THRESH.	THRESHOLD
THRU	THROUGH
T.	TILE
T./ TOIL.	TOILET
T.P.D.	TOILET PAPER DISPENSER
T.P.H.	TOLET PAPER HOLDER
T & G	TONGUE AND GROOVE
T & B	TOP AND BOTTOM
T/C	TOP OF CURB
T/EL.	TOP ELEVATION
T/F	TOP OF FOOTING
T/G	TOP OF GUTTER
T/M	TOP OF MASONRY
T/P	TOP OF PARAPET
T/P	TOP OF PAVEMENT
T/R	TOP OF RIM
T/S	TOP OF STEEL
T/W	TOP OF WALL
T.B.	TOWEL BAR
T.D.	TOWEL DISPENSER
TD & WR	TOWEL DISPENSER AND WASTE RECEPTACLE
T.G.	TRANSFER GRILLE
TRFR	TRANSFORMER
TRAN.	TRANSOM
T	TREAD
T.D.	TRENCH DRAIN
TS	TUBE SECTION
T.V.	TURNING VANE
T.T.	TWIN TEE
TYP.	TYPICAL

U

U.C.	UNDERCUT
U.G.	UNDER GROUND
UL	UNDERWRITER'S LABORATORY
ULT.	ULTIMATE
UNFIN.	UNFINISHED
U.H.	UNIT HEATER
U.SUB.	UNIT SUBSTATION
U.V.	UNIT VENTILATOR
USGS	UNITED STATES GEOLOGICAL SURVEY
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL

V

VAC.	VACUUM
V.B.	VACUUM BREAKER
V.C.O.	VACUUM CLEANER OUTLET
V. BARR.	VAPOR BARRIER
VAR.	VARIABLE
VARN.	VARNISH
VNR	VENEER
V. PLAS.	VENEER PLASTER
V.	VENT
VTR	VENT THRU ROOF
VENT.	VENTILATE/ VENTILATION
V.I.F.	VERIFY IN FIELD
VS.	VERSUS
VERT.	VERTICAL/ VERTICALLY
VERT. C.	VERTICAL CURVE
VEST.	VESTIBULE
V.I.	VIBRATION ISOLATOR
VNY	VINYL
VCT	VINYL COMPOSITION TILE
VIN. FAB.	VINYL FABRIC
V.R.S.	VINYL REDUCER STRIP
VIT.	VITREOUS
VCP	VITRIFIED CLAY PIPE
VOL.	VOLUME
V.D.	VOLUME DAMPER
V	VOLTS

W

WAINS.	WAINSCOT
W.CAB.	WALL CABINET
W.C.O.	WALL CLEAN OUT
W.H.	WALL HYDRANT
W/W	WALL-TO-WALL
W.V.	WALL VENT
WHSE	WAREHOUSE
W.F.	WASH FOUNTAIN
W.	WASTE/ WATTS
W & V	WASTE AND VENT
W.R.	WASTE RECEPTACLE
W.C.	WATER CLOSET
W.G.	WATER GAUGE
W.H.	WATER HEATER
WP	WATERPROOFING
W.PRFG.	WEATHERPROOFING
W.STPG.	WEATHERSTRIPPING
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
W	WEST
W.B.	WET BULB
W.	WIDE/ WIDTH
W_x_	WIDE FLANGE SECTION
WT	WIDE FLANGE TEE SECTION
W.O.	WINDOW OPENING
W.GL.	WIRE GLASS
W.M.	WIRE MESH
w/	WITH
w/o	WITHOUT
WD	WOOD
W.L.	WORK LINE
W.P.	WORK POINT
W.I.	WROUGHT IRON

X

Y

YD	YARD
Y.P.	YIELD POINT
Y.S.	YIELD STRENGTH
YR	YEAR

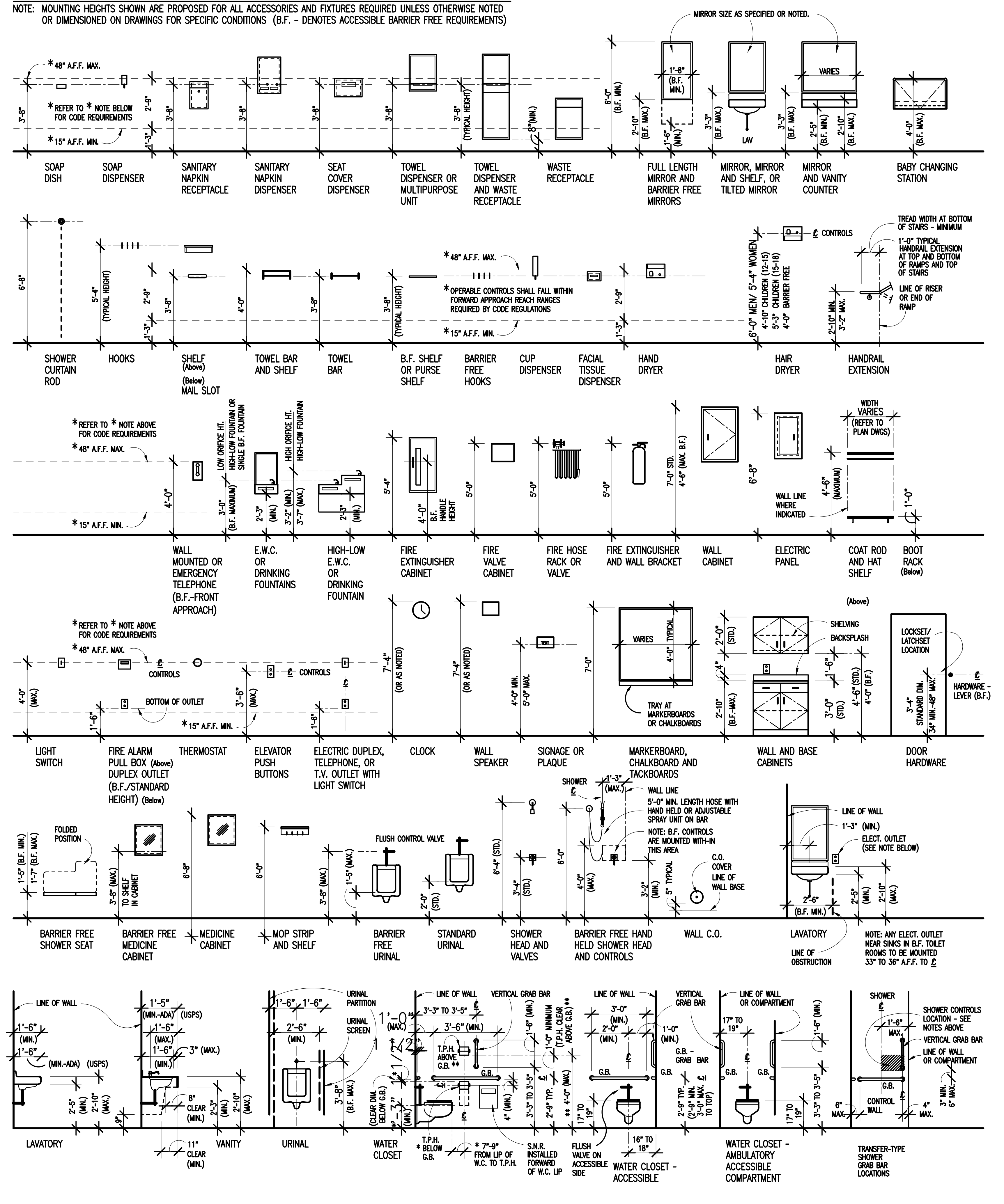
Z

ZC	ZINC

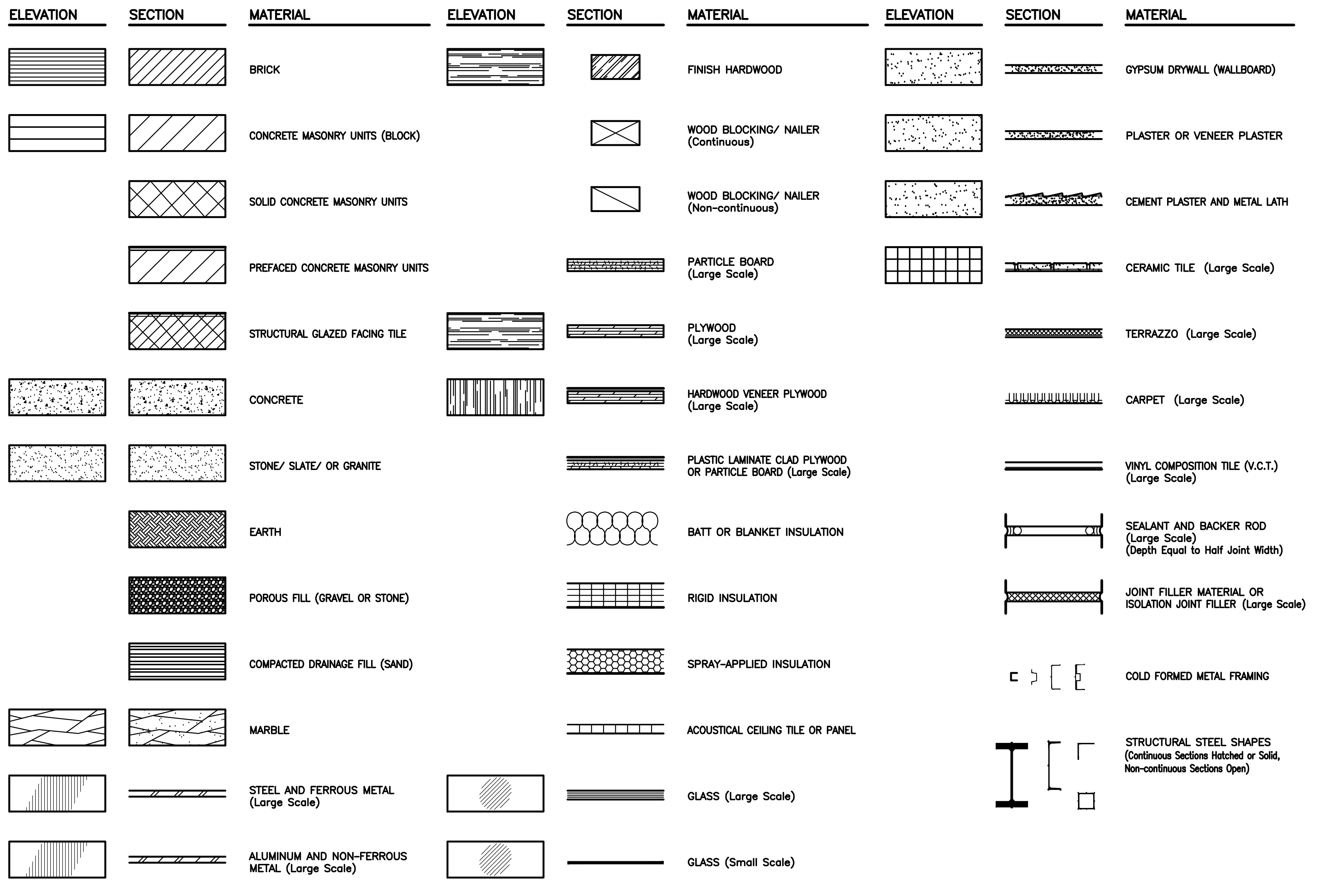
TYPICAL MOUNTING HEIGHTS

MISCELLANEOUS ACCESSORIES, TOILET ACCESSORIES AND FIXTURES

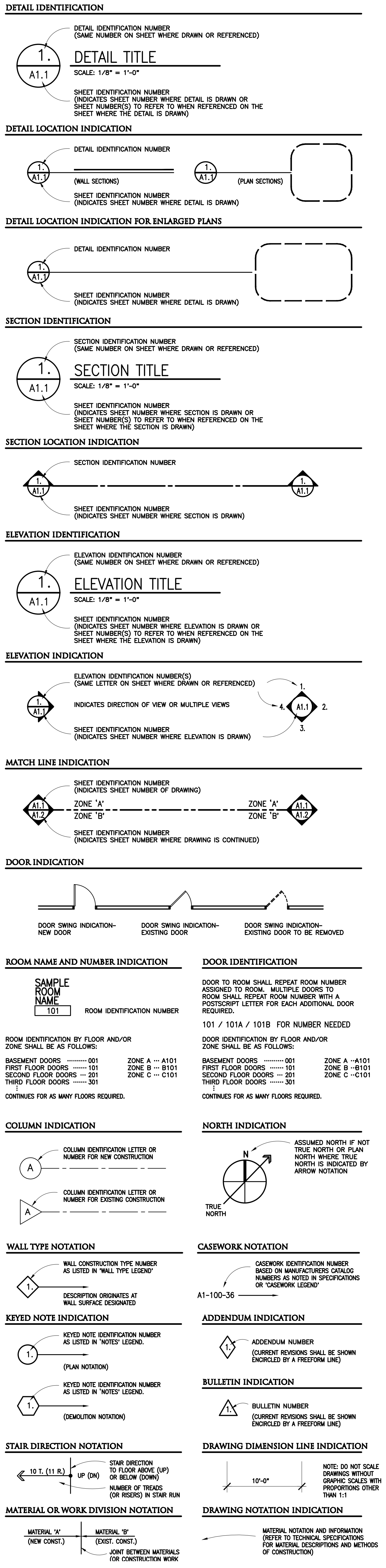
NOTE: MOUNTING HEIGHTS SHOWN ARE PROPOSED FOR ALL ACCESSORIES AND FIXTURES REQUIRED UNLESS OTHERWISE NOTED OR DIMENSIONED ON DRAWINGS FOR SPECIFIC CONDITIONS (B.F. - DENOTES ACCESSIBLE BARRIER FREE REQUIREMENTS)



MATERIAL DESIGNATIONS



REFERENCE SYMBOLS



TMP ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

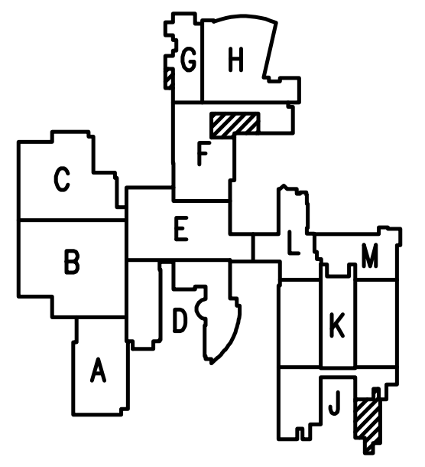
PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

General Information



ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

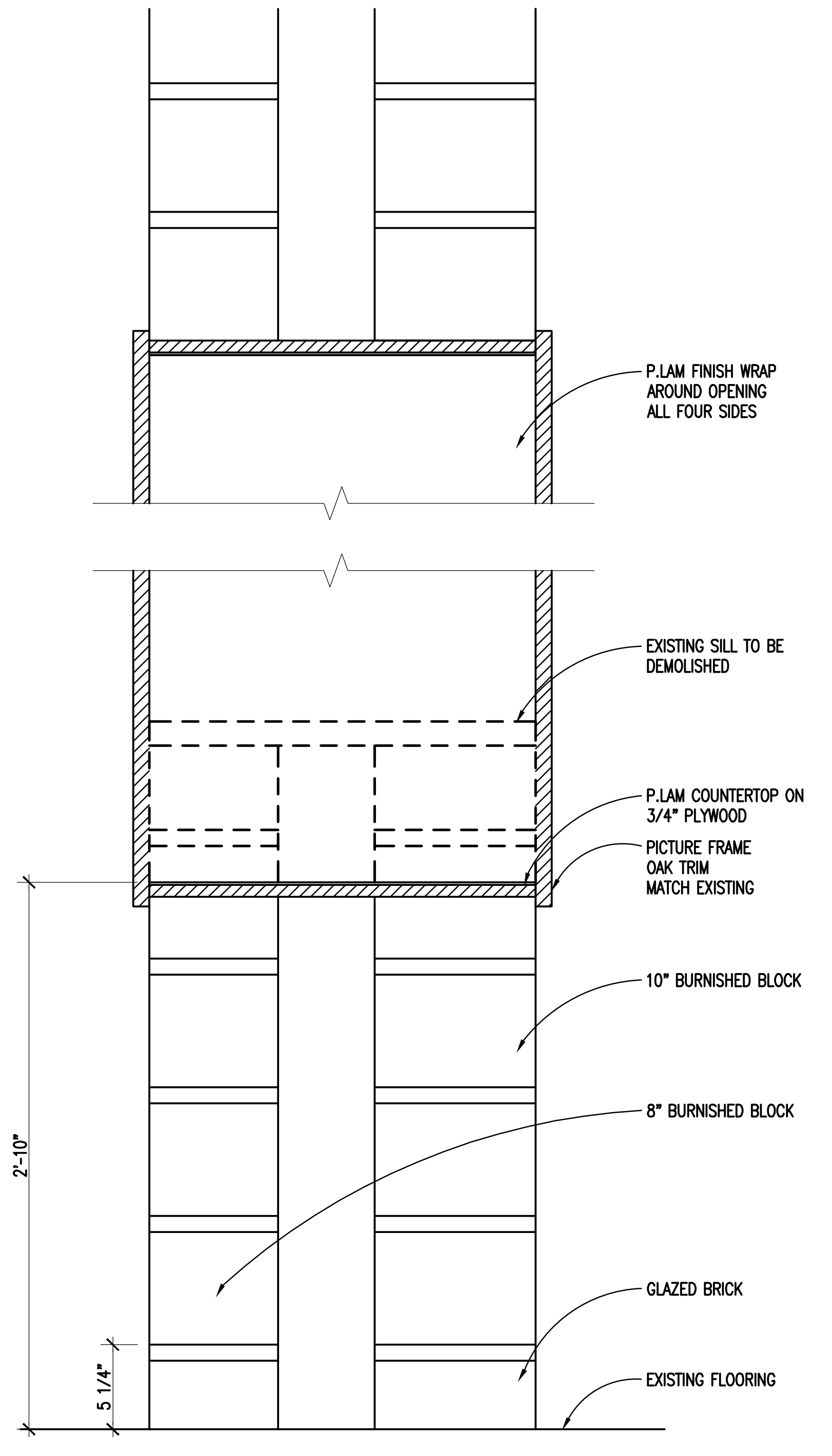
DRAWN JRB
CHECKED .
APPROVED JRR

PROJECT NO.

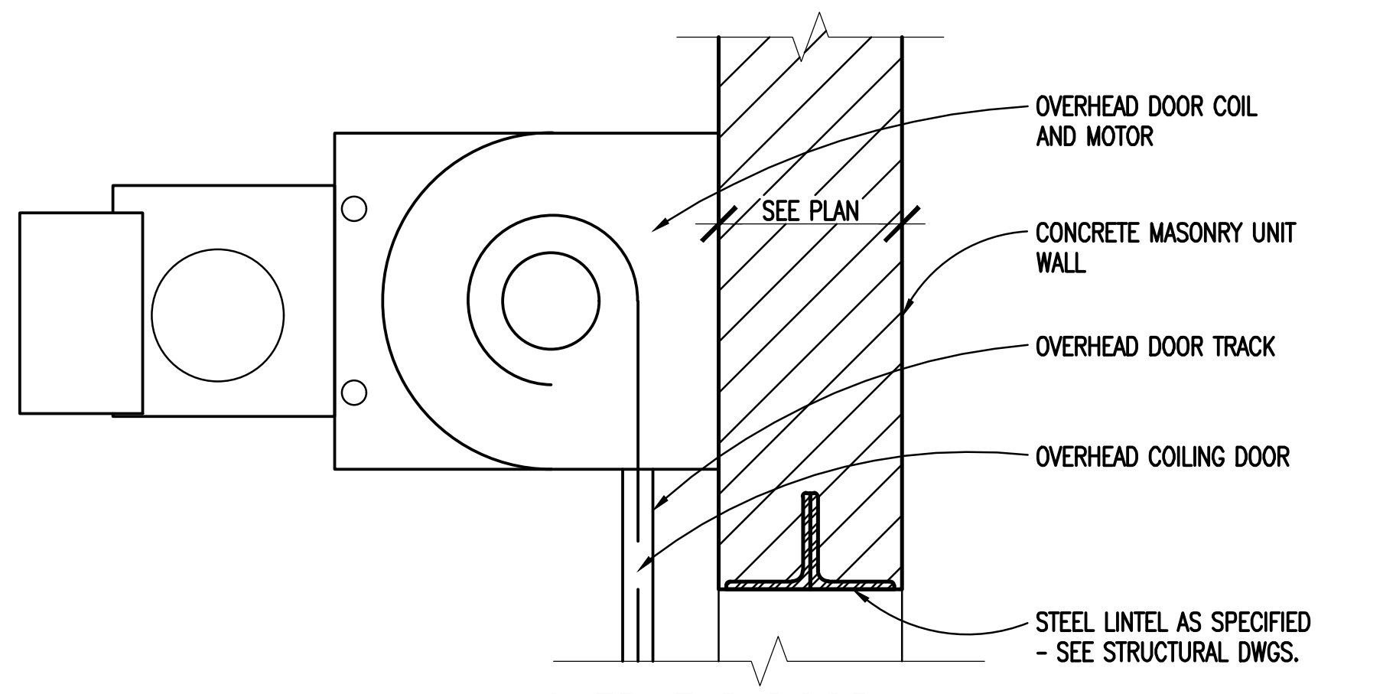
22104G

DRAWING NO.

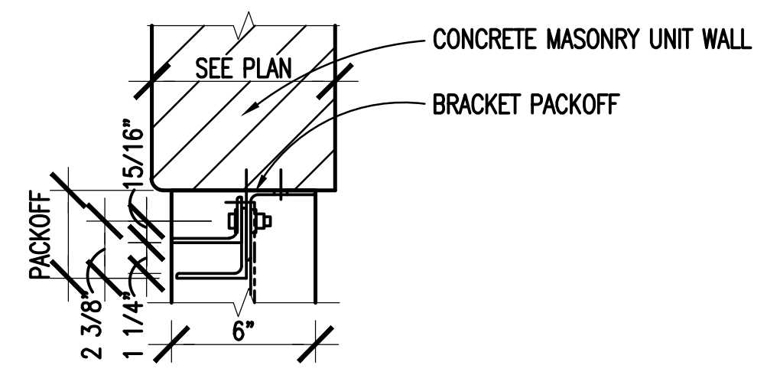
TG.1



3 / -
SILL DETAIL AT COUNTER
SCALE: 1 1/2" = 1'-0"



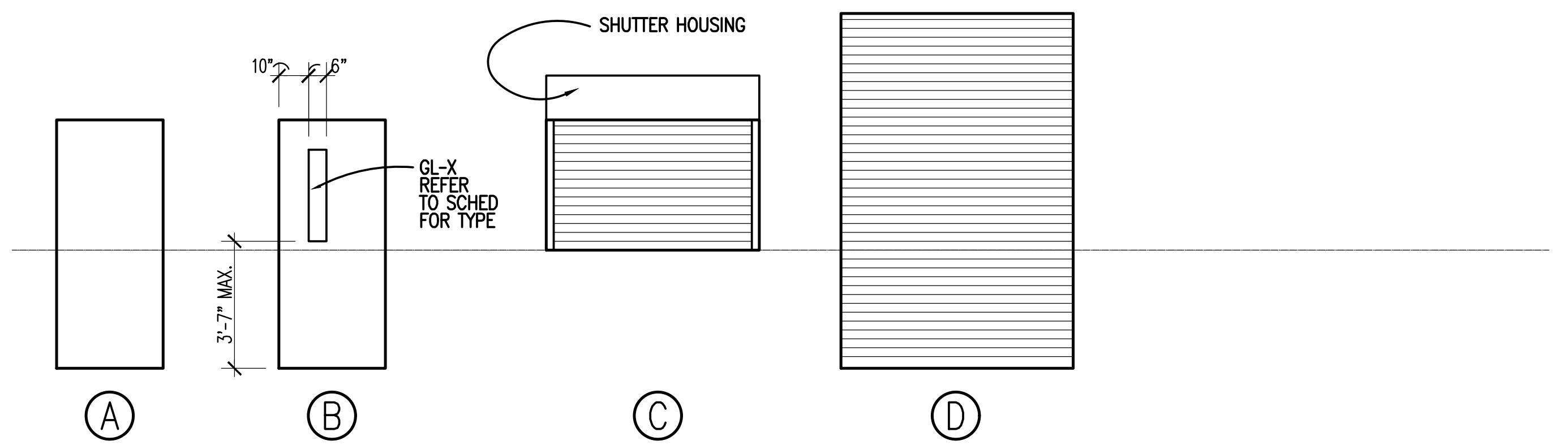
2 / -
OVERHEAD DOOR DOOR HEAD AT C.M.U.
SCALE: 1 1/2" = 1'-0"



1 / -
OVERHEAD DOOR DOOR JAMB AT C.M.U.
SCALE: 1 1/2" = 1'-0"

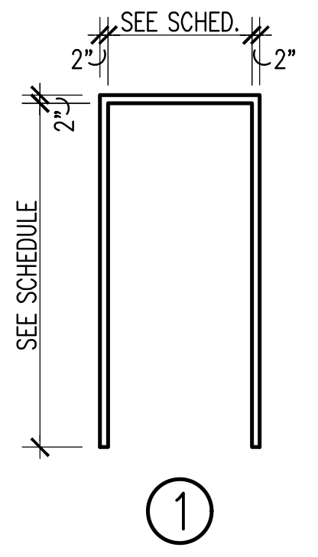
DOOR & FRAME SCHEDULE

Opening		Door				Frame				Details			Threshold	U.L. Label	Hdwe. Set	Remarks
No.	Opening Size (Width x Height)	Type	Material	Finish	Glass	Type	Material	Finish	Glass	Head	Jamb	Sill				
Second Level - Zone 'E'																
E228A	13'-6 1/2"x 10'-0"	D	STSTL	-	-	-	-	-	.	2/AD.1	1/AD.1	.	.	SMOKE	2.00	NEW DOOR AT EXISTING OPENING, VIF
E228B	13'-2"x 10'-0"	D	STSTL	-	-	-	-	-	.	2/AD.1	1/AD.1	.	.	SMOKE	2.00	NEW DOOR AT EXISTING OPENING, VIF
E228C	3'-0"x 7'-0"	B	WD	PFN	GL-2	1	EX	PTD	.	.	.	.	.	.	1.00	NEW DOOR IN EXISTING FRAME, VIF,
E228D	3'-0"x 7'-0"	A	LAM	PFN	.	1	EX	PTD	.	.	.	.	.	.	1.01	NEW DOOR IN EXISTING FRAME, VIF,
E228E	3'-0"x 7'-0"	A	LAM	PFN	.	1	EX	PTD	.	.	.	.	.	.	1.01	NEW DOOR IN EXISTING FRAME, VIF,
E241A	6'-7 5/8"x 6'-2"	C	STSTL	-	-	-	-	-	.	2/AD.1	1/AD.1	.	.	SMOKE	2.00	NEW DOOR AT EXISTING OPENING, VIF
E241B	3'-0"x 7'-0"	B	WD	PFN	-	1	EX	PTD	.	.	.	.	.	.	1.02	NEW DOOR IN EXISTING FRAME, VIF,



(OVERHEAD COILING COUNTER SHUTTER) (OVERHEAD COILING DOOR)

DOOR TYPES



FRAME TYPES

DOOR SCHEDULE ABBREVIATIONS AND NOTES

(REFER TO SPECIFICATIONS FOR ADDITIONAL DOOR INFORMATION)

DOOR SCHEDULE ABBREVIATIONS

AL	ALUMINUM
ALGL	ALUMINUM AND GLASS
EX	EXISTING
FRAF	FIRE RATED ALUMINUM FRAMING
FRP	FIBERGLASS REINFORCED POLYESTER
HM	HOLLOW METAL
LAM	PLASTIC LAMINATE CLAD
MET	METAL THRESHOLD
NAT	NATURAL FINISHED WOODWORK
PFN	PREFINISHED BY MANUFACTURER
PTD	PAINTED
SDSF	SOLID SURFACE THRESHOLD
STL	STEEL
STSTL	STAINLESS STEEL
WD	SOLID CORE HARDWOOD

DOOR SCHEDULE GENERAL NOTES

1. GALVANIZED METAL TO BE PROVIDED FOR HOLLOW METAL DOOR AND/OR FRAME AT EXTERIOR LOCATION.
2. DOORS ARE 1-3/4" THICK UNLESS OTHERWISE NOTED.
3. DETAIL NUMBERS NOTED SIM. REFER TO DETAILS SHOWING HEAD, JAMB, AND/ OR SILL DETAILS THAT REPRESENT CONDITIONS SIMILAR TO THOSE NOTED.
4. HOLLOW METAL FRAMES SET IN MASONRY WALLS ARE 5 3/4" WIDE (U.O.N.).
5. HOLLOW METAL FRAMES, SET IN GYPSUM BD. /METAL STUD PARTITIONS, SHALL BE "DOUBLE BACK-BEND" FRAMES WITH A THROAT DIMENSION EQUAL TO THE PARTITION THICKNESS PLUS 9/16" RETURNS ON EACH SIDE OF THE PARTITION. PROVIDE EQUAL RABBETS.
6. AN ASTERISK (*) CALLS ATTENTION TO THE REMARKS COLUMN OF THE SCHEDULE.
7. WHERE NEW DOORS ARE INDICATED IN EXISTING FRAMES, FIELD VERIFY EXISTING FRAME PREPS AND FABRICATE DOORS TO MATCH.
8. DOORS AND/OR FRAMES LISTED AS EXISTING, WITH 'PTD' IN THE FINISH COLUMN, SHOULD BE PAINTED IN ACCORDANCE WITH THE PAINTING SPECIFICATION.

U.L. DOOR LABEL DESIGNATIONS:

U.L. LABEL**	MIN. OPENING PROTECTION ASSEMBLY
180	3 HR. FIRE RATING
90	1-1/2 HR. FIRE RATING
60	1 HR. FIRE RATING
45	3/4 HR. FIRE RATING
20	1/3 HR. FIRE RATING

** ALL FIRE RATED DOORS SHALL BE SMOKE AND DRAFT CONTROL LABELED IN ADDITION TO U.L. LABELS INDICATED.

GLAZING TYPES

(REFER TO SPECIFICATIONS FOR ASSEMBLIES)

GL-2	1/4" (6mm) CLEAR TEMPERED MONOLITHIC GLASS
GL-6	3/8" (9mm) CLEAR TEMPERED MONOLITHIC GLASS
GL-13	1" (25mm) CLEAR TEMPERED INSULATING GLASS (LOW-E)
GL-17	1" (25mm) TINTED TEMPERED INSULATING GLASS (LOW-E)
GL-25	1" (25mm) TINTED HEAT-STRENGTHENED LAMINATED INSULATING GLASS (LOW-E)
SSGL-1	MONOLITHIC SECURITY GLAZING
SSGL-2	INSULATED SECURITY GLAZING

ARCHITECTURE

T M P A R C H I T E C T U R E I N C
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

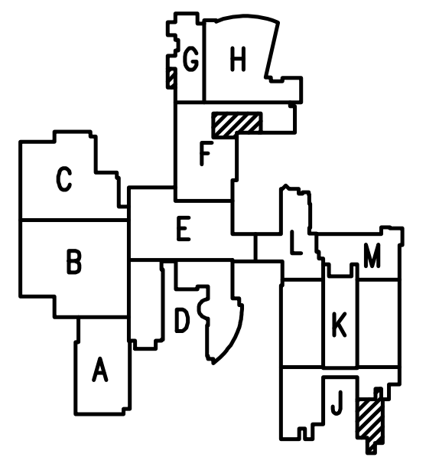
REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
Door & Frame Schedule



ISSUE DATES

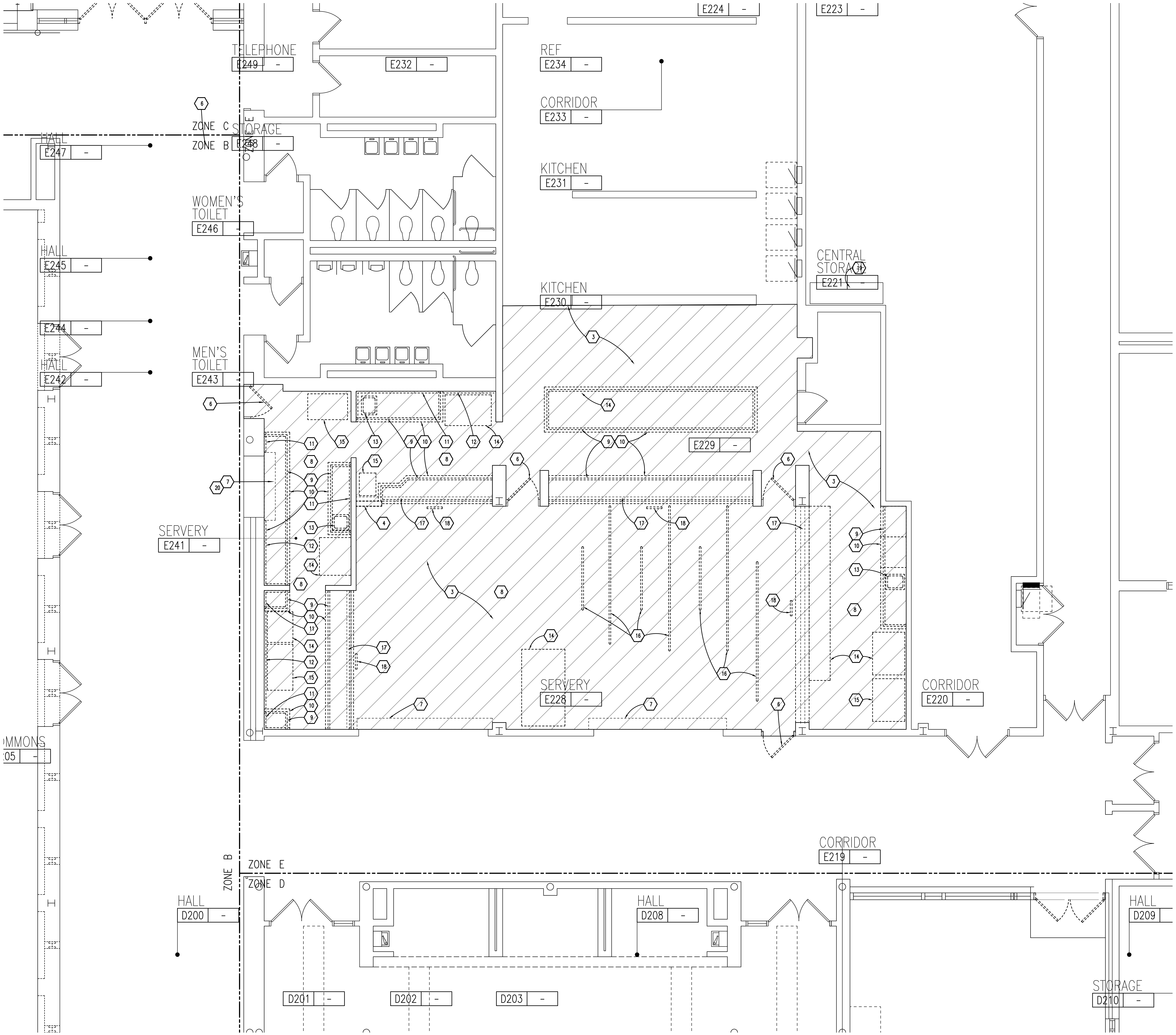
DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN	...
CHECKED	...
APPROVED	...

PROJECT NO.
22104G

DRAWING NO.
AD.1

Drawing File: Q:\acad\2022tmpa\22104G\22104G_cd\22104G_ad1.dwg
Oct 24, 2024 - 11:49am



SECOND LEVEL DEMOLITION PLAN - ZONE 'E'

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

GENERAL NOTES

1. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR RELATED AND ADDITIONAL DEMOLITION AND PATCHING WORK BY MECHANICAL AND ELECTRICAL TRADES.
2. REFER TO ROOF PLANS FOR THE EXTENT OF ROOFING DEMOLITION.
3. SEE CIVIL DRAWINGS FOR SITE DEMOLITION AND PATCHING WORK.
4. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL DEMOLITION AND PATCHING WORK AT EXTERIOR OF BUILDING, INCLUDING (BUT NOT LIMITED TO) DEMOLITION NOTES RELATED TO WINDOW REPLACEMENT.
5. WHERE REMOVAL OF CASEWORK, MILLWORK, CHALKBOARDS, TACKBOARDS, OR EQUIPMENT IS INDICATED, FILL HOLES AND PATCH EXISTING WALLS, BASE AND CEILINGS WHICH ARE TO REMAIN EXPOSED.
6. UNLESS OTHERWISE INDICATED, TOOTH NEW MATERIAL, INTO EXISTING, WHEREVER INFILL REMAINS EXPOSED.
7. SEE SPECIFICATION SECTIONS 01 7329 AND 02 4100 FOR ADDITIONAL DEMOLITION AND PATCHING REQUIREMENTS.
8. REFER TO ARCHITECTURAL WALL SECTIONS FOR ADDITIONAL SELECTIVE DEMOLITION.

DEMOLITION KEYNOTES

1 REMOVE CONCRETE FLOOR SLAB FOR INSTALLATION OF NEW UNDERGROUND ELECTRICAL AND/OR PLUMBING.

2 REMOVE MUD SET QUARRY TILE FLOOR. PREPARE SLAB FOR NEW FLOOR FINISH.

3 REMOVE MUD SET QUARRY TILE FLOOR & BASE IN ALL AREAS INDICATED WITH CROSS HATCH. REMOVE MINIMUM OF 1" OF MUD SET BED. REMOVE ANY LOOSE MATERIAL AND PREPARE FOR NEW TILE AND MUD SET

4 REMOVE CMU WALL COMPLETE FOR PORTION INDICATED. COORDINATE EXTENT WITH THE NEW WORK.

5 REMOVE PLUMBING FIXTURE. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL NOTES AND DETAILS. PATCH ANY SURFACES TO REMAIN EXPOSED.

6 REMOVE DOOR AND HARDWARE, FRAME TO REMAIN.

7 REMOVE OVERHEAD COILING GRILLE/DOOR, MOTOR AND ASSOCIATED HARDWARE AND CONTROLS

8 REMOVE LAY-IN CEILING IN ENTIRE ROOM OR AREA INDICATED. COORDINATE WITH NEW WORK.

9 REMOVE QUARRY TILE BASE AND FRAMING UNDER CASEWORK AND/OR MILLWORK.

10 REMOVE CASEWORK AND/OR MILLWORK, COUNTERTOPS, BACKSPLASH AND INTEGRAL FOOD SERVICE EQUIPMENT.

11 REMOVE 42" HIGH PLAM BACKSPLASH ABOVE 6" BACKSPLASH

12 REMOVE TALL PLAM BACKSPLASH / WALL PANELS

13 REMOVE SINK, REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL NOTES AND DETAILS. PATCH, REPAIR AND/OR FILL EXPOSED ADJACENT SURFACES TO MATCH EXISTING (U.O.N.).

14 REMOVE FOOD SERVICE EQUIPMENT OR SERVING COUNTER MODULES MOUNTED ON WHEELS

15 SALVAGE FOOD SERVICE EQUIPMENT AND RETURN TO OWNER

16 REMOVE METAL FLOOR MOUNTED RAILINGS, BASE PLATES AND ALL FASTENERS. PATCH FLOOR AT LOCATIONS TO REMAIN

17 REMOVE GYPSUM BOARD AND METAL STUD BULKHEAD. REMOVE PORTION OF SUSPENDED ACOUSTICAL CEILING SYSTEM AS REQUIRED IN AREAS WHERE CEILING IS NOTED TO BE REWORKED AROUND NEW CONSTRUCTION.

18 REMOVE SIGNAGE AT BULKHEAD, SALVAGE AND RETURN TO OWNER

19 REMOVE WATER COOLED CONDENSING UNITS AND ASSOCIATED PIPING FOR UNDERCOUNTER REFRIGERATION UNITS AT REMOVED FOOD SERVICE COUNTERS

20 SAWCUT AND REMOVE PORTION OF KNEEWALL AT COUNTER TO ENLARGE COUNTER SHUTTER OPENING FOR NEW COUNTER AT 34" A.F.F.

SALVAGED ITEMS

- FOOD SERVICE EQUIPMENT - RETURN TO OWNER
- BULKHEAD SIGNAGE
-
-
-

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

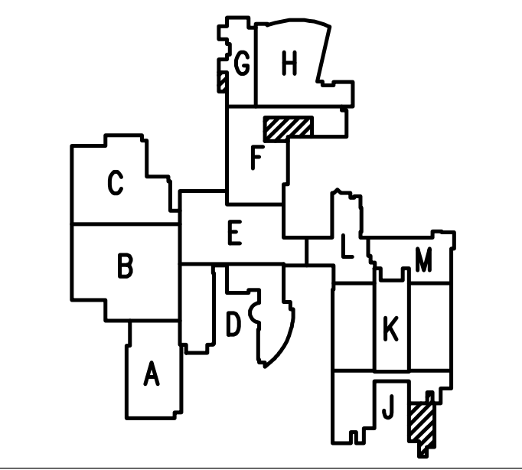
PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

Second Level
Demolition Plan -
Zone E



ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ...
CHECKED ...
APPROVED ...

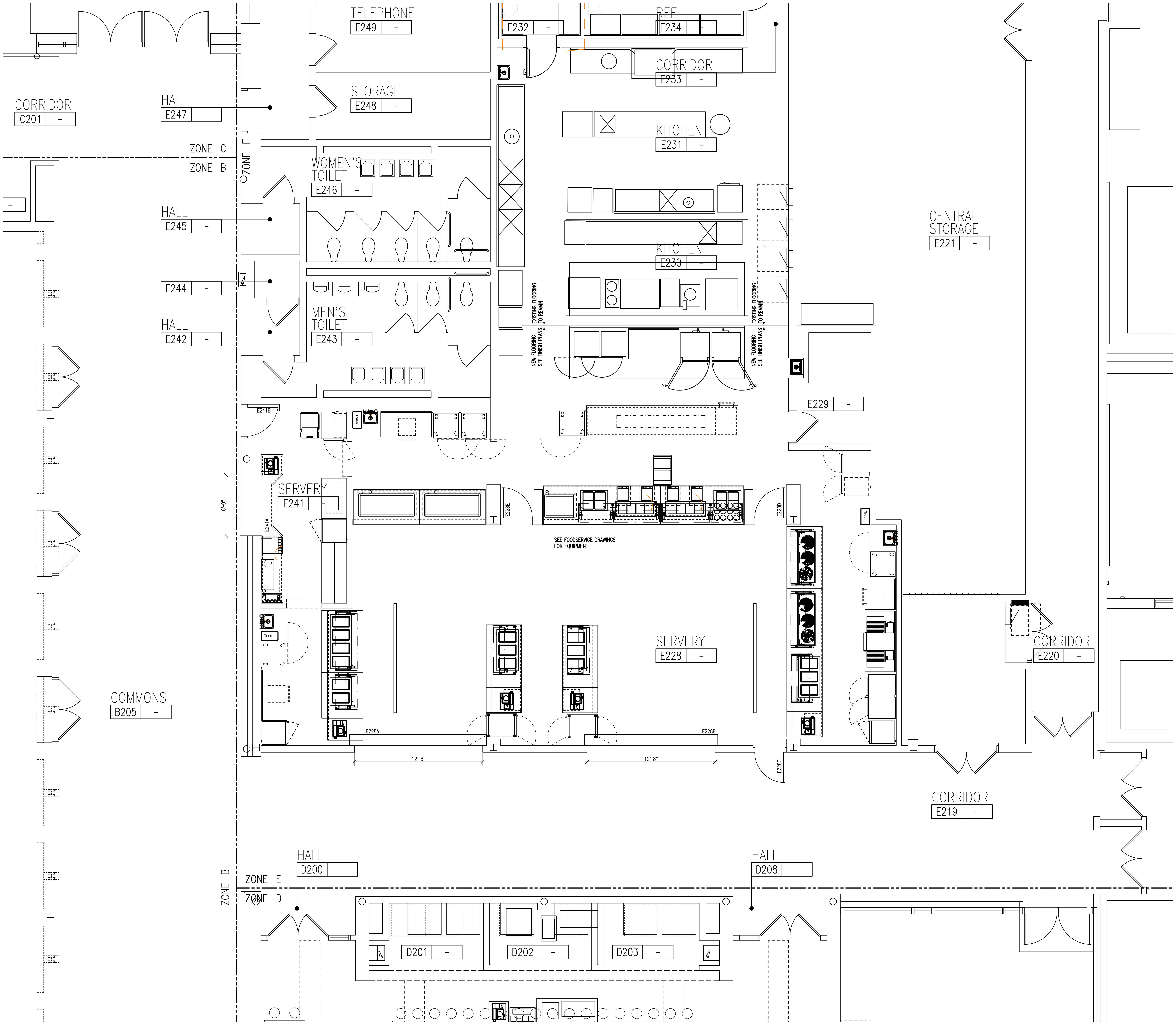
PROJECT NO.

22104G

DRAWING NO.

A0.2E

Drawing File: Q:\acad\2022tmpa\22104G\22104G_cd\22104G_a01e.dwg
Oct 24, 2024 - 3:37pm



SECOND LEVEL FLOOR PLAN - ZONE 'E'

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

WALL / PARTITION KEY

═	EXISTING WALL CONSTRUCTION
▥	METAL STUD PARTITION
▨	CONCRETE MASONRY UNIT WALL w/ HORIZONTAL JOINT REINFORCEMENT AT 16" O.C..
▒	CAST-IN-PLACE CONCRETE WALL (REFER TO STRUCTURAL FOR REINFORCING REQUIREMENTS)

WALL / PARTITION LEGEND

1A — 2 1/2" METAL STUDS AT 16" O.C. (MAX.) WITH 5/8" GYPSUM BOARD ONE SIDE. HEIGHT: FROM FLOOR TO STRUCTURE ABOVE. TYPICAL AT COLUMN NCLOSURES.

1B — 3 5/8" METAL STUDS AT 16" O.C. (MAX.) WITH 5/8" GYPSUM BOARD ONE SIDE. HEIGHT: FROM FLOOR TO 4" ABOVE CEILING. BRACE TO ADJACENT WALL AS REQUIRED.

1C — 2 1/2" METAL STUDS AT 16" O.C. (MAX.) WITH 5/8" GYPSUM BOARD ONE SIDE. HEIGHT: FROM FLOOR TO 6" ABOVE CEILING HEIGHT.

1D — 3 5/8" METAL STUDS AT 16" O.C. (MAX.) WITH 5/8" GYPSUM BOARD ONE SIDE. HEIGHT: FROM FLOOR TO DECK ABOVE. COPE AROUND STRUCTURE, SEAL ALL GAPS AND PENETRATIONS. NOMINAL WIDTH 4" (ACTUAL: 4 1/4")

1E — 5/8" THICK CEMENT BOARD ONE SIDE ON GALV. 3 5/8" METAL STUD FRAMING AT 16" O.C. WITH 3 5/8" GALV. METAL BRACING TO C.M.U. WALL. EXTENDS FROM ELEV. _'-_" TO STRUCTURE ABOVE, SEAL ALL GAPS AND PENETRATIONS (BOTTOM OF CHASE TO MATCH SIDES), EPOXY PAINTED.

2A — 3 5/8" METAL STUDS AT 16" O.C. (MAX.) WITH 1 LAYER 5/8" GYPSUM BOARD EACH SIDE. 3" ACOUSTICAL BATT INSULATION FULL HEIGHT. HEIGHT: FROM FLOOR TO DECK ABOVE. COPE AROUND STRUCTURE, SEAL ALL GAPS AND PENETRATIONS. NOMINAL WIDTH: 5" (ACTUAL: 4 7/8").

2B — 6" METAL STUDS AT 16" O.C. (MAX.) WITH 2 LAYERS 1/2" GYPSUM BOARD ON CORRIDOR SIDE AND 1 LAYER 5/8" GYPSUM BOARD ON 1/2" RESILIENT CHANNELS AT 16" VERTICALLY ON ROOM SIDE. 5" BATT INSULATION FULL HEIGHT. HEIGHT: FROM FLOOR TO DECK ABOVE. COPE AROUND STRUCTURE, SEAL ALL GAPS AND PENETRATIONS. NOMINAL WIDTH: 8" (ACTUAL: 8 1/8").

2C — 6" METAL STUDS AT 16" O.C. (MAX.) WITH 2 LAYERS 1/2" GYPSUM BOARD ON ONE SIDE AND 1 LAYER 5/8" GYPSUM BOARD ON OTHER SIDE. 5" ACOUSTICAL BATT INSULATION FULL HEIGHT. HEIGHT: FROM FLOOR TO DECK ABOVE. COPE AROUND STRUCTURE, SEAL ALL GAPS AND PENETRATIONS. NOMINAL WIDTH: 8" (ACTUAL: 7 5/8").

2D — 6" METAL STUDS AT 16" O.C. (MAX.) WITH 1 LAYER 5/8" GYPSUM BOARD EACH SIDE. 3" ACOUSTICAL BATT INSULATION FULL HEIGHT. HEIGHT: FROM FLOOR TO DECK ABOVE. COPE AROUND STRUCTURE, SEAL ALL GAPS AND PENETRATIONS. NOMINAL WIDTH: 7" (ACTUAL: 7 1/4").

2E — SAME AS 1A ABOVE. 1-HOUR RATED, U.L. DESIGN NO. U465.

3A — 1-HOUR RATED SHAFT WALL. U.L. DESIGN NO. U469 PLUS ACOUSTICAL BATT INSULATION FULL HEIGHT (3 1/8" ACTUAL WIDTH). FROM FLOOR TO STRUCTURE ABOVE. COPE AROUND STRUCTURE, ELECTRICAL AND MECHANICAL. FIRE SAFE ALL GAPS AND PENETRATIONS.

3B — 1-HOUR RATED SHAFT WALL. U.L. DESIGN NO. U469 PLUS ACOUSTICAL BATT INSULATION FULL HEIGHT AND ONE LAYER OF 5/8" TYPE 'X' GYPSUM BOARD (3 3/4" ACTUAL WIDTH). FROM FLOOR TO STRUCTURE ABOVE. COPE AROUND STRUCTURE, ELECTRICAL AND MECHANICAL. FIRE SAFE ALL GAPS AND PENETRATIONS.

NOTES:

1. COORDINATE WITH THE REFLECTED CEILING PLANS FOR RATED WALLS, WALLS WHICH EXTEND UP TO THE STRUCTURE ABOVE AND WALLS WHICH EXTEND ONLY A MINIMUM OF 4" ABOVE THE ADJACENT HIGHEST CEILING. DIMENSIONS OF WALLS ARE SHOWN NOMINAL IN PLAN FOR DETERMINING THE CMU THICKNESS. REFER TO BUILDING SECTIONS, WALL SECTIONS AND INTERIOR ELEVATIONS FOR BANDING OF SPECIAL CMU TYPES OR ANY OTHER SPECIAL CONDITIONS. PARTIAL HEIGHT CMU WALLS WILL BE NOTED AS SUCH ON THE FLOOR PLANS.
2. REFER TO MASONRY SPECIFICATION FOR VERTICAL REINFORCEMENT AND WALL BRACING NOT INDICATED ON DRAWINGS.
3. AT FIRE-RATED AND SMOKE-RESISTING WALLS (MASONRY OR GYPSUM BOARD), PROVIDE U.L. APPROVED, FIRE-RATED, HEAD-OF-WALL TERMINATIONS AS INDICATED. IF NOT INDICATED, PROVIDE "BASIS OF DESIGN", HEAD-OF-WALL FIRESTOP JOINT SYSTEM AS INDICATED IN SPECIFICATION SECTION 078446 (1 OR 2 HOUR AS APPROPRIATE). PROVIDE MINIMUM 1 HOUR TERMINATION AT SMOKE-RESISTING WALLS.
4. ALL CMU IS 8" THICK (NOM.) UNLESS DIMENSIONED OTHERWISE.
5. PROVIDE BULLNOSE CMU UNITS AT ALL OUTSIDE CORNERS WHEN CORNERS ARE EXPOSED IN FINAL CONSTRUCTION. DO NOT BULLNOSE CORNERS WHEN ABUTTING CONSTRUCTION (i.e. GYPSUM BOARD) IS INTENDED TO BE FLUSH WITH CMU.

GENERAL NOTES

1. COORDINATE SIZE AND LOCATION OF ALL ACCESS PANELS WITH TRADE REQUIRING THE SAME. ACCESS PANELS ARE SPECIFIED ARCHITECTURALLY BUT ARE REQUIRED TO BE PROVIDED BY EACH TRADE. ALL LOCATIONS MUST BE COORDINATED AND APPROVED BY THE ARCHITECT'S FIELD REPRESENTATIVE.
2. CONTRACTORS SHALL VERIFY ALL EXISTING BUILDING DIMENSIONS, PARTITION AND WALL LOCATIONS, AND FLOOR ELEVATIONS IN THE FIELD AND NOTIFY THE ARCHITECTS REPRESENTATIVE OF ANY DISCREPANCIES BEFORE START OF WORK.
3. DIMENSIONS FOLLOWED BY ± SHOULD BE REVIEWED AND ALL NECESSARY ADJUSTMENTS MADE PRIOR TO FABRICATION AND/OR INSTALLATION OF AFFECTED WORK. NOTIFY ARCHITECTS REPRESENTATIVE IF DISCREPANCIES ARISE BEFORE PROCEEDING WITH THE WORK.
4. INSTALL CONTROL JOINTS IN GYPSUM BOARD AND METAL STUD-FRAMED PARTITIONS, WALLS, CEILINGS, BULKHEADS, FASCIAE AND SOFFITS IN COMPLIANCE WITH SPECIFICATIONS, AND WITH GENERAL REQUIREMENTS OF ASTM C840. PRIOR TO COMMENCEMENT OF FRAMING INSTALLATION SUBMIT COORDINATION DRAWINGS INDICATING PROPOSED LOCATIONS OF ALL CONTROL JOINTS, AS SPECIFIED.
5. VERIFY QUANTITY, SIZE, AND LOCATION OF ALL FLOOR, ROOF, AND WALL OPENINGS FOR MECHANICAL AND ELECTRICAL WORK WITH THE APPROPRIATE TRADE. PROVIDE ALL OPENINGS SHOWN OR REQUIRED FOR THE COMPLETION OF THE WORK. PROVIDE ALL LINTELS REQUIRED FOR THESE OPENINGS PER SPECIFICATIONS.
6. REFER TO REFLECTED CEILING PLANS FOR EXTENSION OF PARTITION WALLS TO FLOOR OR ROOF CONSTRUCTION ABOVE AND WALL FIRE RESISTANCE RATING REQUIREMENTS.
7. REFER TO A10._ SERIES DRAWINGS FOR FLOOR FINISH PATTERNS AND ROOM FINISHES.
8. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING WITHIN STUD WALLS FOR WALL MOUNTED ITEMS i.e. GRAB BARS, TOWEL DISPENSERS, WALL STOPS, , ETC.

PATCHING NOTES

1. REFER TO DEMOLITION PLANS FOR ADDITIONAL PATCHING NOTES.
2. FOR ALL FLOOR SURFACES RECEIVING NEW FLOOR FINISHES, PREPARE SUBSTRATE BY PROVIDING LEVELING AND PATCHING COMPOUNDS RECOMMENDED BY FINISH FLOORING MANUFACTURERS. CONTRACTOR'S BASE BID PROPOSAL SHALL ASSUME THAT ALL AREAS, INDICATED TO RECEIVE NEW FINISHES, WILL REQUIRE FLOOR PREPARATION.
3. PATCH AND REPAIR ALL FLOOR AND WALL SURFACES LEFT DAMAGED OR INCOMPLETE FROM REMOVAL OF EXISTING PARTITIONS, MILLWORK, CASEWORK, CHALKBOARDS, TACKBOARDS, DISPLAY CASES OR OTHER FIXED EQUIPMENT WITH MATERIALS TO MATCH EXISTING, AS ACCEPTABLE TO THE ARCHITECT.
4. MATCH EXISTING MASONRY COURSING ADJACENT IN EACH AREA AND TOOTH NEW WORK INTO EXISTING, UNLESS OTHERWISE INDICATED.
5. AT EXISTING FLOOR FINISHES TO REMAIN, THAT BECOME SUBSTRATES FOR NEW FLOOR FINISHES, PATCH AND FILL EXISTING AS REQUIRED TO PREPARE FOR NEW FLOOR FINISH UNTIL ACCEPTABLE TO NEW FLOOR FINISH CONTRACTOR.
6. TOOTH-IN MASONRY INTO EXISTING, U.O.N., INCLUDING JAMBS OF DOOR AND OTHER OPENINGS.

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

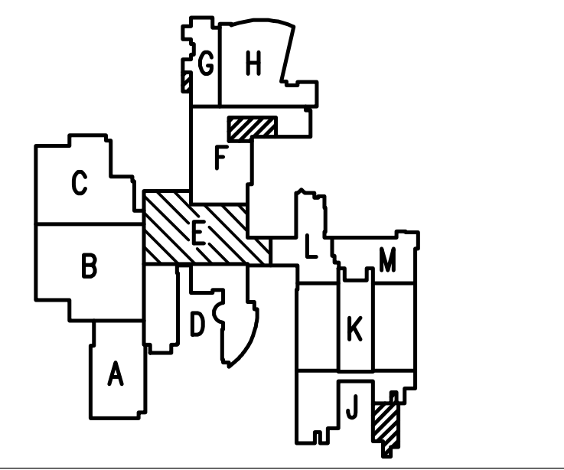
REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
Second Level
Floor Plan -
Zone E



ISSUE DATES

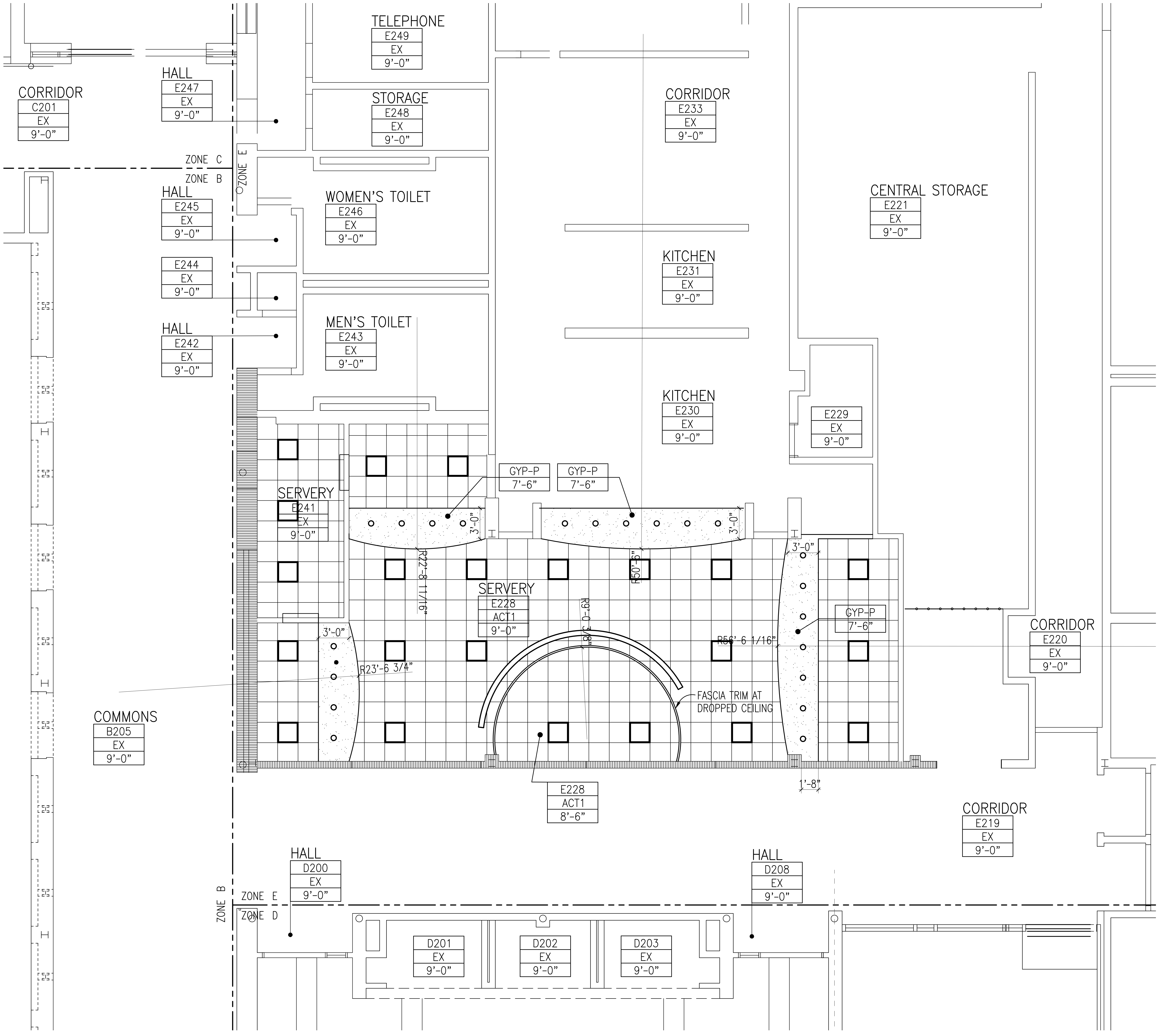
DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ...
CHECKED ...
APPROVED ...

PROJECT NO.
22104G

DRAWING NO.
A1.2E

Drawing File: Q:\acad\2022tmpa\22104G\22104G_cd\22104G_a11e.dwg
Oct 24, 2024 - 11:51am



SECOND LEVEL REFLECTED CEILING PLAN - ZONE 'E'

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

FIXTURE LEGEND

▭	RECESSED FLUORESCENT TROFFER (2'x4'/ 1'x4')
▥	L.E.D. COVE LIGHTING
├─┤	FLUORESCENT INDUSTRIAL FIXTURE
─⊙─⊙─	L.E.D. DOWNLIGHTS, CABLE MOUNTED TO TRACK SYSTEM (TRACK SUSPENDED @ _'-_" A.F.F.) (BOTTOM OF FIXTURES @ _'-_" A.F.F.)
─▯─▯─	SURFACE MOUNTED L.E.D. TRACK LIGHTING
▭	SURFACE MOUNTED FLUORESCENT FIXTURE
▭	PENDANT MOUNTED FLUORESCENT LIGHT FIXTURE
○	RECESSED DOWNLIGHT
⊗	EXIT SIGN / LIGHT
⬡	SMOKE DETECTOR
▤	CEILING MOUNTED CABINET UNIT HEATER
▥	RECESSED RADIANT CEILING PANEL
◪	EXHAUST GRILLE
⊠	SUPPLY DIFFUSER
◿	RETURN-AIR GRILLE
Ⓢ	SPEAKER
⌖	PENDANT SPRINKLER HEAD (SEE MECHANICAL FOR TYPE)
⧗	SIDEWALL SPRINKLER HEAD

CEILING KEY

▨	GYPSUM BOARD (PAINTED) OR INTERIOR/EXTERIOR FINISH SYSTEM CEILING/SOFFIT
▦	24" x 48" SUSPENDED LAY-IN ACOUSTICAL CEILING
▦	24" x 24" SUSPENDED LAY-IN ACOUSTICAL CEILING
☐	EXPOSED OR EXISTING CONSTRUCTION TO REMAIN (PAINTED, U.O.N.)

CEILING LEGEND

ROOM/CEILING TAGS	CEILING FINISH TAG
ROOM NAME AND NUMBER PLUS GENERAL CEILING FINISH AND HEIGHT UNLESS OTHERWISE NOTED CEILING FINISH TAGS.	SPECIFIC FINISH/HEIGHT WHERE VARYING FROM GENERAL ROOM/CEILING TAGS.

CLASSROOM	ROOM NAME	
101	ROOM NUMBER	
ACT	CEILING FINISH ABBREVIATION (SEE BELOW)	ALUM
9'-0"	CEILING HEIGHT (A.F.F.)	8'-10"

CEILING FINISH ABBREVIATIONS

ACT	ACOUSTICAL LAY-IN CEILING TILE
ALUM	ALUMINUM PANEL
AWP	ACOUSTICAL WALL PANEL
AB	ACOUSTICAL BAFFLE
EX	EXISTING
EXP-P	EXPOSED CONSTRUCTION - TO BE PAINTED
FB	FABRIC BANNER
GYP-P	GYPSUM BOARD - TO BE PAINTED
GYP-EP	GYPSUM BOARD - TO BE EPOXY PAINTED
LIN	LINEAR PVC SYSTEM
PT	PAINT
SVP	SYNTHETIC VENEER PLASTER
UF	UNFINISHED

NOTES:

1. REFER TO FINISH PLANS FOR INFORMATION ON ROOM FINISHES.
2. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS AND CONSTRUCTION.
3. WHERE EXPOSED CONSTRUCTION IS INDICATED TO BE PAINTED, THIS SHALL INCLUDE ALL STRUCTURAL MEMBERS, ROOF/FLOOR DECK, DUCTWORK, DIFFUSERS, GRILLES, PIPING, SUSPENDED EQUIPMENT, CONDUITS, ETC. (U.O.N.)

WALL FIRE RATING LEGEND

ALL WALLS INDICATED WITH LINE TYPES BELOW CONTINUE TO FLOOR OR ROOF STRUCTURE ABOVE - ALL WALLS WITHOUT THESE INDICATIONS EXTEND A MINIMUM OF 4" ABOVE THE HIGHEST ADJACENT CEILING

╎╎╎╎╎	: SMOKE RESISTING PARTITION
▬ ▪ ▪ ▬	: NON RATED WALLS TO STRUCTURE ABOVE

GENERAL NOTES

1. REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPES. REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION PERTAINING TO ELECTRICAL AND MECHANICAL WORK.
2. COORDINATE SIZE AND LOCATION OF ALL ACCESS PANELS WITH TRADE REQUIRING THE SAME. ACCESS PANELS ARE SPECIFIED ARCHITECTURALLY BUT ARE REQUIRED TO BE PROVIDED BY TRADE. SPOT ALL LOCATIONS WITHIN FIXED GYPSUM BOARD CEILINGS AND RECEIVE APPROVAL FROM THE ARCHITECT'S FIELD REPRESENTATIVE BEFORE PLACEMENT.
3. COORDINATE CEILING SUSPENSION SYSTEMS WITH OTHER CEILING SPACE EQUIPMENT SUPPORTS.
4. ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTIONS (ABOVE ACCESSIBLE CEILINGS) SHALL BE MARKED EVERY 30'-0" HORIZONTALLY AND WITHIN 15'-0" OF ENDS OF WALLS: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS". REFER TO CURRENT BUILDING CODE FOR LETTERING HEIGHT, STROKE AND CONTRAST.
5. ALL GYPSUM BOARD FASCIAE @ SOFFITS, ADJACENT TO LAY-IN CEILINGS, SHALL EXTEND 4" MINMUM ABOVE LAY-IN CEILINGS.
6. INSTALL CONTROL JOINTS IN GYPSUM BOARD AND METAL STUD-FRAMED PARTITIONS, WALLS, CEILINGS, BULKHEADS, FASCIAE AND SOFFITS IN COMPLIANCE WITH SPECIFICATIONS, AND WITH GENERAL REQUIREMENTS OF ASTM C840. PRIOR TO COMMENCEMENT OF FRAMING INSTALLATION SUBMIT COORDINATION DRAWINGS INDICATING PROPOSED LOCATIONS OF ALL CONTROL JOINTS, AS SPECIFIED.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO @TMP-ARCHITECTURE.COM

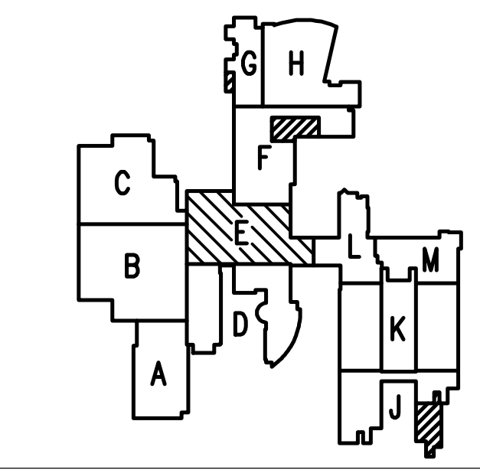
REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
Second Level Reflected Ceiling Plan - Zone E



ISSUE DATES

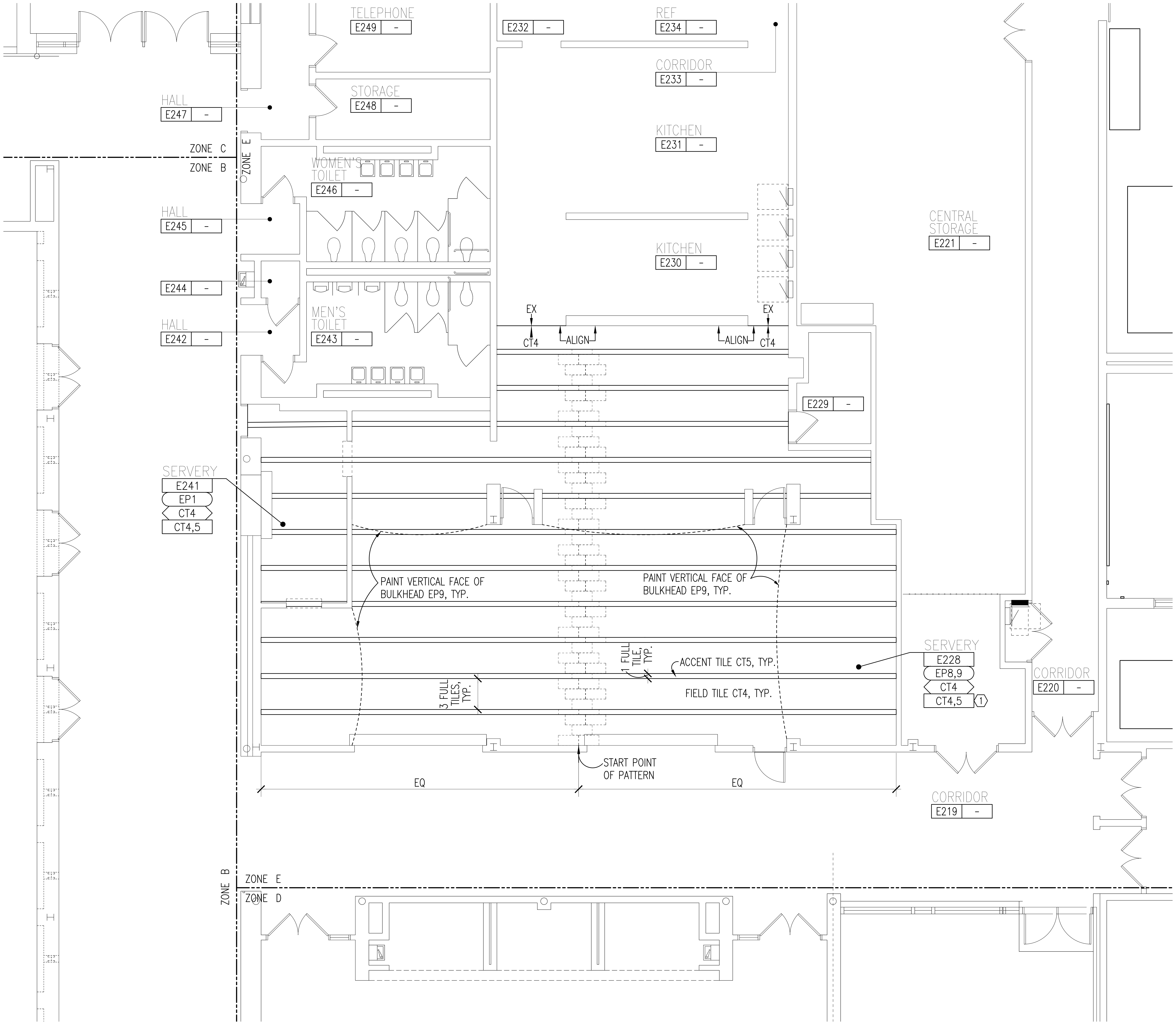
DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN	...
CHECKED	...
APPROVED	...

PROJECT NO.
22104G

DRAWING NO.
A2.2E

Drawing File: Q:\acad\2022tmpa\22104G\22104G_cd\22104G_a21e.dwg
Oct 24, 2024 - 11:50am



SECOND LEVEL FLOOR PLAN - ZONE 'E'
SCALE: 1/4" = 1'-0"

FINISH LEGEND

ROOM TAGS

ROOM NAME AND NUMBER PLUS GENERAL ROOM FINISH INFORMATION.
FINISH TAGS SHALL APPLY TO ALL LIKE MATERIALS WITHIN A ROOM (U.O.N.).

FINISH LEGEND

FINISH LEGEND IS GENERAL. REFER TO SPECIFICATIONS FOR SPECIFIC FINISH INFORMATION. MULTIPLE FINISH TYPES ARE DENOTED BY NUMBER FOLLOWING ABBREVIATION.

CLASSROOM — ROOM NAME
101 — ROOM NUMBER
PT — WALL FINISH (SEE BELOW) — PT-P_ #
RB — BASE (SEE BELOW) — RB #
CPT — FLOOR FINISH (SEE BELOW) — CPT-P_ #
DENOTES PATTERN DETAIL
REFER TO "SPECIFIC NOTES" BELOW

(PL_) — PLASTIC LAMINATE TYPE/COLOR (TAG APPLIES TO ALL CABINETS AND/OR COUNTERTOPS WITHIN THAT SPACE, U.O.N.)

WALL FINISH ABBREVIATIONS

EP	EPOXY PAINT
EX	EXISTING (NO NEW FINISH)

BASE FINISH ABBREVIATIONS

CT	CERAMIC TILE
EX	EXISTING (NO NEW FINISH)

FLOOR FINISH ABBREVIATIONS

CT	CERAMIC TILE
EX	EXISTING (NO NEW FINISH)

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND FINISH INFORMATION.
2. AT CERAMIC TILE LOCATIONS, INSTALLER TO USE APPROPRIATE TROWEL TO ACCOMMODATE DIFFERENT TILE THICKNESSES.
3. REFER TO STRUCTURAL DRAWINGS FOR DEPRESSED SLAB LOCATIONS, INDICATIVE OF MUDSET BEDS AT CERAMIC TILE. SLOPE MUDSET TO DRAINS. REFER TO ARCHITECTURAL DRAWINGS FOR DRAIN ELEVATIONS AND LOCATIONS.
4. PROVIDE ANTI-FRACTURE MEMBRANE AT ALL THINSET CERAMIC FLOOR TILE LOCATIONS, UNLESS OTHERWISE NOTED.
5. PROVIDE RESILIENT BASE AT TOE KICK OF ALL CASEWORK AND BEHIND ALL MOVABLE EQUIPMENT/APPLIANCES, WHEN SCHEDULED WITHIN A ROOM.
6. ALL WALL MOUNTED MECHANICAL EQUIPMENT (DIFFUSERS, GRILLES, ETC.) AND ELECTRICAL EQUIPMENT (PANELS, ETC.) SHALL BE PAINTED TO MATCH THE ADJACENT WALL COLOR. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR QUANTITIES AND LOCATIONS.
7. REFER TO SPEC. SECTION 012300 FOR COMPLETE LIST AND DESCRIPTION OF ALTERNATES.
8. WHERE REMOVAL OR MODIFICATION TO A FINISH MATERIAL IS SHOWN, BUT NEW FINISHES ARE NOT SCHEDULED, PATCH AND REPAIR TO MATCH EXISTING FINISH CONDITION AS REQUIRED.
9. PROVIDE APPROPRIATE TRANSITION STRIPS BETWEEN DISSIMILIAR FLOORING MATERIALS AT VERTICAL AND/OR HORIZONTAL APPLICATIONS.
10. FLOORING CONTRACTOR SHALL INSTALL INSERTS TO MATCH ADJACENT FLOORING MATERIAL AT ALL ELECTRICAL FLOOR BOX COVERS AS REQUIRED.
11. FOR MORE INFORMATION REGARDING THRESHOLDS AT TILE INSTALLATIONS, SEE DOOR SCHEDULE SHEET.

SPECIFIC NOTES

⟨1⟩ TILE INSTALLATION METHOD TO BE A STAGGERED BRICK-JOINT PATTERN. OVERLAP SHOULD NOT EXCEED 33%.

TMP ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

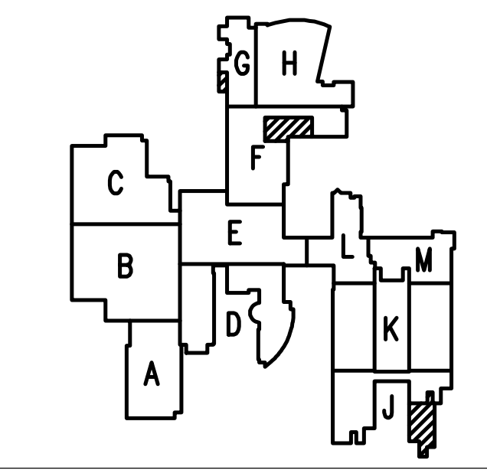
PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

Second Level Finish Plan - Zone E



ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN	NAM
CHECKED	...
APPROVED	...

PROJECT NO.

22104G

DRAWING NO.

A10.2E

Drawing File: Q:\acad\2022tmpa\22104G\22104G_cd\22104G_a102e.dwg
Oct 24, 2024 - 9:32am

FOOD SERVICE EQUIPMENT SCHEDULE

	ITEM NO	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	EQUIPMENT REMARKS	AMPS	KW	HP	VOLTS	PHASE	DIRECT	PLUG	NEMA	ELECTRICAL AFF (IN)	ELEC REMARKS	COLD WATER SIZE (IN)	COLD WATER AFF (IN)	HOT WATER SIZE (IN)	HOT WATER GPH	HOT WATER AFF (IN)	DIRECT DRAIN SIZE (IN)	DIRECT DRAIN AFF (IN)	INDIR DRAIN SIZE (IN)	GAS SIZE (IN)	MBTUH	GAS AFF (IN)	PLUMBING REMARKS
	1	1	EXISTING WARMER	BY OWNER	NIC	RELOCATED	13.8			120	1		X	5-15P	18	***												
	2	1	EXISTING WARMER	BY OWNER	NIC	RELOCATED	13.8			120	1		X	5-15P	18	***												
	3	1	ST. ST. WORK TABLE	ADVANCE TABCO	KSS-365																							
	4	1	EXISTING COMBI OVEN	BY OWNER	NIC	REMAIN AS IS																						
	5	1	EXISTING COMBI OVEN	BY OWNER	NIC	REMAIN AS IS																						
	6	1	ST. ST. CABINET BASE COOKS TABLE W/ SHELF OVER	ST. ST. FABRICATOR	CUSTOM	TIER OF DRAWERS FINISHED BACK																						
	7		SPARE - NOT USED			RELOCATED																						
	8	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	72	DROP CORD FROM ABOVE												
	9	1	HEATED GRAVITY CHUTES	HATCO	GR2SDS-30D											POWERED FROM # 13												
	10		SPARE - NOT USED																									
	11		SPARE - NOT USED																									
	12	1	REFRIGERATOR, REACH-IN	TRAULSEN	G20010		7.4			120	1		X	5-15P	86													
	13	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-46SS MODIFIED 40" LONG		8.5	2.04		120/208	1		X	14-20P	SU	FLOOR RECEPTACLE												
	14		SPARE - NOT USED																									
	15	2	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 22 & 23												
	16	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	COMMON WITH # 22 (99")		11.2	1.3		120	1		X	5-15P	SU	FLOOR RECEPTACLE												
	17	4	INDUCTION RANGE, COUNTERTOP	HATCO	IRNG-HC1-18											POWERED FROM # 22 & 23												
	18	2	DROP-IN, HOT WELLS	DUKE MANUFACTURING	WWG2	WATERLESS WELLS										POWERED FROM # 16 & 25												
	19	1	EXISTING UTILITY CART	BY OWNER	NIC																							
	20		SPARE - NOT USED																									
	21		SPARE - NOT USED																									
	22	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60PG MODIFIED 99" LONG		30.5			120	1		X	5-50P	12	VERIFY HEIGHT AFF												
	23	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60PG MODIFIED 99" LONG		30.5			120	1		X	5-50P	12	VERIFY HEIGHT AFF												
	24	2	DROP-IN, COLD FOOD STATION	DUKE MANUFACTURING	ADI-2MDSL-N7											POWERED FROM # 22 & 23								0.75				RUN TO INDIRECT WASTE
	25	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	COMMON WITH # 25 (99")		11.2	1.3		120	1		X	5-15P	SU	FLOOR RECEPTACLE												
	26	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X	5-15P	18		0.5	12	0.5		12	1.5	21					
	27	1	ST. ST. WORK TABLE	ADVANCE TABCO	KSS-305																							
	28	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
	29	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
	30		SPARE - NOT USED																									
	31		SPARE - NOT USED																									
	32	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 78" LONG	CORD GROMMET HOLE	18.4	4.4		120/208	1		X	L14-30P	SU	FLOOR RECEPTACLE												
	33	1	DISPLAY CASE, HEATED	HATCO	GR2SDS-60D											POWERED FROM # 32												
	34	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 78" LONG	CORD GROMMET HOLE	18.4	4.4		120/208	1		X	L14-30P	SU	FLOOR RECEPTACLE												
	35	1	DISPLAY CASE, HEATED	HATCO	GR2SDS-60D											POWERED FROM # 34												
	36	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X	5-15P	18		0.5	12	0.5		12	1.5	21					
	37	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
	38	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-363																							
	39	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-366	24" HIGH																						
	40		SPARE - NOT USED																									
	41		SPARE - NOT USED																									
	42	2	OVEN, CONVEYOR, COUNTERTOP, ELECTRIC, VENTLESS	OVENTION	C2000	STACKING KIT	44.0	12.3		208	1		X	6-50P	48													
	43	1	REFRIGERATOR, REACH-IN	TRAULSEN	G20012		7.4		1/3	115	1		X	5-15P	86													
	44	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
	45	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15			120	1		X	5-15P	18	*** POWER AND DATA												
	46	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 45												
	47	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 72" LONG		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
	48	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 47												
	49	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 47												
	50		SPARE - NOT USED																									
	51		SPARE - NOT USED																									
	52	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		11.2	1.2		120	1		X	5-20P	SU	FLOOR RECEPTACLE												
	53	1	DROP-IN, HEATED SHELF	HATCO	GRSBF-60-I											POWERED FROM # 52												
	54	1LOT	HEAT LAMP, DECORATIVE	HATCO	DL-400-RTL W/ 48" TRACK	VERIFY COLOR & SHADE #	6.25	.75		120	1	X			DFA													
	55	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM1R-A																							
	56	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		11.2	1.2		120	1		X	5-20P	SU	FLOOR RECEPTACLE												
	57	1	DROP-IN, HEATED SHELF	HATCO	GRSBF-60-I											POWERED FROM # 56												
	58	1LOT	HEAT LAMP, DECORATIVE	HATCO	DL-400-RTL W/ 48" TRACK	VERIFY COLOR & SHADE #	6.25	.75		120	1	X			DFA													
	59	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM1R-A																							
	60		SPARE - NOT USED																									
	61		SPARE - NOT USED																									
	62	1	REFRIGERATOR, PASS-THRU, GLASS DOOR	TRUE MFG.	STA1RPT-1G-1G-HC	LOCKING DOORS NO STUDENT ACCESS	3.8		1/4	115	1		X	5-15P	18													
	63	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15.0			120	1		X	5-15P	SU	*** POWER AND DATA FLOOR RECEPTACLE												
	64	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 63												
	65	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
	66	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 65												
	67	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 65												
	68	1	REFRIGERATOR, PASS-THRU, GLASS DOOR	TRUE MFG.	STA1RPT-1G-1G-HC	LOCKING DOORS NO STUDENT ACCESS	3.8		1/4	115	1		X	5-15P	18													
	69	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15.0			120	1		X	5-15P	SU	*** POWER AND DATA FLOOR RECEPTACLE												
	70		SPARE - NOT USED													POWERED FROM # 63												
	71		SPARE - NOT USED																									
	72	1	POS / REGISTER	BY OWNER	NIC																							
	73	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
	74	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 73												
	75	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 73												
	76	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
	77	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-305																							
	78	1	EXISTING WARMER	BY OWNER	NIC		13.8			120	1		X	5-15P	18	***												
	79	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X		18		0.5	12	0.5		12	1.5	21					
	80		SPARE - NOT USED																									
	81		SPARE - NOT USED																									
	82	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG-MODIFIED					120	1		X	5-15P	18	*** POWER AND DATA												
	83	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 82												
	84	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60SS MODIFIED 54" LONG		11.5			120	1		X	5-15P	SU	FLOOR RECEPTACLE												
	85	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-2 WATERLESS											POWERED FROM # 84												
	86	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 84												
	87	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		16.0			120/208	1		X	L14-20P	SU	FLOOR RECEPTACLE												
	88	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-4 WATERLESS											POWERED FROM # 87												
	89	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 87												
ALT NO. 1	90	1	EXISTING WATER COOLED REFRIGERATION RACK	FLO-COLD		REMOVE AND DISPOSE										DISCONNECT SERVICE												DISCONNECT SERVICE
	91	1	POS / REGISTER	BY OWNER	NIC		15.0			120	1		X	5-15P	48	*** POWER AND DATA												
	92	1LOT	SERVICE COUNTER & BASE	ST. ST. FABRICATOR	CUSTOM	QUARTZ TOP																						
	93	1	SODA DISPENSER	BY COKE	NIC		15.0			120	1		X	5-15P	48	***								0.75				RUN TO INDIRECT WASTE
	94	1LOT	UNDERCOUNTER BIB RACK	BY COKE	NIC	PUMPS/CARBONATOR/CO2	15.0			120	1		X	5-15P	18	***	0.5	18										
	95	1	AIRPOT COFFEE BREWER	BY OWNER	NIC		20.0			120	1		X	5-15P	48	***	0.5	48										
	96	1	TABLE, ENCLOSED BASE, SLIDING DOORS	ADVANCE TABCO	CK-SS-306M	FIELD VERIFY 30" DEPTH																						
	97	2	ST. ST. WALL CABINET	ADVANCE TABCO	WCH 15-36 & 72	HINGED DOORS																						
	98	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
	99	1	TABLE, ENCLOSED BASE, SLIDING DOORS	ADVANCE TABCO	CK-SS-304M	FIELD VERIFY 30" DEPTH																						
	100	1	EXISTING WARMER	BY OWNER	NIC		12.5	1.5		120	1		X	5-15P	48	***												
	101	1	REACH IN REFRIGERATOR	TRAULSEN	G10010		4.9			120	1		X	5-15P	86													
	102	1	PORTABLE ICE CART	CAMBRO	ICS100L110	100# CAPACITY																						
	103	1	EXISTING WALK IN REFRIGERATOR/FREEZER COMPLEX																									
	104	1	ROOF MOUNTED REFRIGERATION SYSTEM RACK	COOLTEC	CRS-6	ALTERNATE NO. 1	38.0			208	3	X			SU	WATERTIGHT ON ROOF												
	105	2	BLOWER COILS - FREEZER		BEL0100BS6EEA	ALTERNATE NO. 1	14.1			208	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
ALT NO. 1	105.1	LOT	HEAT TAPE			ALTERNATE NO. 1																						
	106	1	BLOWER COIL - REFRIGERATOR		BEL0095AS6AMA	ALTERNATE NO. 1	1.8			115	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
	107	1	BLOWER COIL - REFRIGERATOR		BEL0115AS6AMA	ALTERNATE NO. 1	1.8			115	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
	108	1LOT	FIELD ERECTION LABOR																									
	CO1		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				18													
	CO2		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				48													
	CO3		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				SU	DUPLEX FLR RECEPTACLE												
	CO4		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				72	DROP CORD RECEPTACLE												

ARCHITECTURE

TMP ARCHITECTURE INC

1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE

Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE

Food Service Equipment Schedule

KEY PLAN

ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

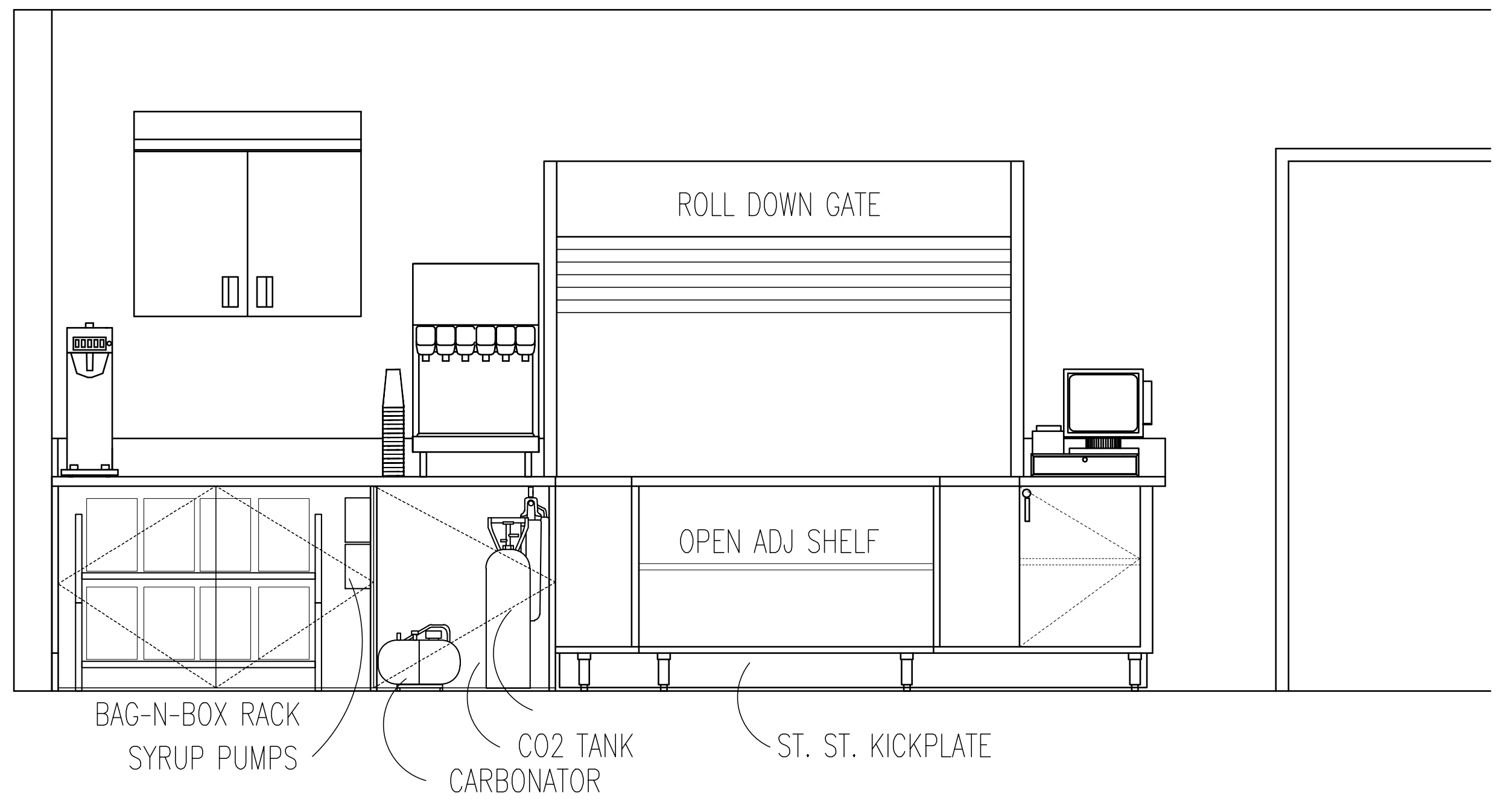
DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.

22104G

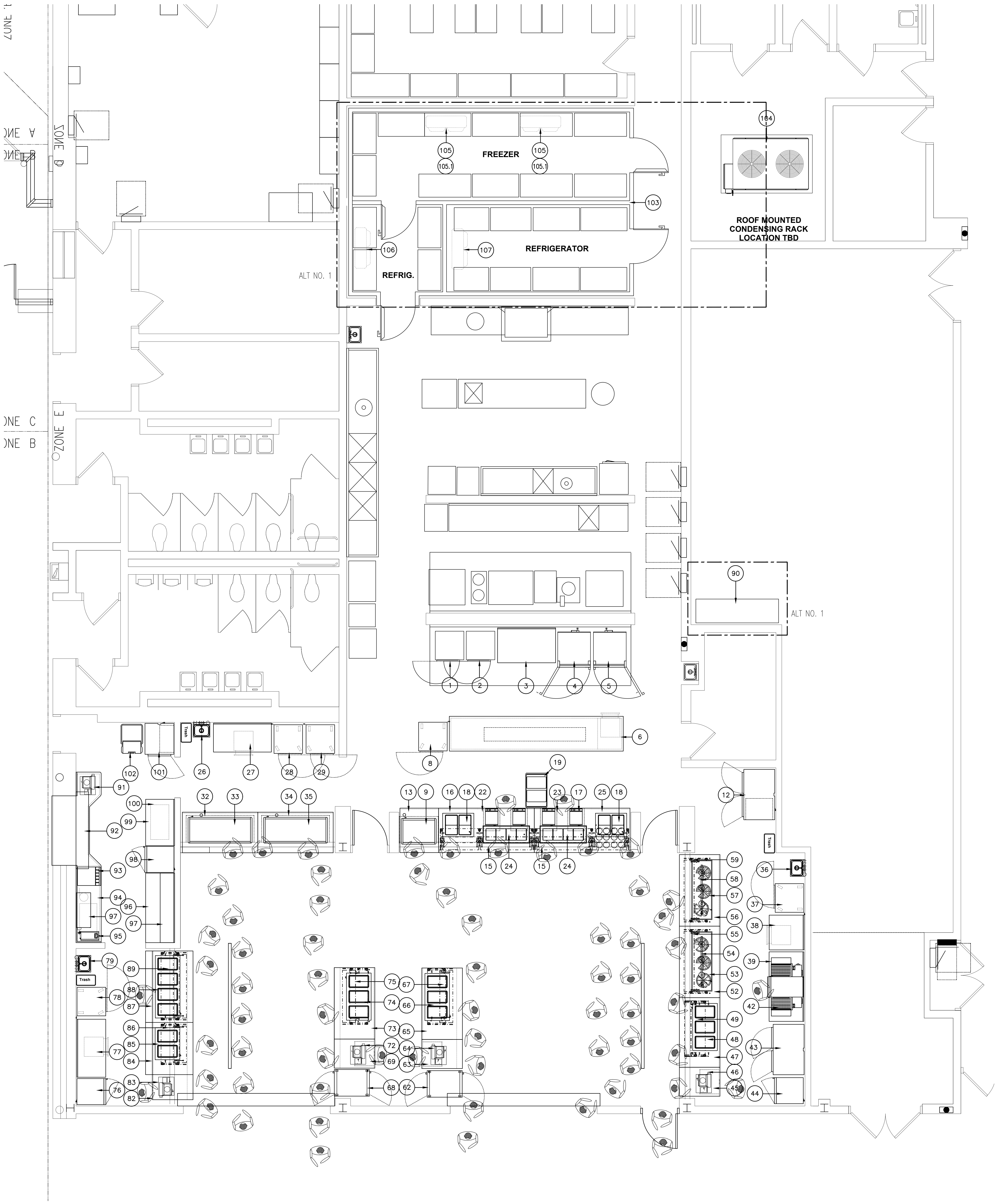
DRAWING NO.

FSE.1



SNACK BAR ELEVATION DETAIL

SCALE: 1/2" = 1'-0"



FOOD SERVICE EQUIPMENT LAYOUT

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

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE

Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE

Food Service Equipment Layout

KEY PLAN

ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-24-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.

22104G

DRAWING NO.

FSE.2

GENERAL NOTES for ROUGH-IN PLAN

THIS PLAN IS TO BE USED FOR BIDDING PURPOSES ONLY & MUST BE REDRAWN BY FOOD SERVICE EQUIP. CONTR. USING ARCHITECTS FINAL WORKING DRAWINGS (ARCH., ELECT., PLUMB. & VENT.). F.S.EQ. CONTR. SHALL FURNISH FULLY DIMENSIONED ROUGH-IN PLAN FOR ELECTRICAL, PLUMBING, VENTILATION, DEPRESSION & WALL OPENINGS WITHIN 30 DAYS AFTER AWARD OF CONTRACT. PLANS ARE TO BE REDRAWN & NOT TRACED-OFF OF ORIGINAL DRAWINGS.

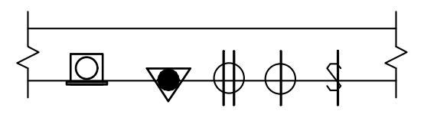
FOOD SERVICE EQUIP. CONTR. IS TO ASSIST ELECTRICAL TRADES DURING PERIOD WHILE FINAL ROUGH-IN CONNECTIONS ARE BEING MADE. F.S.EQ. CONTR. SHALL FURNISH ALL NECESSARY WIRING DETAILS AS REQUIRED. F.S.EQ. CONTR. ALSO TO HAVE FIELD SUPERVISOR ON JOBSITE AT TIME OF FINAL CONN'S.

FOOD SERVICE EQUIP. CONTR. SHALL CONTACT ELECTRICAL ENGINEER BEFORE DRAWING ROUGH-PLAN TO VERIFY EXACT VOLTAGES AVAILABLE ON JOBSITE. THIS CHECK MUST BE MADE TO INSURE PROPER VOLTAGES TO ALL EQUIPMENT.

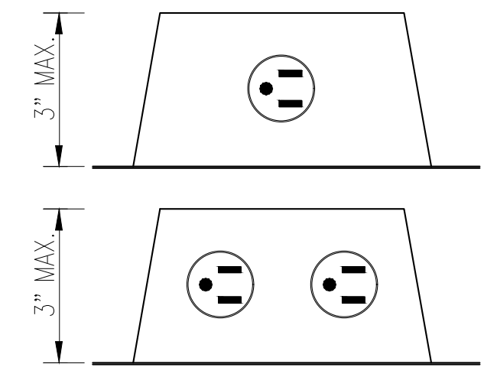
ELECTRICAL ROUGH-IN CODE

⬡ J.B.	JUNCTION BOX
▲	ELECTRICAL CONDUIT CONNECTION
H.P.	HORSEPOWER
KW.	KILOWATT
W.	WATT
V.	VOLT
1ph.	SINGLE PHASE
3ph.	THREE PHASE
⊡	DROP CORD RECEPTACLE
⦶	DUPLEX RECEPTACLE
⊖	SINGLE RECEPTACLE
●●	DUPLEX FLOOR RECEPTACLE
⊙	SINGLE FLOOR RECEPTACLE
⊏	FUSED DISCONNECT SWITCH
$	SWITCH
A.F.F.	ABOVE FINISH FLOOR

GENERAL NOTE for ROUGH-IN PLAN



ALL SERVICES SHOWN WITH SYMBOLS CENTERED ON WALL SHOULD BE BROUGHT TO THAT POINT CONCEALED IN WALL & STUBBED-OUT AT HEIGHT SHOWN ON THIS PLAN OR F.S.EQ. CONTR'S FINAL DIMENSIONED ROUGH-IN PLAN. DO NOT STUB OUT OF FLOOR & RUN EXPOSED ON WALL.



VERIFY EXACT TYPE OF RECEPTACLE W/ ELECT. ENGINEER. FLUSH TYPE TO HAVE REMOVABLE WATER-TIGHT COVER.

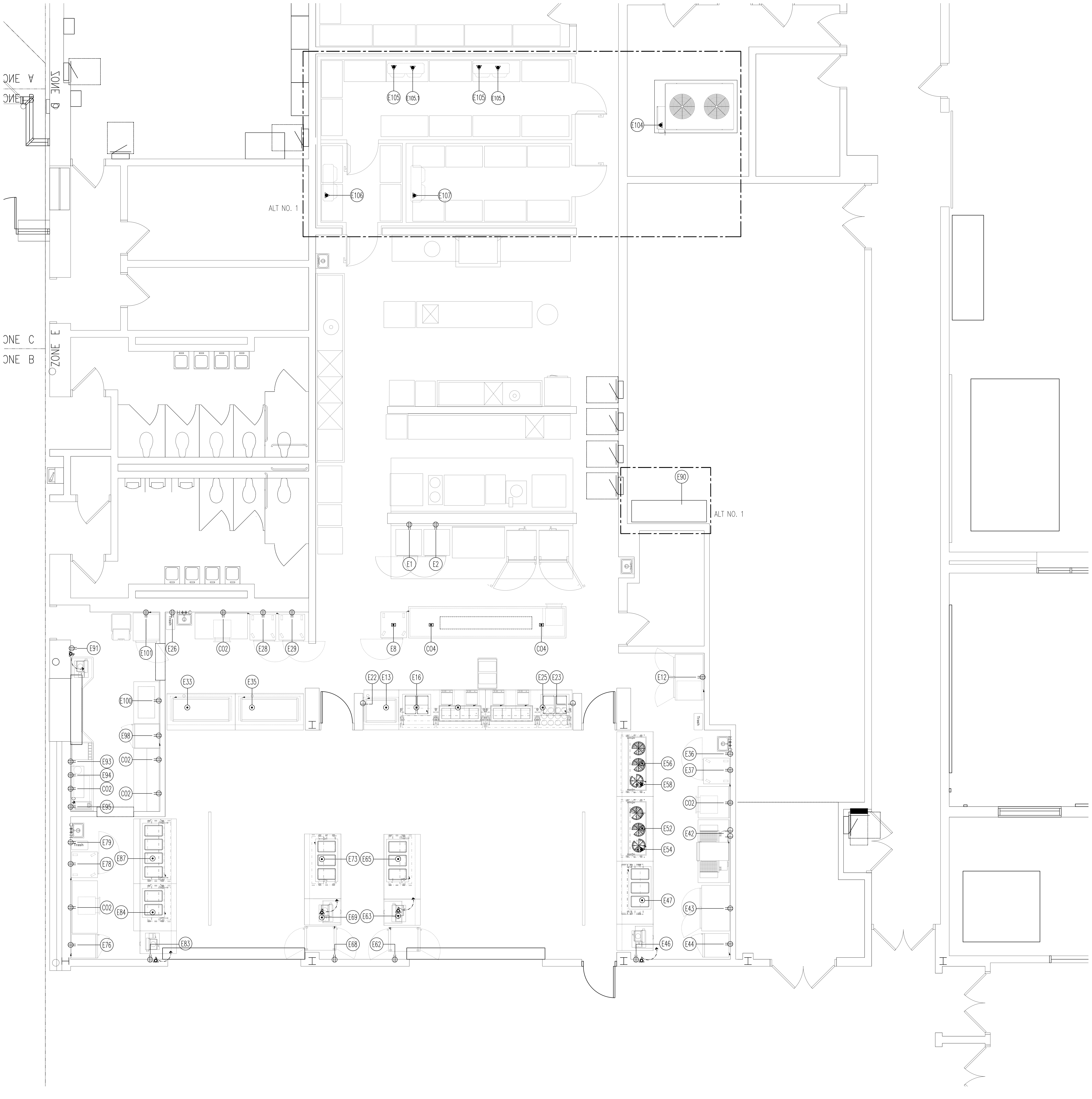
DETAIL of FLOOR RECEPTACLE

NOTE...

ALL ADDITIONAL RECEPTACLES, CONN.'s, WIRING, ETC., TO BE SHOWN BY ELECT. ENGINEER.

ALL 120v DUPLEX RECEPTACLES WITHIN KITCHEN AREAS & WITHIN 72" OF A SINK MUST BE GFCI PROTECTED BY ELECT. TRADES.

ELECT. TRADES TO FURN. & INSTALL ALL LINE DISCONNECT SWITCHES AS REQUIRED TO MEET STATE & LOCAL CODES.



ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE

Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE

Food Service Equipment Electrical Rough in

KEY PLAN

ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.

22104G

DRAWING NO.

FSE.3

GENERAL NOTES for ROUGH-IN PLAN

THIS PLAN IS TO BE USED FOR BIDDING PURPOSES ONLY & MUST BE REDRAWN BY FOOD SERVICE EQUIP. CONTR. USING ARCHITECTS FINAL WORKING DRAWINGS (ARCH., ELECT., PLUMB. & VENT.). F.S.EQ. CONTR. SHALL FURNISH FULLY DIMENSIONED ROUGH-IN PLAN FOR ELECTRICAL, PLUMBING, VENTILATION, DEPRESSION & WALL OPENINGS WITHIN 30 DAYS AFTER AWARD OF CONTRACT. PLANS ARE TO BE REDRAWN & NOT TRACED-OFF OF ORIGINAL DRAWINGS.

FOOD SERVICE EQUIP. CONTR. IS TO ASSIST PLUMBING TRADES DURING PERIOD WHILE FINAL ROUGH-IN CONNECTIONS ARE BEING MADE. F.S.EQ. CONTR. SHALL FURNISH ALL NECESSARY PIPING DETAILS AS REQUIRED. F.S.EQ. CONTR. ALSO TO HAVE FIELD SUPERVISOR ON JOBSITE AT TIME OF FINAL CONN'S.

FOOD SERVICE EQUIP. CONTR. SHALL CONTACT PLUMB. ENGINEER BEFORE DRAWING ROUGH-IN PLAN TO VERIFY TYPE OF GAS ON JOBSITE. WHEN STEAM IS AVAILABLE, PRESSURE IS TO BE VERIFIED AND ALL EQUIPMENT TO BE FURNISHED ACCORDINGLY.

FLOOR DRAIN SCHEDULE

ALL BY PLUMB. TRADES- TYPICAL SIZES SHOWN.

TYPE #1:	6"x6" w/ FULL NICKLE-BRONZE STRAINER. FLUSH W/ FINISH FLOOR.
TYPE #2:	6"x6" W/ FULL NICKLE-BRONZE STRAINER & 4" HIGH NICKLE-BRONZE FUNNEL. FLUSH W/ FINISH FLOOR.
TYPE #3:	12" x 12" x 8 1/2" DEEP W/ FULL NICKLE-BRONZE GRATE TOP, ACID RESISTANT INTERIOR & PERFORATED REMOVABLE ENAMELED BASKET. FLUSH W/ FINISH FLOOR.
TYPE #4:	12" x 12" x 10" DEEP W/ FULL ST. ST. REMOVABLE GRATE TOP & REMOVABLE ST. ST. PERFORATED BASKET. FLUSH W/ FINISH FLOOR.

INDIRECT WASTE SCHEDULE

ALL BY PLUMB. TRADES- TYPICAL SIZES SHOWN.

TYPE #5:	6" DIA. W/ FULL NICKLE-BRONZE STRAINER & 4" HIGH NICKLE-BRONZE FUNNEL.
TYPE #6:	8 1/2" DIA. W/ WHITE PORCELIN INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.
TYPE #7:	12" x 12" x 10" DEEP NO GRATE TOP W/ ACID RESISTANT INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.
TYPE #8:	12" x 12" x 10" DEEP W/ 1/4 CUT-OUT NICKLE-BRONZE GRATE TOP, ACID RESISTANT INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.

PLUMBING ROUGH-IN CODE

●	H.W.	HOT WATER
●	C.W.	COLD WATER
●	W.	WASTE
○	I.W.	INDIRECT WASTE
⊕	F.D.	FLOOR DRAIN
◎	F.T.F.D.	FUNNEL-TYPE FLOOR DRAIN
⊞		FLOOR SINK
⊗	G.	GAS (NATURAL)
	A.F.F.	ABOVE FINISH FLOOR

SYMBOL DENOTES DRAIN/WASTE/ CONDENSATE LINE OF VARIOUS SIZE, TO BE FURNISHED & INSTALLED BY PLUMB. TRADES- TO RUN FROM EQUIPMENT TO NEAREST F.D./F.S./I.W./H.O. VERIFY EXACT SIZE WITH FSEC FINAL BUY-OUT BOOKLET.

GENERAL NOTE for ROUGH-IN PLAN

●●●⊗ ◎◉

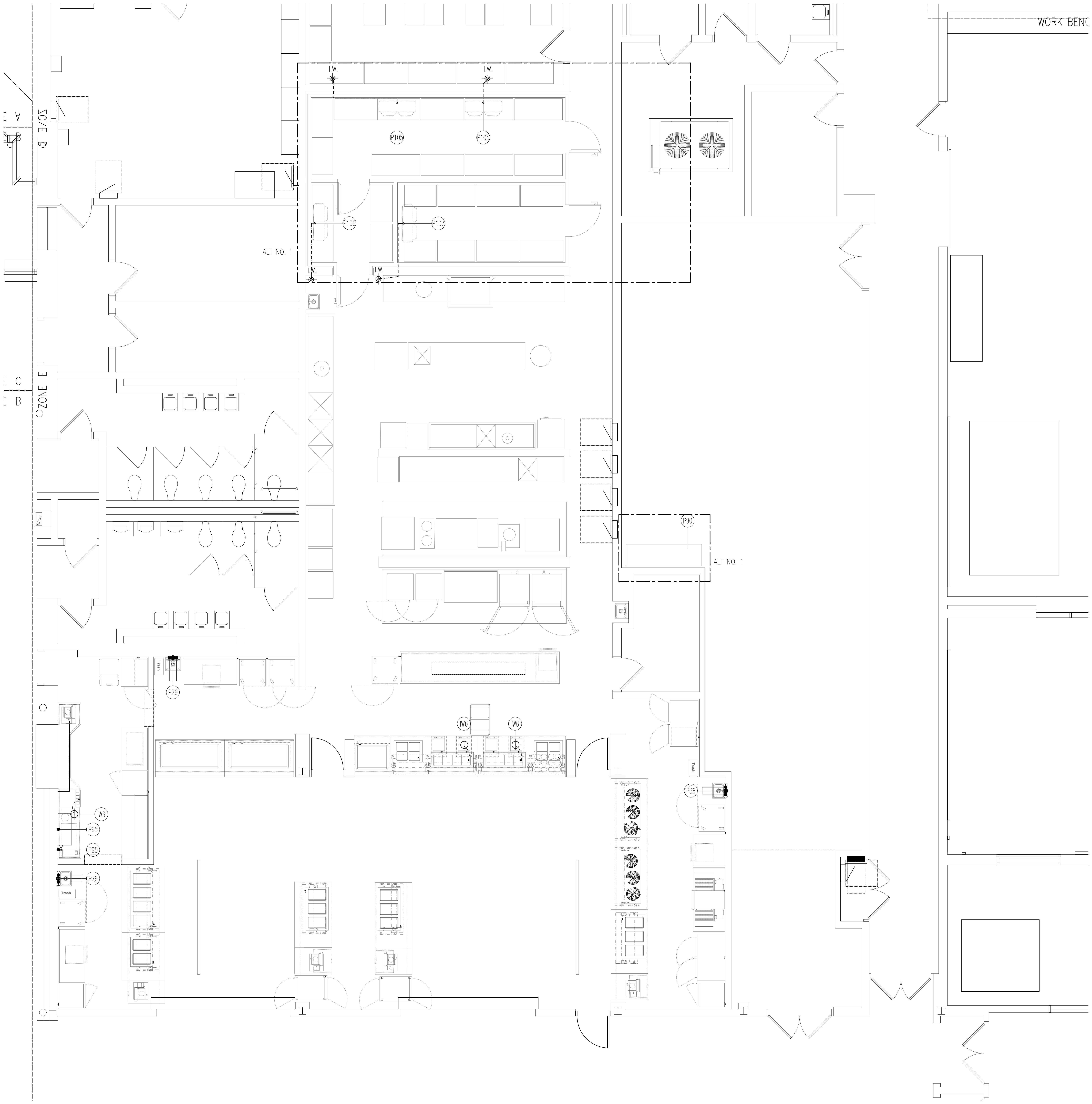
ALL SERVICES SHOWN WITH SYMBOLS CENTERED ON WALL SHOULD BE BROUGHT TO THAT POINT CONCEALED IN WALL & STUBBED-OUT AT HEIGHT SHOWN ON THIS PLAN OR F.S.EQ. CONTR'S FINAL DIMENSIONED ROUGH-IN PLAN. DO NOT STUB OUT OF FLOOR & RUN EXPOSED ON WALL.

NOTE...

PLUMB. TRADES TO RUN ALL DRAIN/ WASTE/CONDENSATE LINES FROM EQUIPMENT TO NEAREST F.D./F.S./I.W.

ALL ADDITIONAL PIPING, DRAINS, SLEEVES, F.D.'s, I.W.'s, ETC., TO BE SHOWN BY MECH. ENGINEER.

ALL ADDITIONAL RPZ'S, PRV, V.B.s, SHUT-OFF VALVES, ATMOSPHERIC V.B.s, SHOCK-STOPS, ETC., TO BE FURN. & INST'D BY PLUMB. TRADES.



ARCHITECTURE

T M P A R C H I T E C T U R E I N C

1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE
Food Service Equipment Plumbing Rough in

KEY PLAN

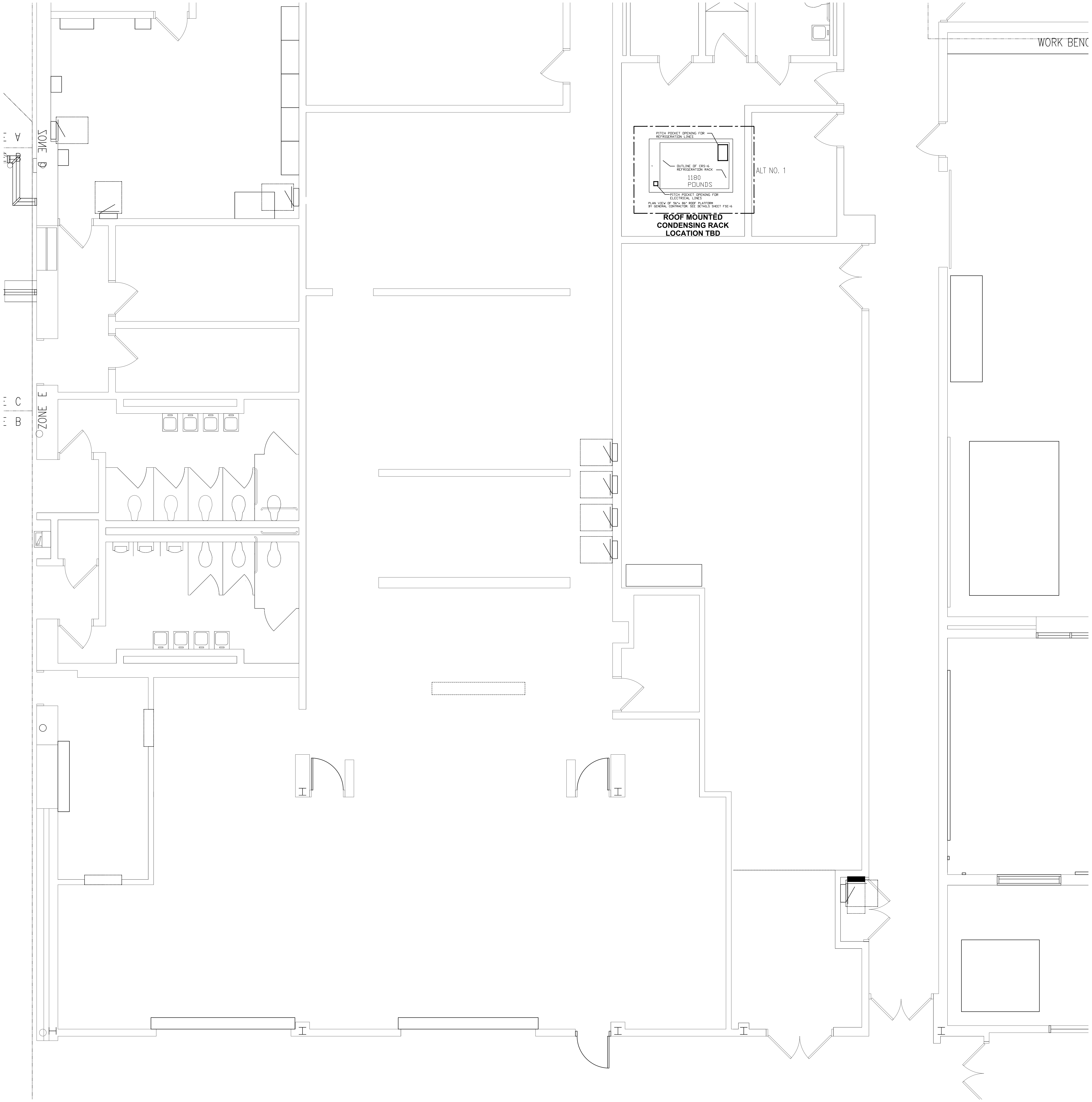
ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.
22104G

DRAWING NO.
FSE.4



ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE

Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE

Food Service Equipment
Special Roof Conditions

KEY PLAN

ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.

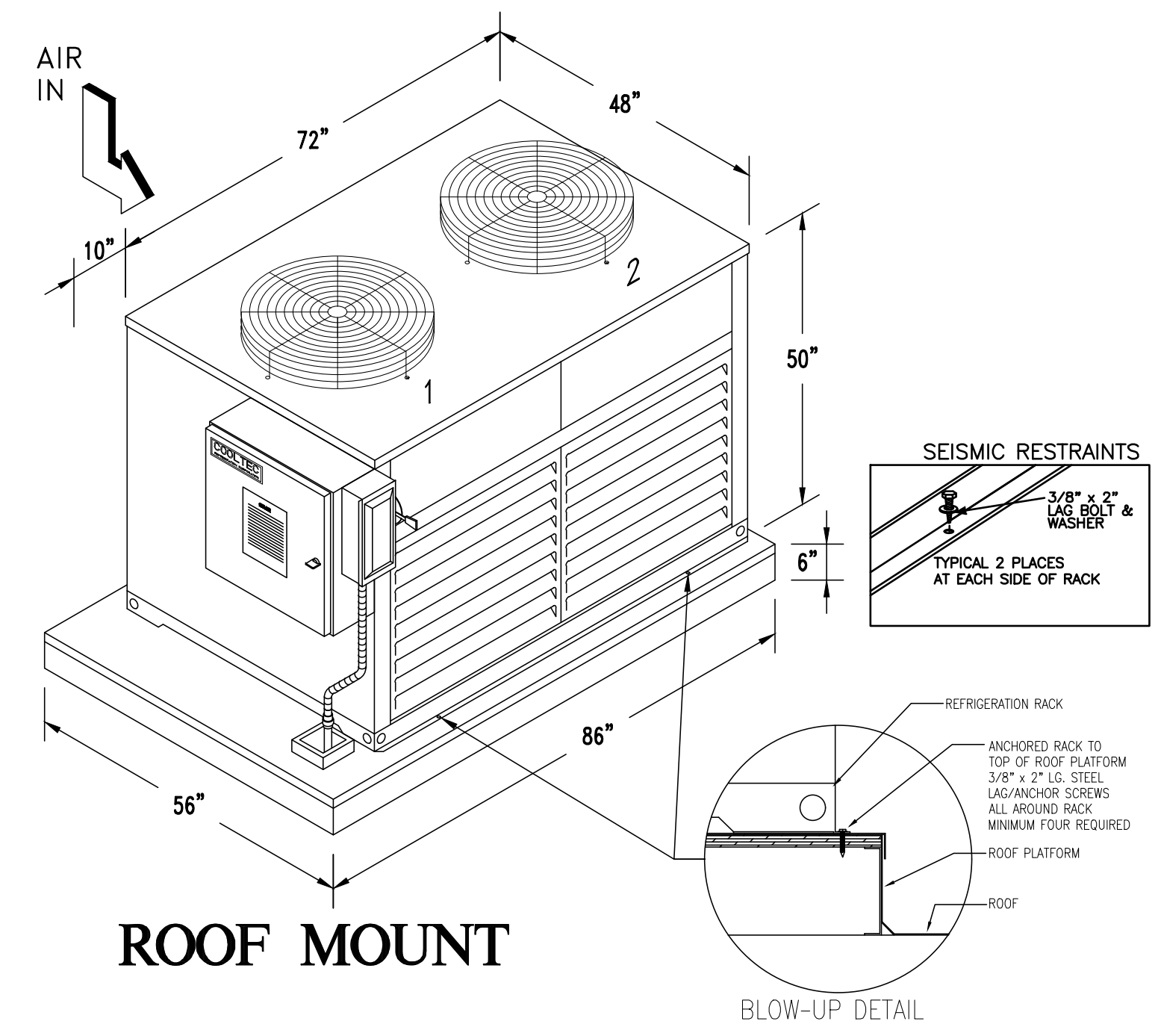
22104G

DRAWING NO.

FSE.5

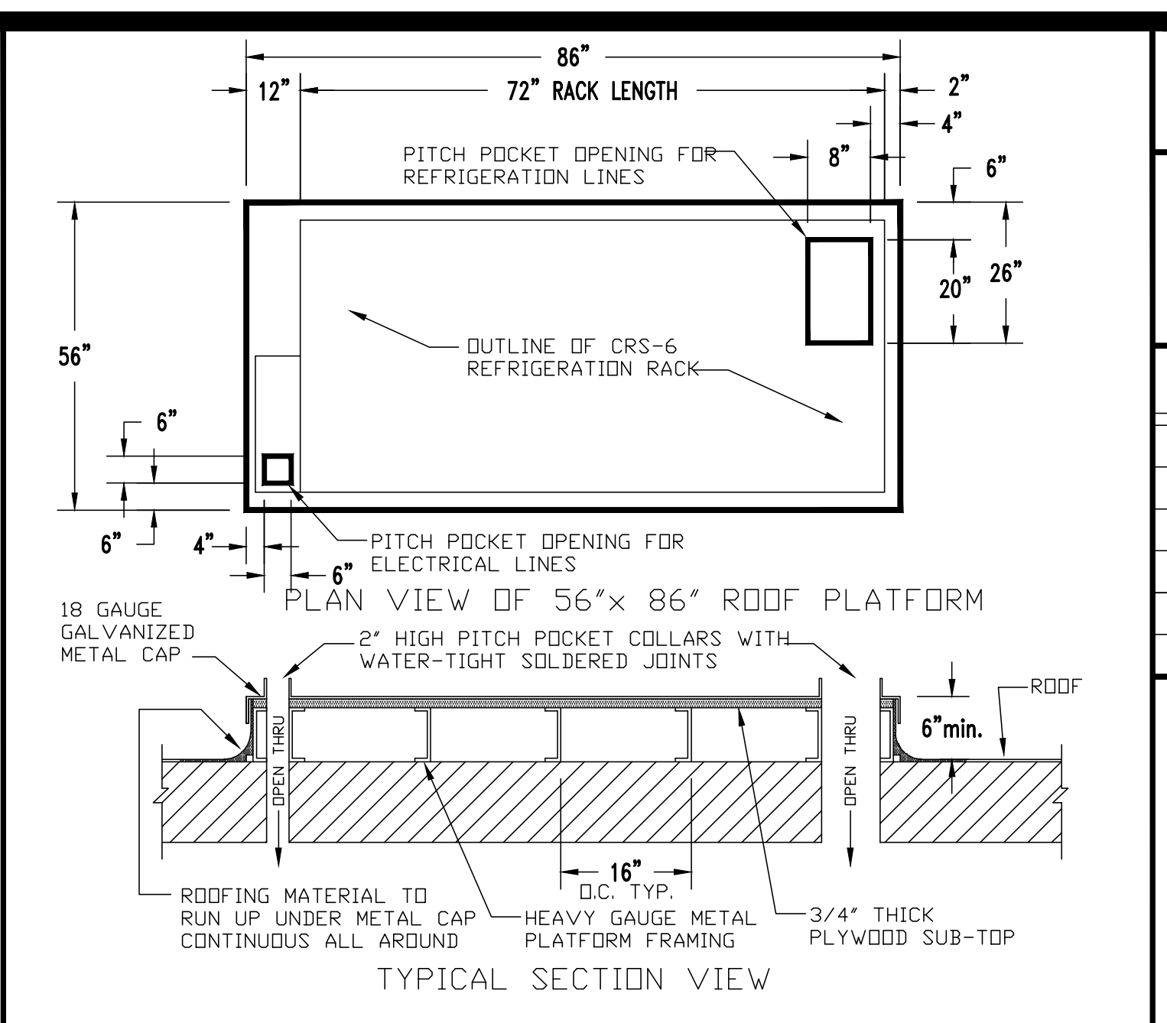
REFRIG-O-PAK SYSTEM

ALLOW 36" CLEAR AROUND UNIT



ESTIMATED WEIGHT (LBS.) 1180#

A / R-1 "REFRIG-O-PAK" SYSTEM # CRS-6



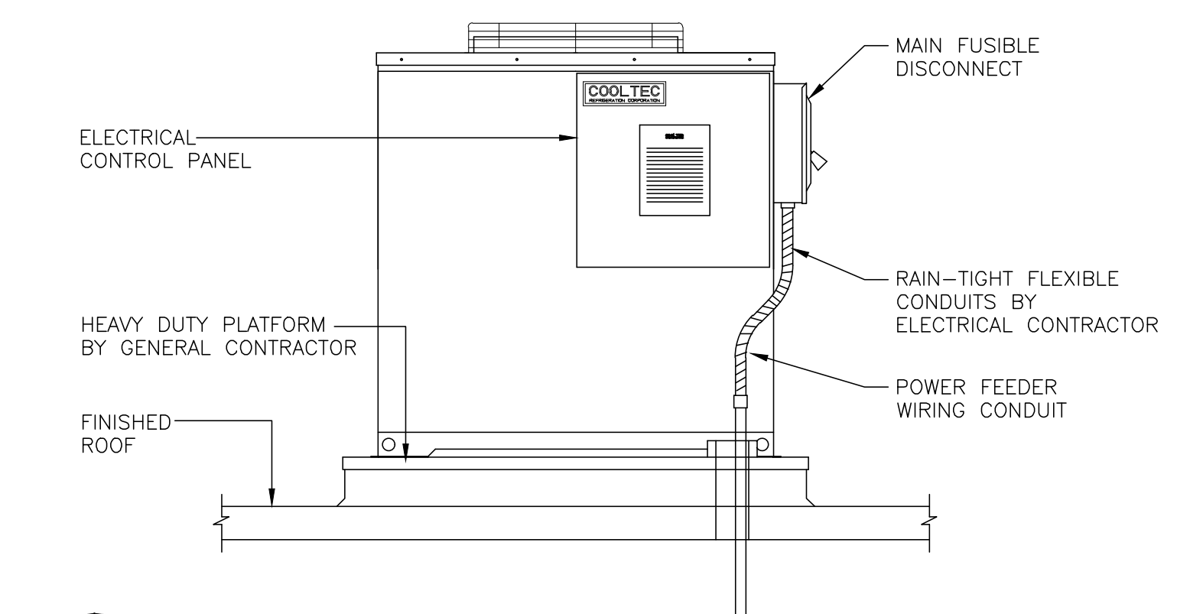
GENERAL CONTRACTOR

1. GENERAL CONTRACTOR TO PROVIDE LEVEL PLATFORM AT CODE HEIGHT.
2. PROVIDE TWO PITCH POCKETS IN THE PLATFORM AS LOCATED.
3. PROVIDE SHEET METAL CAP WITH 2" PITCH POCKET COLLAR AND WITH WATER TIGHT SOLDERED JOINTS.

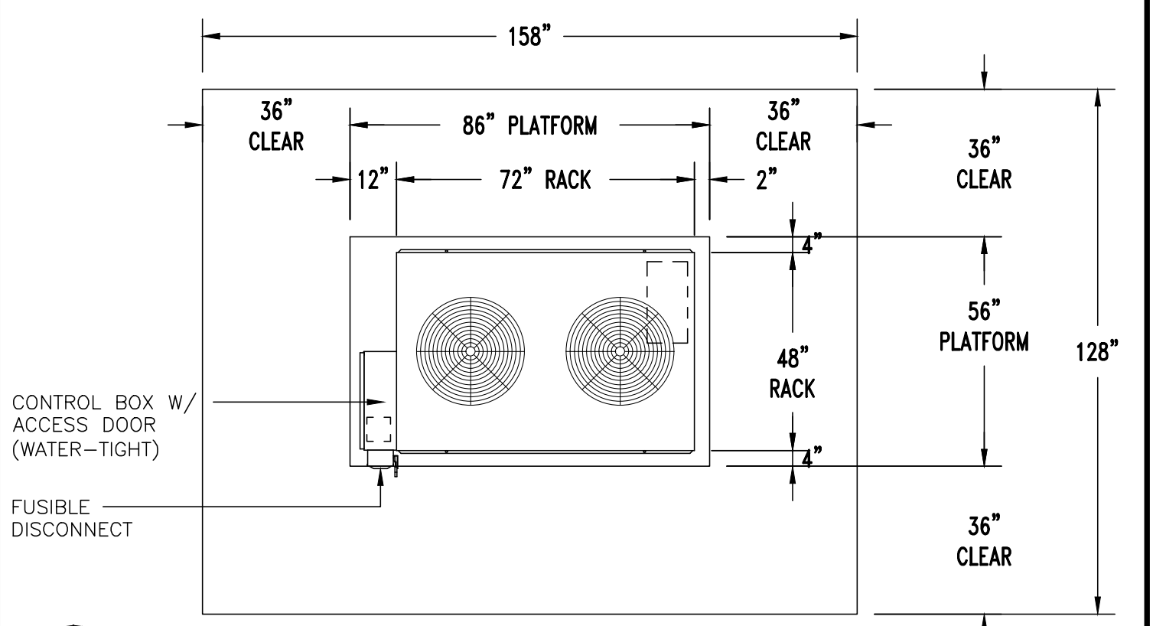
REFRIGERATION CONTRACTOR

1. BACK FILL PITCH POCKET OPENING WITH EXPANDED FOAM AND ROOF SEALANT AFTER COMPLETION OF ELECTRICAL AND REFRIGERATION PIPING.

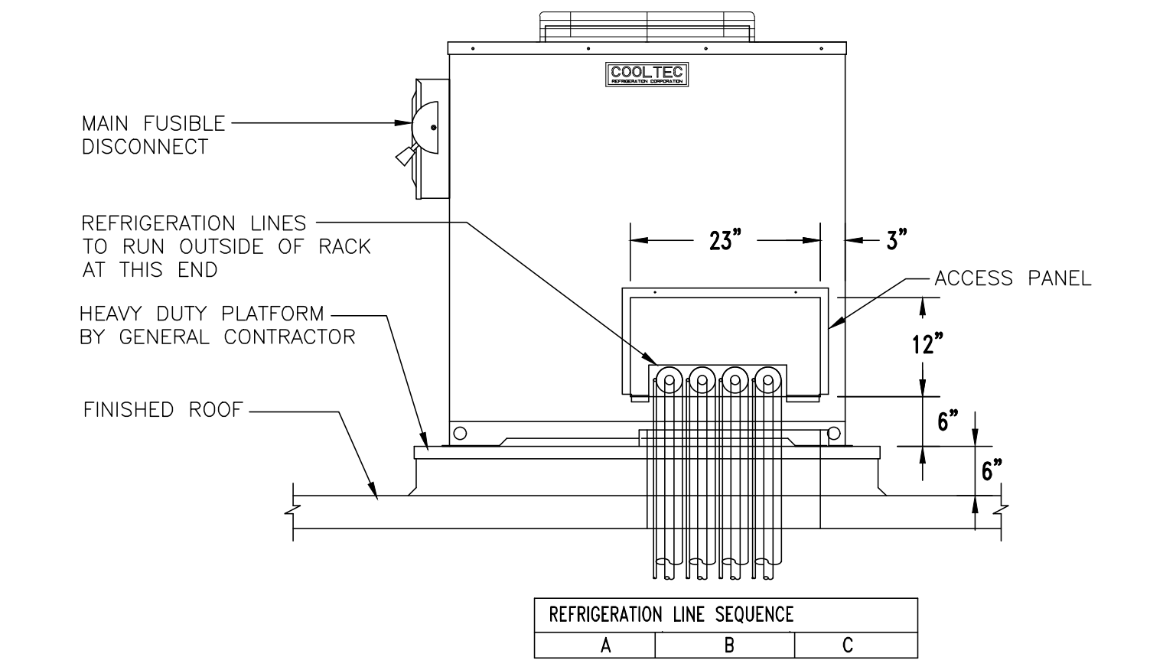
E / R-1 PLATFORM DETAIL



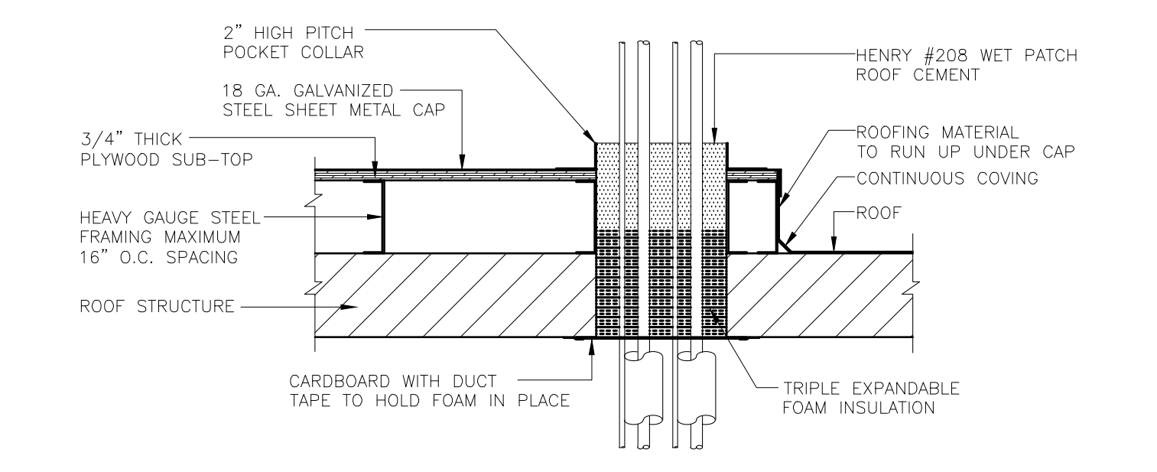
B / R-1 ELECTRICAL CONTROL PANEL



F / R-1 RAIN TIGHT PITCH POCKET



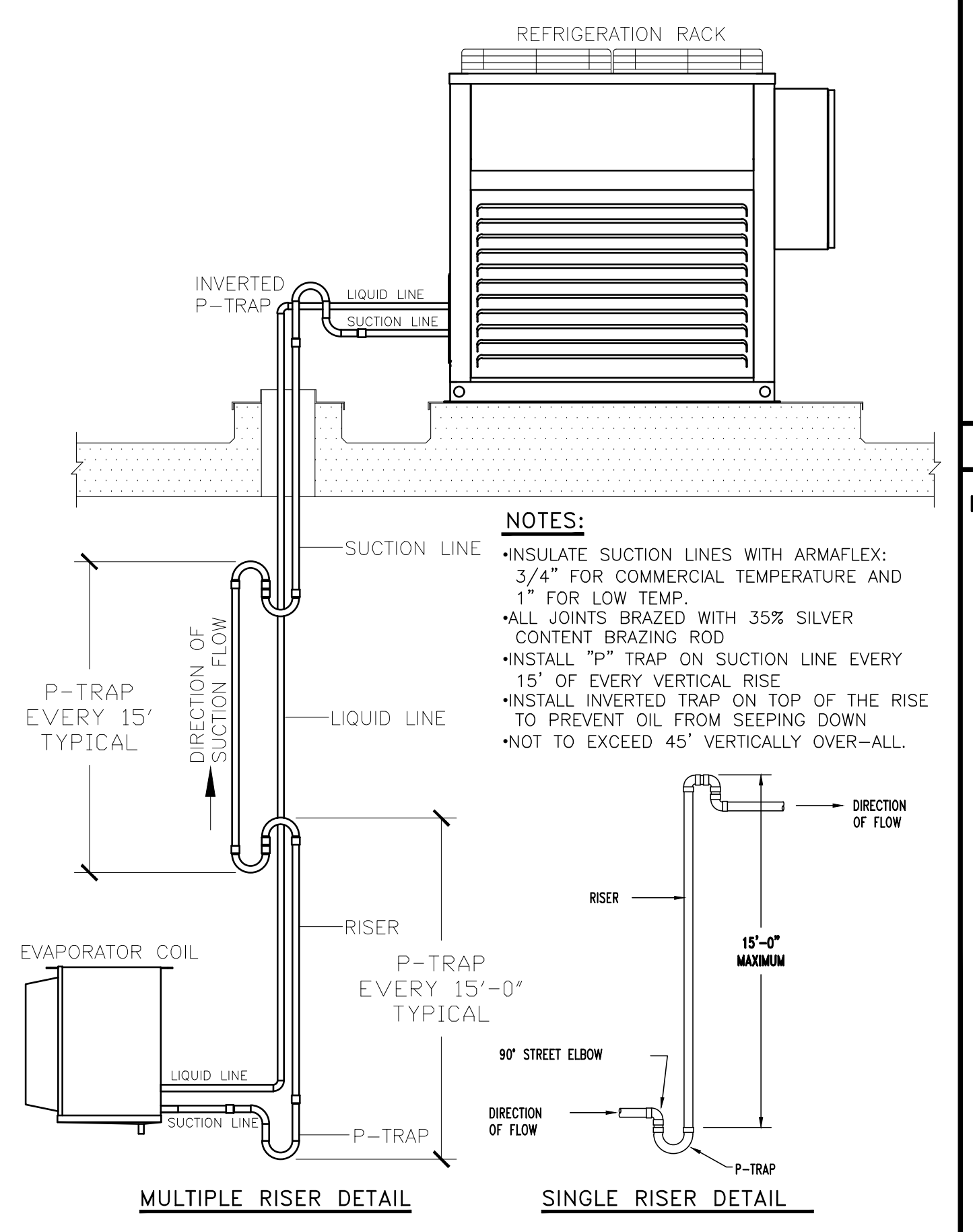
C / R-1 REFRIGERATION PIPING CONNECTION SEQUENCE



INSTRUCTIONS FOR REFRIGERATION CONTRACTOR

A. TAPE CARDBOARD AT THE BOTTOM OF EACH PITCH POCKET OPENING AS SHOWN.
B. AT THE TOP OF THE PITCH POCKET OPENING, FILL IN WITH TRIPLE EXPANDABLE FOAM INSULATION (DOW CHEMICAL "GREAT STUFF INSULATING FOAM), AND LET FOAM CURE FOR ONE HOUR.
C. APPLY HENRY #208 WET PATCH ROOF CEMENT IN BETWEEN REFRIGERATION PIPING, ELECTRICAL LINES, AND FOAM. LET CURE FOR FOUR HOURS. THIS SHOULD SEAL ALL PIPING AND LINES IN THE PITCH POCKET, TO PREVENT RAIN WATER FROM PENETRATING THROUGH.

D / R-1 RAIN TIGHT PITCH POCKET



NOTES:

- •INSULATE SUCTION LINES WITH ARMAFLEX: 3/4" FOR COMMERCIAL TEMPERATURE AND 1" FOR LOW TEMP.
- •ALL JOINTS BRAZED WITH 35% SILVER CONTENT BRAZING ROD
- •INSTALL "P" TRAP ON SUCTION LINE EVERY 15' OF EVERY VERTICAL RISE
- •INSTALL INVERTED TRAP ON TOP OF THE RISE TO PREVENT OIL FROM SEEPING DOWN
- •NOT TO EXCEED 45' VERTICALLY OVER-ALL.

G / R-1 P-TRAP DETAILS AND SUCTION LINE RISER

COOLTEC ENGINEERING SUMMARY

AMBIENT TEMPERATURE 95°F

POWER SUPPLY: 208V/3PH/60HZ **FUSE SIZE:** 50 AMP

CONNECTED LOAD= 38.0 AMP **MINIMUM AMPACITY=** 42.9 AMP

SYSTEM	ITEM #	FIXTURES DESCRIPTION	TEMP (F) FIXT.	TEMP (F) SST.	REFRIGERANT R-	REFRIGERANT LBS IN SYSTEM	COMPRESSORS MODEL	H.P.	RATING @ 60 Hz RLA	V	PH	MBH. (95°F)	DEFROST	UNIT COOLER ITEM #	QUANTITY	MODEL	RATING @ 60 Hz 1 ø FAN RLA	V	HEATER FLA	V	PH	SYSTEM TOTAL POWER 208V, 60 Hz AMPS	PH	LINE SIZE (O.D.) AND RUN ROUTE	SUCTION	LIQUID	LINE RUN LENGTH (FEET)	DISCH.	DRAIN	ACCESSORIES (SEE SUPPLY CODE *) HEAD PRESSURE CONTROL	CRANK CASE HEATER	FAN CYCLE SWITCH	SUCTION ACCUMULATOR	THERMOSTAT	SOLENOID VALVE	THERMOSTATIC EXPANSION VALVE	TIME CLOCK
		CONDENSER FAN MOTORS 2						3/4	5.1	208	1											10.2	1														
A	103	WALK-IN FREEZER	-10	-20	448A	28	ZF18K4E-TF5	6.0	19.6	208	3	21.6										19.6	3	M	1/8	1/2	100			F	F		F				
													D	105	1	BEL0100BS6EEA	1.0	208	9.1	208	1			B	7/8	3/8								F	F	F	KE2LOW
													D	105	1	BEL0100BS6EEA	1.0	208	9.1	208	1			B	7/8	3/8								F	F	F	KE2LOW
B	103	WALK-IN COOLER	35	25	448A	16	ZB07KAE-PFV	3/4	5.6	208	1	9.32	D	106	1	BEL0095AS6AMA	1.8	115				5.6	1	S	7/8	3/8	100			F	F			F	F	F	KE2MED
C	103	WALK-IN COOLER	35	25	448A	16	ZS13KAE-TF5	1.5	8.7	208	3	15.5	D	107	1	BEL0115AS6AMA	1.8	115				8.7	3	S	7/8	3/8	100			F	F			F	F	F	KE2MED

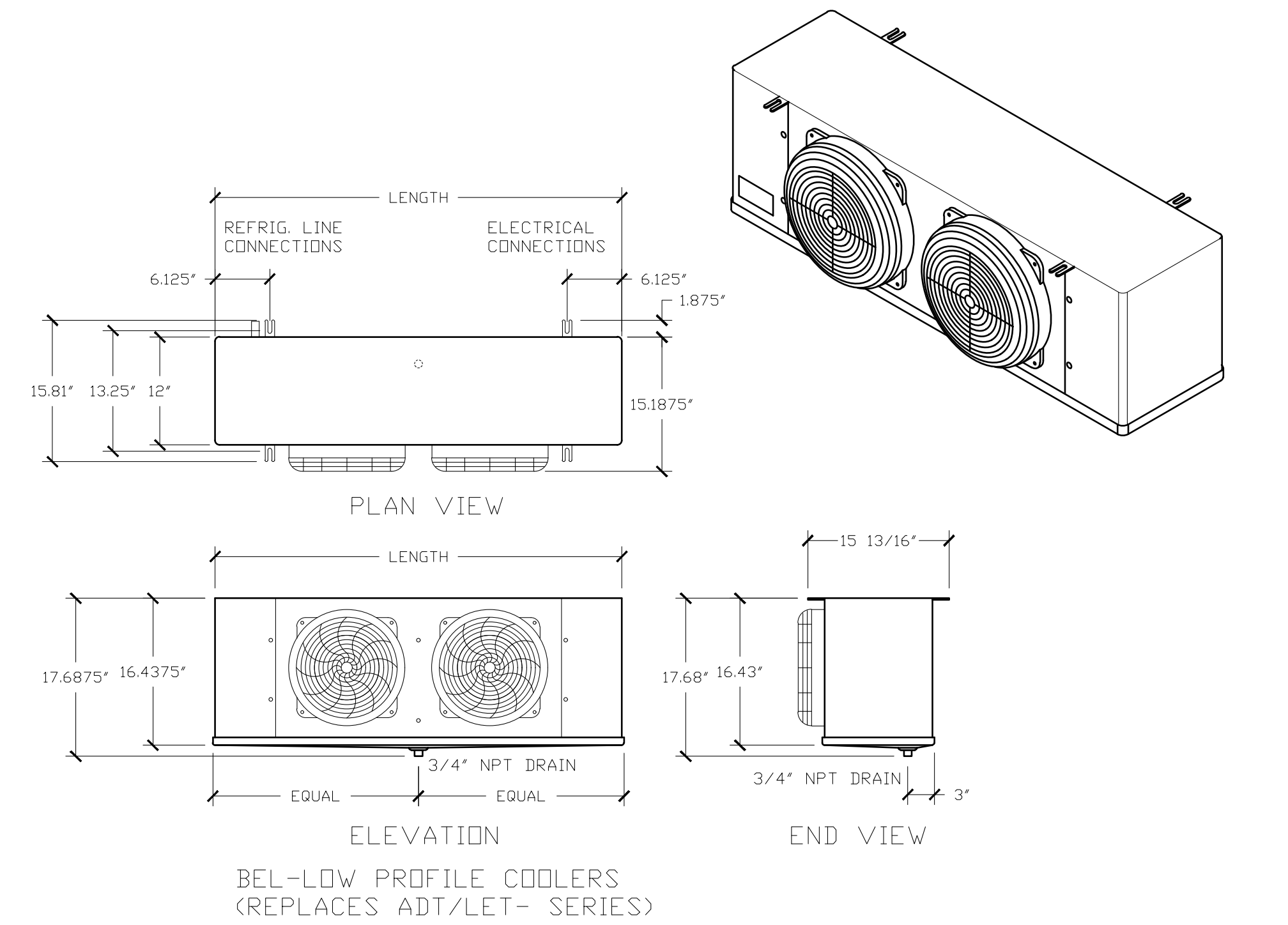
c UL US LISTED
CONDENSING UNIT
33SZ FILE SA32027

E ELECTRIC (TIMED)
G GRAVITY (TIMED)
H HOT GAS (TIMED)
O OFF CYCLE (TEMP.)
D DEMAND DEFROST (KE2)

B BRANCH
M MAIN
S SINGLE

* SUPPLY CODES:
F – FACTORY INSTALLED
L – LOOSE (FIELD INSTALLED)
M – MANUFACTURER EQUIPPED
R – REFRIGERATION CONTRACTOR

NOTE:
- – ALL SYSTEMS ENGINEERED WITH R-448A REFRIGERANT. ANY BASES/COILS NOT SUPPLIED BY COOLTEC MUST BE EQUIPPED WITH R-448A EXPANSION VALVES.
- – REFRIGERATION PIPE SIZES ARE BASED ON A MAXIMUM LINE RUN UP TO 100 EQUIVALENT FEET FOR LIQUID AND SUCTION LINES. VERIFY LINE LENGTHS WITH JOB SITE CONDITIONS AND LINE ROUTING AT INDIVIDUAL INSTALLATIONS. IF LINE RUNS ARE GREATER THAN 100 FEET, PLEASE CONTACT COOLTEC FACTORY.
- – "COMPRESSOR MOTOR PROTECTED UNDER PRIMARY SINGLE PHASE PROTECTION"
- – EFFECTIVE JANUARY 1. 2009, ALL WALK-IN COOLER AND FREEZER EVAPORATIVE COILS INSTALLED IN THE U.S.A. SHALL BE SUPPLIED WITH ENERGY EFFICIENT (EC) MOTORS BASED ON THE FEDERAL ENERGY INDEPENDENCE AND SECURITY ACT (HR-6).
- – CONDENSERS ARE ELECTRO-FIN COATED AGAINST SALT AIR CONTAMINATION AND TO MINIMIZE RUST CORROSION.
- – REFRIGERATION CONTRACTOR IS RESPONSIBLE FOR LOCATION AND INSTALLATION OF EVAPORATIVE COILS IN REFRIGERATED AREAS.
- – ELECTRICAL CONTRACTOR TO SUPPLY POWER FROM BUILDING AND CONNECT POWER TO WALK-IN EVAPORATIVE COIL'S DEMAND DEFROST CONTROL AND TO COIL'S DRAIN HEATER.



SYSTEM	UNIT MODEL No.	CAPACITY BTU	LENGTH	FANS QTY.	CFM	EC MOTOR 115/1/60	EC MOTOR 208/1/60	ELEC DEFROST 208-1-60	CONNECTIONS (In.) COIL INLET OD	SUCTION ID	EQUALIZER OD	DRAIN MPT	APPROX. SHIP WT. (Lbs.)
A	BEL0100BS6EMA	9900	45-1/2"	2	1281	--	1.0	9.1	1/2"	7/8"	1/4"	3/4"	59
B	BEL0095AS6AMA	10000	45-1/2"	2	1305	1.8	--	--	1/2"	5/8"	1/4"	3/4"	51
C	BEL0115AS6AMA	14500	45-1/2"	2	1220	1.8	--	--	1/2"	7/8"	1/4"	3/4"	56

J / R-1 UNIT COOLER DETAIL

ELECTRICAL CONTRACTOR TO SUPPLY POWER FROM BUILDING AND CONNECT POWER TO WALK-IN EVAPORATIVE COIL'S DEMAND DEFROST CONTROL AND TO COIL'S DRAIN HEATER.

SYSTEM	UNIT COOLER ITEM #	DESCRIPTION	DEFROST	QUANTITY	MODEL	POWER FROM BUILDING BY ELECTRICAL CONTRACTOR EVAP COIL RLA	EVAP COIL VOLTAGE	DRAIN HEATER RLA	DRAIN HEATER VOLTAGE	TOTAL CONNECTED LOAD RLA	TOTAL CONNECTED LOAD VOLTAGE
A	103	WALK-IN FREEZER	D	1	BEL0100BS6EEA	9.1	208/1	5.0	208/1	14.1	208/1
				1	BEL0100BS6EEA	9.1	208/1	5.0	208/1	14.1	208/1
B	103	WALK-IN COOLER	D	1	BEL0095AS6AMA	1.8	115/1	--	---	1.8	115/1
C	103	WALK-IN COOLER	D	1	BEL0115AS6AMA	1.8	115/1	--	---	1.8	115/1

NOTE: PROVIDE SEPARATE POWER SOURCE FOR EACH EVAPORATOR. POWER FROM BUILDING.

SPECIFICATION

ITEM NO. 104 REMOTE REFRIGERATION PACKAGE

THE REFRIGERATION PACKAGE SHALL BE PRE-ENGINEERED AND FACTORY ASSEMBLED UNIT, TRADE NAME "REFRIG-O-PAK", AS MANUFACTURED BY COOLTEC REFRIGERATION CORP., 1250 E. FRANKLIN AVE., POMONA, CA 91766. PHONE: (909) 865-2229, FAX: (909) 868-0777. E-MAIL ADDRESS: sales@cooltecrefrigeration.com

CONTRACTOR SHALL FURNISH AND INSTALL, WHERE SHOWN ON PLANS, (1) COOLTEC U.L. APPROVED "REFRIG-O-PAK" AIR COOLED REMOTE REFRIGERATION PACKAGE, MODEL CRS-6, WITH CONTROL PANEL, **208 VOLTS, 3 PHASE, 60 HERTZ.** REFRIGERATION SYSTEM SHALL BE HOUSED IN A WEATHER PROTECTED ENCLOSURE. THE FRAME, ENCLOSURE, AND PANELS SHALL BE FABRICATED OF GALVANIZED STEEL. THE ENTIRE FRAME SHALL BE PRE-ASSEMBLED, WELDED, CLEANED, AND PRIMED AND POWDER COATED EPOXY ENAMEL AND BAKED. CONDENSER FAN MOTORS SHALL BE MOUNTED ON THE TOP OF THE ENCLOSURE FOR BETTER HEAT DISCHARGE.

1. REFRIGERATION UNITS
   - A. AIR-COOLED CONDENSING UNITS SHALL BE HERMATIC/GLACIER SCROLL TYPE (COPELAND). EACH UNIT SHALL BE EQUIPPED WITH HIGH-LOW PRESSURE CONTROL, LIQUID LINE DRIER, SIGHT GLASS, HEAD PRESSURE CONTROL, TIME CLOCKS AND PUMP DOWN SOLENOIDS.
   - B. ALL COMPRESSOR UNITS SHALL BE NEW FACTORY ASSEMBLED TO OPERATE WITH THE REFRIGERANT SPECIFIED IN THE ENGINEERING SUMMARY SHEET. REFRIGERANT R-448A SHALL BE USED ON ALL COMMERCIAL TEMPERATURE UNITS AND LOW TEMPERATURE UNITS.
   - C. THE CONDENSER SHALL BE SECTIONAL, REMOVABLE, WITH RIFLED TUBE SLOTTED FINNED, AND SHALL BE DESIGNED FOR 20°FTD. THE CONDENSER SHALL BE ELECTRO-FIN COATED AGAINST SALT AIR CONTAMINATION AND CORROSION.
2. PRE-PIPING
   - A. ALL REFRIGERANT LINES SHALL BE EXTENDED TO ONE SIDE OF THE PACKAGE IN A NEAT AND ORDERLY MANNER. SUCTION LINES MUST BE INSULATED WITH ARMAFLEX (1" THICK FOR LOW TEMP, 3/4" THICK FOR MEDIUM TEMP).
   - B. ALL TUBING SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS.
   - C. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
   - D. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 200 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAKED TESTED WITH ALL VALVES OPENED.
3. CONTROL PANEL
   - A. THE PACKAGE SHALL HAVE A FACTORY MOUNTED AND PRE-WIRED CONTROL PANEL COMPLETE WITH MAIN FUSED DISCONNECT. COMPRESSOR CIRCUIT BREAKERS, FUSES, CONTACTORS AND THE TIME CLOCKS WIRED FOR SINGLE POINT CONNECTION.
   - B. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MAIN POWER LINES TO PANEL, ALL IN ACCORDANCE WITH THE WIRING DIAGRAM AND PER LOCAL CODES.
4. SAFETY CAUTION
   - A. EACH SYSTEM AND EVAPORATOR IS SHIPPED UNDER NITROGEN PRESSURE. USE CAUTION AND EXERCISE SAFETY AT ALL TIMES WHEN PREPARING FOR FINAL HOOK-UP.
5. EVAPORATIVE COIL
   - A. EVAPORATIVE COILS SHALL BE DIRECT EXPANSION TYPE, FABRICATED OF COPPER TUBES WITH ALUMINUM FINS. ALL EVAPORATIVE COILS SHALL BE PROVIDED WITH SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE, AND ELECTRONIC THERMOSTAT, PIPED AND WIRED TO THE JUNCTION BOX FOR POSITIVE PUMP DOWN.
   - B. EVAPORATIVE COILS SHALL BE EQUIPPED WITH TWO SPEED, ENERGY SAVING "EC" MOTORS (DOE COMPLIANT).
   - C. REFRIGERATION CONTRACTOR IS RESPONSIBLE FOR LOCATION AND INSTALLATION OF EVAPORATIVE COILS INSIDE WALK-IN'S, COLD ROOMS AND REFRIGERATED DISPLAYS (COILS SUPPLIED BY COOLTEC ONLY).

CONSTRUCTION NOTES FOR TRADES

1. GENERAL CONTRACTOR
   - A. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES.
   - B. GENERAL CONTRACTOR TO VERIFY AND CO-ORDINATE LOCATION OF REFRIGERATION RACK WITH REFRIGERATION CONTRACTOR TO SATISFY LOCAL CODE REQUIREMENTS AND MAINTENANCE OF THE RACK.
   - C. GENERAL CONTRACTOR TO VERIFY REFRIGERATION LINE RUNS THRU TO ROOF OR MULTI-STORY BUILDING PRIOR TO CONSTRUCTION WITH REFRIGERATION CONTRACTOR FOR ACCESSIBILITY.
   - D. GENERAL CONTRACTOR TO VERIFY ACCESS OF CRANE OR MECHANICAL LIFT WITH REFRIGERATION CONTRACTOR PRIOR TO CONSTRUCTION (IF REQUIRED).
   - E. GENERAL CONTRACTOR SHALL PREPARE AND WEATHER PROOF THE PLATFORM AND CURBED OPENINGS FOR REFRIGERATION PIPING AND ELECTRICAL CONDUIT. ROOF PAD TO BE CONSTRUCTED OF HEAVY DUTY STEEL FRAMING, AND THE FINISHED HEIGHT DICTATED PER LOCAL CODES.
   - F. PROVIDE SHEET METAL CAP WITH 2" HIGH PITCH POCKET COLLAR AND WATER TIGHT SOLDERED JOINTS.
   - G. GENERAL CONTRACTOR TO ALLOW 3'-0" (36") OF CLEAR SPACE AROUND ROOF PAD FOR MAINTENANCE.
   - H. ALL CORE DRILLING REQUIRED FOR REMOTE REFRIGERATION PIPING WORK BY THE REFRIGERATION CONTRACTOR, IS IN THE GENERAL CONTRACTOR'S SCOOP OF WORK. COORDINATE EXACT LOCATION AND NUMBER OF PENETRATIONS WITH THE REFRIGERATION CONTRACTOR AND COMPLY WITH ALL LANDLORD REQUIREMENTS FOR X-RAY OF SLAB PRIOR TO WORK.
   - I. ANY ATTACHMENT TO BUILDING STRUCTURE FOR LOAD BEARING WEIGHT TO BE PROVIDED AND CO-ORDINATED BY GENERAL CONTRACTOR.
   - J. GENERAL CONTRACTOR TO BACKFILL ALL PITCH POCKETS TO TOP WITH TAR OR PITCH AFTER REFRIGERATION AND ELECTRICAL LINES HAVE BEEN RUN.
2. REFRIGERATION CONTRACTOR
   - A. REFRIGERATION CONTRACTOR SHALL RUN ALL REFRIGERATION LINES WHICH EXTEND DOWN THRU WALL(S) BEFORE WALL(S) ARE CLOSED UP WHEN CONDUIT IS NOT PROVIDED.
   - B. REFRIGERATION CONTRACTOR TO SEAL BOTH ENDS OF CONDUIT WITH FOMOFIL AFTER ALL LINES HAVE BEEN RUN. IF PULL BOX(ES) ARE SPECIFIED, THEY MUST BE A MINIMUM 12"x 12".
   - C. REFRIGERATION CONTRACTOR SHALL INSULATE ALL REFRIGERATION SUCTION LINES.
   - D. REFRIGERATION CONTRACTOR SHALL VERIFY LOCATION AND INSTALL BLOWER COIL(S) AND COMPRESSOR(S) FOR ALL REFRIGERATED AREAS.
   - E. REFRIGERATION CONTRACTOR SHALL VERIFY LOCATION OF PITCH POCKET(S) FOR REFRIGERATION LINE PENETRATION THRU ROOF WITH GENERAL CONTRACTOR. GENERAL CONTRACTOR TO INSTALL ALL PITCH POCKETS.
   - F. CONTRACTOR SHALL USE ONLY CLEAN DEHYDRATED, SEALED REFRIGERATION GRADE A.C.R. COPPER TUBING. USE ONLY LONG RADIUS ELBOWS TO REDUCE FLOW RESISTANCE AND LINE BREAKAGE.
   - G. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED ON ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE. USE MINIMUM 35% SILVER SOLDER FOR DISSIMILAR METALS.
   - H. ALL PIPING MUST BE SUPPORTED WITH HANGERS THAT CAN WITHSTAND THE COMBINED WEIGHT OF TUBING, INSULATION, VALVES, AND FLUID IN THE TUBING.
   - I. USE NITROGEN IN THE COPPER TUBING DURING BRAZING TO PREVENT FORMATION OF COPPER OXIDES. LIQUID AND SUCTION LINES MUST BE FREE TO EXPAND INDEPENDENTLY OF EACH OTHER. DO NOT EXCEED 100 FEET WITHOUT A CHANGE IN DIRECTION OR AN OFFSET. PLAN PROPER PITCHING, EXPANSION ALLOWANCE, AND P-TRAPS AT THE BASE OF ALL SUCTION RISERS AND AT EVERY 15 FEET OF EVERY VERTICAL RISE. INSTALL SERVICE VALVES AT SEVERAL LOCATIONS FOR EASE OF MAINTENANCE. THESE VALVES MUST BE APPROVED FOR 450 PSI WORKING PRESSURE.
   - J. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 200 PSI WITH ALL VALVES OPEN AND HELD FOR 12 HOURS. ELECTRONIC LEAK DETECTORS SHALL BE USED TO LOCATE ALL LEAKS.
   - K. COMPLETE SYSTEM SHALL BE EVACUATED TO 500 MICRONS WITH VACUUM PUMP BEFORE CHARGING THE SYSTEM.
   - L. ONCE SYSTEM IS CHARGED AND RUNNING, ADJUST ALL CONTROLS ______ INCLUDING PRESSURE CONTROLS, EXPANSION VALVES, THERMOSTATS, AND TIME CLOCKS. RETURN AFTER 24 HOURS TO VERIFY PROPER OPERATION OF SYSTEMS.
   - M. REFRIGERATION CONTRACTOR TO PROVIDE AND INSTALL DRAIN LINE HEATER WITH INSULATION IN FREEZER TO BE CONNECTED BY ELECTRICAL CONTRACTOR.
   - N. REFRIGERANT SUCTION LINES OUTSIDE OF REFRIGERATED COMPARTMENTS, NOT RUN IN CONDUIT, SHALL BE INSULATED BACK TO COMPRESSOR WITH ARMSTRONG ARMA-FLEX AP-25/50 FOAMED PLASTIC INSULATION OR EQUAL IN ACCORD WITH DIRECTION OF THE MANUFACTURER. MINIMUM THICKNESS SHALL BE 3/4 INCH FOR COMMERCIAL TEMPERATURE AND 1.0 INCH FOR LOW TEMPERATURE.
   - O. FILL ROOF REFRIGERATION AND ELECTRICAL PITCH POCKETS WITH FOAM AND SEALANT.
   - P. REFRIGERATION CONTRACTOR TO SEAL ALL REFRIGERATION LINE PENETRATIONS MADE THRU WALK-IN COOLERS/FREEZERS, AND REFRIGERATED BASE SECTIONS OF COUNTERS.
3. ELECTRICAL CONTRACTOR
   - A. ELECTRICAL CONTRACTOR TO PROVIDE MAIN POWER FOR THE REFRIGERATION PACKAGE AND CONNECT CONTROL AND DEFROST SYSTEMS AT THE COIL.
   - B. ELECTRICAL CONTRACTOR TO PROVIDE POWER FOR MEDIUM AND LOW TEMPERATURE EVAPORATOR COILS. POWER FROM BUILDING. PROVIDE SEPARATE POWER SOURCE FOR EACH EVAPORATOR.
   - C. ELECTRICAL CONTRACTOR TO CONNECT DRAIN-LINE HEATER IN THE FREEZER.
   - D. ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE ACCORDANCE WITH THE WIRING DIAGRAM AND PER LOCAL CODES.
   - E. IF CONTRACTED, ELECTRICAL CONTRACTOR TO INSTALL ALL CONDUITS FOR REFRIGERATION LINES IN WALLS, PRIOR TO WALLS ARE CLOSED UP. ALL PULL BOXES MUST BE A MINIMUM OF 12"x 12".
4. PLUMBING CONTRACTOR
   - A. PLUMBING CONTRACTOR TO PROVIDE TYPE "M" COPPER DRAIN LINES FOR WALK-IN REFRIGERATOR AND FREEZER, PITCHED 1/2 INCH PER FOOT OF RUN. IN FREEZER, HEATED DRAIN LINE MUST BE INSULATED TO PREVENT FREEZING. TRAP DRAIN LINES OUTSIDE OF REFRIGERATED SPACE TO AVOID ENTRANCE OF WARM AND MOIST AIR.
   - B. CONTRACTOR TO PROVIDE INDIVIDUAL DRAIN LINE FOR EACH EVAPORATOR UNLESS OTHERWISE CALLED FOR IN THE PLANS.
   - C. ALL PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES.

REV LEVEL	DESCRIPTION	DATE
A	--	--

DRAWING APPROVAL
"PRODUCTION LEAD TIME:
4-6 WEEKS AFTER RECEIPT
OF APPROVED DRAWINGS AND
PURCHASE ORDER.
SEND APPROVED DRAWING TO
"KATHERINE SANCHEZ"
APPROVED BY:__________
DATE:__________

COOLTEC
REFRIGERATION CORP.
1250 E. FRANKLIN AVENUE, POMONA, CA 91766
PHONE: (909) 865-2229 FAX: (909) 868-0777
E-MAIL: sales@cooltecrefrigeration.com

DRAWING TITLE:
REFRIGERATION PLAN
PROJECT NAME:
TROY HIGH SCHOOL
TROY, MICHIGAN

DRAWN BY
APO
CHECKED BY
PAUL BEDI
DATE
10/16/2024
LATEST REVISION
DRAWING NO.
CTR3563
SHEET
R-1
1 OF 2 SHEETS

ARCHITECTURE

T M P A R C H I T E C T U R E I N C
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE
Food Service Equipment
Refrigeration Rack

KEY PLAN

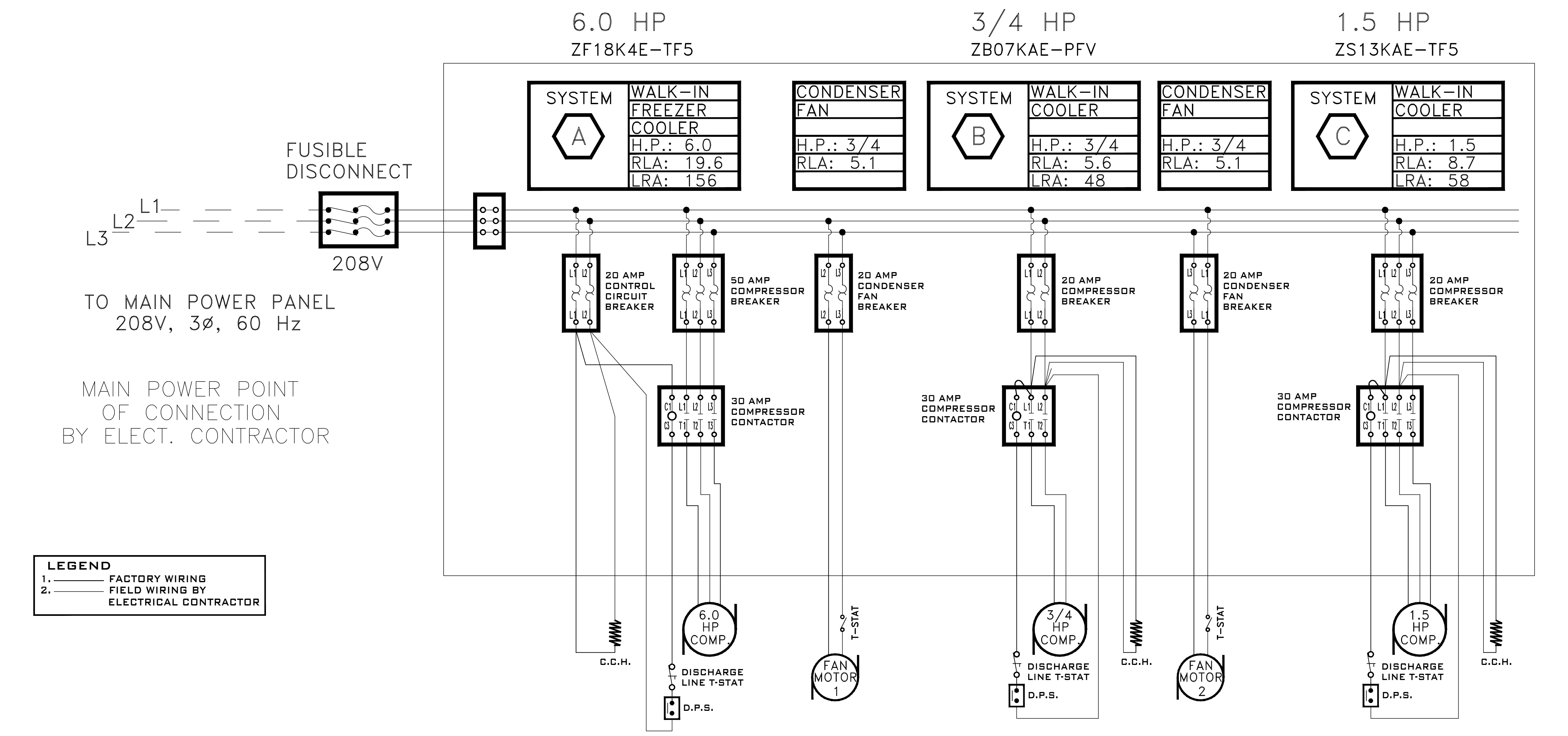
ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.
22104G

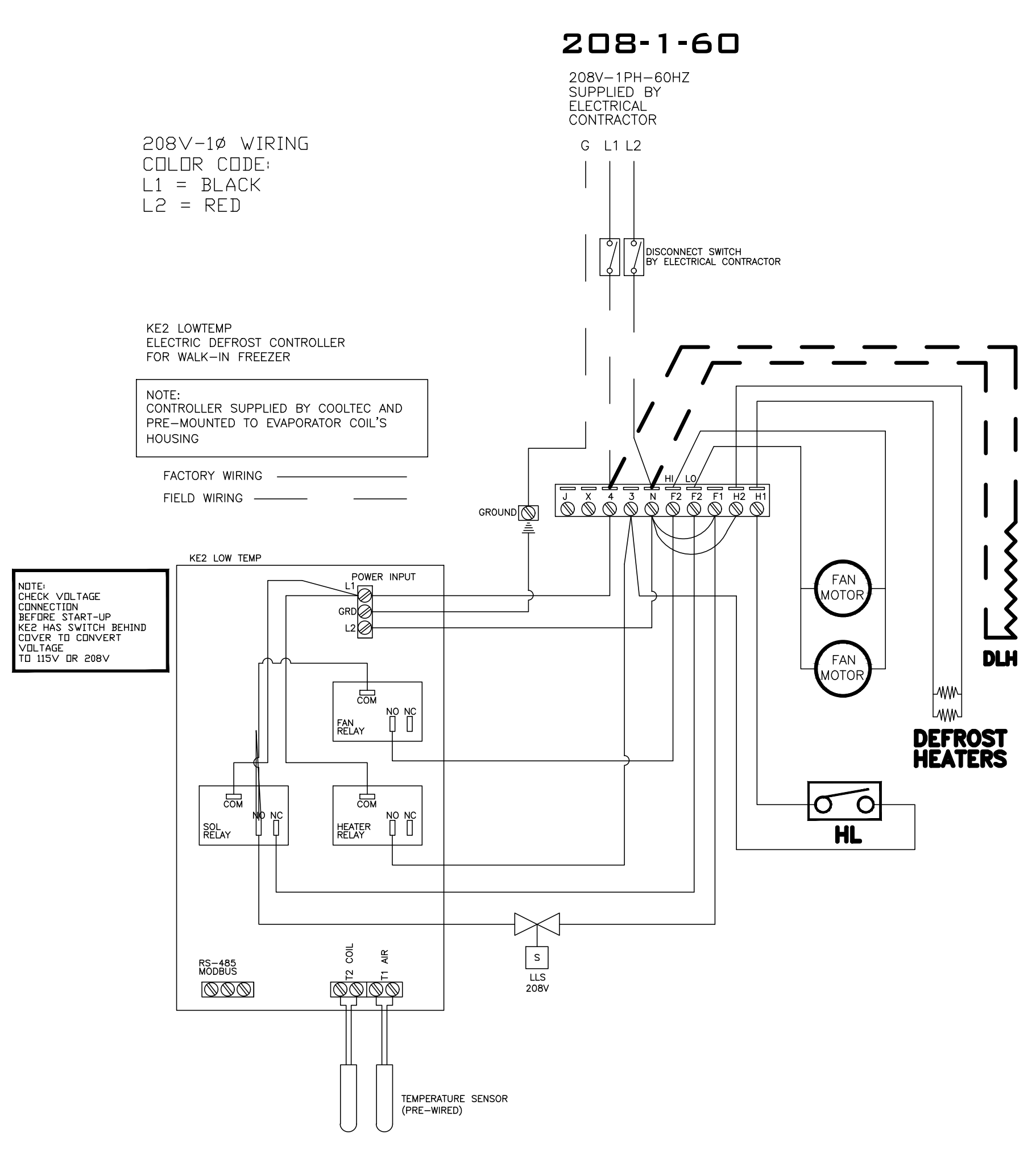
DRAWING NO.
FSE.6



A / R-2 WIRING DIAGRAM

ELECTRICAL CONTRACTOR TO SUPPLY POWER FROM BUILDING AND CONNECT POWER TO WALK-IN FREEZER EVAPORATIVE COIL'S DEMAND DEFROST CONTROL AND TO COIL'S DRAIN HEATER.

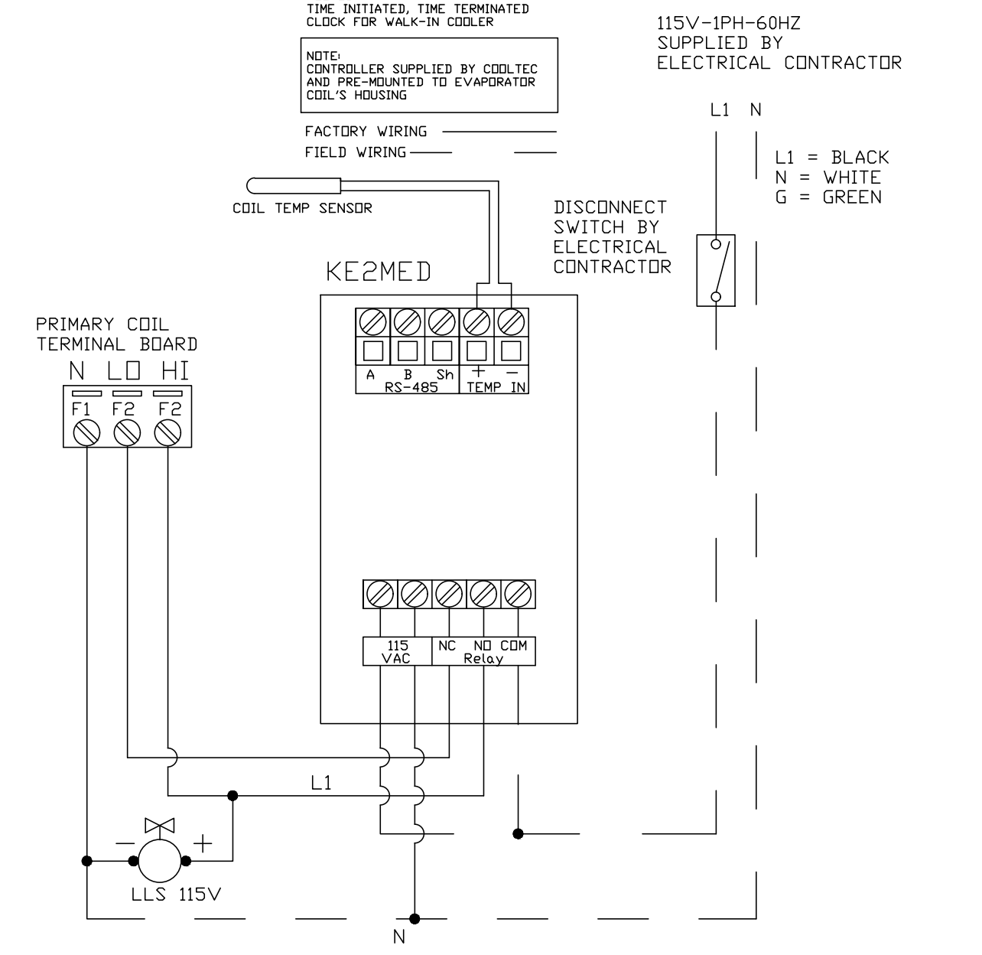
SYSTEM	DEFROST	UNIT COOLER							
		ITEM #	DESCRIPTION	QUANTITY	MODEL	POWER FROM BUILDING			
						EVAP. COIL		DRAIN HEATER	
						RLA	VOLTAGE	RLA	VOLTAGE
A	D	103	WALK-IN FREEZER	1	BEL0100BS6EEA	9.1	208/1	5.0	208/1



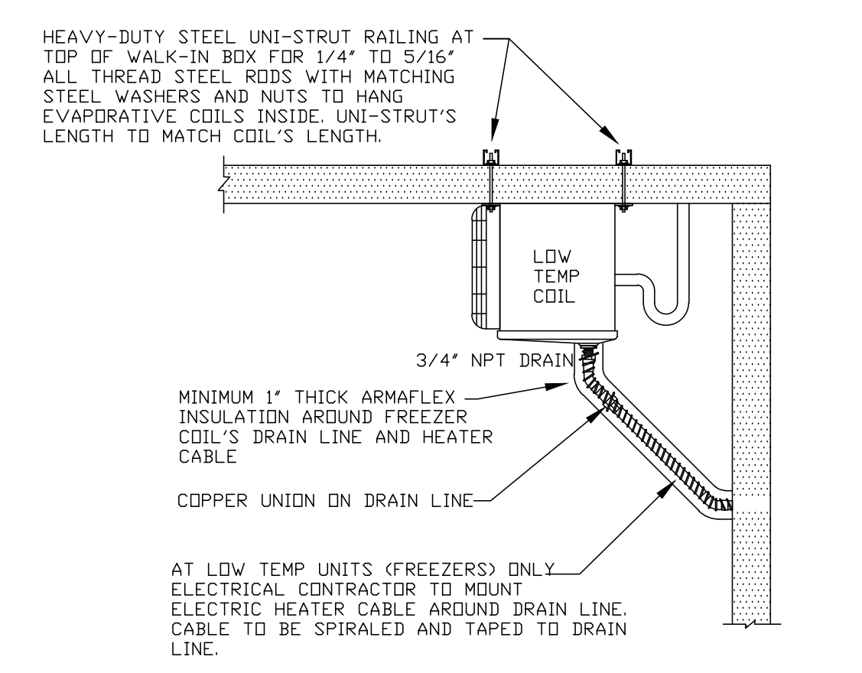
B / R-2 DEMAND DEFROST- KE2 LOW TEMP WIRING DIAGRAM FOR FREEZER COIL

ELECTRICAL CONTRACTOR TO SUPPLY POWER FROM BUILDING AND CONNECT POWER TO WALK-IN EVAPORATIVE COIL'S DEMAND DEFROST CONTROL.

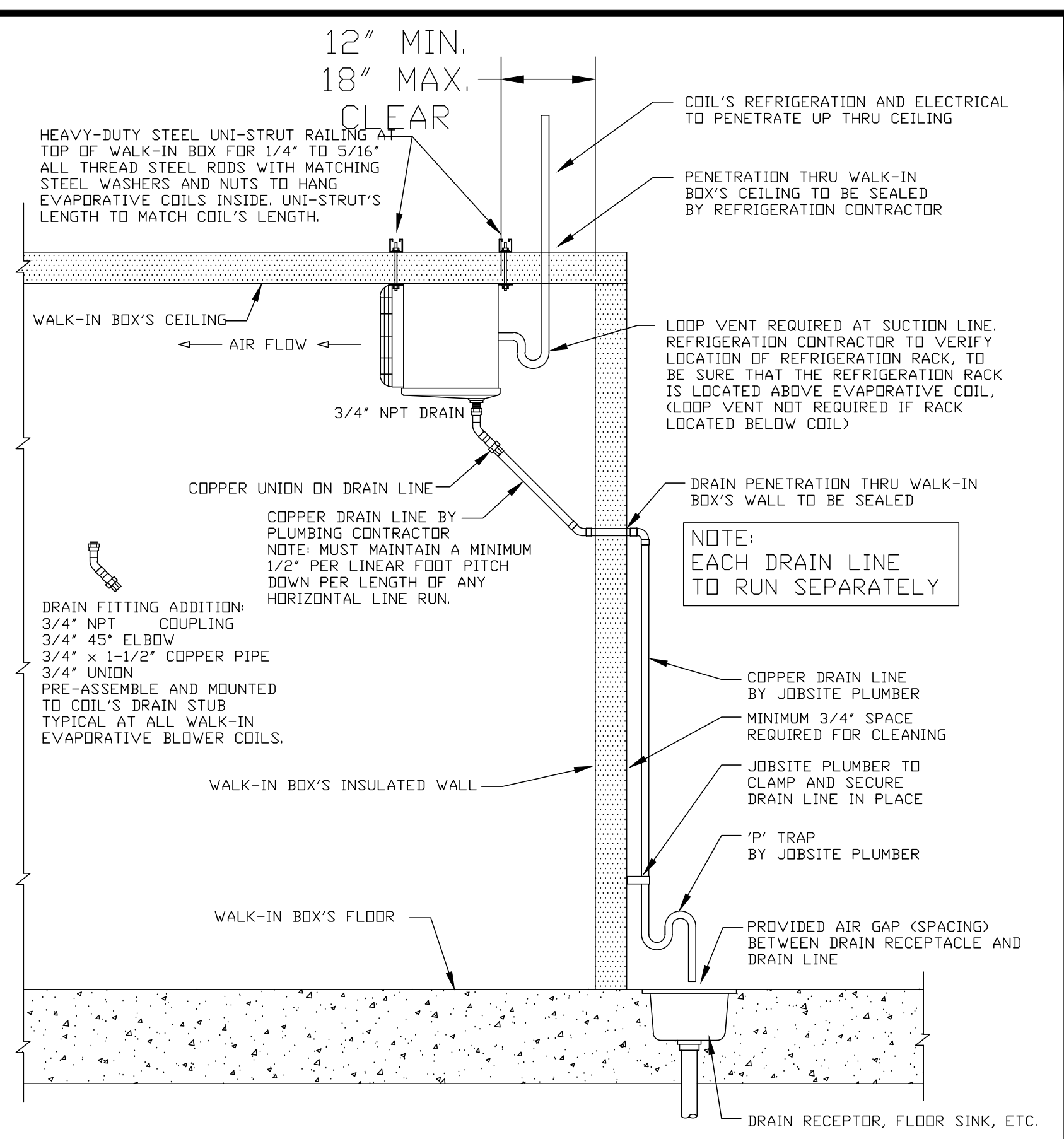
SYSTEM	DEFROST	UNIT COOLER					
		ITEM #	DESCRIPTION	QUANTITY	MODEL	POWER FROM BUILDING	
						RLA	VOLTAGE
B	D	103	WALK-IN COOLER	1	BEL0095AS6AMA	1.8	115/1
C	D	103	WALK-IN COOLER	1	BEL0115AS6AMA	1.8	115/1



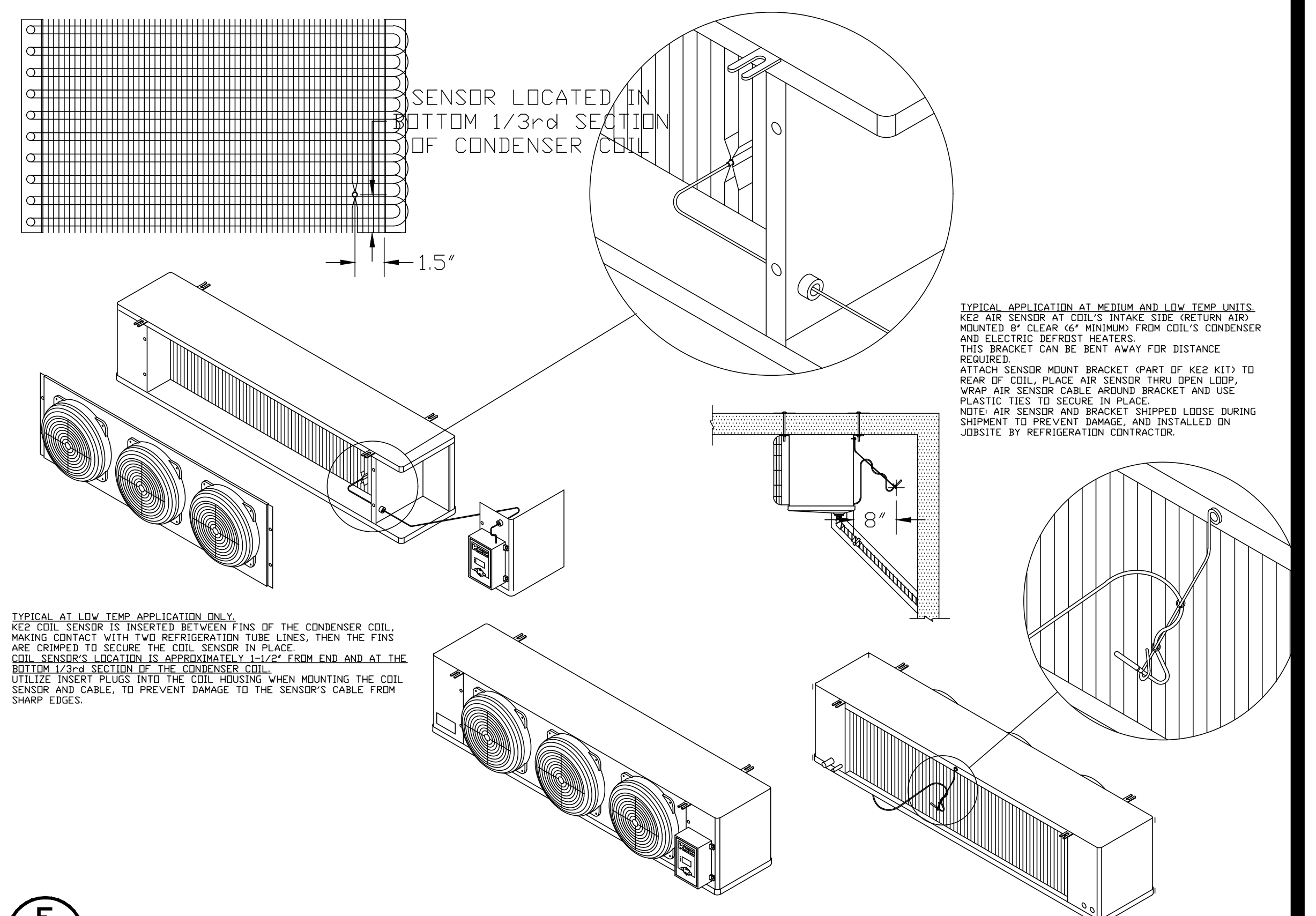
C / R-2 DEMAND DEFROST- KE2 MED. TEMP WIRING DIAGRAM FOR COOLER COIL



D / R-2 WALK-IN'S FREEZER CONDENSATE DRAIN LINE



E / R-2 WALK-IN'S COIL MOUNT AND CONDENSATE DRAIN LINE



TYPICAL AT LOW TEMP APPLICATION ONLY.
KE2 COIL SENSOR IS INSERTED BETWEEN FINS OF THE CONDENSER COIL, MAKING CONTACT WITH TWO REFRIGERATION TUBE LINES, THEN THE FINS ARE CRIMPED TO SECURE THE COIL SENSOR IN PLACE.
COIL SENSOR'S LOCATION IS APPROXIMATELY 1-1/2" FROM END AND AT THE BOTTOM 1/3rd SECTION OF THE CONDENSER COIL.
UTILIZE INSERT PLUGS INTO THE COIL HOUSING WHEN MOUNTING THE COIL SENSOR AND CABLE, TO PREVENT DAMAGE TO THE SENSOR'S CABLE FROM SHARP EDGES.

TYPICAL APPLICATION AT MEDIUM AND LOW TEMP UNITS.
KE2 AIR SENSOR AT COIL'S INTAKE SIDE (RETURN AIR) MOUNTED 8" CLEAR (6" MINIMUM) FROM COIL'S CONDENSER AND ELECTRIC DEFROST HEATERS.
THIS BRACKET CAN BE BENT AWAY FOR DISTANCE REQUIRED.
ATTACH SENSOR MOUNT BRACKET (PART OF KE2 KIT) TO REAR OF COIL, PLACE AIR SENSOR THRU OPEN LOOP, WRAP AIR SENSOR CABLE AROUND BRACKET AND USE PLASTIC TIES TO SECURE IN PLACE.
NOTE: AIR SENSOR AND BRACKET SHIPPED LOOSE DURING SHIPMENT TO PREVENT DAMAGE, AND INSTALLED ON JOBSITE BY REFRIGERATION CONTRACTOR.

F / R-2 KE2 SENSOR PROBE LOCATIONS

REV LEVEL	DESCRIPTION	DATE
A	–	–

DRAWING APPROVAL
"PRODUCTION LEAD TIME:
4-6 WEEKS AFTER RECEIPT
OF APPROVED DRAWINGS AND
PURCHASE ORDER.
SEND APPROVED DRAWING TO
"KATHERINE SANCHEZ"

APPROVED BY:____________
DATE:____________

COOLTEC
REFRIGERATION CORP.
1250 E. FRANKLIN AVENUE, POMONA, CA 91766
PHONE: (909) 865-2229 FAX: (909) 868-0777
E-MAIL: sales@cooltecrefrigeration.com

DRAWING TITLE:
REFRIGERATION PLAN
PROJECT NAME:
**TROY HIGH SCHOOL
TROY, MICHIGAN**

DRAWN BY
APO
CHECKED BY
PAUL BEDI
DATE
10/16/2024
LATEST REVISION
DRAWING NO.
CTR3563
SHEET
R-2
2 OF 2 SHEETS

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS · MICHIGAN · 48302
PH · 248.338.4561 FX · 248.338.0223
EM · INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PROJECT TITLE
Troy High School Servery Renovation

Troy School District
Troy, Michigan

DRAWING TITLE
Food Service Equipment
Refrigeration Rack

KEY PLAN

ISSUE DATES

DATE:	ISSUED FOR:
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
.	.
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN RSW
CHECKED ...
APPROVED

PROJECT NO.
22104G

DRAWING NO.
FSE.7

MECHANICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	COMPRESSED AIR
A(__#)	COMPRESSED AIR (SPECIFIC PSIG)
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AD	AREA DRAIN
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AMP	AMPERE
APD	AIR PRESSURE DROP
AR	ARGON
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
ATD	AIR TRANSFER DUCT
AUX	AUXILIARY
AV	ACID VENT
AVTR	ACID VENT THROUGH ROOF
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BCU	BLOWER COIL UNIT
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BVC	BEVERAGE CONDUIT
BWV	BACKWATER VALVE
C	COMMON
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CATCH BASIN
CC	COOLING COIL
CD	COLD DECK
CD	CONDENSATE DRAIN
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	COOLING
CNDS	CONDENSATE
CNDS (__#)	CONDENSATE (SPECIFIC PSIG)
CO	CLEAN OUT
CO2	CARBON DIOXIDE
CONT	CONTINUATION OR CONTINUED
CONTR	CONTRACTOR
CONV	CONVECTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CIRCULATING PUMP
CRU	CONDENSATE RETURN UNIT
CSS	CLINICAL SERVICE SINK
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CW	DOMESTIC COLD WATER
CWF	DOMESTIC COLD WATER - FILTERED
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D&T	DRIP AND TRAP
DA	DISCHARGE AIR
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DMPR	DAMPER
D/N	DAY/NIGHT
DN	DOWN
DNZ	DOWNSPOUT NOZZLE
DS	DUCT SILENCER
DT	DRAIN TILE
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
DWG	DRAWING
(E)	EXISTING
E	EXHAUST GRILLE OR REGISTER
EA	EACH
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EXPANSION COMPENSATOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ECUH	ELECTRIC CABINET UNIT HEATER
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATIO
EES	EMERGENCY EYE WASH / SHOWER
EEW	EMERGENCY EYE WASH
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ERL	ENERGY RECOVERY LOOP
ERLR	ENERGY RECOVERY LOOP RETURN
ERLS	ENERGY RECOVERY LOOP SUPPLY
ERU	ENERGY RECOVERY UNIT
ESH	EMERGENCY SHOWER
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FIRE PROTECTION
°F	DEGREES FAHRENHEIT
F&B	FACE AND BYPASS
F&T	FLOAT AND THERMOSTATIC
FA	FACE AREA
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FLOW METER
FMS	FLOW MEASURING STATION
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FP	FIRE PUMP
FPTU	FAN POWERED (AIR) TERMINAL UNIT
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FT	FEET
FTR	FINNED TUBE RADIATION
FV	FACE VELOCITY
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GRH	GRAVITY RELIEF HOOD
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSAN	GREASE SANITARY WASTE
H	HYDROGEN
HB	HOSE BIBB
HC	HEATING COIL
HD	HOT DECK
HEPA	HIGH EFFICIENCY PARTICULATE ARRESTANCE
HL	HIGH LIMIT
HOA	HAND/OFF/AUTO
HP	HEAT PUMP
HP	HORSEPOWER
HPCW	HIGH PRESSURE DOMESTIC COLD WATER
HPHW	HIGH PRESSURE DOMESTIC HOT WATER
HPHWR	HIGH PRESSURE DOMESTIC HOT WATER RETURN
HPL	HEAT PUMP LOOP
HPLR	HEAT PUMP LOOP RETURN
HPLS	HEAT PUMP LOOP SUPPLY
HR	HOUR
HTG	HEATING
HV	HEATING VENTILATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HWH	HOT WATER HEATING
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HW	DOMESTIC HOT WATER
HW(__)	DOMESTIC HOT WATER (SPECIFIC TEMP °F)
HWR	DOMESTIC HOT WATER RETURN
HX	HEAT EXCHANGER
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IH	INTAKE HOOD
IN	INCHES
IR	INFRARED HEATER
IW	INDIRECT WASTE
JC	JANITOR'S CLOSET
JP	JOCKEY PUMP
KA	THOUSAND AMP
KW	KILOWATT
KWH	KILOWATT-HOUR
LAT	LEAVING AIR TEMPERATURE
LAB	LABORATORY
LAV	LAVATORY
LBS	POUNDS
LDB	LEAVING DRY BULB
LL	LOW LIMIT
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MEDICAL COMPRESSED AIR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIL	1/1000th INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MMBH	MILLION BRITISH THERMAL UNITS PER HOUR
MOP	MAXIMUM OVERCURRENT PROTECTION
M/S	MOTOR STARTER
MTD	MOUNTED
MTR	MOTOR
MV	MANUAL AIR VENT
MVAC	MEDICAL VACUUM
N	NITROGEN
N2O	NITROUS OXIDE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIMED CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOTC	NORMALLY OPEN TIMED CLOSED
NOTO	NORMALLY OPEN TIMED OPEN
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPCW	NON POTABLE COLD WATER
O	OXYGEN
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OB	OUTLET BOX
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER/CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD
ORC	OVERFLOW RAIN CONDUCTOR
ORD	OVERFLOW ROOF DRAIN
OS&Y	OUTSIDE SCREW AND YOKE
OV	OUTLET VELOCITY
OWS	OPERATOR WORKSTATION
PACU	PACKAGED AIR CONDITIONING UNIT
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PCW	PROCESS COOLING WATER
PCWR	PROCESS COOLING WATER RETURN
PCWS	PROCESS COOLING WATER SUPPLY
PD	PRESSURE DROP (FEET OF WATER)
PH	PERIMETER HEAT
PHR	PERIMETER HEAT RETURN
PHS	PERIMETER HEAT SUPPLY
PNL	PANEL
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSAN	PUMPED SANITARY
PST	PUMPED STORM
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PW	PURIFIED WATER
PWR	PURIFIED WATER RETURN
PWS	PURIFIED WATER SUPPLY
(R)	RELOCATED
R	RETURN GRILLE OR REGISTER
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RC	RAIN CONDUCTOR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REQD	REQUIRED
REF	ROOF EXHAUST FAN
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RLFA	RELIEF AIR
RPM	REVOLUTIONS PER MINUTE
RPDA	REDUCED PRESSURE BACKFLOW PREVENTION DETECTION ASSY
RPZA	REDUCED PRESSURE BACKFLOW PREVENTION ZONE ASSY
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
S	SUPPLY AIR DIFFUSER OR GRILLE
SA	SOUND ATTENUATOR
SA	SUPPLY AIR
SAN	SANITARY WASTE
SAT	SUPPLY AIR TEMPERATURE
SECT	SECTION
SCCR	SHORT CIRCUIT CURRENT RATING
SF	SUPPLY FAN
SH	SHOWER
SK	SINK
SMR	SNOW MELT RETURN
SMS	SNOW MELT SUPPLY
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQFT	SQUARE FOOT/SQUARE FEET
S/S	START/STOP
SS	SERVICE SINK
ST	STORM
STD	STANDARD
STK	STACK
STM	STEAM
STM(__#)	STEAM (SPECIFIC PSIG)
S/W	SUMMER/WINTER
SW	SWITCH
T	TRANSFER GRILLE
TC	TEMPERATURE CONTROL
TC	TEMPERING COIL
TCP	TEMPERATURE CONTROL PANEL
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TEMP	TEMPORARY
TH	TERMINAL HEATING
THA	TOTAL HEAT ABSORBED
THR	TERMINAL HEATING RETURN
THR	TOTAL HEAT REJECTED
THS	TERMINAL HEATING SUPPLY
TK	TANK
TMR	TIMER SWITCH
TPD	TEPID WATER
TSP	TOTAL STATIC PRESSURE
TU	(AIR) TERMINAL UNIT
TV	TURNING VANES
TW	TEMPERED WATER
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UR	URINAL
UV	UNIT VENTILATOR
V	VALVE
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VOL	VOLUME
VFC	VARIABLE FREQUENCY CONTROLLER
VTR	VENT THROUGH ROOF
VTU	VENTURI TERMINAL UNIT
VUV	VERTICAL UNIT VENTILATOR
W	WASTE
W&V	WASTE AND VENT
WAGD	WASTE ANESTHETIC GAS DISPOSAL
WB	WET BULB
WC	WATER CLOSET
WC	WATER COLUMN
WG	WATER GAUGE
WH	WALL HYDRANT
WMSD	WASHING MACHINE SUPPLY AND DRAIN BOX
WPD	WATER PRESSURE DROP
WT	WEIGHT
XFMR	TRANSFORMER
ZVB	ZONE VALVE BOX

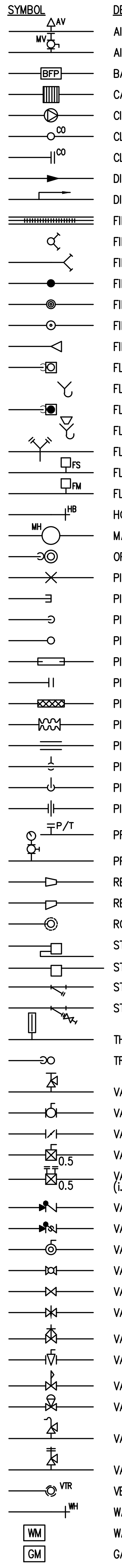
TEMPERATURE CONTROL - PARTIAL SYMBOLS LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CO2	CARBON DIOXIDE SENSOR	OS	OCCUPANCY SENSOR
CO	CARBON MONOXIDE SENSOR	PT	PRESSURE TRANSMITTER
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	SP	STATIC PRESSURE SENSOR OR PROBE
FM	FLOW METER		VALVE - 2 WAY CONTROL VALVE
	GUARD FOR STAT OR SENSOR		VALVE - 3 WAY CONTROL VALVE
H	HUMIDISTAT OR HUMIDITY SENSOR (AS DEFINED ON TC DRAWINGS)	T	THERMOSTAT OR TEMPERATURE SENSOR (AS DEFINED ON TC DRAWINGS)

NOTE: LIST OF ADDITIONAL SYMBOLS & ABBREVIATIONS ASSOCIATED WITH TEMPERATURE CONTROLS ARE IDENTIFIED ON TC DRAWINGS.

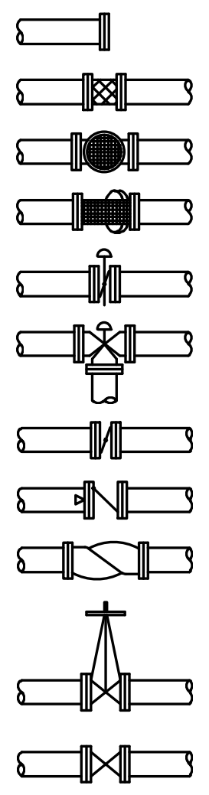
MECHANICAL SYMBOL LIST

PIPING SYMBOLS



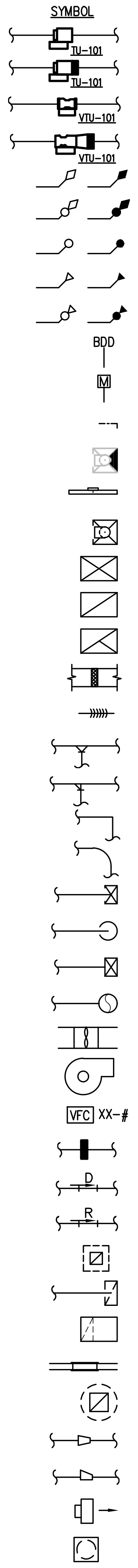
SYMBOL	DESCRIPTION
AV	AIR VENT - AUTOMATIC
MV	AIR VENT - MANUAL
BFP	BACKFLOW PREVENTER
	CATCH BASIN
	CIRCULATING PUMP
CO	CLEAN OUT - IN FLOOR
CO	CLEAN OUT - FLANGE
	DIRECTION OF FLOW
	DIRECTION OF PITCH - DOWN
	FINNED TUBE RADIATION
	FIRE PROTECTION - SIAMESE CONNECTION - FREE STANDING
	FIRE PROTECTION - SIAMESE CONNECTION - WALL MOUNTED
	FIRE PROTECTION - SPRINKLER HEAD, CONCEALED
	FIRE PROTECTION - SPRINKLER HEAD, PENDANT
	FIRE PROTECTION - SPRINKLER HEAD, UPRIGHT
	FIRE PROTECTION - SPRINKLER HEAD, SIDEWALL
	FLOOR DRAIN
	FLOOR DRAIN - ELEVATION
	FLOOR DRAIN - FUNNEL
	FLOOR DRAIN - FUNNEL, ELEVATION
	FLOW MEASURING DEVICE (FOR TEST AND BALANCING)
FS	FLOW SWITCH
FM	FLOW METER
HB	HOSE BIBB
MH	MANHOLE
	OPEN SITE DRAIN
	PIPE - ANCHOR
	PIPE - CAP OR PLUG
	PIPE - ELBOW DOWN
	PIPE - ELBOW UP
	PIPE - EXPANSION JOINT OR COMPENSATOR
	PIPE - FLANGE
	PIPE - HOSE AND BRAID FLEXIBLE CONNECTION
	PIPE - RUBBER FLEXIBLE CONNECTION
	PIPE - GUIDE
	PIPE - TEE DOWN
	PIPE - TEE UP
	PIPE - UNION
P/T	PRESSURE AND TEMPERATURE TEST PLUG
	PRESSURE GAUGE AND COCK
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	ROOF/OVERFLOW DRAIN
	STEAM TRAP - FLOAT AND THERMOSTATIC
	STEAM TRAP - BUCKET
	STRAINER
	STRAINER WITH VALVE AND BLOW-OFF
	THERMOMETER
	TRAP
	VALVE - ANGLE
	VALVE - BALL
	VALVE - BUTTERFLY
0.5	VALVE - BALANCE (i.e. BALANCE VALVE TO 0.5 GPM)
0.5	VALVE - COMBINATION BALANCE & FLOW MEASURING (i.e. BALANCE VALVE TO 0.5 GPM)
	VALVE - CHECK
	VALVE - SPRING CHECK
	VALVE - GAS (MANUAL)
	VALVE - GLOBE
	VALVE - ISOLATION
	VALVE - NEEDLE
	VALVE - OS&Y
	VALVE - PLUG
	VALVE - PRESSURE REGULATING
	VALVE - PRESSURE REDUCING
	VALVE - PRESSURE RELIEF
	VALVE - PRESSURE & TEMPERATURE RELIEF
VTR	VENT THROUGH ROOF
WH	WALL HYDRANT
WM	WATER METER
GM	GAS METER

DOUBLE LINE PIPING SYMBOLS



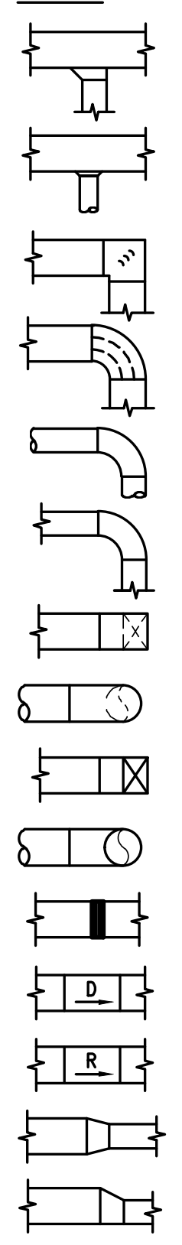
SYMBOL	DESCRIPTION
	FLANGE
	FLEX CONNECTION
	STRAINER - BASKET
	STRAINER - Y TYPE
	VALVE - 2 WAY CONTROL
	VALVE - 3 WAY CONTROL
	VALVE - BUTTERFLY
	VALVE - CHECK
	VALVE - DETECTOR CHECK
	VALVE - OS&Y HORIZONTAL STEM
	VALVE - OS&Y VERTICAL STEM

DUCTWORK SYMBOLS



SYMBOL	DESCRIPTION
TU-101	AIR TERMINAL UNIT
TU-101	AIR TERMINAL UNIT WITH HEATING COIL
VTU-101	VENTURI AIR TERMINAL UNIT
VTU-101	VENTURI AIR TERMINAL UNIT WITH HEATING COIL
	DAMPER - HORIZONTAL FIRE (EXISTING, NEW)
	DAMPER - HORIZONTAL FIRE / SMOKE (EXISTING, NEW)
	DAMPER - SMOKE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE / SMOKE (EXISTING, NEW)
BDD	DAMPER - BACK DRAFT
M	DAMPER - MOTORIZED
	DAMPER - VOLUME (MANUALLY ADJUSTABLE)
	DIFFUSER - BLANK OFF
	DIFFUSER - LINEAR SLOT
	DIFFUSER - SQUARE OR RECTANGULAR
	DUCT CROSS SECTION - SUPPLY
	DUCT CROSS SECTION - RETURN
	DUCT CROSS SECTION - EXHAUST
	DUCT - FLEXIBLE CONNECTION
	DUCT - FLEXIBLE DUCT
	DUCT TAKE-OFF - ROUND CONICAL
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR/ ROUND SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	FAN - AXIAL
	FAN - CENTRIFUGAL (ELEVATION)
VFC XX-#	VARIABLE FREQUENCY CONTROLLER SERVING EQUIPMENT XX-#
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	INTAKE OR RELIEF HOOD
	REGISTER - RETURN OR EXHAUST
	REGISTER - RETURN WITH BOOT
	REGISTER - TRANSFER GRILLE
	ROOF EXHAUST FAN
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC
	UNIT HEATER - HORIZONTAL THROW
	UNIT HEATER - VERTICAL THROW

DOUBLE LINE DUCTWORK SYMBOLS

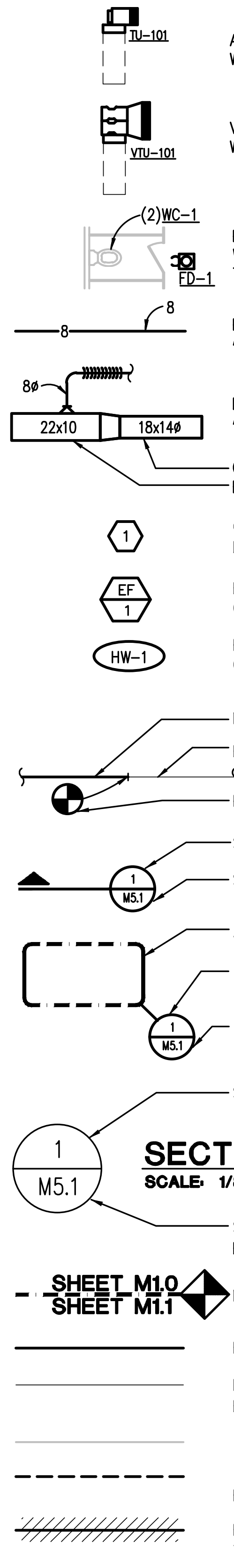


SYMBOL	DESCRIPTION
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	DUCT TAKE-OFF - ROUND CONICAL
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR SHORT RADIUS WITH SPLITTER VANES
	ELBOW - ROUND
	ELBOW - RECTANGULAR SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC

MECHANICAL DRAWING INDEX

SHEET NO.	SHEET TITLE
M0.1	MECHANICAL STANDARDS AND DRAWING INDEX
MD2.1E	FIRST LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'
MD2.2E	SECOND LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'
MD4.2E	SECOND LEVEL SHEET METAL DEMOLITION PLAN - ZONE 'E'
M2.1E	FIRST LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'
M2.2E	SECOND LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'
M4.2E	SECOND LEVEL SHEET METAL NEW WORK PLAN - ZONE 'E'
M6.1	MECHANICAL DETAILS
M7.1	MECHANICAL SCHEDULES

STANDARD METHODS OF NOTATION



S-1 10ø 350-4	SUPPLY DIFFUSER WITH SCHEDULE TAG "1", 10" DIAMETER NECK SIZE 350 CFM TYPICAL FOR 4
R-1 22x22 640-2	RETURN REGISTER WITH SCHEDULE TAG "1", 22"x 22" NECK SIZE 640 CFM TYPICAL FOR 2 EXHAUST REGISTER E DESIGNATION SIMILAR.

AIR TERMINAL UNIT WITH HEATING COIL NO. 101 WITH SERVICE CLEARANCE SHOWN

VENTURI AIR TERMINAL WITH HEATING COIL NO. 101 WITH SERVICE CLEARANCE SHOWN

PLUMBING FIXTURE UNIT IDENTIFICATION TAG
WATER CLOSET TYPE "1"
TYPICAL FOR 2

PIPE DIAMETER NOTATION
ALL SIZES IN INCHES

DUCT SIZE NOTATION
ALL SIZES IN INCHES

OVAL DUCT
RECTANGULAR DUCT

CONSTRUCTION KEY NOTE (NUMBER) OR DEMOLITION KEY NOTE (LETTER)

EQUIPMENT DESIGNATION,
(i.e. EXHAUST FAN NUMBER 1)

PIPING RISER DESIGNATION
(i.e. HOT WATER RISER NUMBER 1)

NEW SYSTEM COMPONENT
EXISTING SYSTEM COMPONENT TO REMAIN
POINT OF NEW CONNECTION SYMBOL

SECTION OR PLAN NUMBER
SHEET WHERE SECTION IS DRAWN

AREA OF ENLARGEMENT
PLAN NUMBER
SHEET WHERE ENLARGED PLAN IS DRAWN

SECTION OR PLAN NUMBER

SECTION OR ENLARGED PLAN
SCALE: 1/8" = 1' - 0"

SHEET WHERE SECTION IS CUT OR ENLARGED PLAN IS REFERENCED

MATCH LINE

HEAVY LINE WEIGHT INDICATES NEW WORK

LIGHT LINE WEIGHT INDICATES EXISTING EQUIPMENT OR REFERENCED INFORMATION

GRAY LINE INDICATES BACKGROUND INFORMATION

DASHED LINES INDICATE PIPING ROUTED BELOW SLAB OR GRADE

HATCH MARKS INDICATE EQUIPMENT OR MATERIALS TO BE DISCONNECTED AND REMOVED.

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

ARCHITECTURE
TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
MECHANICAL STANDARDS
AND DRAWING INDEX

ISSUE DATES

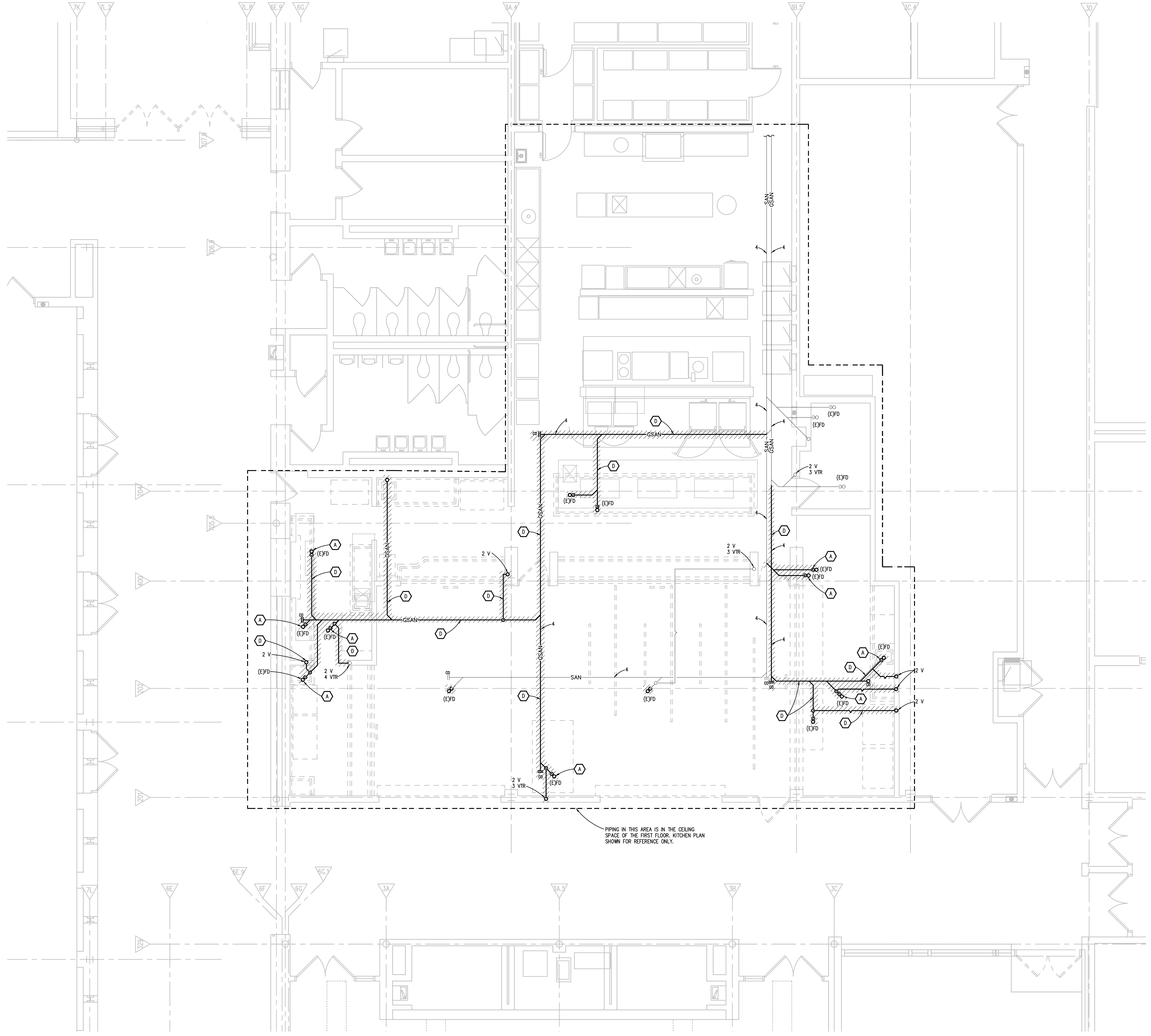
DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN WTF
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

DRAWING NO.
M0.1

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



PIPING IN THIS AREA IS IN THE CEILING SPACE OF THE FIRST FLOOR. KITCHEN PLAN SHOWN FOR REFERENCE ONLY.

FIRST LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'

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

MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

DEMOLITION KEY NOTES:

A. REMOVE EXISTING FLOOR DRAIN OR FLOOR SINK.

B. REMOVE AND REPLACE EXISTING FLOOR DRAIN OR FLOOR SINK. PREPARE EXISTING PIPING FOR RECONNECTION AFTER NEW FLOOR HAS BEEN PLACED.

C. REMOVE EXISTING PLUMBING FIXTURE. REMOVE PIPING BACK TO NEAREST BRANCH AND CAP UNLESS OTHERWISE NOTED ON PLANS.

D. REMOVE EXISTING PIPING.

E. ALTERNATE NO. 1: REMOVE EXISTING WATER FEED FOR EXISTING WATER COOLED EVAPORATOR. VALVE AND CAP PIPING BACK TO NEAREST MAIN.

TMP ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

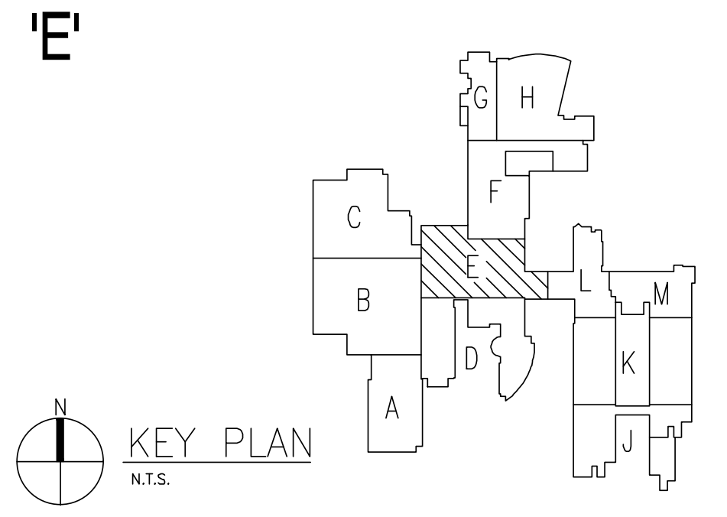
PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

FIRST LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'



KEY PLAN
N.T.S.

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN MEP
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

DRAWING NO.
MD2.1E

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

SECOND LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'

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

MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

⟨#⟩ DEMOLITION KEY NOTES:

A. REMOVE EXISTING FLOOR DRAIN OR FLOOR SINK.

B. REMOVE AND REPLACE EXISTING FLOOR DRAIN OR FLOOR SINK. PREPARE EXISTING PIPING FOR RECONNECTION AFTER NEW FLOOR HAS BEEN PLACED.

C. REMOVE EXISTING PLUMBING FIXTURE. REMOVE PIPING BACK TO NEAREST BRANCH AND CAP UNLESS OTHERWISE NOTED ON PLANS.

D. REMOVE EXISTING PIPING.

E. ALTERNATE NO. 1: REMOVE EXISTING WATER FEED FOR EXISTING WATER COOLED EVAPORATOR. VALVE AND CAP PIPING BACK TO NEAREST MAIN.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

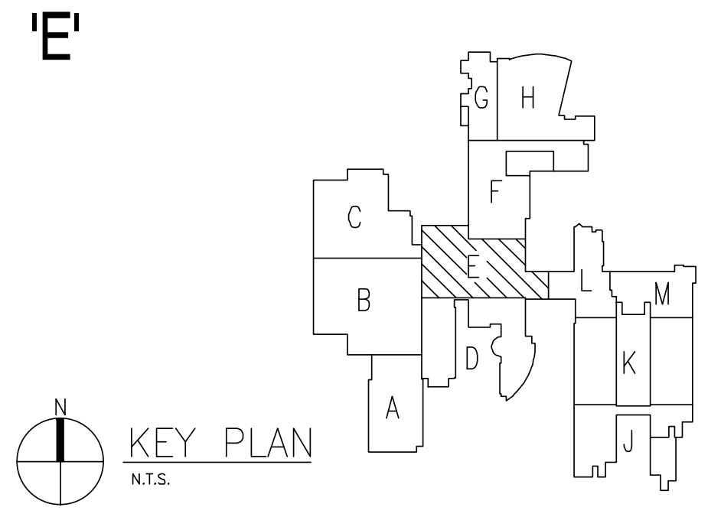
CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
SECOND LEVEL PLUMBING DEMOLITION PLAN - ZONE 'E'



ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

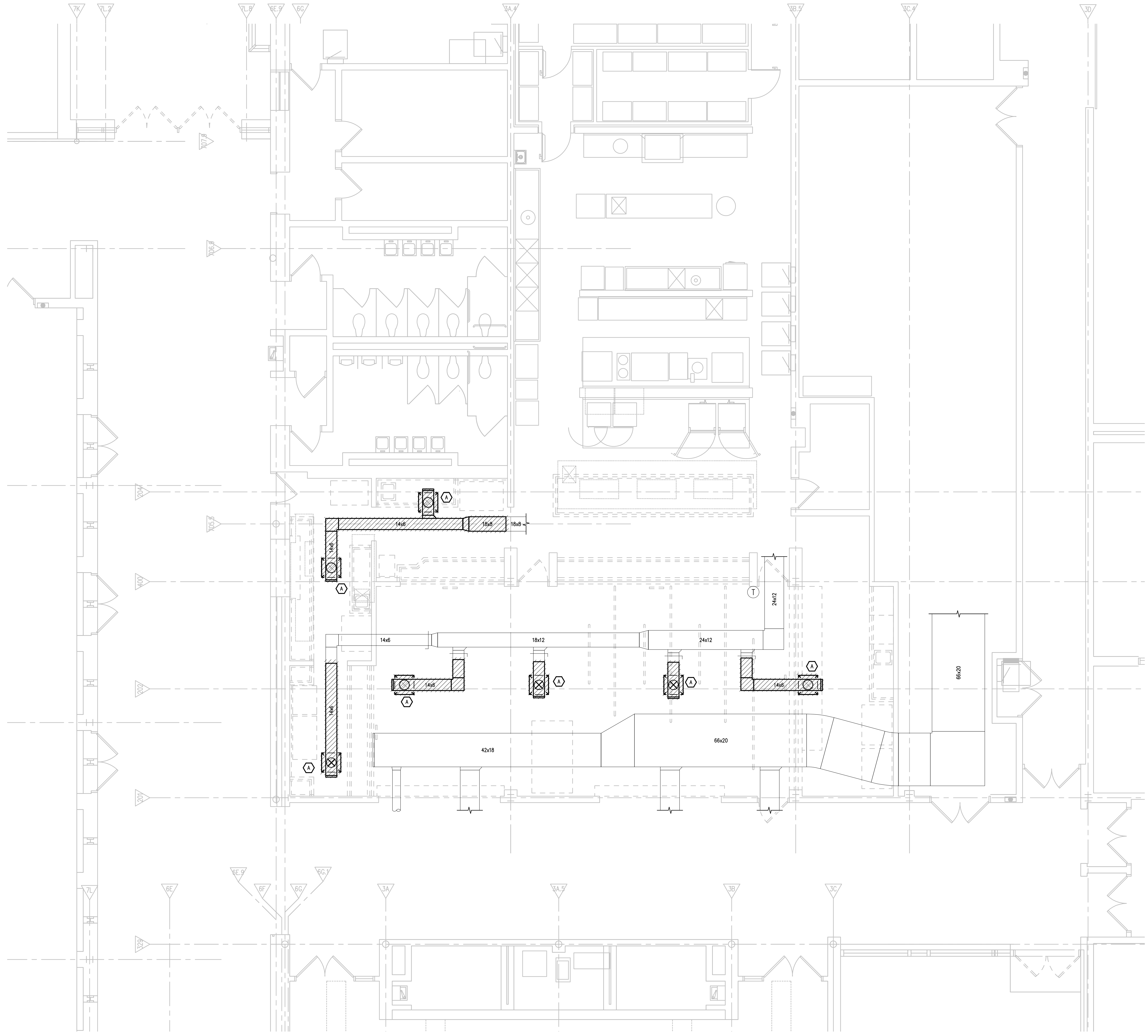
DRAWN MEP
CHECKED KLH
APPROVED SVM

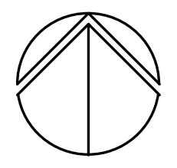
PROJECT NO.
22104G

DRAWING NO.
MD2.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-MD2-PL2.dwg, MD2.2E, 10/24/2024 9:54:21 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.





SECOND LEVEL SHEET METAL DEMOLITION PLAN - ZONE 'E'

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

MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

DEMOLITION KEY NOTES:

A. REMOVE EXISTING DIFFUSER AND ASSOCIATED DUCTWORK. CONTRACTOR TO PERFORM PRE-CONSTRUCTION AIRFLOW READINGS PRIOR TO DEMOLITION.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

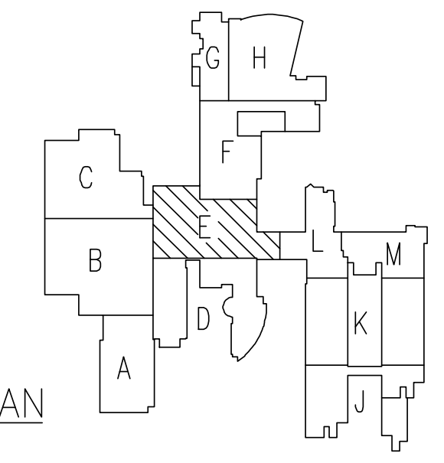
PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

SECOND LEVEL SHEET METAL DEMOLITION PLAN - ZONE 'E'



KEY PLAN
N.T.S.

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN WTF
CHECKED KLH
APPROVED SVM

PROJECT NO.

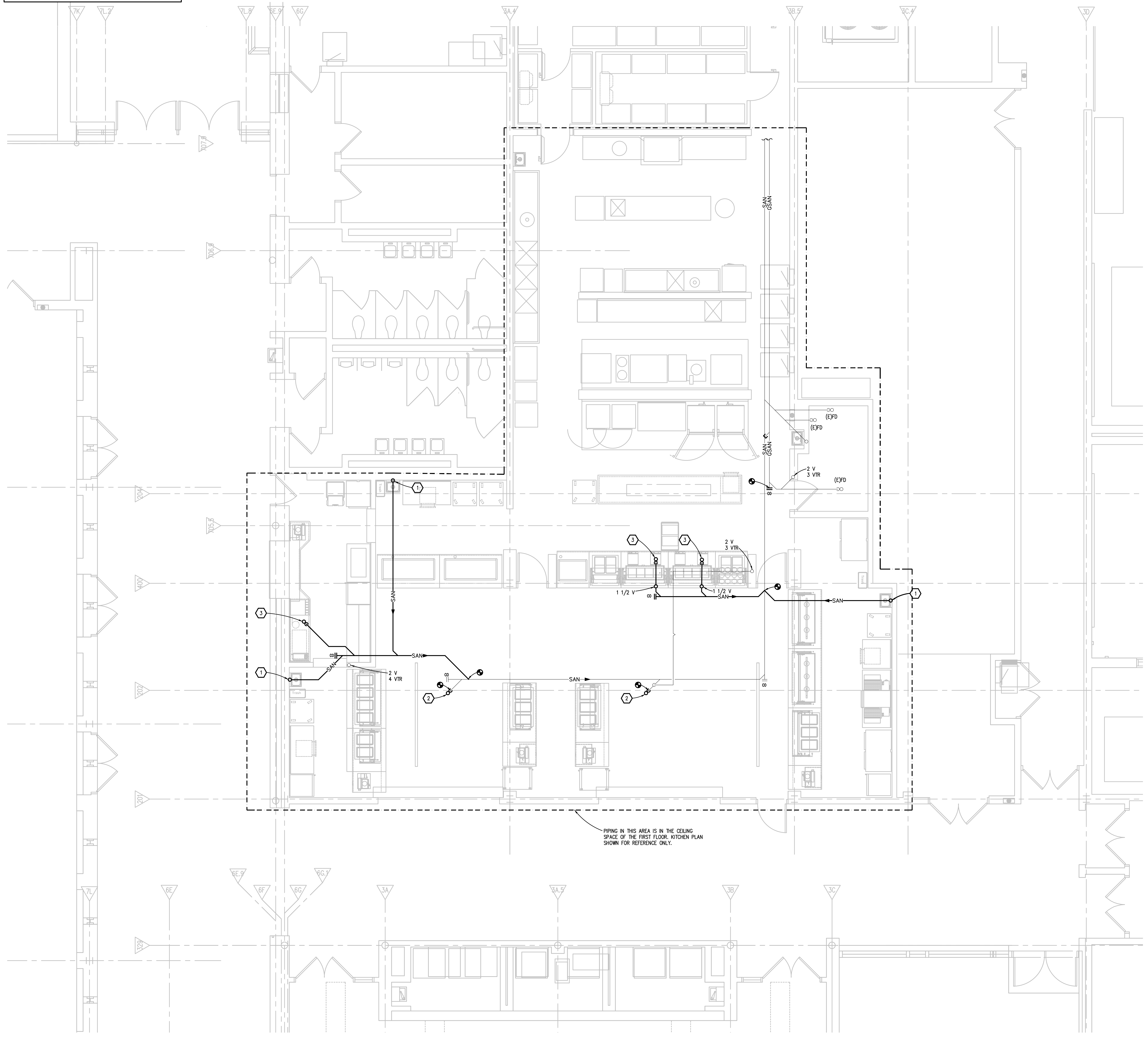
22104G

DRAWING NO.

MD4.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-MD4-SM2.dwg, MD4.2E, 10/24/2024 9:54:29 AM, Robert W. MacKinnon, None, 0.13459, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



PIPING IN THIS AREA IS IN THE CEILING SPACE OF THE FIRST FLOOR. KITCHEN PLAN SHOWN FOR REFERENCE ONLY.

FIRST LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'

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

PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 72", OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

CONSTRUCTION KEY NOTES:

1. 3 SAN TO SINK.
2. 3 SAN TO FLOOR DRAIN.
3. 3 SAN TO FLOOR SINK.
4. 1/2 CW TO AIRPOT COFFEE BREWER.
5. 1/2 CW TO FSE PROVIDE EQUIPMENT. ROUTE 3/4 IW FROM UNDER COUNTER BIB RACK AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK. SEE FOOD SERVICE DRAWINGS FOR FURTHER INFORMATION ON EQUIPMENT.
6. 3/4 HW, 3/4 CW AND 1 1/2 VENT TO FSE PROVIDED SINK.
7. ROUTE 3/4 IW FROM DROP IN COLD STATION AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK. SEE FOOD SERVICE DRAWINGS FOR FURTHER INFORMATION ON EQUIPMENT.
8. MODIFY SPRINKLER HEAD LAYOUT IN RENOVATED AREA AS REQUIRED TO PROVIDE A FULLY FUNCTIONING AUTOMATIC WET SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13, THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S INSURING AGENCY IN AREA INDICATED.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

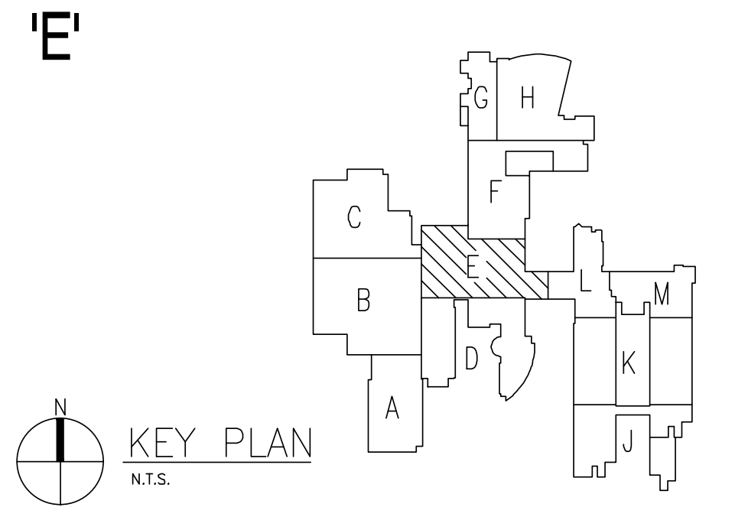
PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

FIRST LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'



ISSUE DATES

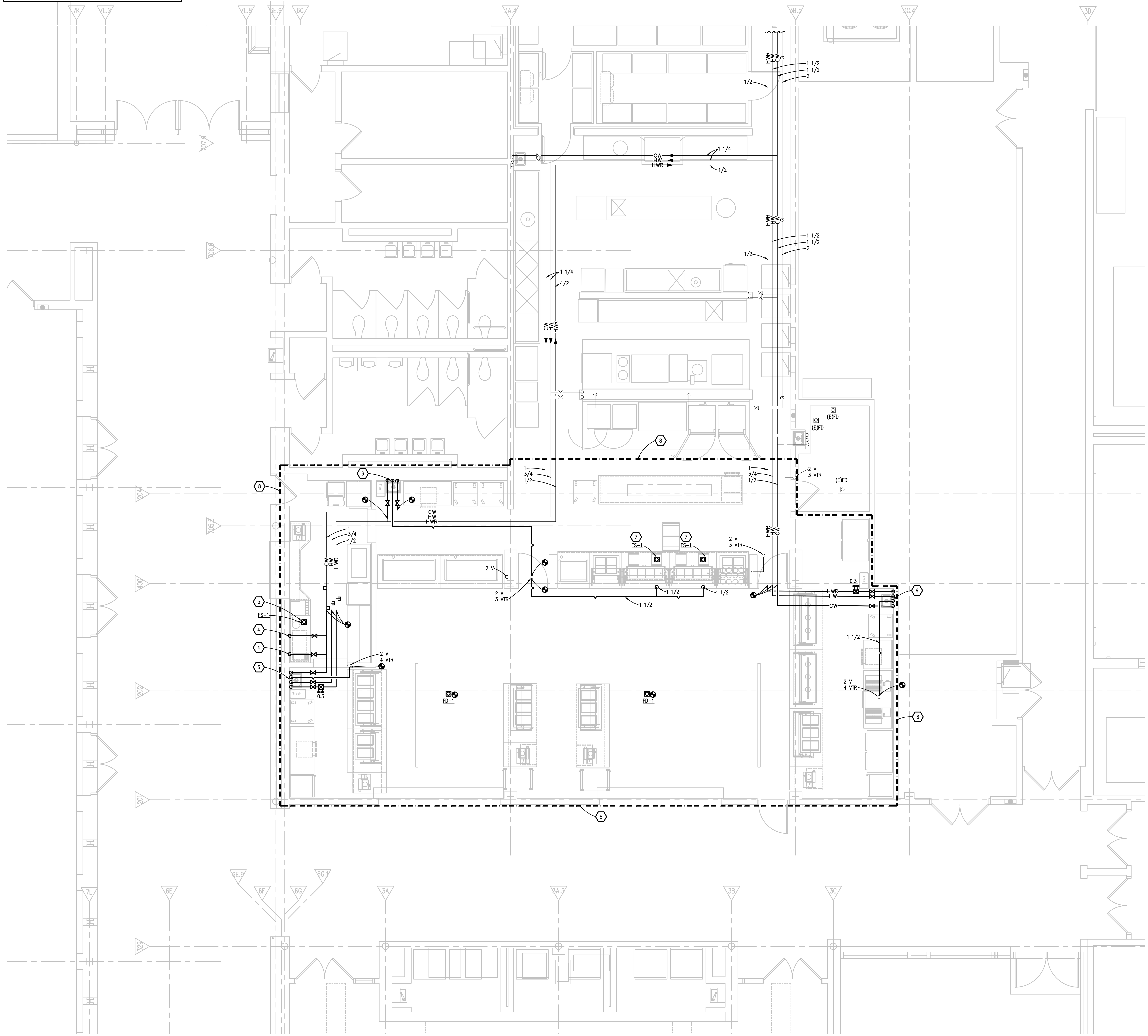
DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN MEP
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

DRAWING NO.
M2.1E

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



SECOND LEVEL PLUMBING NEW WORK PLAN - ZONE 'E'

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

PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 72", OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

CONSTRUCTION KEY NOTES:

1. 3 SAN TO SINK.
2. 3 SAN TO FLOOR DRAIN.
3. 3 SAN TO FLOOR SINK.
4. 1/2 CW TO AIRPOT COFFEE BREWER.
5. 1/2 CW TO FSE PROVIDE EQUIPMENT. ROUTE 3/4 IW FROM UNDER COUNTER BIB RACK AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK. SEE FOOD SERVICE DRAWINGS FOR FURTHER INFORMATION ON EQUIPMENT.
6. 3/4 HW, 3/4 CW AND 1 1/2 VENT TO FSE PROVIDED SINK.
7. ROUTE 3/4 IW FROM DROP IN COLD STATION AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK. SEE FOOD SERVICE DRAWINGS FOR FURTHER INFORMATION ON EQUIPMENT.
8. MODIFY SPRINKLER HEAD LAYOUT IN RENOVATED AREA AS REQUIRED TO PROVIDE A FULLY FUNCTIONING AUTOMATIC WET SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13, THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S INSURING AGENCY IN AREA INDICATED.

TMP ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

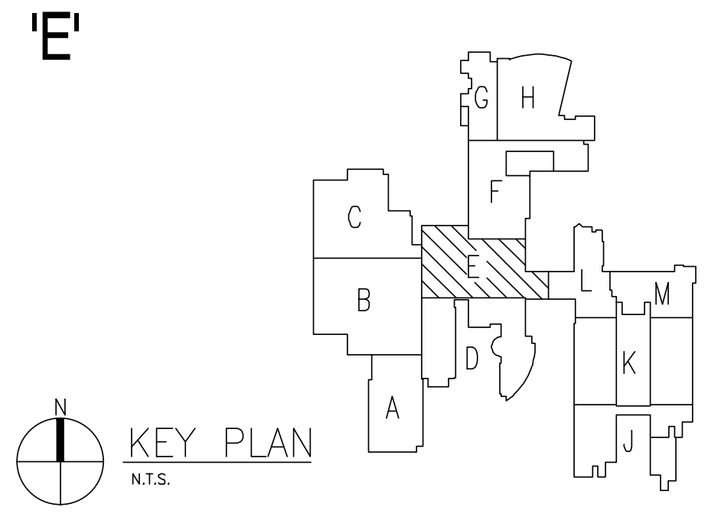
CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
SECOND LEVEL PLUMBING
NEW WORK PLAN - ZONE
'E'



ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

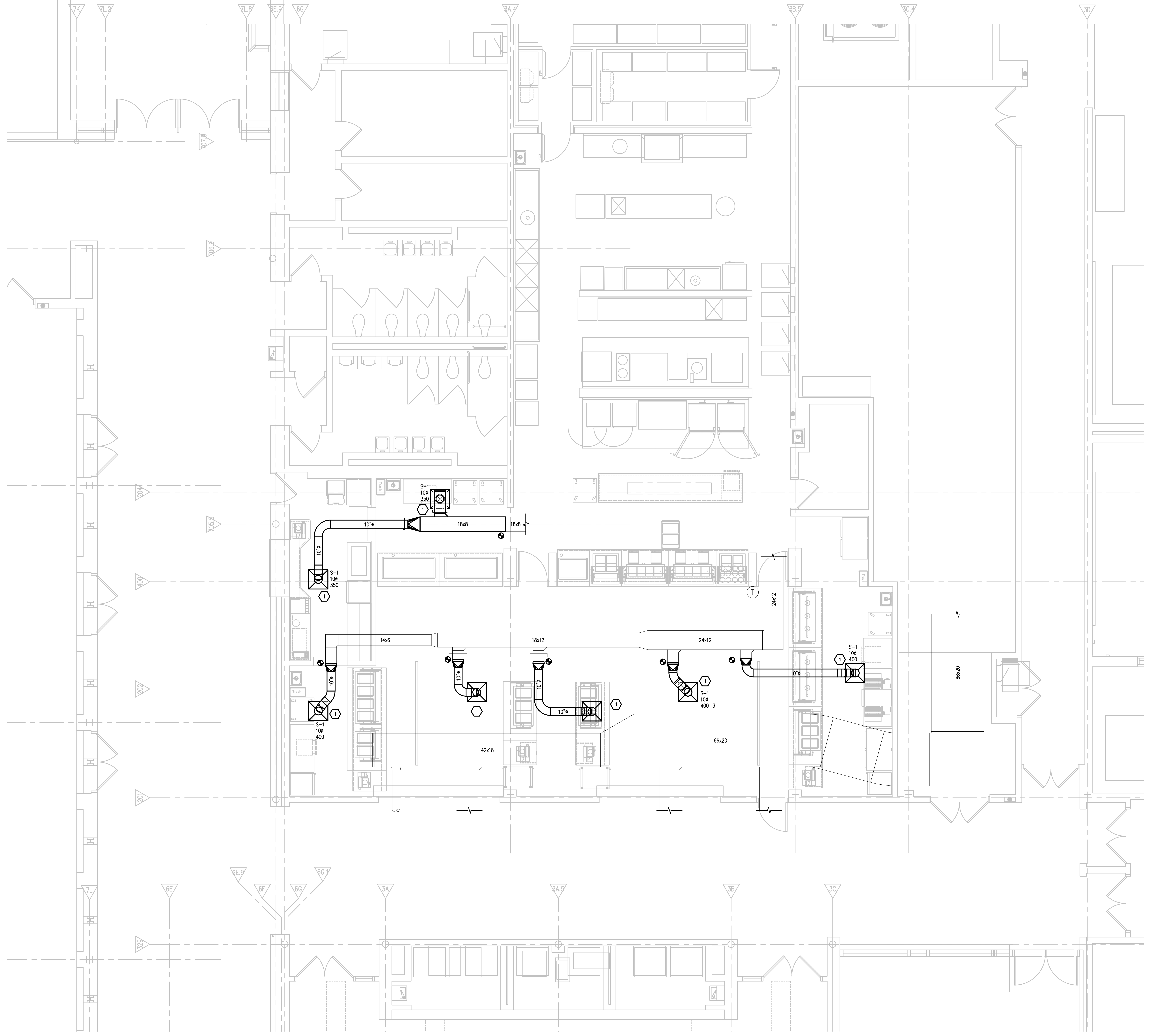
DRAWN MEP
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

DRAWING NO.
M2.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-M2-PL2.dwg, M2.2E, 10/24/2024 9:54:46 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



SECOND LEVEL SHEET METAL NEW WORK PLAN - ZONE 'E'

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

SHEET METAL GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONED LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS.
7. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. BALANCE NEW DIFFUSER TO PRE–DEMOLITION AIRFLOW.

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PBA
Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

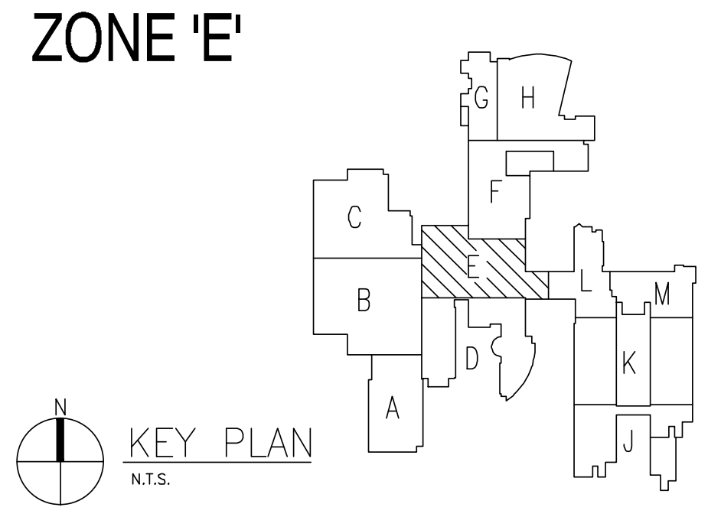
PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

SECOND LEVEL SHEET METAL NEW WORK PLAN - ZONE 'E'



ISSUE DATES

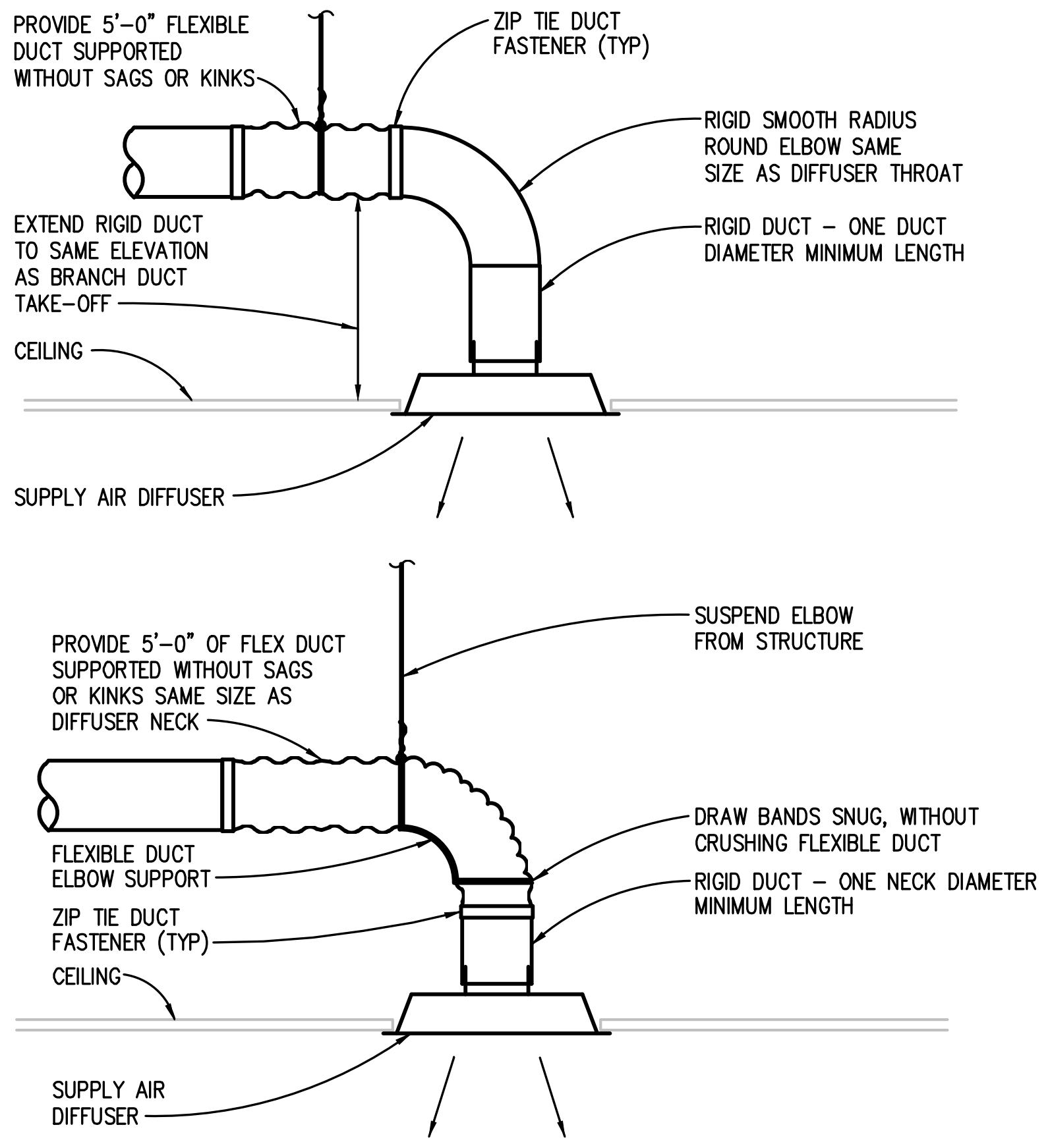
DATE:	ISSUED FOR:
10–25–2024	CONSTRUCTION DOCUMENTS

DRAWN WTF
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

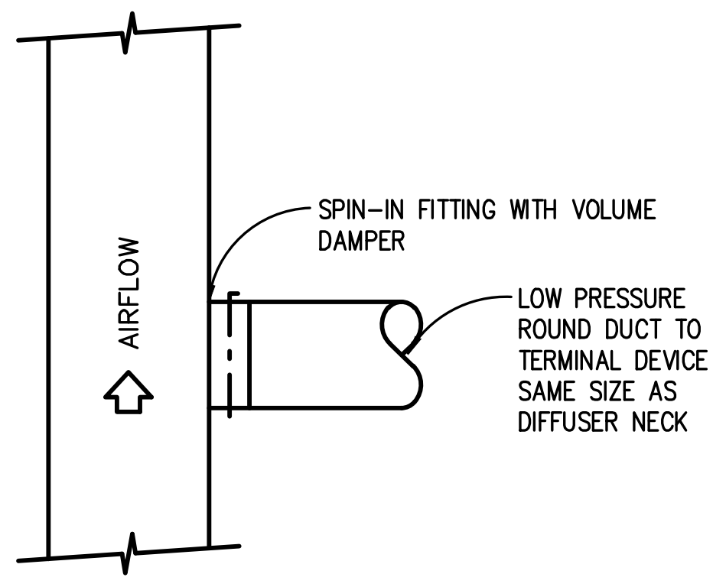
DRAWING NO.
M4.2E

g:\2023\2023–0156–00\CAD\Kitchen\2023–0156–02–M4–SM2.dwg, M4.2E, 10/24/2024 9:54:56 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

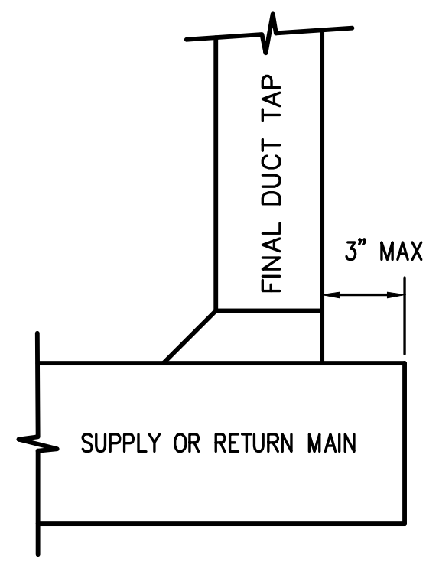


ROUND NECK SUPPLY AIR DIFFUSER DETAIL

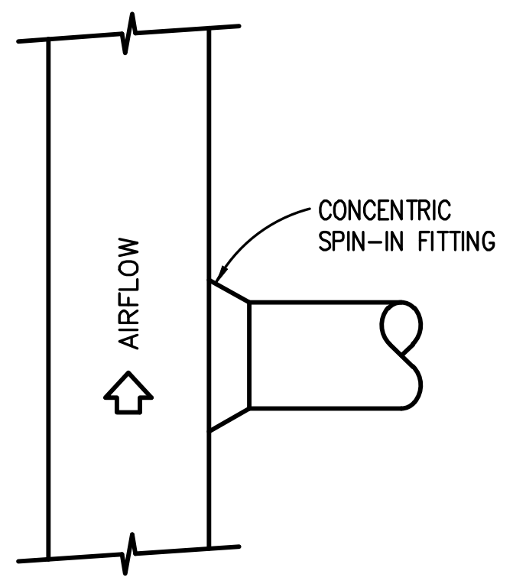
NO SCALE



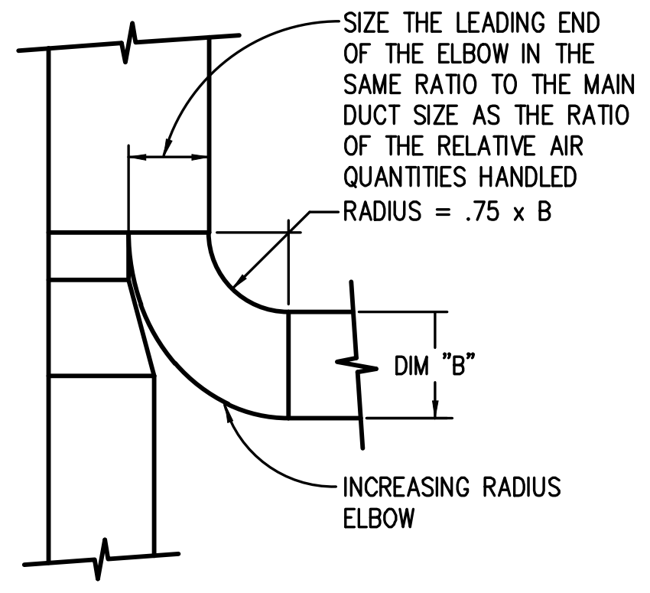
LOW PRESSURE INLET/OUTLET TO/FROM DIFFUSER, REGISTER OR GRILLE



LOW PRESSURE END OF RUN

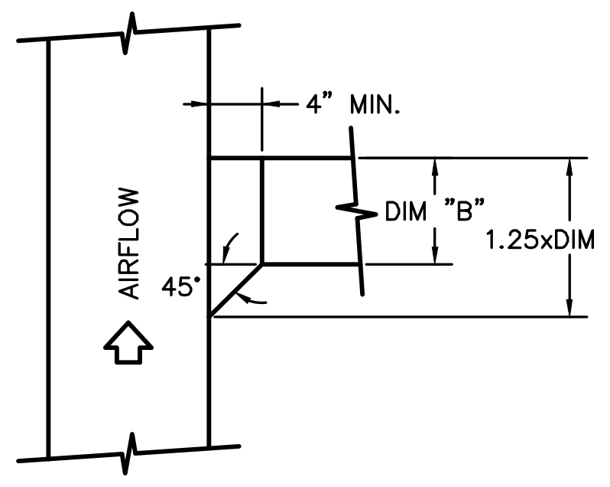


RECTANGULAR TO ROUND DUCT

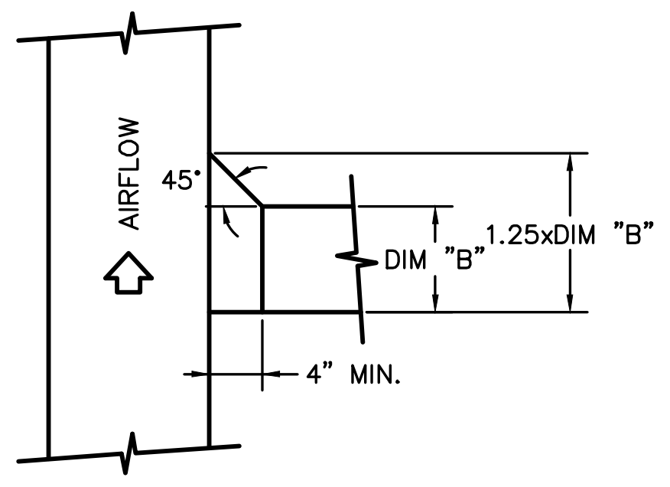


SUPPLY, RETURN OR EXHAUST DUCT

FOR USE WHEN A BRANCH TAKE-OFF IS TO HANDLE MORE THAN 25% OF THE AIR HANDLED BY THE MAIN DUCT



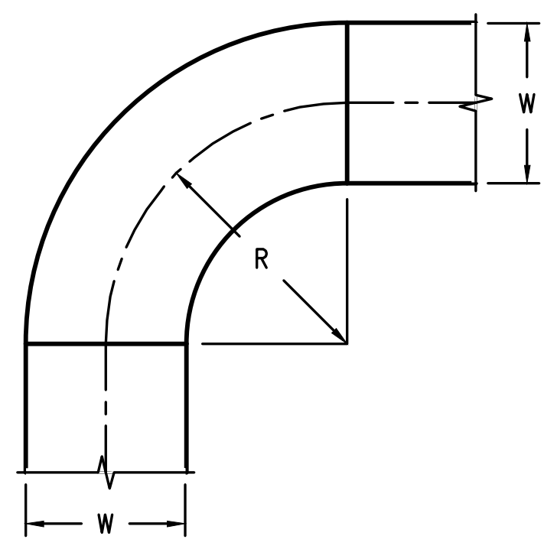
SUPPLY DUCT



RETURN OR EXHAUST DUCT

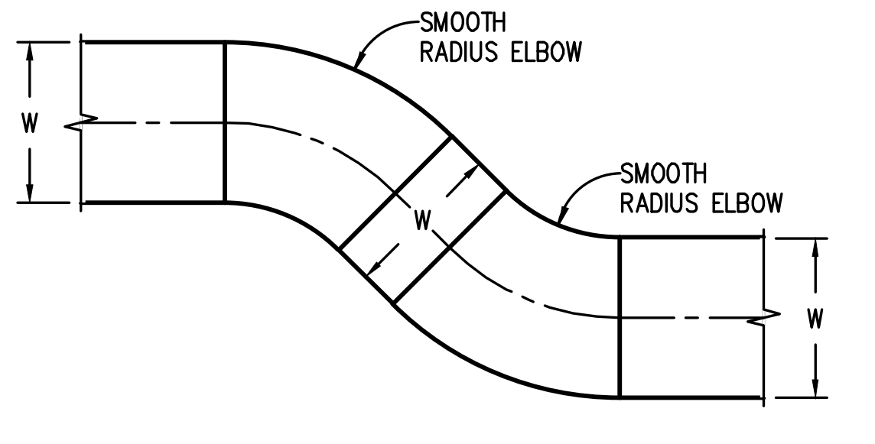
RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS

NO SCALE

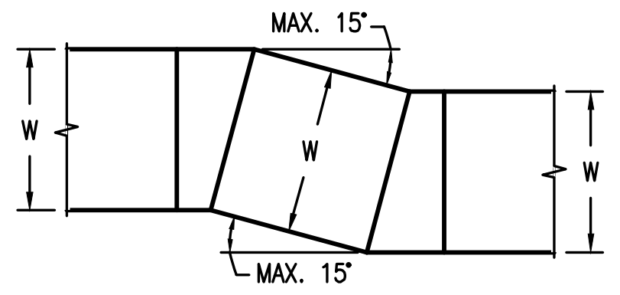


NOTES:
1. R/W = 1.0 FOR VELOCITIES <= 2,000 FPM UNLESS OTHERWISE INDICATED, R/W = 1.5 FOR VELOCITIES > 2,000 FPM UNLESS OTHERWISE INDICATED.
2. ALL CHANGES IN DIRECTION SHALL BE SMOOTH RADIUS ELBOW UNLESS OTHERWISE INDICATED.
3. THIS DETAIL APPLIES TO CHANGES IN DIRECTION FOR ALL ANGLES.

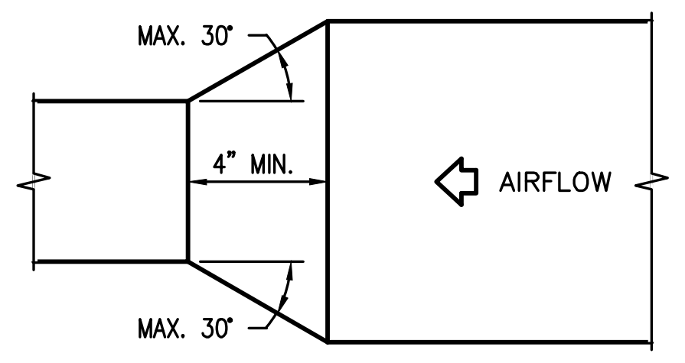
SMOOTH RADIUS ELBOW DETAIL



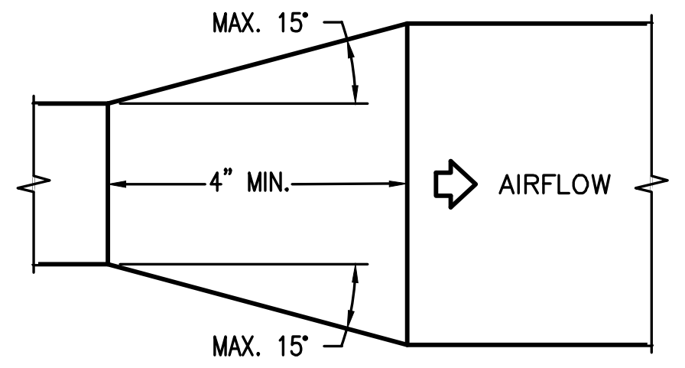
SMOOTH RADIUS ELBOW OFFSET



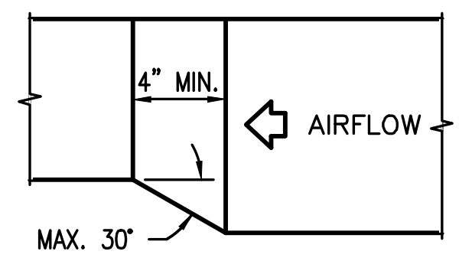
ANGLED OFFSET



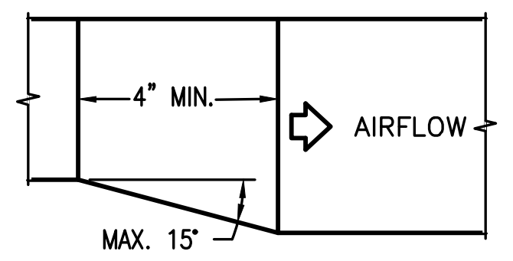
CONCENTRIC CONVERGING TRANSITION



CONCENTRIC DIVERGING TRANSITION



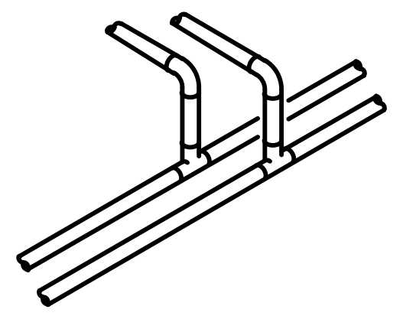
ECCENTRIC CONVERGING TRANSITION



ECCENTRIC DIVERGING TRANSITION

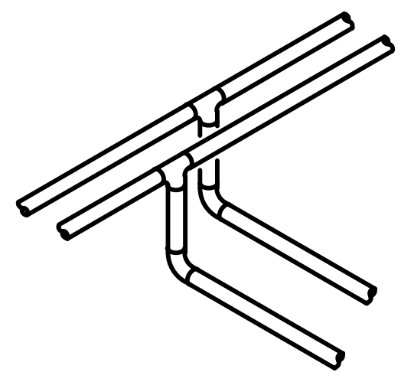
DUCT TRANSITION AND OFFSET DETAILS

NO SCALE



BRANCH CONNECTION OFF TOP

APPLIES TO THE FOLLOWING SYSTEMS:
DOMESTIC WATER
STEAM & CONDENSATE
LABORATORY GASES
LABORATORY VACUUM
COMPRESSED AIR
NATURAL GAS



BRANCH CONNECTION OFF BOTTOM

APPLIES TO THE FOLLOWING SYSTEMS:
HOT WATER HEATING
CHILLED WATER
CONDENSER WATER
ENERGY RECOVERY
PROCESS COOLING WATER

NOTE: BOTTOM AS INDICATED OR SIDE CONNECTION IS ACCEPTABLE. CONNECTION ABOVE CENTERLINE OF MAINS IS NOT ACCEPTABLE.

TYPICAL BRANCH TAKE-OFF CONNECTION PIPING DETAIL

NO SCALE

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
MECHANICAL DETAILS

ISSUE DATES

10-25-2024	CONSTRUCTION DOCUMENTS
DATE:	ISSUED FOR:

DRAWN WTF
CHECKED KLH
APPROVED SVM

PROJECT NO.
22104G

DRAWING NO.
M6.1

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-M6-DT.dwg, M6.1, 10/24/2024 9:55:01 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

DUCT SYSTEM APPLICATION SCHEDULE

AIR SYSTEMS	DUCT MATERIAL: G90 GALV. SHEET METAL	DOUBLE-WALL LINED G90 GALV. SHEET METAL (SOLID INNER WALL)	DOUBLE-WALL LINED G90 GALV. SHEET METAL (PERF. INNER WALL)	G90 GALV. SHEET METAL WITH 1-INCH LINING	GALVANNEALED SHEET METAL	ALUMINUM	TYPE 304 STAINLESS STEEL	TYPE 316 STAINLESS STEEL	PVC COATED GALV. SHEET METAL (4X1)	PVC COATED GALV. SHEET METAL (1X4)	PVC COATED GALV. SHEET METAL (4X4)	16 GA. CARBON STEEL	ZERO-CLEARANCE PREFABRICATED RANGE HOOD EXHAUST DUCT	FABRIC	DESIGN PRESSURE CLASS (INCHES WG)	SEAL CLASS	MAX. ALLOWABLE LEAKAGE RATE (PERCENT)	KEYED NOTES
SUPPLY AIR DOWNSTREAM OF TERMINAL UNITS	X														+2	A	5	

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A DUCT SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. 4 X 1 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON EXTERIOR SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON INTERIOR SURFACES.
3. 1 X 4 (4 X 1 REVERSE COATED) PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON INTERIOR SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON EXTERIOR SURFACES.
4. 4 X 4 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND 4 MILS (0.10 MM) THICK ON OPPOSITE SURFACES.

KEYED NOTES

A. SCREWS, DAMPERS, OR PROJECTIONS OF ANY TYPE ON INTERIOR OF DUCT SURFACE ARE PROHIBITED.
B. DUCT SHALL BE LINED WITHIN 25 FEET UPSTREAM OF FANS.
C. ALL WELDED CONSTRUCTION.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

UNIT IDENTIFICATION	TYPE	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NUMBER	KEYED NOTES
S-1	DIFFUSER	24x24	SEE PLANS	NOTE 2	–	STEEL	WHITE	SCD	

GENERAL NOTES:
1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.
2. COORDINATE EXACT FRAME TYPE WITH ARCHITECTURAL TRADES.

DUCT SYSTEM INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES): FIBERGLASS BLANKET 0.75 LB/CU FT	FIBERGLASS BLANKET 1.0 LB/CU FT	FIBERGLASS BOARD 2.25 LB/CU FT	FIBERGLASS BOARD 6.0 LB/CU FT	FLEXIBLE ELASTOMERIC	ASTM E2336 2-HOUR FIRE RATED BLANKET	2-HOUR FIRE RATED BLANKET	FIELD APPLIED JACKET MATERIAL: ALUMINUM	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	KEYED NOTES
DUCT SYSTEMS LOCATED INDOORS										
SUPPLY AIR, EXCEPT AS NOTED BELOW		1.5								A, E

PLENUMS, DUCTS, AND DUCT ACCESSORIES NOT REQUIRING INSULATION:
- FIBROUS-GLASS DUCTS
- DOUBLE-WALL METAL DUCTS WITH INSULATION OF SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE AND ASHRAE/IESNA 90.1 - 2013
- METAL DUCTS WITH DUCT LINER OF SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE AND ASHRAE/IESNA 90.1 - 2013
- FABRIC SUPPLY DUCTS
- FACTORY-INSULATED FLEXIBLE DUCTS
- FACTORY-INSULATED PLENUMS AND CASINGS
- FLEXIBLE CONNECTORS
- VIBRATION-CONTROL DEVICES
- FACTORY-INSULATED ACCESS PANELS AND DOORS

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATE ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A DUCT SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. REFER TO METAL DUCT SECTION OF SPECIFICATIONS FOR DUCT LINING AND DOUBLE-WALL INSULATED DUCT.
3. REFER TO HVAC CASINGS SECTION OF SPECIFICATIONS FOR DOUBLE-WALL INSULATED PLENUMS.

KEYED NOTES

A. INCLUDE INSULATION AROUND DUCT MOUNTED COILS AND AIR TERMINAL UNIT COILS.
B. NUMBER OF LAYERS AND TOTAL INSULATION THICKNESS AS RECOMMENDED BY SELECTED MANUFACTURER.
C. DOES NOT APPLY TO PREFABRICATED, ZERO-CLEARANCE GREASE DUCT.
D. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL DUCT INSULATION.
E. EXPOSED SUPPLY DUCTWORK LOCATED IN A CONDITIONED SPACE SERVED BY THE SAME AIR HANDLING SYSTEM IS NOT REQUIRED TO BE INSULATED.

PLUMBING CONNECTION SCHEDULE

UNIT IDENTIFICATION	CW INCHES	HW INCHES	SAN INCHES	VENT INCHES	KEYED NOTES
FD-1	–	–	3	–	
FS-1	–	–	3	–	

GENERAL NOTES:
1. INDIVIDUAL WATER LINE BRANCHES, WASTE LINES, VENTS, AND TRAPS FOR CONNECTION TO INDIVIDUAL FIXTURES, FIXTURE FITTINGS, AND SPECIALTIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE OR AS INDICATED ON DRAWINGS, WHICHEVER IS GREATER.

KEYED NOTES:
1. PROVIDE MIXING VALVE.

SCHEDULES GENERAL NOTES:

TYPICAL FOR ALL SCHEDULE SHEETS:

1. REFER TO ELECTRICAL STANDARD SCHEDULES, ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL ELECTRICAL INFORMATION
2. PROVIDE THE FOLLOWING FACTORY-WIRED ELECTRICAL OPTIONS/ACCESSORIES WHERE INDICATED IN SCHEDULE:
   - A – NON-FUSED DISCONNECT SWITCH
   - B – UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS
   - C – SERVICE RECEPTACLE
   - D – FUSED DISCONNECT SWITCH
   - E – COMBINATION STARTER
   - F – UNIT SHALL HAVE (2) SINGLE POINT CONNECTIONS WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS. (1) CONNECTION SHALL BE FOR CONDENSING SECTION AND (1) CONNECTION SHALL BE FOR THE REMAINDER OF THE UNIT.
3. FOR MODULATION/CONTROL TYPE COLUMN, "VFC" INDICATES VARIABLE FREQUENCY CONTROLLERS, "AUTO" INDICATES AUTOMATIC OPERATION (CONTROLLED BY TEMPERATURE CONTROLS OR SELF CONTAINED CONTROLS), "MANUAL" INDICATES HAND OPERATION.
4. IF VARIABLE FREQUENCY CONTROLLERS ARE INDICATED TO BE PROVIDED AND ARE NOT INSTALLED INTEGRAL TO THE UNIT, VARIABLE FREQUENCY CONTROLLERS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR (UNLESS OTHERWISE NOTED) AND INSTALLED BY THE ELECTRICAL CONTRACTOR INCLUDING THE LINE SIDE AND LOAD SIDE WIRING TO THE MOTOR AND INCLUDING MISCELLANEOUS STEEL REQUIRED FOR THE SUPPORT AND MOUNTING OF THE VFC. REFER TO FLOOR PLANS FOR LOCATION.
5. WHERE EQUIPMENT IS INDICATED TO HAVE A SINGLE POINT ELECTRICAL CONNECTION, THAT EQUIPMENT SHALL COME COMPLETE WITH FACTORY INSTALLED STARTERS, MOTOR OVERLOAD PROTECTION, CONTACTORS, FUSING AND ALL NECESSARY INTERNAL WIRING AND CONTROLS. PROVIDE A FACTORY MOUNTED UNIT DISCONNECTING MEANS WHERE THE ELECTRICAL CONTRACTOR SHALL MAKE SINGLE POINT CONNECTION. INSTALL PACKAGED EQUIPMENT SUCH THAT THE ELECTRICAL CONNECTION AND CONTROLS ARE ACCESSIBLE AND HAVE CLEARANCES MEETING THE NATIONAL ELECTRICAL CODE.
6. WHERE PACKAGED EQUIPMENT IS PROVIDED, NAMEPLATE MUST INDICATE MAXIMUM OVERCURRENT PROTECTION BY HACR RATED CIRCUIT BREAKERS OR FUSES. IF FUSE PROTECTION ONLY IS INDICATED, PROVIDE A FUSIBLE DISCONNECT AND FUSES WITH THE UNIT.
7. WHERE EQUIPMENT IS DESIGNATED BY MANUFACTURER AND MODEL NUMBER, THIS IS THE BASIS OF DESIGN. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT BY OTHER SPECIFIED MANUFACTURERS OR PROPOSED ALTERNATE EQUIPMENT BY THE BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS TO ELECTRICAL REQUIREMENTS, STRUCTURAL LOADING, OR ARCHITECTURAL APPURTENANCES AND SHALL INCLUDE THE COST OF SUCH REVISIONS IN HIS BID.
8. WHERE EQUIPMENT IS SCHEDULED TO INCLUDE A SERVICE RECEPTACLE, PROVIDE A FACTORY MOUNTED SERVICE RECEPTACLE WITH APPROPRIATE FUSES AND TRANSFORMERS CONNECTED ON THE LINE SIDE OF THE UNIT DISCONNECT. PROVIDE A NAMEPLATE ON THE DISCONNECT SWITCH INDICATING THE PRESENCE OF LIVE POWER TO THE SERVICE RECEPTACLE WHEN THE UNIT DISCONNECT IS IN THE OFF POSITION.
9. SIZE ALL EQUIPMENT FEEDERS BASED ON THE LISTED MOP (MAXIMUM OVERCURRENT PROTECTION). REFER TO THE FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE ON THE ELECTRICAL STANDARD SCHEDULES SHEET.

PLUMBING PIPING & VALVE APPLICATION SCHEDULE

PIPE SIZE (INCHES)	MATERIAL: SOFT COPPER TYPE K	HARD COPPER TYPE L	HARD COPPER TYPE M	CARBON STEEL (SCHED. 40)	CARBON STEEL (STD.)	GALV. STEEL (SCHED. 40)	STAINLESS STEEL (SCHED. 10)	PEX	PE PIPE	PE SHEATHED CARBON STEEL PIPE	CSST	NO-HUB CISP	PVC TYPE DWV	PP DRAINAGE PIPE	COPPER TYPE DWV	DUCTILE IRON PIPE
ABOVEGROUND DOMESTIC WATER (POTABLE AND NON-POTABLE) ON DISTRIBUTION SIDE OF METER - MIN. WORKING PRESS. & TEMP.: 125 PSIG AT 200 DEG F																
UP TO 4		X														
ABOVEGROUND SANITARY WASTE & VENT - MIN. WORKING PRESS.: 10-FOOT HEAD OF WATER																
1-1/2 TO 15												X				
ABOVEGROUND INDIRECT SANITARY WASTE - MIN. WORKING PRESS.: 10-FOOT HEAD OF WATER																
UP TO 8			X												X	

PIPE SIZE (INCHES)	PRESSURE CONNECTIONS: SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	INSERT & CRIMP	FUSION	PRESSURE-SEAL	MECHANICALLY-FORMED TEE	MECHANICAL JOINT	PUSH-ON-JOINT	GRAVITY DWV CONNECTIONS: SOLVENT WELDED	SOLDERED	FUSION	CISP HUBLESS	HEAVY-DUTY HUBLESS	ISOLATION VALVES: BALL	AGA BALL	GENERAL SERVICE BUTTERFLY	LUBRICATED PLUG	GATE	KEYED NOTES
ABOVEGROUND DOMESTIC WATER (POTABLE AND NON-POTABLE) ON DISTRIBUTION SIDE OF METER - MIN. WORKING PRESS. & TEMP.: 125 PSIG AT 200 DEG F																							
UP TO 4	X	X			X	X			X	X								X		X			A
ABOVEGROUND SANITARY WASTE & VENT - MIN. WORKING PRESS.: 10-FOOT HEAD OF WATER																							
1-1/2 TO 15																X							
ABOVEGROUND INDIRECT SANITARY WASTE - MIN. WORKING PRESS.: 10-FOOT HEAD OF WATER																							
UP TO 8														X									

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A PIPING SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. DISSIMILAR-METAL PIPING JOINTS: CONSTRUCT JOINTS USING DIELECTRIC FITTINGS COMPATIBLE WITH BOTH PIPING MATERIALS.
   - a. NPS 2 AND SMALLER: USE DIELECTRIC NIPPLE/WATERWAY.
   - b. NPS 2-1/2 AND LARGER: USE DIELECTRIC FLANGE KITS.
3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS.
4. PLUMBING EQUIPMENT DRAINS, VENTS, SAFETY VALVE PIPING, BLOWDOWN PIPING AND THE LIKE SHALL BE SAME PIPING MATERIAL AS ASSOCIATED PIPING SYSTEM.
5. GROOVED END VALVES MAY BE USED WITH GROOVED PIPING.

KEYED NOTES

A. GROOVED AND FLANGED FITTINGS, JOINTS, AND COUPLINGS, IF INDICATED AS AN ACCEPTABLE SELECTION, MAY BE USED IN ACCESSIBLE LOCATIONS ONLY FOR THIS PIPING SYSTEM. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS.
B. JOINTS ARE NOT PERMITTED ON UNDERGROUND WATER PIPING.
C. USE CAST IRON DRAINAGE PATTERN (DURHAM) FITTINGS.
D. INSTALL IN CONTAINMENT JACKET, REFER TO SPECIFICATIONS.
E. VALVES, UNIONS, AND FLANGED JOINTS MAY BE USED IN ACCESSIBLE LOCATIONS ONLY, EXCLUDING CEILINGS USED AS AIR PLENUMS. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS. USE ONLY STEEL WELDED FITTINGS AND WELDED JOINTS IN CEILING USED AS AIR PLENUMS.
F. NO JOINTS ALLOWED UNDERGROUND.

ABOVEGROUND PLUMBING PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES): FLEXIBLE ELASTOMERIC	FIBERGLASS	MINERAL WOOL	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	FIELD-APPLIED JACKET MATERIAL: ALUMINUM	STAINLESS STEEL	PVC	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	PVDC (INDOOR)	PVDC (OUTDOOR)	KEYED NOTES
INDOOR PIPE SYSTEM AND SIZE (INCHES)														
DOMESTIC COLD WATER	1	1						X		X				A
DOMESTIC HOT WATER SUPPLY & RETURN 140 DEG F AND LESS:														
NPS 1-1/4 AND SMALLER	1	1						X		X				A
NPS 1-1/2 AND LARGER	1.5	1.5						X		X				A
FLOOR DRAINS, TRAPS AND SANITARY DRAIN PIPING WITHIN 10 FEET OF DRAIN RECEIVING CONDENSATE AND EQUIPMENT DRAIN WATER BELOW 60 DEG F	0.75	1						X		X				A

UNLESS OTHERWISE INDICATED OR SCHEDULED, DO NOT INSULATE THE FOLLOWING:
- FIRE SUPPRESSION PIPING
- UNDERGROUND PIPING
- LABORATORY GAS AND VACUUM PIPING
- MEDICAL GAS AND VACUUM PIPING
- FUEL GAS PIPING
- FUEL OIL PIPING

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. INSULATE PIPING WITHIN AIR HANDLING EQUIPMENT THE SAME AS INDOOR PIPING. PROVIDE ALUMINUM OR STAINLESS STEEL JACKET.

KEYED NOTES

A. PROVIDE FIELD APPLIED JACKET FOR PIPING EXPOSED IN EQUIPMENT ROOMS, STORAGE ROOMS, JANITORS CLOSETS, RECEIVING ROOMS, TEST AREAS, CIRCULATION AREAS AND SUCH AREAS SUBJECT TO DAMAGE, WITHIN 10 FEET (3 METERS) OF FINISHED FLOOR.
B. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL INSULATION.

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

PBa
Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

MECHANICAL SCHEDULES

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN WTF
CHECKED KLH
APPROVED SVM

PROJECT NO.

22104G

DRAWING NO.

M7.1

ELECTRICAL SYMBOL LIST

(NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT)

SYMBOL	DESCRIPTION
X (NL)	X DENOTES FIXTURE TYPE (NL INDICATES NIGHT LIGHT)
	FILL DENOTES EMERGENCY FIXTURE
	TROFFER LIGHT
	STRIP LIGHT
	LINEAR LIGHT
	MULTIHEAD ADJUSTABLE LIGHT
○ / □	DOWN LIGHT
	DIRECTIONAL DOWN LIGHT
	DECORATIVE LIGHT
	DECORATIVE LIGHT
	WALL MOUNTED LIGHT
	WALL SCONCE
	ARM MOUNTED LIGHT
	LIGHTING TRACK
	TRACK LIGHT
	ADJUSTABLE FLOOD LIGHT
	STEP LIGHT
---	LED TAPE
	REMOTE DRIVER
○ / ▭	HIGH BAY LIGHT
	POLE MOUNTED LIGHT
	POST TOP LIGHT
	BOLLARD LIGHT
	IN GROUND LIGHT
	EMERGENCY LIGHT
	EXIT LIGHT WITH DIRECTIONAL ARROWS (FILLED AREA INDICATES FACE)
	EXIT LIGHT WITH DIRECTIONAL ARROWS (FILLED AREA INDICATES FACE)
	EXIT LIGHT – WALL MOUNTED (FILLED AREA INDICATES FACE)
	EXIT/EMERGENCY LIGHT COMBO – WALL MOUNTED (FILLED AREA INDICATES FACE)
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
ALCR	AUTOMATIC LOAD CONTROL RELAY
LC	LIGHTING CONTROL DEVICE – REFER TO LIGHTING CONTROL SCHEDULE
XX	ROOM CONTROL DESIGNATION – REFER TO LIGHTING CONTROL SCHEDULE
S	SINGLE POLE TOGGLE SWITCH
S_2	TWO POLE TOGGLE SWITCH
S_3	3 WAY TOGGLE SWITCH
S_4	4 WAY TOGGLE SWITCH
K	KEY OPERATED SWITCH
K_3	3 WAY KEY OPERATED SWITCH
K_4	4 WAY KEY OPERATED SWITCH
D	DIMMER SWITCH
D_3	3 WAY DIMMER SWITCH
D_O	DIMMER OCCUPANCY SENSOR SWITCH
D_L	LOW VOLTAGE DIMMER SWITCH
S_P	PILOT SWITCH

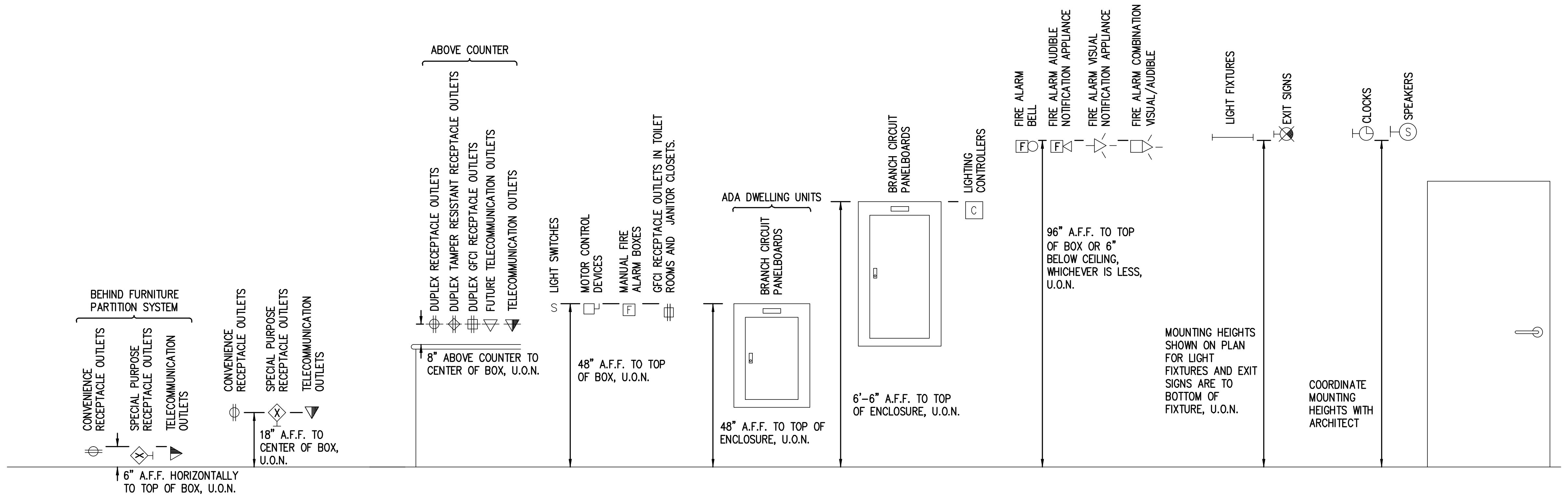
SYMBOL	DESCRIPTION	
TWC	TWO–WAY COMMUNICATION SYSTEM CALL STATION	
TWCD	TWO–WAY COMMUNICATION SYSTEM AUTO DIALER	
TWCA	TWO–WAY COMMUNICATION SYSTEM ANNUNCIATOR & COMMUNICATION PANEL	
TWCP	TWO–WAY COMMUNICATION SYSTEM POWER SUPPLY WITH BATTERY BACK–UP	
TWCDP	TWO–WAY COMMUNICATION SYSTEM AUTO DIALER POWER SUPPLY WITH BATTERY BACK–UP	
RGP	REMOTE GENERATOR ANNUCIATOR PANEL	
ATS	AUTOMATIC TRANSFER SWITCH	
UPS	UNINTERRUPTIBLE POWER SUPPLY	
CSX	LOW VOLTAGE CONTROL STATION "X" INDICATES TYPE	
"X"	SINGLE / DUPLEX RECEPTACLE OUTLET "X" INDICATES TYPE	
	SINGLE/DUPLEX RECEPTACLE OUTLET CONTROLLED BY AUTOMATIC CONTROL DEVICE/SYSTEM	
	QUAD RECEPTACLE OUTLET	
	ABOVE COUNTER DUPLEX RECEPTACLE OUTLET (SIMILAR FOR TAMPER RESISTANT, CONTROLLED, QUADS, EMERGENCY, UPS, USB, AND GFCI RECEPTACLE OUTLETS)	
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE OUTLET	
□	DEAD FRONT GROUND FAULT CIRCUIT INTERRUPTER	
	DUPLEX EMERGENCY RECEPTACLE OUTLET	
	DUPLEX TAMPER RESISTANT RECEPTACLE OUTLET	
	QUAD TAMPER RESISTANT RECEPTACLE OUTLET	
	DUPLEX UPS RECEPTACLE OUTLET	
	DUPLEX RECEPTACLE OUTLET WITH 2 USB PORTS	
	4 PORT USB CHARGING STATION	
	CEILING MOUNTED DUPLEX/QUAD RECEPTACLE OUTLET	
■	POWER POLE	
X / X	WALL/CEILING MOUNTED SPECIAL RECEPTACLE OUTLET – REFER TO ELECTRICAL STANDARD SCHEDULES	
	MULTI–OUTLET SURFACE RACEWAY	
"X"	MULTI–SERVICE DROP SEE ELECTRICAL DETAILS AND DIAGRAMS SHEET "X" INDICATES TYPE	
PTX	POKE–THROUGH ASSEMBLY "X" INDICATES TYPE	
FBX	FLOOR SERVICE FITTING "X" INDICATES TYPE	
AFX	ACCESS FLOOR SERVICE FITTING "X" INDICATES TYPE	
RX	CORD REEL "X" INDICATES TYPE	
S S	DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES	
S_3S_3	3–WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES	
S_4S_4	4–WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES	
S_T	DIGITAL TIME SWITCH	
S_I	ILLUMINATED TOGGLE SWITCH FOR CONTROL OF LIGHTING ON CRITICAL POWER–ILLUMINATED WHEN SWITCH IS IN "OFF" POSITION	
S_L	LOW VOLTAGE SWITCH	
S_O	OCCUPANCY SENSOR	REFER TO ELECTRICAL STANDARD SCHEDULES
S_{O2}	OCCUPANCY SENSOR	
OS X	OCCUPANCY SENSOR "X" INDICATES TYPE	

SYMBOL	DESCRIPTION	
CP	CONTROL PANEL	
	MOTOR	
VFC	VARIABLE FREQUENCY CONTROLLER.	
	MANUAL CONTROLLER	
☒	MAGNETIC CONTROLLER	
	COMBINATION MAGNETIC CONTROLLER	
	NON–FUSIBLE DISCONNECT SWITCH	
	FUSIBLE DISCONNECT SWITCH	
CB	ENCLOSED CIRCUIT BREAKER	
	PUSH BUTTON STATION	
J	JUNCTION BOX	
	HARD WIRE POWER CONNECTION	
	GROUND ROD	
	GROUND CONNECTION	
HH	HANDHOLE	
X	CONDUIT SLEEVE WITH BUSHINGS LENGTH AS REQUIRED "X" INDICATES CONDUIT SIZE	
○	CONDUIT UP	
●	CONDUIT DOWN	
	EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET	REFER TO ELECTRICAL STANDARD SCHEDULES
	ABOVE COUNTER EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET	
	EMPTY BOX FOR FUTURE CEILING MOUNTED TELECOMMUNICATION OUTLET	
X	TELECOMMUNICATION OUTLET "X" INDICATES TYPE	
X	ABOVE COUNTER TELECOMMUNICATION OUTLET "X" INDICATES TYPE	
X	TELECOMMUNICATION CEILING MOUNTED OUTLET "X" INDICATES TYPE	
	TELECOMMUNICATION BACKBOARD	
TGB	TELECOMMUNICATION GROUNDING BUS BAR	
TMGB	TELECOMMUNICATION MAIN GROUNDING BUS BAR	
IC	INTERCOM OUTLET	
S	SPEAKER	
S	SPEAKER – WALL MOUNTED	
MIC	MICROPHONE	
VC	VOLUME CONTROL/STATION SELECTOR	
B	SIGNALING BELL	
	SINGLE FACE CLOCK – CEILING MOUNTED	
	SINGLE FACE CLOCK – WALL MOUNTED	
	DOUBLE FACE CLOCK – CEILING MOUNTED	
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER CEILING MOUNTED	
	DOUBLE FACE CLOCK – WALL MOUNTED	
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER WALL MOUNTED	
T/C	TIME CLOCK	
C	CONTACTOR	
P	PHOTOCELL	
TT	TWIST TIMER	
EVSE	ELECTRICAL VEHICLE SUPPLY EQUIPMENT	
DCFC	DC FAST CHARGER – STANDALONE	
DCPM	DC FAST CHARGER – POWER MODULE	
DCDP	DC FAST CHARGER – DISPENSER	

SYMBOL	DESCRIPTION
	SECURITY CAMERA
MD	MOTION DETECTOR
K	SECURITY KEY SWITCH
DC	DOOR CONTACT
KP	KEY PAD
CR	CARD READER
DB	DURESS PUSH BUTTON STATION
DE	DELAYED EGRESS
REX	REQUEST TO EXIT STATION
PP	AUTOMATIC DOOR PUSH PAD OPERATOR
DO	DOOR OPERATOR
DA	DOOR ACTUATOR
AC	ACCESS CONTROL STATION
ACCP	ACCESS CONTROL CONTROL PANEL
ACPS	ACCESS CONTROL POWER SUPPLY
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER MANUALLY/ OPERATED
E	DRAWOUT CIRCUIT BREAKER ELECTRICALLY/ OPERATED
	SWITCH
	AUTOMATIC OR MANUAL TRANSFER SWITCH
	FUSE
	TRANSFORMER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	LIGHTNING ARRESTOR
X	PANELBOARD "X" INDICATES PANELBOARD NAME
	GROUND
▼	STRESS CONE TERMINATION
K	SECURITY KEY INTERLOCK
G	ENGINE GENERATOR
M	UTILITY METER
EMU	ELECTRONIC METERING UNIT
A	AMMETER
V	VOLTMETER
AS	AMMETER SWITCH
VS	VOLTMETER SWITCH
SPD	SURGE PROTECTIVE DEVICE
CR	CONTROL RELAY
TDR	TIME DELAY RELAY
PRM	PHASE ROTATION MONITOR
	CAMLOK – MALE
	CAMLOK – FEMALE
	THERMAL OVERLOAD RELAY
	NORMALLY OPEN CONTACTS
	NORMALLY CLOSED CONTACTS
	N.O. PUSH BUTTON SINGLE CIRCUIT
	N.C. PUSH BUTTON SINGLE CIRCUIT
X–X	CABLE VAULT "X–X" INDICATES TYPE
	BRANCH CIRCUIT PANELBOARD
	LOAD CENTER
	MOTOR CONTROL CENTER
T	TRANSFORMER
	DISTRIBUTION EQUIPMENT
GB	ELECTRICAL GROUNDING BUS BAR
PB	PLUG IN BUSWAY
FB	FEEDER BUSWAY
12x4	CABLE TRAY – ALL SIZES IN INCHES

SYMBOL	DESCRIPTION
F	MANUAL FIRE ALARM BOX
SD	SMOKE DETECTOR
DD	DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
RT	REMOTE TEST STATION (FOR DUCT DETECTOR)
HD	HEAT DETECTOR
BD	PROJECTED BEAM DETECTOR
F	FIRE ALARM BELL
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE NOTIFICATION APPLIANCE– CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE – CEILING MOUNTED
F	FIREFIGHTERS PHONE JACK
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
NAC	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL
MM	ADDRESSABLE MONITORING MODULE
CM	ADDRESSABLE CONTROL MODULE
TS	ADDRESSABLE MONITORING MODULE FOR TAMPER SWITCH
FS	ADDRESSABLE MONITORING MODULE FOR FLOW SWITCH
DR	MAGNETIC DOOR RELEASE

STANDARD MOUNTING HEIGHTS



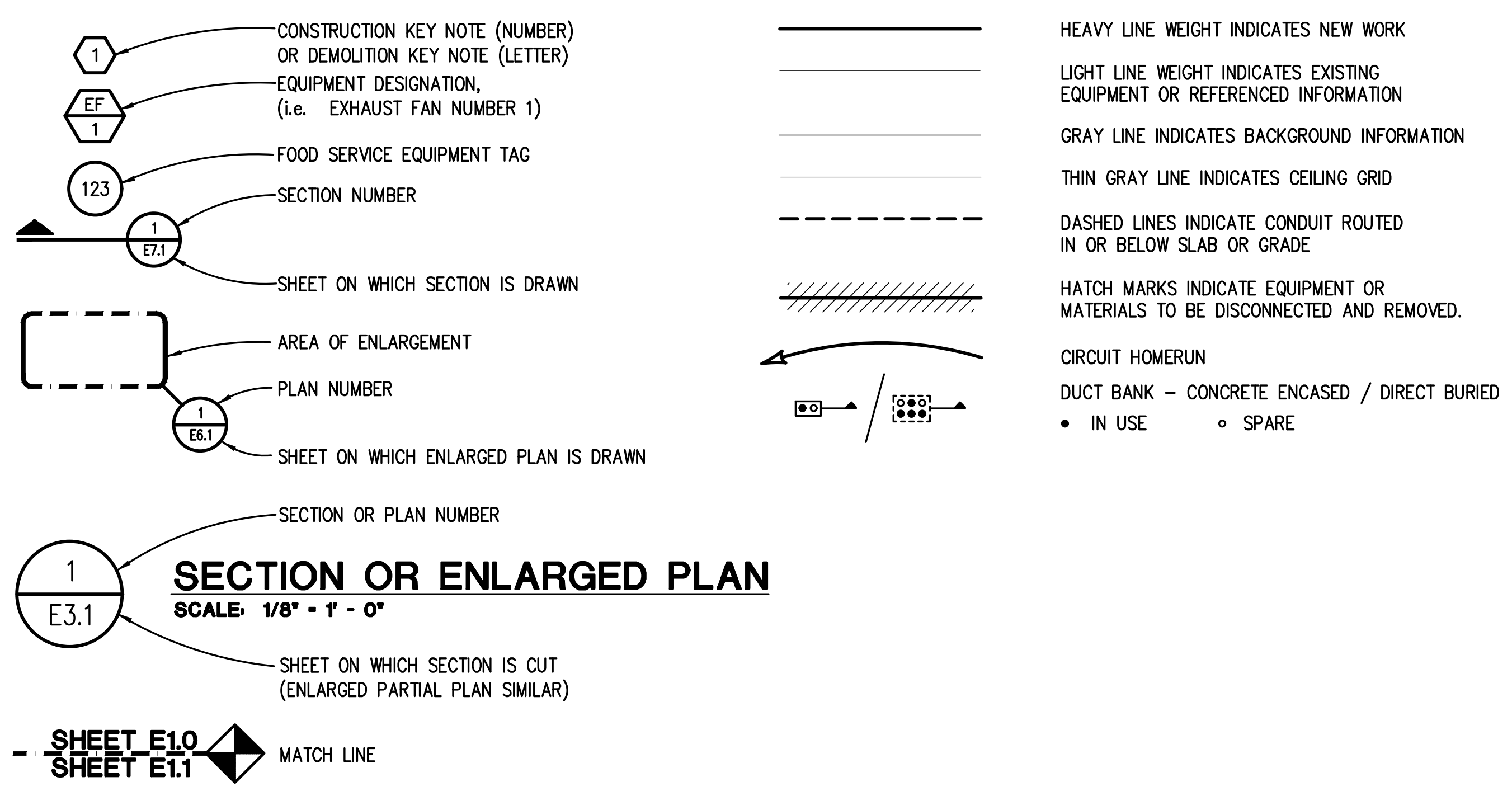
ELECTRICAL DRAWING INDEX

SHEET NO.	SHEET TITLE
E0.1	ELECTRICAL STANDARDS AND DRAWING INDEX
E0.2	ELECTRICAL STANDARD SCHEDULES
E0.3	FOOD SERVICE EQUIPMENT SCHEDULES
E0.4	SECOND LEVEL ELECTRICAL COMPOSITE PLAN
ED1.2E	SECOND LEVEL ELECTRICAL DEMOLITION PLAN – ZONE 'E'
E2.2E	SECOND LEVEL LIGHTING PLAN – ZONE 'E'
E3.2E	SECOND LEVEL POWER AND AUXILIARY SYSTEMS PLAN – ZONE 'E'
E5.1	ONE LINE DIAGRAM
E5.2	PANEL SCHEDULES
E7.1	ELECTRICAL DETAILS AND DIAGRAMS

ELECTRICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	AMPERES
AER	ARC ENERGY REDUCTION
AF	AMPERES FRAME (BREAKER RATING)
AFCI	ARC FAULT CIRCUIT INTERRUPTER
A.F.F.	ABOVE FINISH FLOOR
AIC	AMPS INTERRUPTING CAPACITY
AL	AUDIENCE LEFT
ALCR	AUTOMATIC LOAD CONTROL RELAY
AR	AUDIENCE RIGHT
AT	AMPERES TRIP (BREAKER SETTING)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
BKR	BREAKER
BPS	BOLTED PRESSURE SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
DEMO	DEMOLITION
DIM	DIMENSION
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DS	DOWNSTAGE
DWG	DRAWING
EBU	EMERGENCY BATTERY UNIT
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEC	ELECTRICAL
EM/ EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FLR	FLOOR
FOH	FRONT OF HOUSE
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FU	FUSE
G/GRD/EG	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HOA	HAND–OFF–AUTO
HP	HORSEPOWER
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KA	THOUSAND AMP
KV	KILOVOLT
KVA	KILOVOLT – AMPERES
KW	KILOWATT
KWH	KILOWATT – HOURS
LA	LIGHTNING ARRESTOR
LP	LIGHTING PANEL
LDP	LIGHTING DISTRIBUTION PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MIN	MINIMUM
MISC.	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON–FUSIBLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	POLE
PB	PUSHBUTTON STATION
PH	PHASE
PT	POTENTIAL TRANSFORMER
PDP	POWER DISTRIBUTION PANEL
RECEPT.	RECEPTACLE
RDP	RECEPTACLE DISTRIBUTION PANEL
RP	RECEPTACLE PANEL
RSC	RIGID STEEL CONDUIT
SCCR	SHORT CIRCUIT CURRENT RATING
SCHED	SCHEDULE
SPD	SURGE PROTECTION DEVICE
ST	SHUNT TRIP
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TB	TERMINAL BOX
TELECOM	TELECOMMUNICATIONS
TR	TAMPER RESISTANT
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
US	UPSTAGE
V	VOLTS
W	WIRE OR WATTS
WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
(E)	EXISTING
(R)	RELOCATED

STANDARD METHODS OF NOTATION



ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
ELECTRICAL STANDARDS
AND DRAWING INDEX

ISSUE DATES

DATE:	ISSUED FOR:
10–25–2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E0.1

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E0-IND.dwg, E0.1, 10/24/2024 10:06:10 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER(S)	WATTAGE	VOLTAGE	LIGHT CHARACTERISTICS	CONTROLS	REMARKS
L1	2'X2' RECESSED FLAT PANEL LIGHT FIXTURE: ALUMINUM BEZEL, STEEL BACKING AND WHITE FROST ACRYLIC DIFFUSER.	1. LITHONIA CPX SERIES 2. METALUX CGTX SERIES 3. COLUMBIA CBT SERIES	36.3	MULTI	LED 4000K 80CRI 3,200 LUMENS	0-10V TO 10% DIMMING	FOR FIXTURES INDICATED AS EMERGENCY ON PLAN PROVIDE AUTOMATIC LOAD CONTROL RELAY (ALCR)
L2	6" DIAMETER DOWNLIGHT LIGHT FIXTURE: VENTILATED DIE CAST ALUMINUM HEAT SINK, SELF FLANGED WHITE TRIM RING WITH SEMI-SPECULAR REFLECTOR, DIFFUSED LENS WIDE DISTRIBUTION.	1. GOTHAM EVO SERIES 2. PORTFOLIO LD6C SERIES 3. PRESOLITE LFR-6RD SERIES	11.7	MULTI	LED 4000K 80CRI 500 LUMENS	0-10V TO 10% DIMMING	
L3	10' DIAMETER SURFACE MOUNT CURVED LIGHT FIXTURE: 4" SQUARE ALUMINUM HOUSING WITH DIE CAST ALUMINUM END CAPS. PROVIDE LENGTHS AS INDICATED ON PLANS. FINISH BY ARCHITECT.	1. LUMOS RP SERIES 2. BETA-CALCO KURL SERIES 3. CAMMAN AVALON SERIES		MULTI	LED 4000K 80CRI 750 LUMES PER FOOT	0-10V TO 10% DIMMING	
EXIT SIGN	WHITE DIE CAST ALUMINUM FACE, RED LETTERS, HIGH OUTPUT LED DIFFUSE LIGHT PANEL. SINGLE OR DOUBLE STENCIL WITH DIRECTIONAL ARROWS AS INDICATED ON PLAN. PROVIDE MOUNTING AS INDICATED ON PLAN.	1. LITHONIA SIGNATURE SERIES 2. DUAL-LITE SEMPRA SERIES 3. SURELITE CX SERIES	2	MULTI	HIGH OUTPUT LED LIGHT PANEL		

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR CEILING TYPES.
2. WATTAGE LISTED IS FROM THE BASIS OF DESIGN MANUFACTURER. (BASIS OF DESIGN IS FIRST LISTED MANUFACTURER)
3. FINISH TO BE APPROVED BY INTERIOR DESIGNER AND/OR ARCHITECT.
4. ALL LUMINAIRES TO BE AS SPECIFIED OR EQUAL APPROVED BY PBA.

FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE

OVERCURRENT DEVICE RATING (AMPERES)	COPPER CONDUCTORS						KEYED NOTES
	WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE				
	PHASE & NEUTRAL	GROUND	SINGLE PHASE 2 WIRE+G (1PH, 1N, 1G, 2PH, 1G)	SINGLE PHASE 3 WIRE+G (2PH, 1N, 1G)	THREE PHASE 3 WIRE+G (3PH, 1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH, 1N, 1G)	
15-20	12	12	3/4"	3/4"	3/4"	3/4"	
25-30	10	10	3/4"	3/4"	3/4"	3/4"	
35-40	8	10	3/4"	3/4"	3/4"	3/4"	
45-50	8 (6)	10	3/4"	3/4"	3/4"	3/4"	1
60	6 (4)	10	3/4" (1")	3/4" (1")	3/4" (1")	1" (1 1/4")	1
70	4	8	1"	1 1/4"	1 1/4"	1 1/4"	
80	4 (3)	8	1"	1 1/4"	1 1/4"	1 1/4"	1
90-100	3 (2)	8	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1
110	2 (1)	6	–	1 1/4"	1 1/4"	1 1/4" (1 1/2")	1
125	1 (1/0)	6	–	1 1/4" (1 1/2")	1 1/4" (1 1/2")	1 1/2"	1
150	1/0	6	–	1 1/2"	1 1/2"	1 1/2"	
175	2/0	6	–	2"	2"	2"	
200	3/0	6	–	2"	2"	2 1/2"	
225	4/0	4	–	2"	2"	2 1/2"	
250	250	4	–	2 1/2"	2 1/2"	2 1/2"	
300	350	4	–	2 1/2"	2 1/2"	3"	
350	500	3	–	3"	3"	3"	
400	500	3	–	3"	3"	3"	

GENERAL NOTES:

1. CONTRACTOR TO SIZE FEEDERS AND BRANCH CIRCUITS BASED ON THIS SCHEDULE AND OVER CURRENT DEVICE SIZE, UNLESS NOTED OTHERWISE.
2. CONTRACTOR MAY COMBINE 20A CIRCUITS AS NOTED IN SPECIFICATION.
3. CONDUCTORS ARE BASED ON THHN/THWN-2 UP TO AND INCLUDING #4/0. LARGER THAN #4/0 ARE BASED ON TYPE XHHW.
4. CONDUIT SIZES ARE VALID FOR EMT OR RSC. CONDUIT SIZES SHALL BE ADJUSTED AS REQUIRED FOR OTHER TYPES OF CONDUIT.
5. SIZE OF DISCONNECT SWITCH LOCATED AT EQUIPMENT SHALL BE SIZED BASED UPON OVERCURRENT PROTECTION OF THAT DEVICE.
6. OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLING DIFFERENT SIZE/QUANTITY OF CONDUCTORS TO OBTAIN AN EQUIVALENT AMPACITY.

KEYED NOTES:

1. CONDUCTORS ARE BASED ON 90°C, 600V INSULATED WIRE APPLIED AT 75°C FOR TERMINATION RATED 60/75°C OR 75°C. FOR TERMINATION RATED AT 60°C, USE CONDUCTORS AND CONDUIT SIZES INDICATED IN PARENTHESES.

RACEWAY / CONDUCTOR / CABLE APPLICATION SCHEDULE

	WIRE	RACEWAY								CABLE / CORD	
	COPPER, TYPE THHN/THWN-2	ELECTRICAL METALLIC TUBING (EMT)	INTERMEDIATE METAL CONDUIT (IMC)	RIGID STEEL CONDUIT (RSC)	PVC COATED RIGID STEEL CONDUIT	RIGID NON-METALLIC CONDUIT (RNC) TYPE EPC-40	FLEXIBLE METAL CONDUIT (FMC)	LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC)	SURFACE RACEWAY	METAL CLAD TYPE CABLE WITH INSULATED GROUND WIRE (TYPE MC)	POWER LIMITED CABLE
FEEDERS - INTERIOR											
CONCEALED, ACCESSIBLE CEILINGS	X	X	X								
CONCEALED, INACCESSIBLE CEILINGS	X	X	X								
CONCEALED IN GYPSUM BOARD PARTITION WALLS	X	X	X								
CONCEALED IN CMU WALLS	X	X	X								
EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X		X	X	X						
EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X	X	X								
EXPOSED, ABOVE 10' AFF UNFINISHED SPACES	X	X	X								
EXPOSED, FINISHED SPACES	X								X		
BELOW SLAB ON GRADE	X			X	X	X					
DAMP AND WET LOCATIONS	X		X	X	X	X					
BRANCH CIRCUITS - INTERIOR											
CONCEALED, ACCESSIBLE CEILINGS	X	X	X							X	
CONCEALED, INACCESSIBLE CEILINGS	X	X	X								
CONCEALED IN GYPSUM BOARD PARTITION WALLS	X	X	X				X			X	
CONCEALED IN CMU WALLS	X	X	X								
EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X		X	X	X						
EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X	X	X						X		
EXPOSED, ABOVE 10' AFF UNFINISHED SPACES	X	X	X								
EXPOSED, FINISHED SPACES	X								X		
BELOW SLAB ON GRADE	X					X					
DAMP AND WET LOCATIONS	X		X	X	X	X		X			
SPECIAL APPLICATIONS											
CLASS 1 CONTROL CIRCUITS	X	X	X	X							
CLASS 2 CONTROL CIRCUITS	X	X	X	X							X
CLASS 3 CONTROL CIRCUITS	X	X	X	X							X

GENERAL NOTES:

1. TRANSITION FROM PVC/HDPE AND PROVIDE RIGID STEEL OR RTRC SWEEPS WHERE CONDUITS PENETRATE WALLS, CONCRETE SLABS, CONCRETE BASES, AND ASPHALT.
2. REFER TO SPECIFICATIONS FOR RESTRICTIONS ON MC/AC CABLE INSTALLATION.
3. EMT SHALL NOT BE USED ON THE EXTERIOR OF A BUILDING OR IN AREAS SUBJECT TO DAMAGE BELOW 10' AFF.
4. INSTALL SURFACE RACEWAYS ONLY WHERE INDICATED ON DRAWINGS.

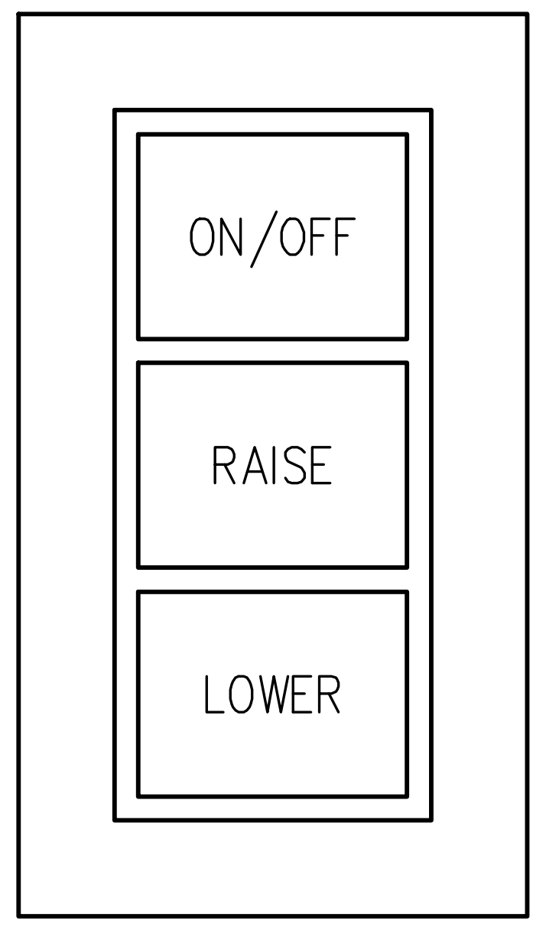
DTE LIGHTING INCENTIVES PROGRAM

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MEETING ALL REQUIREMENTS FOR THE OWNER TO PARTICIPATE IN THE CURRENT DTE ENERGY SAVINGS PROGRAM. THE FOLLOWING ITEMS WILL BE REQUIRED BUT NOT LIMITED TO, FOR OWNER TO PARTICIPATE IN THIS PROGRAM:

1. ON BEHALF OF THE OWNER, PROVIDE ALL REQUIRED INFORMATION FOR THE RESERVATION APPLICATION. REFER TO DTE ENERGY PROGRAM APPLICATION AT www.eecontractor.com
2. CONTRACTOR BUSINESS INFORMATION.
3. LIGHTING INCENTIVES WORKSHEET.
4. TYPE OF FIXTURES REMOVED, WATTAGE AND LAMP SIZE.
5. EASY TO READ ITEMIZED INVOICES WITH PART NUMBERS OF ALL LED LIGHT FIXTURES, AND CONTROLS.
6. MANUFACTURERS CUT SHEETS WITH HIGHLIGHTED FIGURES, TYPES OF LED FIXTURES, DRIVERS, AND CONTROLS, ETC. AS REQUIRED BY DTE.
7. MEASURES ARE COMPLETELY INSTALLED WITH 90 DAYS OF PROJECT APPROVAL.

IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO CONTACT DTE'S ENERGY SAVINGS TEAM OR ASSIGNED REPRESENTATIVE IF A PROJECT IS DELAYED, OR SUBSTANTIALLY CHANGED.

THE ELECTRICAL CONTRACTOR SHALL WORK WITH AND COORDINATE WITH THE OWNER FOR THE RESERVATION PROCESS PRIOR TO SITE WORK BEING CONDUCTED AND POST REVIEW INSPECTION FOR REMOVAL AND INSTALLATION OF ALL EQUIPMENT RELATED TO THE INCENTIVE PROGRAM.



TYPICAL DIMMING LIGHTING CONTROL STATION
NO SCALE

FBX FLOOR SERVICE FITTING ASSEMBLY SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER (SEE NOTE #2)	DEVICE CONFIGURATION	FLANGE/COVER MATERIAL & COLOR	SERVICE PLATE TYPE	MINIMUM DEPTH	MAXIMUM CONDUIT
FB1	POWER ABOVE FLOOR SERVICE FITTING MOUNTED TO CAST IRON FLOOR BOX FOR SLAB ON GRADE APPLICATIONS.	WIREMOLD 525 MTD ON 800-CI FLOOR BOX	AS INDICATED	AL	N/A	3"	3/4"
FB2	MULTIFUNCTION ABOVE FLOOR TWO GANG SERVICE FITTING MOUNTED TO CAST IRON FLOOR BOX FOR SLAB ON GRADE APPLICATIONS.	WIREMOLD 525 MTD ON 800-CI FLOOR BOX	HOLE WITH GROMMET	AL	N/A	3"	3/4"

GENERAL NOTES:

1. PROVIDE 1 1/4"C. FROM EACH TELECOM FLOOR BOX (GANG) TO ACCESSIBLE LOCATION IN CEILING.
2. OTHER ACCEPTABLE MANUFACTURERS ARE STEEL CITY, OR HUBBELL-RACO.
3. ALL PRODUCTS IN THIS SCHEDULE SHALL MEET AND EXCEED THE UL514A or UL514C SCRUB WATER EXCLUSION REQUIREMENT.
4. COORDINATE ALL TELECOM AND A/V OUTLETS WITH COMMUNICATIONS AND A/V CONTRACTORS.
5. COORDINATE NEMA CONFIGURATION OF SIMPLEX RECEPTACLES WITH EQUIPMENT BEING PROVIDED.

ABBREVIATIONS:

PF = PARTITION FEED
D = DUPLEX RECEPTACLE
T = 2 TELECOM OPENINGS
S = SIMPLEX RECEPTACLE

BS = BRASS
AL = ALUMINUM
BK = BLACK
GY = GRAY (CONCRETE)
BZ = BRONZE
NK = NICKEL

RF = RECTANGULAR FLIP COVER
RFC = RECTANGULAR FLIP COVER WITH CUTOUT FOR CARPET/TILE INSERT
CF = ROUND FLIP COVER
RPF = RECTANGULAR FURNITURE FEED COVER
CPF = ROUND FURNITURE FEED COVER

BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR SINGLE PHASE CIRCUITS

BRANCH CKT RATING (A)	WIRE SIZE (AWG)	MAXIMUM BRANCH CIRCUIT LENGTH (IN FEET)				
		120V	208V	240V	277V	480V
20A	12	83	143	165	191	331
	10	128	222	256	295	511
	8	201	348	402	464	804
	6	313	542	625	721	1250
30A	10	85	148	170	197	341
	8	134	232	268	309	536
	6	208	361	417	481	833
	4	313	542	625	721	1250

GENERAL NOTES:

1. THE ABOVE TABLE VALUES ARE BASED ON COPPER CONDUCTORS, IN STEEL CONDUIT, WITH A LOAD POWER FACTOR OF 0.85 PER NEC CHAPTER 9, TABLE 9.
2. PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
3. CONDUCTOR SIZES ARE BASED ON MAXIMUM OF 9 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT.
4. LIMITS FOR CONDUCTOR LENGTHS SHOWN ARE BASED ON A MAXIMUM BRANCH CIRCUIT LOADING OF 64% OF THE BRANCH BREAKER RATING AND A MAXIMUM OF 3 PERCENT VOLTAGE DROP TO COMPLY WITH ASHRAE 90.1 AND THE NEC. FOR CIRCUITS LOADED GREATER THAN 64% OF BRANCH BREAKER RATING, THE CONTRACTOR SHALL PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

INTERIOR LIGHTING CONTROL SCHEDULE

PLAN REFERENCE	ROOM TYPE	LOCAL CONTROL		CONTROL ON / OFF	SENSOR TYPE	TURN ON LIGHTING TO %	BI-LEVEL CONTROL	DAYLIGHT			NO DETECTION FULL OFF (MIN)	EMERGENCY LIGHTING CIRCUIT CONTROL	HVAC CONTROL	NOTES
		SWITCH TYPE	SWITCH CONTROL					SIDE LIGHT	TOP LIGHT	MAINTAIN FC LEVEL				
A	FOOD PREPARATION AREA	LOW VOLTAGE	ON-OFF-DIM	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	FULL 100%	CONTINUOUS DIM	N/A	N/A	N/A	20	ALCR	N/A	

NOTE:

1. REFER TO PLANS FOR LOCATION OF LOCAL CONTROL.
2. PROVIDE EMERGENCY LIGHTING CIRCUIT CONTROL (BCELTS OR ALCR) PER SWITCHING CIRCUIT AS REQUIRED.
3. CONTRACTOR SHALL PROVIDE FLOOR PLAN INDICATING SENSOR AND EQUIPMENT LOCATIONS OF CHOSEN CONTROL SYSTEM.
4. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE CHARACTERISTICS.
5. LIGHTING SENSOR SHALL HAVE CONTACT FOR HVAC CONTROL WHEN A "YES" SELECTION IS MADE IN THE HVAC CONTROL COLUMN.
6. REFER TO TEMPERATURE CONTROL DRAWINGS AND DIAGRAMS FOR ADDITIONAL SENSOR REQUIREMENTS.
7. PROVIDE WIRING CONTROL DIAGRAM FOR APPLICABLE CONTROL SYSTEM(S).

N/A = NOT APPLICABLE

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

ARCHITECTURE
TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
ELECTRICAL STANDARD
SCHEDULES

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E0.2

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E0-IND.dwg, E0.2, 10/24/2024 10:06:11 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

FOOD SERVICE EQUIPMENT SCHEDULE

ITEM NO	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	EQUIPMENT REMARKS	AMPS	KW	HP	VOLTS	PHASE	DIRECT	PLUG	NEMA	ELECTRICAL AFF (IN)	ELEC REMARKS	COLD WATER SIZE (IN)	COLD WATER AFF (IN)	HOT WATER SIZE (IN)	HOT WATER GPH	HOT WATER AFF (IN)	DIRECT DRAIN SIZE (IN)	DIRECT DRAIN AFF (IN)	INDIR DRAIN SIZE (IN)	GAS SIZE (IN)	MBTUH	GAS AFF (IN)	PLUMBING REMARKS
1	1	EXISTING WARMER	BY OWNER	NIC	RELOCATED	13.8			120	1		X	5-15P	18	***												
2	1	EXISTING WARMER	BY OWNER	NIC	RELOCATED	13.8			120	1		X	5-15P	18	***												
3	1	ST. ST. WORK TABLE	ADVANCE TABCO	KSS-365																							
4	1	EXISTING COMBI OVEN	BY OWNER	NIC	REMAIN AS IS																						
5	1	EXISTING COMBI OVEN	BY OWNER	NIC	REMAIN AS IS																						
6	1	ST. ST. CABINET BASE COOKS TABLE W/ SHELF OVER	ST. ST. FABRICATOR	CUSTOM	TIER OF DRAWERS FINISHED BACK																						
7		SPARE - NOT USED			RELOCATED																						
8	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	72	DROP CORD FROM ABOVE												
9	1	HEATED GRAVITY CHUTES	HATCO	GR2SDS-30D											POWERED FROM # 13												
10		SPARE - NOT USED																									
11		SPARE - NOT USED																									
12	1	REFRIGERATOR, REACH-IN	TRAULSEN	G20010		7.4			120	1		X	5-15P	86													
13	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-46SS MODIFIED 40" LONG		8.5	2.04		120/208	1		X	14-20P	SU	FLOOR RECEPTACLE												
14		SPARE - NOT USED																									
15	4	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A																							
16	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-46SS MODIFIED 40" LONG		11.2	1.3		120	1		X	5-15P	SU	FLOOR RECEPTACLE												
17	4	INDUCTION RANGE, COUNTERTOP	HATCO	IRNG-HC1-18											POWERED FROM # 22 & 23												
18	2	DROP-IN, HOT WELLS	DUKE MANUFACTURING	WWG2	WATERLESS WELLS										POWERED FROM # 16 & 25												
19	1	EXISTING UTILITY CART	BY OWNER	NIC																							
20		SPARE - NOT USED																									
21		SPARE - NOT USED																									
22	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60PG MODIFIED 59" LONG		30.5			120	1		X	5-50P	SU	FLOOR RECEPTACLE												
23	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60PG MODIFIED 59" LONG		30.5			120	1		X	5-50P	SU	FLOOR RECEPTACLE												
24	2	DROP-IN, COLD FOOD STATION	DUKE MANUFACTURING	ADI-2MDSL-N7											POWERED FROM # 22 & 23								0.75				RUN TO INDIRECT WASTE
25	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-46SS MODIFIED 40" LONG		11.2	1.3		120	1		X	5-15P	SU	FLOOR RECEPTACLE												
26	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X	5-15P	18		0.5	12	0.5		12	1.5	21					
27	1	ST. ST. WORK TABLE	ADVANCE TABCO	KSS-305																							
28	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
29	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
30		SPARE - NOT USED																									
31		SPARE - NOT USED																									
32	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 78" LONG	CORD GROMMET HOLE	18.4	4.4		120/208	1		X	L14-30P	SU	FLOOR RECEPTACLE												
33	1	DISPLAY CASE, HEATED	HATCO	GR2SDS-60D											POWERED FROM # 32												
34	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 78" LONG	CORD GROMMET HOLE	18.4	4.4		120/208	1		X	L14-30P	SU	FLOOR RECEPTACLE												
35	1	DISPLAY CASE, HEATED	HATCO	GR2SDS-60D											POWERED FROM # 34												
36	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X	5-15P	18		0.5	12	0.5		12	1.5	21					
37	1	HOLDING CABINET, HUMIDIFIED HEATED	F.W.E.	MTU-12		13.8			120	1		X	5-15P	18													
38	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-363																							
39	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-366	24" HIGH																						
40		SPARE - NOT USED																									
41		SPARE - NOT USED																									
42	2	OVEN, CONVEYOR, COUNTERTOP, ELECTRIC, VENTLESS	OVENTION	C2000	STACKING KIT	44.0	12.3		208	1		X	6-50P	48													
43	1	REFRIGERATOR, REACH-IN	TRAULSEN	G20012		7.4		1/3	115	1		X	5-15P	86													
44	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
45	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15			120	1		X	5-15P	18	*** POWER AND DATA												
46	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 45												
47	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS MODIFIED 72" LONG		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
48	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 47												
49	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 47												
50		SPARE - NOT USED																									
51		SPARE - NOT USED																									
52	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		11.2	1.2		120	1		X	5-20P	SU	FLOOR RECEPTACLE												
53	1	DROP-IN, HEATED SHELF	HATCO	GRSBF-60-I											POWERED FROM # 52												
54	1LOT	HEAT LAMP, DECORATIVE	HATCO	DL-725-RTL W/ 48" TRACK	VERIFY COLOR & SHADE #	6.25	.75		120	1	X			DFA													
55	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM1R-A																							
56	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		11.2	1.2		120	1		X	5-20P	SU	FLOOR RECEPTACLE												
57	1	DROP-IN, HEATED SHELF	HATCO	GRSBF-60-I											POWERED FROM # 56												
58	1LOT	HEAT LAMP, DECORATIVE	HATCO	DL-725-RTL W/ 48" TRACK	VERIFY COLOR & SHADE #	6.25	.75		120	1	X			DFA													
59	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM1R-A																							
60		SPARE - NOT USED																									
61		SPARE - NOT USED																									
62	1	REFRIGERATOR, PASS-THRU, GLASS DOOR	TRUE MFG.	STA1RPT-1G-1G-HC	LOCKING DOORS NO STUDENT ACCESS	3.8		1/4	115	1		X	5-15P	18													
63	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15.0			120	1		X	5-15P	SU	*** POWER AND DATA FLOOR RECEPTACLE												
64	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 63												
65	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
66	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 65												
67	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 65												
68	1	REFRIGERATOR, PASS-THRU, GLASS DOOR	TRUE MFG.	STA1RPT-1G-1G-HC	LOCKING DOORS NO STUDENT ACCESS	3.8		1/4	115	1		X	5-15P	18													
69	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG		15.0			120	1		X	5-15P	SU	*** POWER AND DATA FLOOR RECEPTACLE												
70		SPARE - NOT USED													POWERED FROM # 63												
71		SPARE - NOT USED																									
72	1	POS / REGISTER	BY OWNER	NIC																							
73	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		17.0			120	1		X	5-20P	SU	FLOOR RECEPTACLE												
74	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-3 WATERLESS											POWERED FROM # 73												
75	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 73												
76	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
77	1	TABLE, WORK, 14 GAUGE, BACK SPLASH	ADVANCE TABCO	KSS-305																							
78	1	EXISTING WARMER	BY OWNER	NIC		13.8			120	1		X	5-15P	18	***												
79	1	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-40	ELECTRONIC FAUCET	1.0			120	1		X		18		0.5	12	0.5		12	1.5	21					
80		SPARE - NOT USED																									
81		SPARE - NOT USED																									
82	1	BUFFET/CAFETERIA, CASHIER STATION	DUKE MANUFACTURING	TCS-30PG-MODIFIED					120	1		X	5-15P	18	*** POWER AND DATA												
83	1	POS / REGISTER	BY OWNER	NIC											POWERED FROM # 82												
84	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-60SS MODIFIED 54" LONG		11.5			120	1		X	5-15P	SU	FLOOR RECEPTACLE												
85	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-2 WATERLESS											POWERED FROM # 84												
86	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 84												
87	1	BUFFET/CAFETERIA, FLAT TOP	DUKE MANUFACTURING	TST-74SS		16.0			120/208	1		X	L14-20P	SU	FLOOR RECEPTACLE												
88	1	DROP-IN, HOT/COLD WELLS	DUKE MANUFACTURING	HCF-4 WATERLESS											POWERED FROM # 87												
89	1	FOOD SHIELD, ADJUSTABLE	PREMIER METAL & GLASS	FM2R-A											POWERED FROM # 87												
90	1	EXISTING WATER COOLED REFRIGERATION RACK	FLO-COLD		REMOVE AND DISPOSE										DISCONNECT SERVICE												DISCONNECT SERVICE
91	1	POS / REGISTER	BY OWNER	NIC		15.0			120	1		X	5-15P	48	*** POWER AND DATA												
92	1LOT	SERVICE COUNTER & BASE	ST. ST. FABRICATOR	CUSTOM	QUARTZ TOP																						
93	1	SODA DISPENSER	BY COKE	NIC		15.0			120	1		X	5-15P	48	***								0.75				RUN TO INDIRECT WASTE
94	1LOT	UNDERCOUNTER BIB RACK	BY COKE	NIC	PUMPS/CARBONATOR/CO2	15.0			120	1		X	5-15P	18	***	0.5	18										
95	1	AIRPOT COFFEE BREWER	BY OWNER	NIC		20.0			120	1		X	5-15P	48	***	0.5	48										
96	1	TABLE, ENCLOSED BASE, SLIDING DOORS	ADVANCE TABCO	CK-SS-306M	FIELD VERIFY 30" DEPTH																						
97	1	ST. ST. WALL CABINET	ADVANCE TABCO	WCH 15-72	HINGED DOORS																						
98	1	DISPLAY CASE, REFRIGERATED	TRUE MFG.	GDM-23-HC~TSL01		5.4	0.6	1/3	115	1		X	5-15P	86													
99	1	TABLE, ENCLOSED BASE, SLIDING DOORS	ADVANCE TABCO	CK-SS-304M	FIELD VERIFY 30" DEPTH																						
100	1	EXISTING WARMER	BY OWNER	NIC		12.5	1.5		120	1		X	5-15P	48	***												
101	1	REACH IN REFRIGERATOR	TRAULSEN	G10010		4.9			120	1		X	5-15P	86													
102	1	PORTABLE ICE CART	CAMBRO	ICS100L110	100# CAPACITY																						
103	1	EXISTING WALK IN REFRIGERATOR/FREEZER COMPLEX																									
104	1	ROOF MOUNTED REFRIGERATION SYSTEM RACK	COOLTEC	CRS-6	ALTERNATE NO. 1	38.0			208	3	X			SU	WATERTIGHT ON ROOF												
105	2	BLOWER COILS - FREEZER		BEL0100BS6EEA	ALTERNATE NO. 1	14.1			208	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
105.1	LOT	HEAT TAPE			ALTERNATE NO. 1																						
106	1	BLOWER COIL - REFRIGERATOR		BEL0095AS6AMA	ALTERNATE NO. 1	1.8			115	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
107	1	BLOWER COIL - REFRIGERATOR		BEL0115AS6AMA	ALTERNATE NO. 1	1.8			115	1	X			DFA									0.75				RUN TO EXISTING INDIRECT WASTE
108	1LOT	FIELD ERECTION LABOR																									
CO1		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				18													
CO2		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				48													
CO3		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				SU	DUPLEX FLR RECEPTACLE												
CO4		CONVENIENCE OUTLET			DEDICATED	20.0			120	1				72	DROP CORD RECEPTACLE												

*** ELECTRICAL TRADE TO VERIFY EXISTING REQUIREMENTS - CONNECT TO EXISTING WHERE POSSIBLE

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

FOOD SERVICE EQUIPMENT SCHEDULES

ISSUE DATES

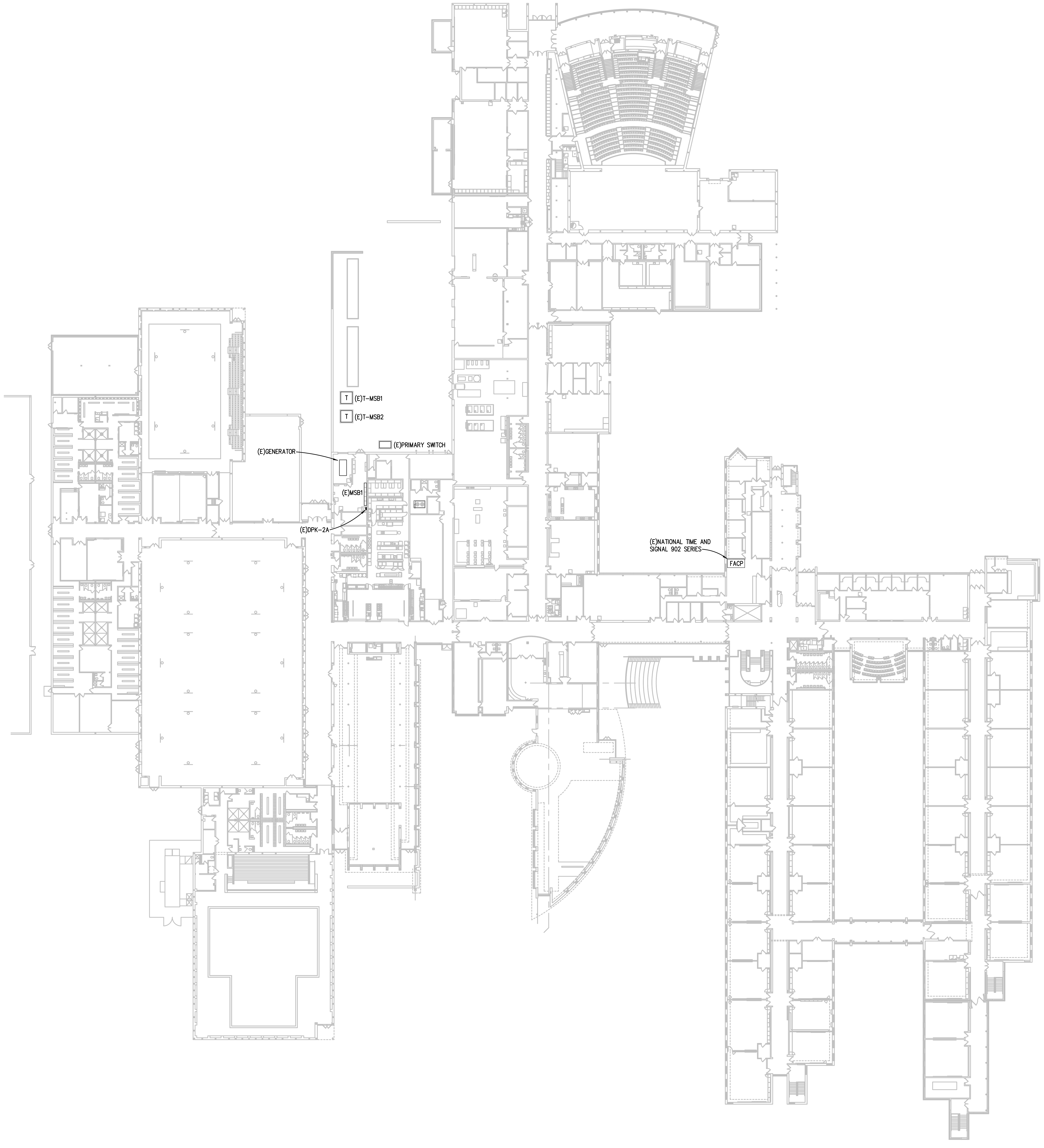
DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E0.3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



SECOND LEVEL ELECTRICAL COMPOSITE PLAN

SCALE: 1/32" = 1' - 0"

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E0-CMP2.dwg, E0.4, 10/24/2024 10:06:21 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

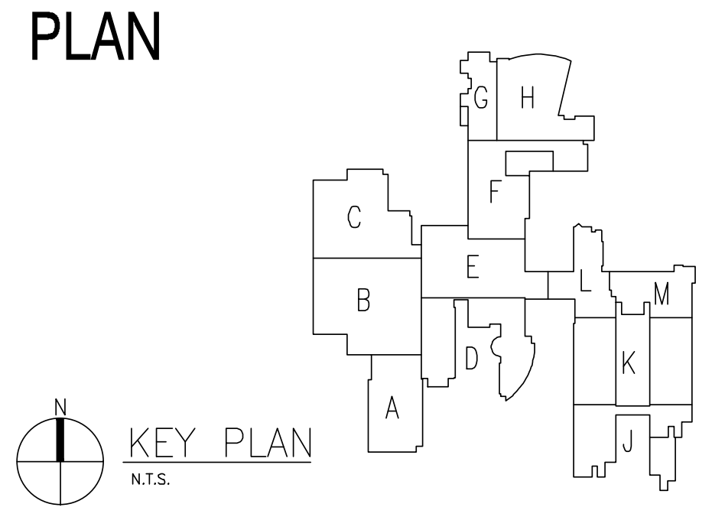
CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
SECOND LEVEL
ELECTRICAL COMPOSITE
PLAN



KEY PLAN
N.T.S.

ISSUE DATES

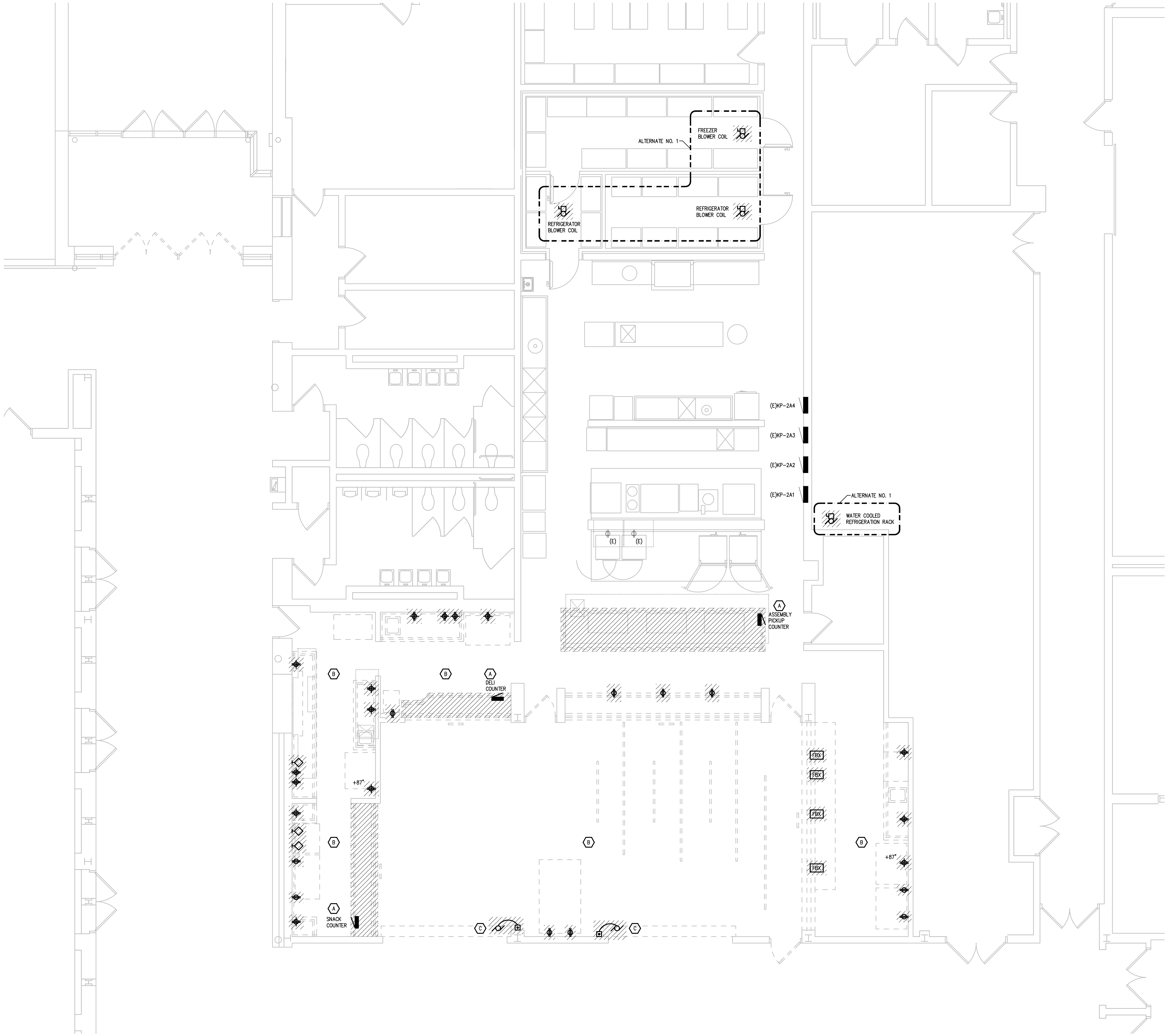
DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E0.4

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



SECOND LEVEL ELECTRICAL DEMOLITION PLAN - ZONE 'E'

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

ELECTRICAL DEMOLITION GENERAL NOTES:

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
3. REMOVE EQUIPMENT OR MATERIALS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE COMPONENTS SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE DIAGRAMS AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE-ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
6. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
7. MAINTAIN ELECTRICAL SERVICE TO ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND CONDUIT AND WIRE AS REQUIRED WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM LOADS THAT ARE TO REMAIN.
8. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, INCLUDING TCLP TESTING, PROPER DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
9. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
10. RING OUT AND TAG ALL CIRCUITS AFFECTED BY THIS ALTERATION AT BOTH ENDS. MARK ALL UNUSED CIRCUIT BREAKERS "SPARE".
11. PROVIDE UPDATED TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
12. VERIFY ALL UNDERGROUND AND IN SLAB UTILITY LOCATIONS PRIOR TO SAW-CUTTING OR PENETRATING ANY FLOOR SLAB.
13. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.

DEMOLITION KEY NOTES:

A. DISCONNECT AND REMOVE FOOD SERVICE EQUIPMENT SUBPANEL AND ALL ASSOCIATED DEVICES.

B. REMOVE ELECTRICAL DEVICES IN WALLS AND CEILINGS TO BE DEMOLISHED. (LIGHTING AND ASSOCIATED CONTROLS, POWER, FIRE ALARM, ETC.). MAINTAIN LIGHTING BRANCH CIRCUIT FOR REUSE. ANY DEVICE LOCATED ON WALLS NOT TO BE DEMOLISHED IS TO REMAIN U.O.N. (WALLS TO BE DEMOLISHED ARE SHOWN AS DASHED.) REFER TO NEW WORK PLANS FOR EXTENT OF WORK.

C. DISCONNECT POWER TO OVERHEAD DOOR. MAINTAIN BRANCH CIRCUIT FOR REUSE.

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

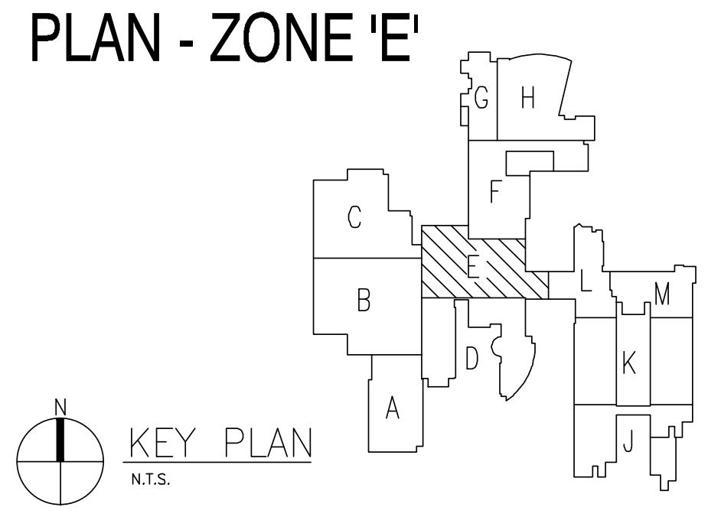
PROJECT TITLE

Troy High School Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

SECOND LEVEL ELECTRICAL DEMOLITION PLAN - ZONE 'E'



KEY PLAN
N.T.S.

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

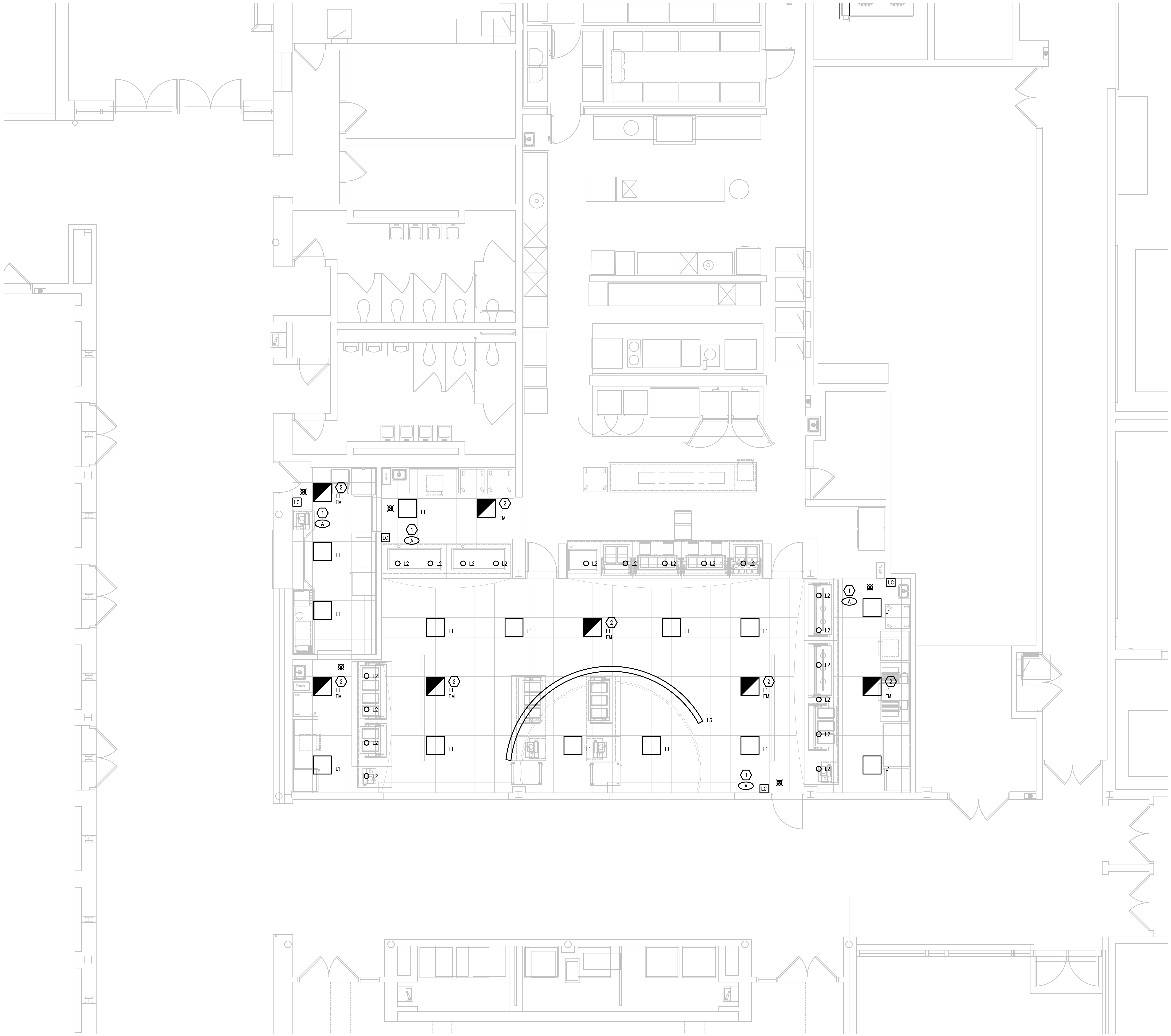
DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
ED1.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-ED1-DP2.dwg, ED1.2E, 10/24/2024 10:06:30 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS
ONE INCH WHEN PRINTED TO SCALE.



SECOND LEVEL LIGHTING PLAN - ZONE 'E'

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

ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
9. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
10. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
11. CONNECT EXIT SIGNS TO EMERGENCY LIGHTING BRANCH CIRCUIT SERVING THE AREA. CONNECT AHEAD OF ANY LIGHTING CONTROL DEVICE OR SYSTEM.
12. ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING NATIONAL TIME AND SIGNAL FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE-TEST AND CERTIFY EXISTING FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
13. PROVIDE TAMPER-RESISTANT TYPE RECEPTACLES FOR ALL NEW RECEPTACLES UNLESS OTHERWISE NOTED.

CONSTRUCTION KEY NOTES:

1. CONNECT LIGHT FIXTURES TO MAINTAINED LIGHTING BRANCH CIRCUIT. MODIFY SWITCHLEG AS REQUIRED FOR WORK INDICATED. EXTEND CONDUIT AND WIRE AS REQUIRED.
2. CONNECT LIGHT FIXTURE TO EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

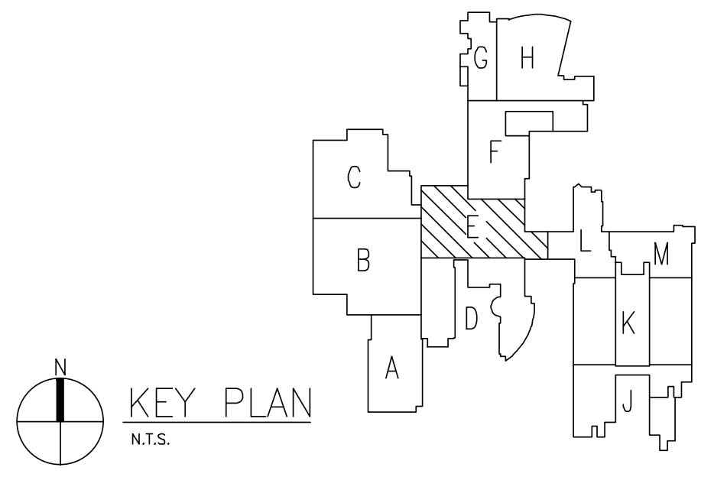
CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
SECOND LEVEL LIGHTING
PLAN - ZONE 'E'



KEY PLAN
N.T.S.

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

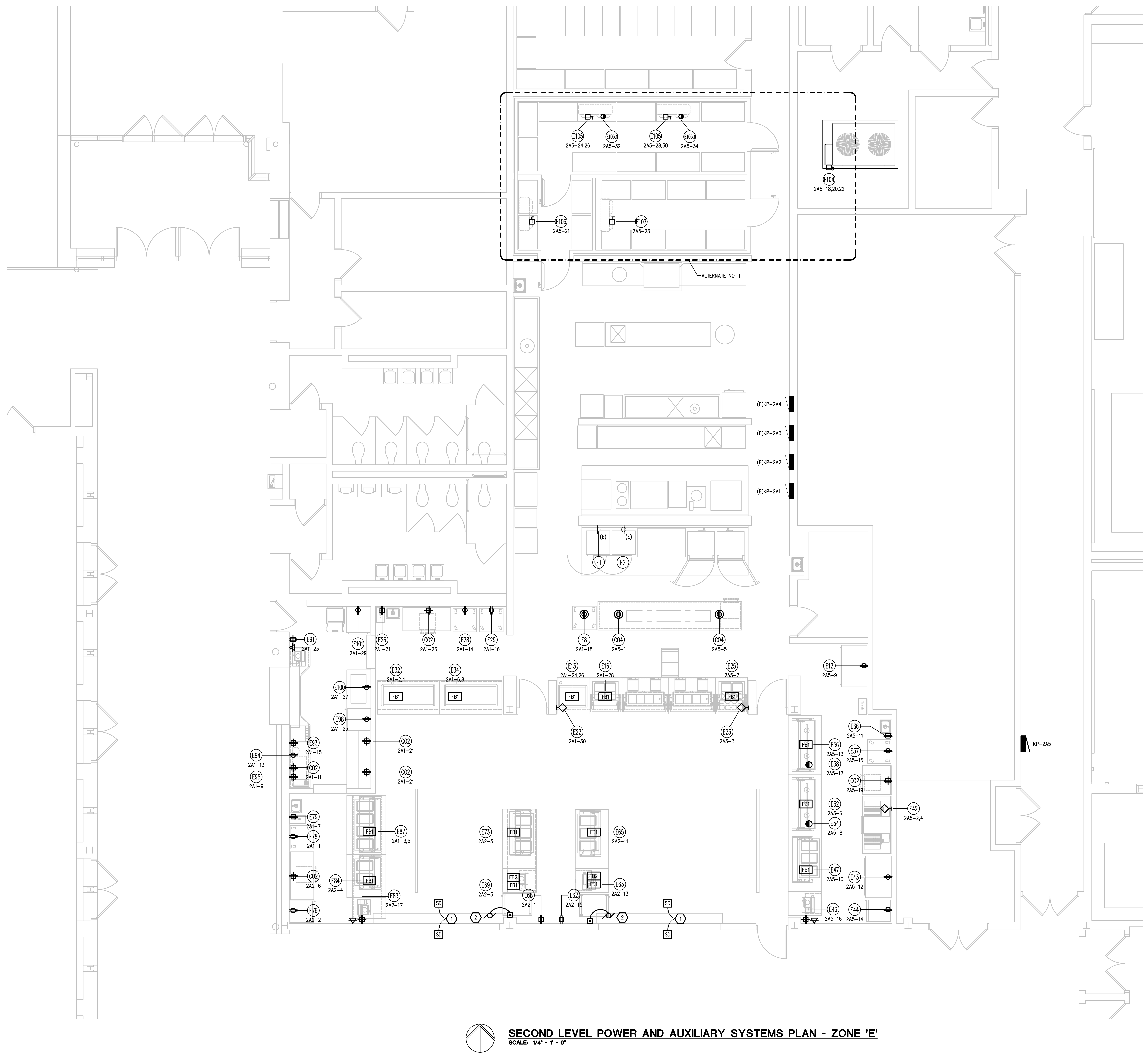
DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E2.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E2-LP2.dwg, E2.2E, 10/24/2024 10:06:39 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



SECOND LEVEL POWER AND AUXILIARY SYSTEMS PLAN - ZONE 'E'

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

ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE–THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
9. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
10. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
11. CONNECT EXIT SIGNS TO EMERGENCY LIGHTING BRANCH CIRCUIT SERVING THE AREA. CONNECT AHEAD OF ANY LIGHTING CONTROL DEVICE OR SYSTEM.
12. ALL FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING NATIONAL TIME AND SIGNAL FIRE ALARM SYSTEM. PROVIDE NECESSARY COMPONENTS, MODULES, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. RE–TEST AND CERTIFY EXISTING FIRE ALARM SYSTEM AT COMPLETION OF PROJECT.
13. PROVIDE TAMPER–RESISTANT TYPE RECEPTACLES FOR ALL NEW RECEPTACLES UNLESS OTHERWISE NOTED.

FOOD SERVICE GENERAL NOTES:

1. LOCATIONS, DIMENSIONS, UTILITY REQUIREMENTS, INTERCONNECTIONS, AND NEMA CONFIGURATIONS OF CORD AND PLUG ASSEMBLIES, ETC. ARE BASED ON BASIS OF DESIGN MANUFACTURER IN THE SPECIFICATIONS. COORDINATE FINAL LOCATIONS AND DEVIATIONS FROM BASIS OF DESIGN WITH FOOD SERVICE EQUIPMENT CONTRACTOR (FSEC).
2. PROVIDE GROUND–FAULT–CIRCUIT–INTERRUPTER (GFCI) FOR PERSONNEL PROTECTION, PER NEC, FOR ALL SINGLE–PHASE RECEPTACLES 150V TO GROUND OR LESS AND 50A OR LESS, AND FOR ALL THREE–PHASE RECEPTACLES 150V TO GROUND OR LESS AND 100A OR LESS. PROVIDE GFCI CIRCUIT BREAKER(S) OR REMOTE DEAD FRONT GFCI DEVICE(S), IN READILY ACCESSIBLE LOCATIONS, FOR ANY RECEPTACLE THAT CANNOT BE ACCESSED WITHOUT MOVING EQUIPMENT.
3. SEAL ALL CONDUIT PENETRATIONS TO WALK–IN COOLERS AND FREEZERS WITH FOAM AND NON–HEAT CONDUCTIVE SEALANT, IN AND AROUND CONDUIT TO ENSURE NO AIR LEAKS. CONDUIT PENETRATIONS INTO REFRIGERATOR AND/OR FREEZER SHALL BE ENT AND TRANSITIONED TO EMT OUTSIDE OF THE UNIT(S).
4. PROVIDE ALL INTERCONNECTING WIRING FOR WALK–IN REFRIGERATOR AND/OR FREEZER LIGHTS, DOOR HEATERS, COMPRESSORS, EVAPORATORS, ALARM SYSTEMS, HEATED PRESSURE RELIEF VENTS, WINDOW HEATERS, TIME CLOCKS, INTERLOCKS, ETC. WHERE UNITS ARE NOT PRE–WIRED. WIRE PER MANUFACTURER'S DRAWINGS/DIAGRAMS. INTERIOR CONDUIT RUNS ARE NOT ACCEPTABLE.

⟨#⟩ CONSTRUCTION KEY NOTES:

1. CONNECT FIRE ALARM DEVICES TO ELECTRIC COILING DOOR AND FIRE ALARM SYSTEM. COILING DOOR SHALL OPERATE UPON ACTIVATION OF THE SMOKE DETECTORS ASSOCIATED WITH THE COILING FIRE DOOR. COORDINATE WITH COILING DOOR CONTRACTOR FOR ALL SMOKE DETECTORS AND CONTROL MODULES REQUIRED FOR A COMPLETE SYSTEM.
2. CONNECT OVERHEAD DOOR TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.

TMP
ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

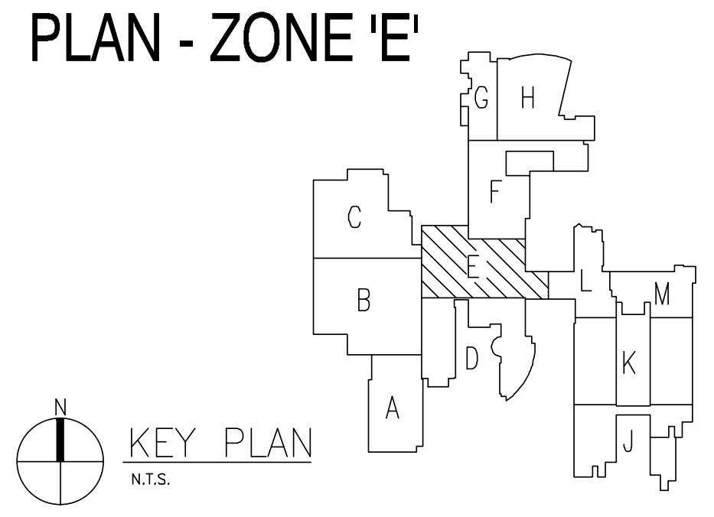
PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

SECOND LEVEL POWER
AND AUXILIARY SYSTEMS
PLAN - ZONE 'E'



ISSUE DATES

DATE:	ISSUED FOR:
10–25–2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.

22104G

DRAWING NO.

E3.2E

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E3-PP2.dwg, E3.2E, 10/24/2024 10:06:49 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

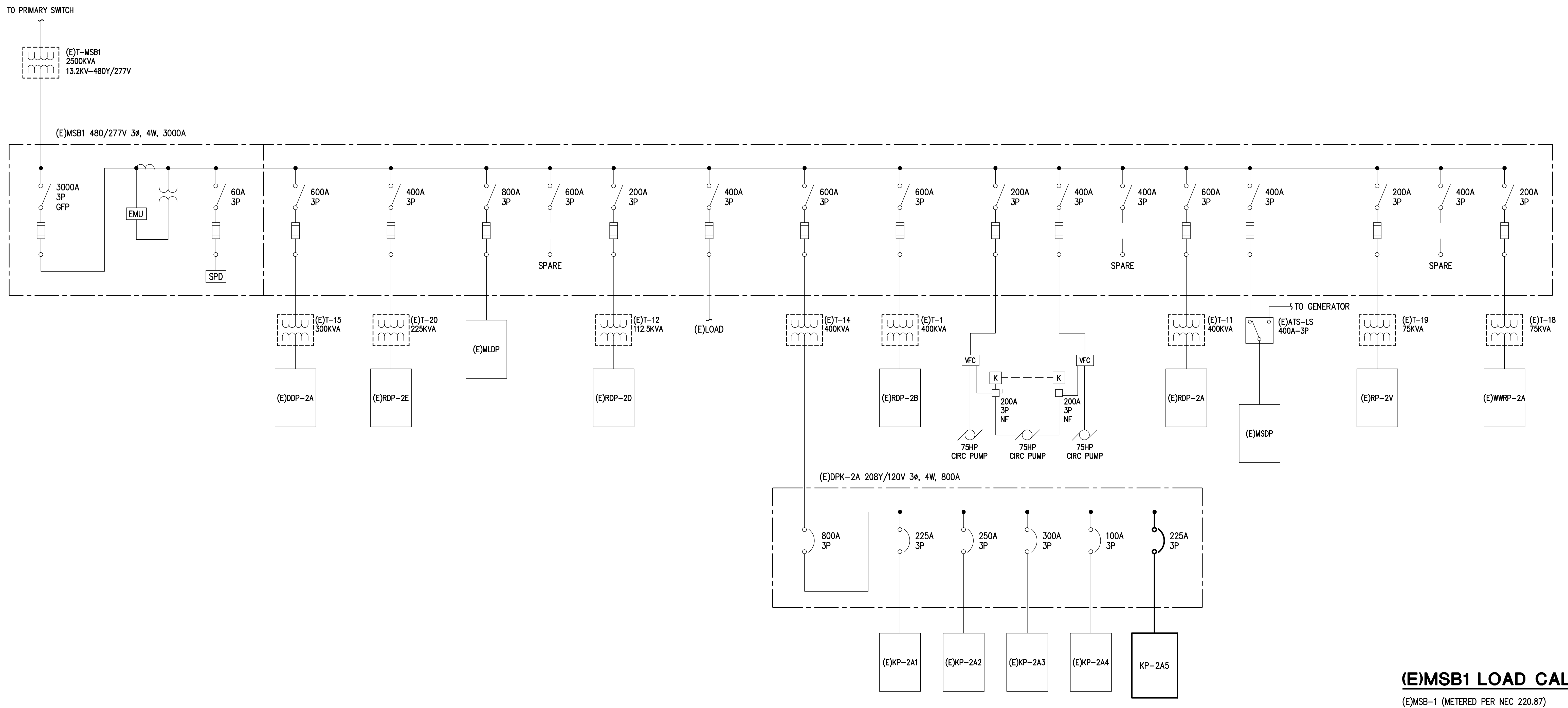


DIAGRAM GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE "FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE-GENERAL PURPOSE" ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
3. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH THE MOTOR CIRCUIT SIZING SCHEDULES ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
4. BASIS OF DESIGN IS SQUARE D DISTRIBUTION EQUIPMENT. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT FROM OTHER APPROVED MANUFACTURERS, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE LAYOUT AND CLEARANCE REQUIREMENTS IN ALL SPACES CONTAINING ELECTRICAL EQUIPMENT AND PROVIDE EQUIPMENT MEETING THE SPECIFICATIONS AND ACHIEVING CODE REQUIRED CLEARANCES WITHIN THE SPACE PROVIDED.
5. ALL TRANSFORMERS ARE 480V-208Y/120V, 3ø, 4W UNLESS OTHERWISE NOTED.

(E)MSB1 LOAD CALCULATION SUMMARY

(E)MSB-1 (METERED PER NEC 220.87) 366.6 KVA X 125%	458.2 KVA
KP-2A5	31.2 KVA
TOTAL CONNECTED LOAD	489.4 KVA

SHORT-CIRCUIT CALCULATIONS

FAULT POINT	PANEL/ TRANSFORMER	SOURCE FAULT POINT	SOURCE Isc	CONDUIT TYPE	CONDUCTOR MATERIAL	CONDUCTOR OR BUS SIZE	'C' VALUE	E (V)	L (FT)	XFMR kVA	XFMR %Z	f	M	Isc
1	(E)T-MSB1							480		2500	5.75			52,298
2	(E)MSB1	1	52,298	NM	CU	8 SETS OF 500 KCML	26706	480	75.0			0.066	0.94	49,049
3	(E)T-14(PRIM)	2	49,049	M	CU	2 SETS OF 250 KCML	16483	480	20.0			0.107	0.90	44,293
4	(E)T-14(SEC)	3	44,293				#N/A	208		300	3.6	4.414	0.18	18,881
5	(E)DPK-2A	4	18,881	M	CU	2 SETS OF 500 KCML	22185	208	10.0			0.035	0.97	18,235
6	KP-2A5	5	18,235	M	CU	1 SET OF 4/0	15082	208	150.0			1.510	0.40	7,264

THE FOLLOWING THREE PHASE CALCULATIONS ARE BASED ON THE "POINT-BY POINT" METHOD WHERE:

$$Isc = Isc \times M \qquad M = 1/(1+f)$$

CONDUCTOR OR BUS

$$f = \frac{1.732 \times L \times Isc}{C \times n \times E}$$

UTILITY XFMR:

$$Isc = \frac{kVA \times 100{,}000}{E \times 1.732 \times \%Z}$$

XFMR:

$$f = \frac{Ip(sc) \times Ep \times 1.73 \times \%Z}{100{,}000 \times KVA} \qquad Is(sc) = \frac{Ep \times M \times Ip(sc)}{Es}$$

L = LENGTH (ft) OF CONDUCTOR, C = CONSTANT FROM TABLE, n = NUMBER OF CONDUCTORS PER PHASE
Isc = AVAILABLE SHORT CIRCUIT (A), E = VOLTAGE OF CIRCUIT

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

ONE LINE DIAGRAM

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.

22104G

DRAWING NO.

E5.1

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E5-SH.dwg, E5.2, 10/24/2024 10:07:06 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.

EXISTING KP-2A1

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	K	E78 – WARMER	GFCI	20	1650	3550			1900	30	GFCI	E32 – BUFFET COUNTER	K	2
3	K	E87 – BUFFET COUNTER	GFCI	20	1650		3550		1900				K	4
5	K				1650			3550	1900	30	GFCI	E34 – BUFFET COUNTER	K	6
7	K	E79 – HAND SINK	NEW	20	120	2020			1900				K	8
9	K	E95 – AIRPOT COFFEE BREWER	NEW	20	750		1250		500	20	EXIST	EXISTING LOAD	NC	10
11	R	RECEPTACLE	NEW	20	180			680	500				NC	12
13	K	E94 – UNDERCOUNTER BIB RACK	GFCI	20	750	2400			1650	20	GFCI	E28 – HOLDING CABINET	K	14
15	K	E93 – SODA DISPENSER	NEW	20	750		2400		1650	20	GFCI	E29 – HOLDING CABINET	K	16
17	NC	EXISTING LOAD	EXIST	30	750			2400	1650	20	GFCI	E8 – HOLDING CABINET	K	18
19	NC		EXIST		750	1250			500	20	EXIST	EXISTING LOAD	NC	20
21	R	RECEPTACLE/RECEPTACLE (TANDEM)	EXIST	20/20	360		860		500	20	EXIST	EXISTING LOAD	NC	22
23	R	RECEPTACLE/RECEPTACLE (TANDEM)	EXIST	20/20	360			1260	900	20	GFCI	E13 – BUFFET COUNTER	K	24
25	K	E98 – REFRIGERATED DISPLAY CASE	GFCI	20	650	1550			900				K	26
27	K	E100 – EXISTING WARMER	GFCI	20	1500		2840		1340	20	GFCI	E16 – BUFFET COUNTER	K	28
29	K	E101 – REFRIGERATOR	GFCI	20	600			4250	3650	50	GFCI	E22 – BUFFET COUNTER	K	30
31	K	E26 – HAND SINK	NEW	20	120	495			375	15	EXIST	EXISTING LOAD	NC	32
33	NC	EXISTING LOAD	EXIST	15	375		750		375				NC	34
35	NC				375			750	375				NC	36
37	NC	EXISTING LOAD	EXIST	20	500	1000			500	20	EXIST	EXISTING LOAD	NC	38
39	NC	EXISTING LOAD	EXIST	20	500		1000		500	20	EXIST	EXISTING LOAD	NC	40
41	NC	EXISTING LOAD	EXIST	20	500			1000	500	20	EXIST	EXISTING LOAD	NC	42
						12265	12650	13890						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 225A
MAIN TYPE: MLO
MINIMUM A.I.C.:
MOUNTING: FLUSH

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	8375	100%	8375	100%	8375
KITCHEN LOAD (K)	29530	65%	19195	100%	19195
RECEPTACLE BASE LOAD (R)	900	100%	900	100%	900
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	28.47		
		TOTAL (AMPS):	79	TOTAL (AMPS):	79

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

EXISTING KP-2A2

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	K	E68 – REFRIGERATOR	NEW	20	450	1200			750	20	NEW	E83 – CASHIERS STATION	NC	2
3	NC	E69 – CASHIERS STATION	GFCI	20	750		2130		1380	20	GFCI	E84 – BUFFET COUNTER	K	4
5	K	E73 – BUFFET COUNTER	GFCI	30	2040			2220	180	20	NEW	RECEPTACLE	R	6
7	NC	EXISTING LOAD	EXIST	20	500	1000			500	20	EXIST	EXISTING LOAD	NC	8
9	NC				500		1000		500	20	EXIST	EXISTING LOAD	NC	10
11	K	E65 – BUFFET COUNTER	GFCI	30	2040			2540	500	20	EXIST	EXISTING LOAD	NC	12
13	K	E63 – BUFFET COUNTER	GFCI	20	1800	2300			500	20	EXIST	EXISTING LOAD	NC	14
15	K	E62 – REFRIGERATOR	GFCI	20	450		950		500	20	EXIST	EXISTING LOAD	NC	16
17	NC	E83 – CASHIERS STATION	NEW	20	750			1250	500	20	EXIST	EXISTING LOAD	NC	18
19	NC	EXISTING LOAD	EXIST	50	1250	1750			500	20	EXIST	EXISTING LOAD	NC	20
21	NC				1250		1750		500				NC	22
23	NC				1250			1750	500				NC	24
25	NC	EXISTING LOAD	EXIST	20	500	5250			4750	90	EXIST	EXISTING LOAD	NC	26
27	NC	EXISTING LOAD	EXIST	20	500		5250		4750				NC	28
29	NC	EXISTING LOAD	EXIST	20	500			5250	4750				NC	30
31	NC	EXISTING LOAD	EXIST	20	500	1000			500	20	EXIST	EXISTING LOAD	NC	32
33	NC	EXISTING LOAD	EXIST	20	500		1000		500	20	EXIST	EXISTING LOAD	NC	34
35	NC	EXISTING LOAD	EXIST	20	500			1000	500	20	EXIST	EXISTING LOAD	NC	36
37	NC	EXISTING LOAD	EXIST	25	625	1125			500	20	EXIST	EXISTING LOAD	NC	38
39	NC	EXISTING LOAD	EXIST	30	750		1250		500	20	EXIST	EXISTING LOAD	NC	40
41	NC	EXISTING LOAD	EXIST	20	500			1000	500				NC	42
						13625	13330	15010						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 400A
MAIN TYPE: MLO
MINIMUM A.I.C.:
MOUNTING: FLUSH

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	33625	100%	33625	100%	33625
KITCHEN LOAD (K)	8160	65%	5304	100%	5304
RECEPTACLE BASE LOAD (R)	180	100%	180	100%	180
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	39.11		
		TOTAL (AMPS):	109	TOTAL (AMPS):	109

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

KP-2A5

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	R	RECEPTACLE	GFCI	20	180	4750			4570	50	GFCI	E42 – CONVEYOR OVEN	K	2
3	K	E23 – BUFFET COUNTER	GFCI	50	3650		8220		4570				K	4
5	R	RECEPTACLE	GFCI	20	180			1520	1340	20	GFCI	E52 – BUFFET COUNTER	K	6
7	K	E25 – BUFFET COUNTER	GFCI	20	1340	2090			750	20		E54 – HEAT LAMP	L	8
9	K	E12 – REFRIGERATOR	GFCI	20	850		2850		2000	20	GFCI	E47 – BUFFET COUNTER	K	10
11	K	E36 – HAND SINK		20	120			970	850	20	GFCI	E43 – REFRIGERATOR	K	12
13	K	E56 – BUFFET COUNTER	GFCI	20	1340	1990			650	20	GFCI	E44 – REFRIGERATED DISPLAY CASE	K	14
15	K	E37 – HOLDING CABINET	GFCI	20	1650		2400		750	20		E46 – POS/REGISTER	NC	16
17	L	E58 – HEAT LAMP		20	750			5310	4560	50		E104 – WALK-IN CONDENSER	K	18
19	R	RECEPTACLE		20	180	4740			4560				K	20
21	K	E106 – BLOWER COIL REFRIGERATOR		20	220		4780		4560				K	22
23	K	E107 – BLOWER COIL REFRIGERATOR		20	220			1700	1480	20		E105 – BLOWER COIL FREEZER	K	24
25		SPARE		20		1480			1480				K	26
27		SPARE		20			1480		1480	20		E105 – BLOWER COIL FREEZER	K	28
29		SPARE		20				1480	1480				K	30
31		SPACE				250			250	20	GFEP	E105.1 – HEAT TAPE	NC	32
33		SPACE					250		250	20	GFEP	E105.1 – HEAT TAPE	NC	34
35		SPACE										SPACE		36
37		SPACE										SPACE		38
39		SPACE										SPACE		40
41		SPACE										SPACE		42
						15300	19980	10980						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 225A
MAIN TYPE: MLO
MINIMUM A.I.C.: 10,000
MOUNTING: FLUSH

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	1250	100%	1250	100%	1250
KITCHEN LOAD (K)	42970	65%	27931	100%	27931
RECEPTACLE BASE LOAD (R)	540	100%	540	100%	540
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)	1500	100%	1500	125%	1875
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	31.22		
		TOTAL (AMPS):	87	TOTAL (AMPS):	88

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso
Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE
Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE
PANEL SCHEDULES

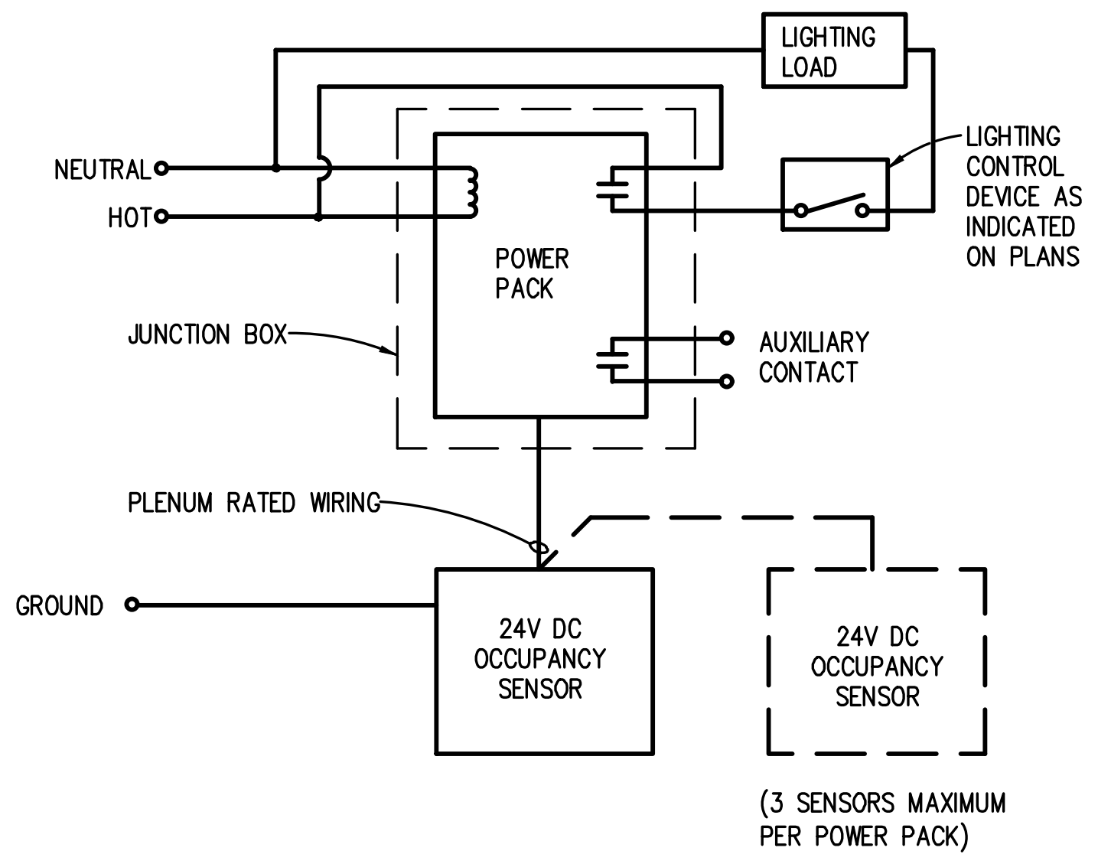
ISSUE DATES

DATE:	ISSUED FOR:
10–25–2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.
22104G

DRAWING NO.
E5.2

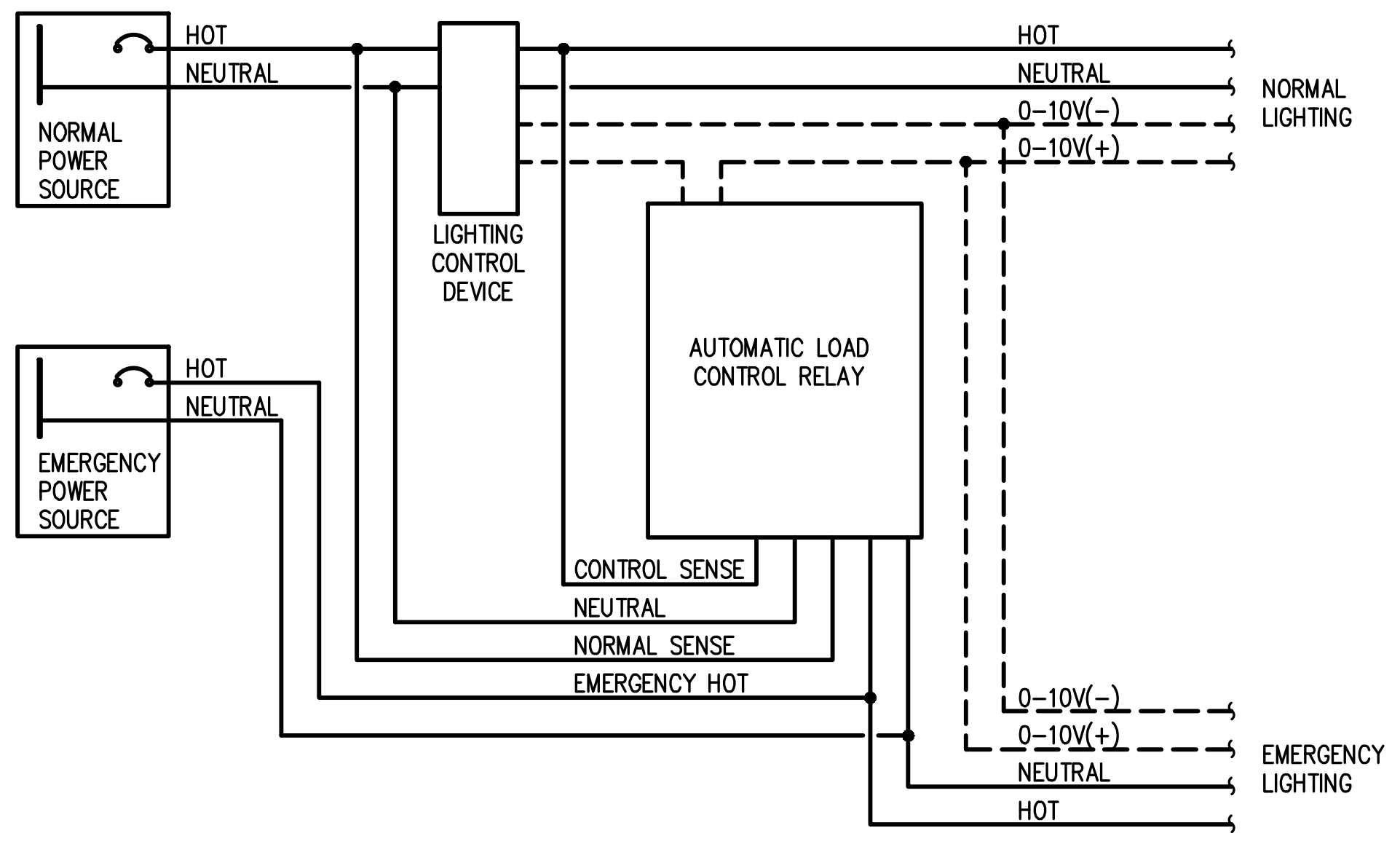


OCCUPANCY SENSOR WIRING DIAGRAM

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ACCEPTED MANUFACTURERS.
2. PROVIDE POWER PACKS AND SLAVE PACKS AS REQUIRED FOR SWITCHING AS INDICATED ON PLAN. REVISE DETAIL AS REQUIRED BY MANUFACTURER.
3. MOUNTING LOCATION PER MANUFACTURER'S RECOMMENDATION.
4. ADJUST SENSITIVITY LEVELS PER THE OWNER REQUIREMENTS.
5. PROVIDE FACTORY SUPPORT FOR AIMING/ADJUSTING OF SENSORS.
6. PLACE CEILING MOUNTED OCCUPANCY SENSORS IN CENTER OF A FULL CEILING TILE, WHERE APPLICABLE.
7. SENSOR ADJUSTMENT: BEFORE MAKING ADJUSTMENTS, MAKE SURE ROOM FURNITURE IS INSTALLED, LIGHTING CIRCUITS ARE TURNED ON, AND THE HVAC SYSTEMS ARE IN THE ON POSITION. VAV SYSTEMS SHOULD BE SET TO THEIR HIGHEST AIRFLOW. SET THE LOGIC CONFIGURATION DIP SWITCHES TO "EITHER". EITHER REQUIRES MOTION DETECTION BY ONLY ONE TECHNOLOGY. SET THE TIME DELAY PER OWNERS DIRECTION.

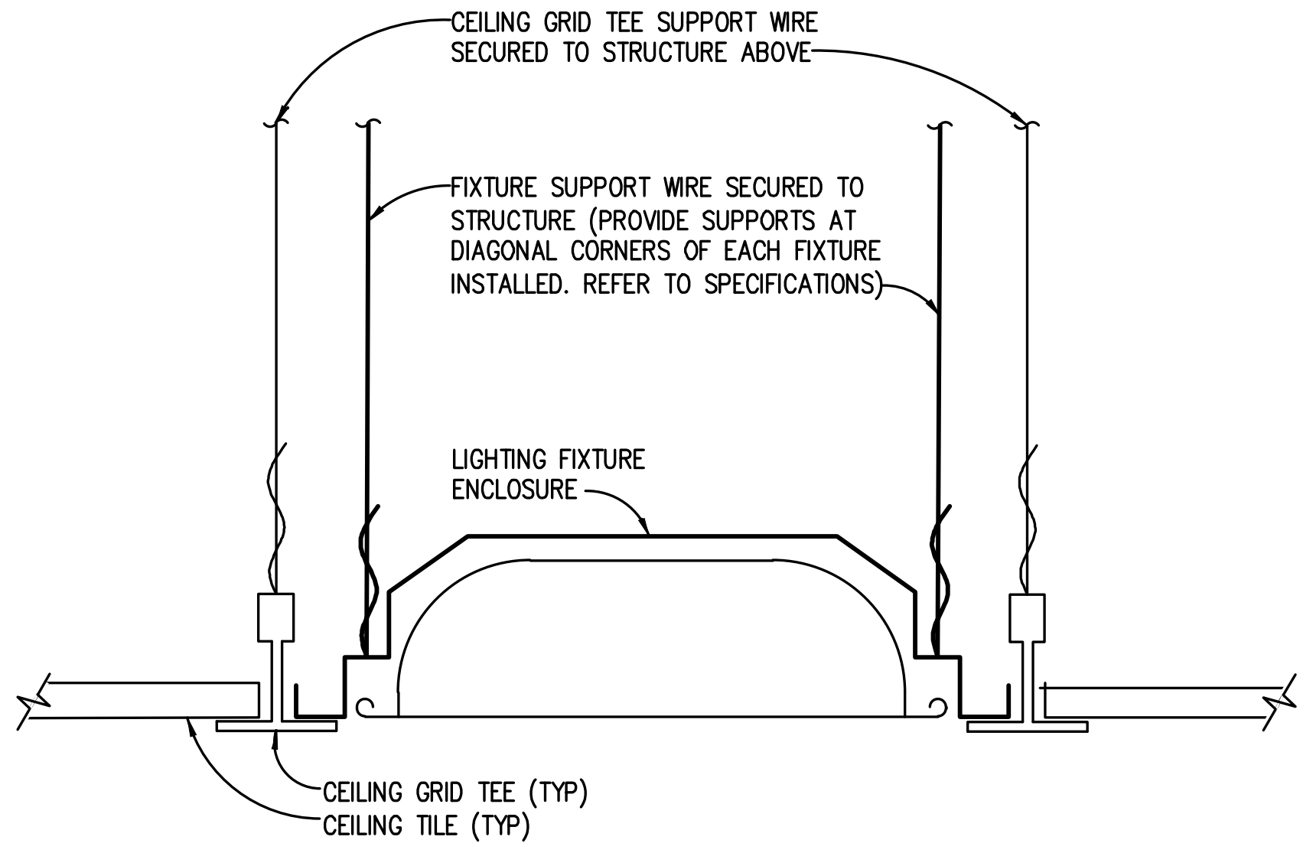


AUTOMATIC LOAD CONTROL RELAY FOR 0-10V DIMMING

NO SCALE

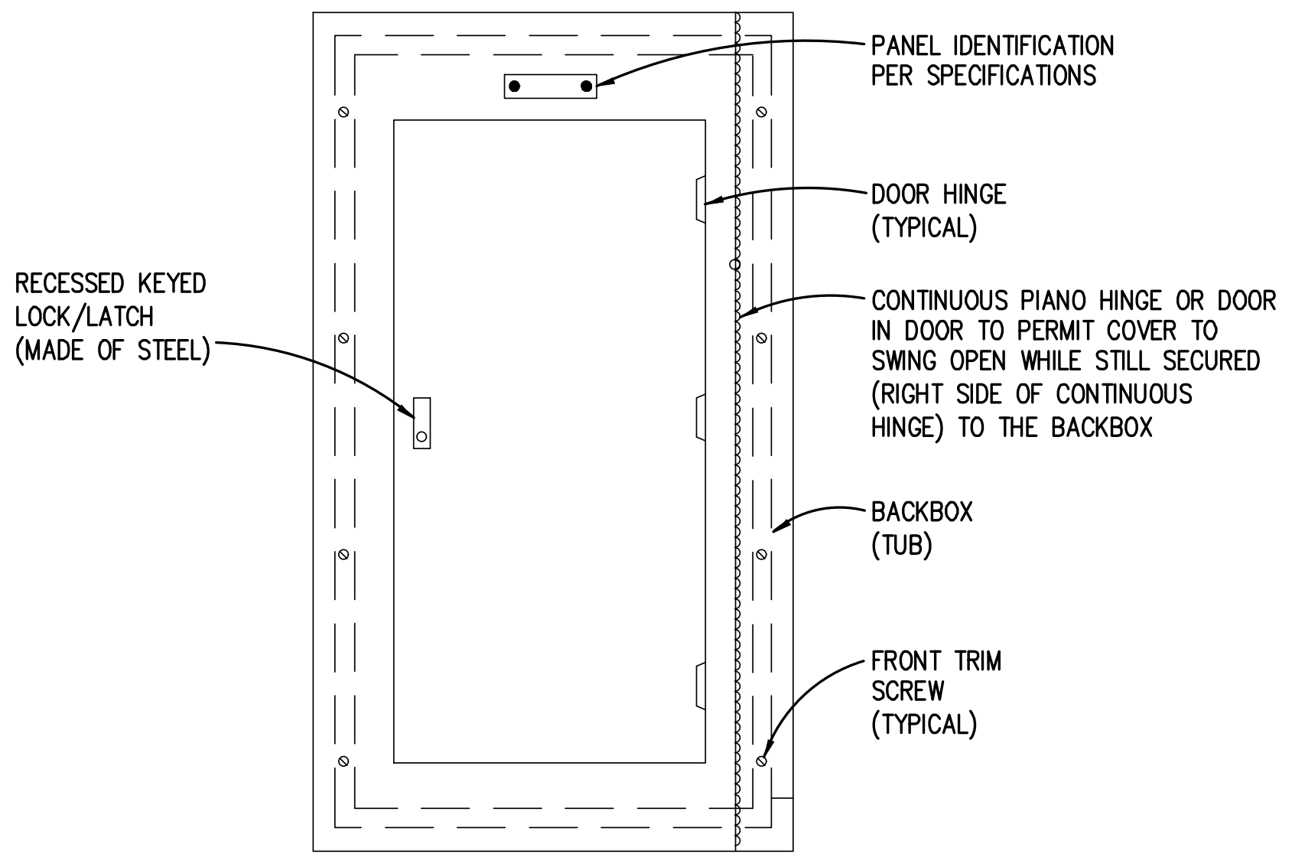
NOTES:

1. BASIS OF DESIGN IS LVS CONTROLS EPC-2-D. REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS. ADJUST WIRING AS NECESSARY FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE ONE AUTOMATIC LOAD CONTROL RELAY FOR EACH CONTROL CIRCUIT.



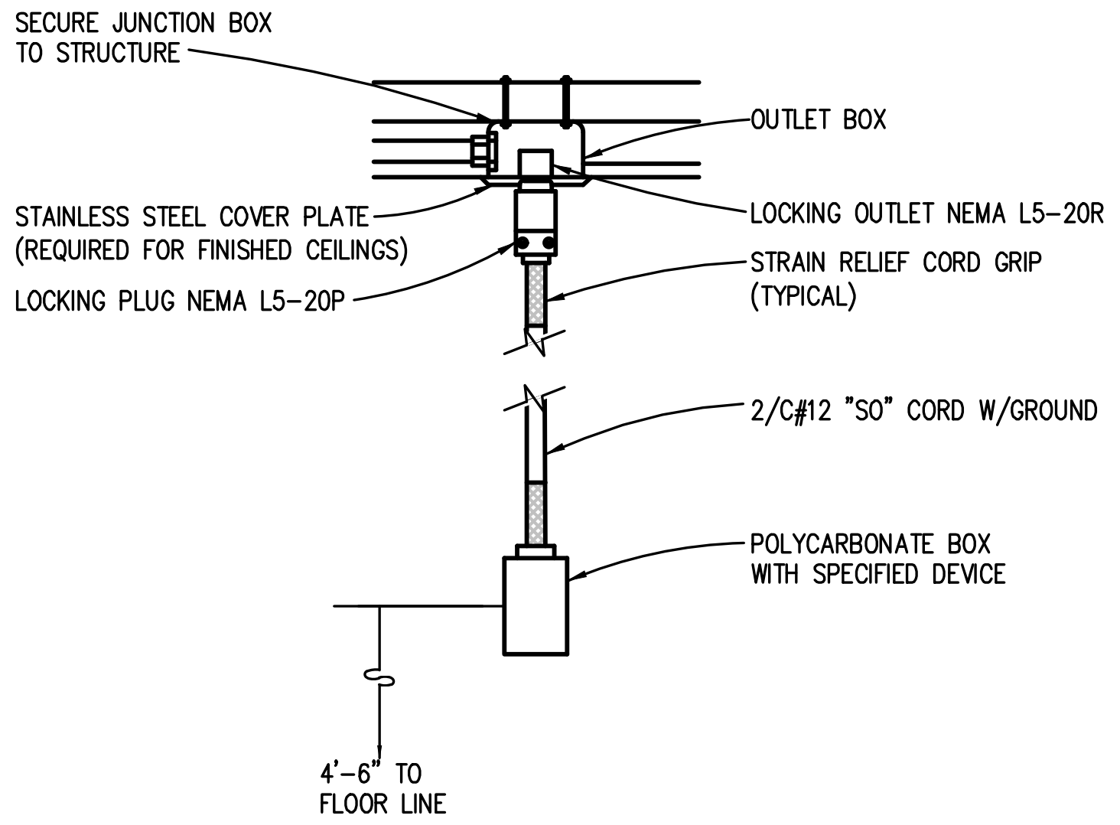
RECESSED LIGHTING FIXTURE INSTALLATION DETAIL

NO SCALE



PANELBOARD FRONT COVER DETAIL

NO SCALE



SUSPENDED OUTLET DETAIL

NO SCALE

ARCHITECTURE

TMP ARCHITECTURE INC
1191 WEST SQUARE LAKE ROAD
BLOOMFIELD HILLS • MICHIGAN • 48302
PH • 248.338.4561 FX • 248.338.0223
EM • INFO@TMP-ARCHITECTURE.COM

REGISTRATION SEAL

CONSULTANT

Peter Basso Associates
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
www.PeterBassoAssociates.com
PBA Project No.: 2023.0156.02

PROJECT TITLE

Troy High School
Kitchen Remodel

Troy School District
Troy, Michigan

DRAWING TITLE

ELECTRICAL DETAILS AND DIAGRAMS

ISSUE DATES

DATE:	ISSUED FOR:
10-25-2024	CONSTRUCTION DOCUMENTS

DRAWN ZDB
CHECKED ZDB
APPROVED STP

PROJECT NO.

22104G

DRAWING NO.

E7.1

g:\2023\2023-0156-00\CAD\Kitchen\2023-0156-02-E7-DT.dwg, E7.1, 10/24/2024 10:07:11 AM, Robert W. MacKinnon, None ,0.13459, Peter Basso Associates Inc.