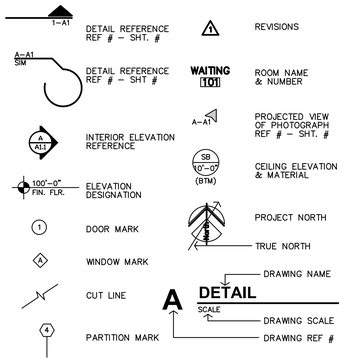
GREAT PLAINS MANUFACTURING

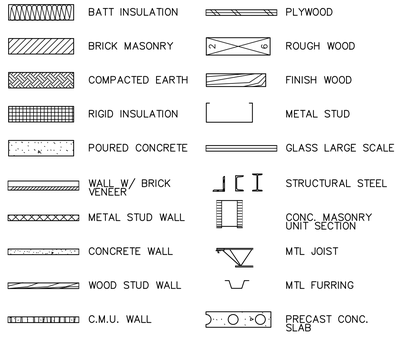
NEW CE TESTING FACILITY

SALINA, **23-3315** **KANSAS**

REFERENCE LEGEND



MATERIAL LEGEND





RENDERING



RENDERING

JonesGillamRenz

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1881 Main Street, Suite 301 Kansas City, MO 64108 jgr@jgrarchitects.com

ADDENDUM 1 - PHASE 2

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ADA ADA DIAGRAMS

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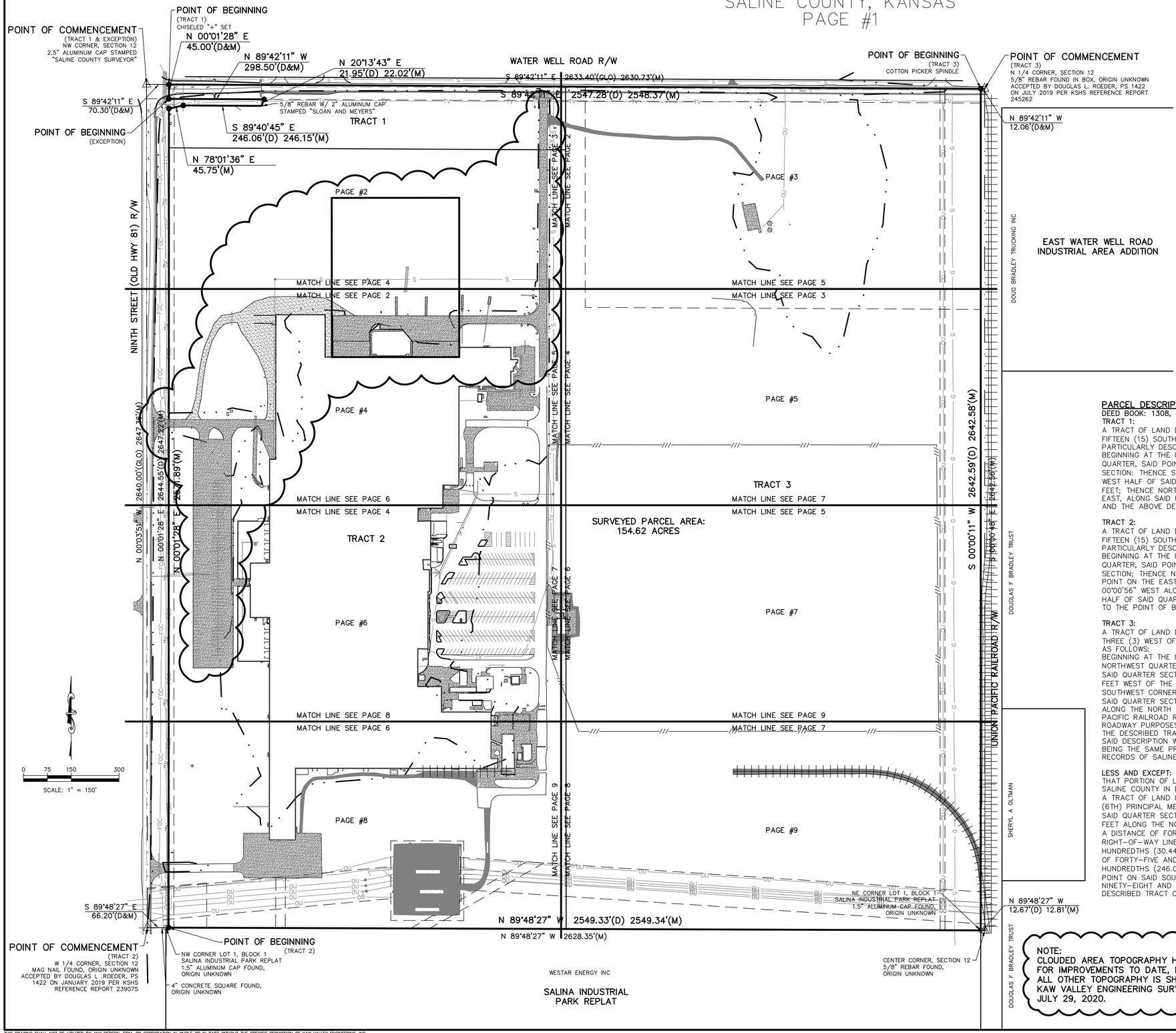
ABBREVIATIONS

&	AND
∠	Angle
@	At
℄	Centerline
ø	Diameter or Round
#	Pound or Number
Acous.	Acoustical
Adj.	Adjustable
A.F.F.	Above Finished Floor
Aggr.	Aggregate
Al.	Aluminum
Approx.	Approximate
Arch.	Architect or Architectural
Asb.	Asbestos
Asph.	Asphalt
A.V.	Audio Visual
Bd.	Board
Bitum.	Bituminous
Bldg.	Building
Blk.	Block
Blk g.	Blocking
Bm.	Beam
Bot.	Bottom
BO	BY OWNER
Brg.	Bearing
Brk.	Brick
Cab.	Cabinet
Clg.	Ceiling
Clr.	Clear
Cntr.	Counter
Col.	Column
Conc.	Conc. Concrete
C.T.	Ceramic Tile
CMU	Concrete Masonry Unit
Ctr.	Center
Dbl.	Double
Det.	Detail
D.F.	Drinking Fountain
Dia.	Diameter
Dim.	Dimension
Dn.	Down
Dr.	Door
Ds.	Downspout
Dwg.	Drawing
Dwr.	Drawer
(E)	Existing
E.	East or Existing
Ea.	Each
E.J.	Expansion Joint
El.	Elevation
Elec.	Electrical
Elev.	Elevator
Eq.	Equal
Equip.	Equipment
E.W.	Each Way
E.W.C.	Elec. Water Cooler
Exist.	Existing
Expo.	Exposed
Exp.	Expansion
Ext.	Exterior
F.A.	Fire Alarm
F.D.	Floor Drain
Fdn.	Foundation
F.E.	Fire Extinguisher
F.E.C.	F.E. Cabinet
Fin.	Finish
Fl.	Floor
Flash.	Flashing
fl.	Flow line
Ft.	Foot or feet
Ftg.	Footing
Furr.	Furring
Fut.	Future
Ga.	Gauge
Galv.	Galvanized
G.B.	Grab Bar
Gl.	Glass
Gnd.	Ground
Gr.	Grade
Gyp.	Gypsum
H.B.	Hose Bibb
H.C.	Hollow Core
Hdwd.	Hardwood
Hdwr.	Hardware
H.M.	Hollow Metal
Horiz.	Horizontal
Hr.	Hour
Hgt.	Height
I.D.	Inside Diameter
Insul.	Insulation
Int.	Interior
Jan	Janitor
Jt.	Joint
Kit.	Kitchen
Lab.	Laboratory
Lam.	Laminate
Lav.	Lavatory
Lkr.	Locker
Lt.	Light
Mas.	Masonry
Max.	Maximum
M.C.	Medicine Cabinet
Mech.	Mechanical
Memb.	Membrane
Met.	Metal
Mfr.	Manufacturer
Mh.	Manhole
Min.	Minimum
Mir.	Mirror
Misc.	Miscellaneous
M.O.	Masonry Opening
Mtd.	Mounted
N.	North
N.I.C.	Not In Contract
No. or #	Number
Nom.	Nominal
N.T.S.	Not To Scale
O/	On or Over
Obs.	Obscure
O.C.	On Center
O.D.	Diameter
Off.	Office
Opng.	Opening
Opp.	Opposite
P.	Paint
Pl.	Plate
P.Lam.	Plastic Laminate
Plas.	Plaster
Plywd.	Plywood
Pr.	Pair
Pt.	Point
P.T.D.	Paper Towel Dispenser
Ptn.	Partition
P.T.R.	Paper Towel Receptacle
Q.T.	Quarry Tile
R.	Riser
Rad.	Radius
R.D.	Roof Drain
Ref.	Reference
Reinf.	Reinforced
Req'd	Required
Resil.	Resilient
Rm.	Room
R.O.	Rough Opening
S.	South
S.B.	Splash Block
S.C.	Solid Core
Sched.	Schedule
S.D.	Soap Dispenser
Sect.	Section
Shr.	Shower
Sht.	Sheet
Sim.	Similar
S.N.D.	Sanitary Napkin Disp.
S.N.R.	Sanitary Napkin Recep.
Spec.	Specification
Sq.	Square
SSt.	Stainless Steel
Std.	Standard
Stl.	Steel
Stor.	Storage
Strl.	Structural
Susp.	Suspended
S.V.	Sheet Vinyl
Sym.	Symmetrical
Tex.	Texture
T.B.	Towel Bar
T.Bd.	Tack Board
Temp.	Tempered
T.&G.	Tongue & Groove
Thk.	Thick
T.O.M.	Top Of Masonry
T.O.S.	Top Of Steel
T.P.	Top Of Pavement
T.P.D.	Toilet Paper Dispenser
T.V.	Television
T.W.	Tackwall
Typ.	Typical
Trd.	Tread
U.O.N.	Unless Otherwise Noted
Ur.	Urinal
V.C.T.	Vinyl Composition Tile
V.T.	Vinyl Tile
V.B.	Vapor Barrier
Vert.	Vertical
Vest.	Vestibule
Vyl.	Vinyl
W.	West
w/	With
w/o	Without
W.C.	Wall Covering
Wd.	Wood
Wp.	Waterproof
Wdw.	Window
Wsct.	Wainscot
Wt.	Weight

BUILDING PERMIT SET 5-6-2026

CERTIFICATE OF SURVEY

A PROTION OF THE NW 1/4, SECTION 12, T-15-S, R-3-W
SALINE COUNTY, KANSAS
PAGE #1



LEGEND

- SECTION CORNER FOUND
- MONUMENT FOUND
- 1/2"x24" REBAR W/ YELLOW "KVE CLS-20" CAP SET, OTHERWISE NOTED
- (GLO) DISTANCE PER GLO NOTES
- (D) DISTANCE PER TITLE DESCRIPTION
- (M) MEASURED
- (C) CALCULATED
- RIGHT-OF-WAY MARKER FOUND
- STREET SIGN
- STEEL BOLLARD
- CANOPY SUPPORT
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- BREAKER BOX
- LIGHT POLE
- DEADMAN ANCHOR
- (5) OU OVERHEAD UTILITY - # LINES
- AIR CONDITIONING UNIT
- ELECTRIC METER
- E UNDERGROUND ELECTRIC LINE
- PULL BOX
- CABLE TV SIGN
- TV UNDERGROUND CABLE TV
- GAS SIGN
- GAS LINE RISER VALVE
- GAS METER
- G UNDERGROUND GAS LINE
- GAS CATHODIC PROTECTION STATION
- WATER LINE GATE VALVE
- W WATER LINE
- WATER METER
- WELL
- POST INDICATOR VALVE
- FIRE HYDRANT
- SIAMESE FIRE CONNECTOR
- DOWNSPOUT
- SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- SANITARY SEWER CLEAN-OUT
- SUBMERSIBLE PUMP
- STORM SEWER MANHOLE
- TELEPHONE PEDESTAL
- T UNDERGROUND TELEPHONE LINE
- FIBER OPTIC CABLE SIGN
- FOC UNDERGROUND FIBER OPTIC CABLE
- RAILROAD TRAFFIC SIGN
- FLAG POLE
- MAILBOX
- WHEEL STOP
- HANDICAP SIGN
- LEFT TURN ARROW
- GATE POST
- CHAIN LINK FENCE
- GUARDRAIL
- 18" DECIDUOUS TREE W/ SIZE & DRIP LINE
- 18" EVERGREEN TREE W/ SIZE & DRIP LINE
- TREE LINE
- SHRUB
- STUMP
- 10 PARKING STALL COUNT
- 1250 1' CONTOUR INTERVAL
- 51.05 / 50.59 SPOT ELEVATION AT TOP AND FLOWLINE OF CURB (ADD 1200)
- X 1247.56 SPOT ELEVATION AT GROUND/PAVEMENT
- A POSSIBLE ENCROACHMENT IDENTIFIER

PARCEL DESCRIPTION:
DEED BOOK: 1308, PAGE: 937
TRACT 1:
A TRACT OF LAND DESCRIBED AS THE NORTH 6 ACRES OF THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION TWELVE (12), TOWNSHIP FIFTEEN (15) SOUTH, RANGE THREE (3) WEST OF THE SIXTH P.M., IN SALINE COUNTY, KANSAS, LESS U,S. HIGHWAY RIGHT-OF-WAY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF EXISTING U.S. HIGHWAY 81 AND THE NORTH LINE OF THE SAID NORTHWEST QUARTER, SAID POINT BEING ON AN ASSUMED BEARING OF SOUTH 89°40'52" EAST, 70.3 FEET FROM THE NORTHWEST CORNER OF SAID QUARTER SECTION: THENCE SOUTH 89°40'52" EAST ALONG THE NORTH LINE OF SAID QUARTER SECTION 1244.52 FEET TO THE NORTHEAST CORNER OF THE WEST HALF OF SAID QUARTER SECTION; THENCE SOUTH 00°00'56" ALONG THE EAST LINE OF THE WEST HALF OF SAID QUARTER SECTION, 198.78 FEET; THENCE NORTH 89°40'52" WEST, 1244.78 FEET TO THE EAST RIGHT-OF-WAY LINE OF EXISTING U.S. HIGHWAY 81; THENCE NORTH 00°05'20" EAST, ALONG SAID RIGHT-OF-WAY LINE, 198.78 FEET, MORE OR LESS, TO THE POINT OF BEGINNING, EXCEPT THE EXISTING HIGHWAY RIGHT-OF-WAY AND THE ABOVE DESCRIBED TRACT IS FURTHER SUBJECT TO THE NORTH 24.75 FEET NOW, AND TO BE USED FOR ROADWAY PURPOSES.

TRACT 2:
A TRACT OF LAND DESCRIBED AS THE WEST HALF OF THE NORTHWEST QUARTER, LESS THE NORTH 6 ACRES, OF SECTION TWELVE (12), TOWNSHIP FIFTEEN (15) SOUTH, RANGE THREE (3) WEST OF THE SIXTH P.M., IN SALINE COUNTY, KANSAS, LESS U,S. HIGHWAY RIGHT-OF-WAY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE EXISTING U.S., HIGHWAY 81 AND THE SOUTH LINE OF THE SAID NORTHWEST QUARTER, SAID POINT BEING ON AN ASSUMED BEARING OF SOUTH 89°43'31" EAST, 66.2 FEET FROM THE SOUTHWEST CORNER OF SAID QUARTER SECTION; THENCE NORTH 00°05'20" EAST ALONG SAID RIGHT-OF-WAY LINE, 2445.77 FEET; THENCE SOUTH 89°40'52" EAST, 1244.78 FEET TO THE POINT ON THE EAST LINE, 198.78 FEET SOUTH OF THE NORTHEAST CORNER OF THE WEST HALF OF SAID QUARTER SECTION; THENCE SOUTH 00°00'56" WEST ALONG THE EAST LINE OF THE WEST HALF OF SAID QUARTER SECTION 2444.82 FEET TO THE SOUTHEAST CORNER OF THE WEST HALF OF SAID QUARTER SECTION; THENCE NORTH 89°43'31" WEST, ALONG THE SOUTH LINE OF SAID QUARTER SECTION 1247.9 FEET, MORE OR LESS, TO THE POINT OF BEGINNING, EXCEPT EXISTING HIGHWAY RIGHT-OF-WAY.

TRACT 3:
A TRACT OF LAND DESCRIBED AS THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION TWELVE (12), TOWNSHIP FIFTEEN (15) SOUTH, RANGE THREE (3) WEST OF THE SIXTH P.M., IN SALINE COUNTY, KANSAS, LESS UNION PACIFIC RAILROAD RIGHT-OF-WAY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE WEST RIGHT-OF-WAY LINE OF EXISTING UNION PACIFIC RAILROAD AND THE NORTH LINE OF THE SAID NORTHWEST QUARTER, SAID POINT BEING ON AN ASSUMED BEARING OF THE NORTH 89°40'52" WEST, 12.06 FEET FROM THE NORTHEAST CORNER OF SAID QUARTER SECTION; THENCE SOUTH 00°02'40" WEST, ALONG SAID RIGHT-OF-WAY LINE, 2642.59 FEET TO A POINT ON THE SOUTH LINE, 12.67 FEET WEST OF THE SOUTHEAST CORNER OF SAID QUARTER SECTION; THENCE NORTH 89°43'31" WEST ALONG SAID SOUTH LINE, 1301.43 FEET TO THE SOUTHWEST CORNER OF THE EAST HALF IF SAID QUARTER SECTION; THENCE NORTH 00°00'56" EAST ALONG THE WEST LINE OF THE EAST HALF OF SAID QUARTER SECTION, 2643.60 FEET TO THE NORTHWEST CORNER OF THE EAST HALF OF SAID QUARTER SECTION; THENCE SOUTH 89°40'52" EAST ALONG THE NORTH LINE OF SAID QUARTER SECTION, 1302.76 FEET, MORE OR LESS, TO THE POINT OF BEGINNING, EXCEPT THE EXISTING UNION PACIFIC RAILROAD RIGHT-OF-WAY. THE ABOVE DESCRIBED TRACT IS FURTHER SUBJECT TO THE NORTH 24.75 FEET NOW, AND TO BE USED FOR ROADWAY PURPOSES AND AN EASEMENT TO THE KANSAS POWER AND LIGHT COMPANY FOR HIGH PRESSURE GAL LINE ALONG THE EAST LINE OF THE DESCRIBED TRACT.
SAID DESCRIPTION WERE FURNISHED BY PROPERTY PLAN NO, A231EN-2 DATED AUGUST 4, 1970
BEING THE SAME PROPERTY CONVEYED TO GRANTOR BY WESTINGHOUSE ELECTRIC CORPORATION, DATED FEBRUARY 11, 1983 RECORDED IN OFFICIAL RECORDS OF SALINE COUNTY IN BOOK 334, PAGE 316.

LESS AND EXCEPT:
THAT PORTION OF LAND CONVEYED FROM GRANTOR TO THE CITY OF SALINA, KANSAS DATED MARCH 20, 2003 RECORDED IN OFFICIAL RECORDS OF SALINE COUNTY IN BOOK 1039, PAGE 1925, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
A TRACT OF LAND IN THE NORTHWEST QUARTER OF SECTION TWELVE (12), TOWNSHIP FIFTEEN (15) SOUTH, RANGE THREE (3) WEST OF THE SIXTH (6TH) PRINCIPAL MERIDIAN, SALINE COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID QUARTER SECTION; THENCE ON AN ASSUMED BEARING OF SOUTH 89°43'35" EAST, A DISTANCE OF SEVENTY AND THIRTY HUNDREDTHS (70.30) FEET ALONG THE NORTH LINE OF SAID QUARTER SECTION TO THE EASTERLY RIGHT-OF-WAY LINE OF NINTH STREET; THENCE SOUTH 00°01'02" EAST, A DISTANCE OF FORTY-FIVE (45 AND NO HUNDREDTHS (45.00) FEET ALONG SAID EASTERLY RIGHT-OF-WAY LINE TO THE SOUTHERLY RIGHT-OF-WAY LINE OF WATERWELL ROAD AND THE POINT OF BEGINNING; THENCE S 00°01'02" EAST A DISTANCE OF THIRTY AND FORTY-FOUR HUNDREDTHS (30.44) FEET CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE OF NINTH STREET; THENCE NORTH 77°51'04" EAST, A DISTANCE OF FORTY-FIVE AND SEVENTY-FIVE HUNDREDTHS (45.75) FEET; THENCE SOUTH 89°43'35" EAST, A DISTANCE OF TWO HUNDRED FORTY-SIX AND SIX HUNDREDTHS (246.06 FEET); THENCE NORTH 20°31'48" EAST, A DISTANCE OF TWENTY-ONE AND NINETY-FIVE HUNDREDTHS (21.95) FEET TO A POINT ON SAID SOUTHERLY RIGHT-OF-WAY LINE OF WATERWELL ROAD; THENCE NORTH 89°43'35" WEST, A DISTANCE OF TWO HUNDRED NINETY-EIGHT AND FIFTY HUNDREDTHS 298.50 FEET ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE TO THE POINT OF BEGINNING. THE ABOVE DESCRIBED TRACT OF LAND CONTAINS 0.14 ACRES, MORE OR LESS.

NOTE:
CLOUDED AREA TOPOGRAPHY HAS BEEN AS-BUILT FOR IMPROVEMENTS TO DATE, MAY 8, 2024.
ALL OTHER TOPOGRAPHY IS SHOWN PER PREVIOUS KAW VALLEY ENGINEERING SURVEY DATED, JULY 29, 2020.

JASON R. LOADER LICENSED 1462 07/18/2024 KANSAS LAND SURVEYOR

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KAW VALLEY ENGINEERING

PROJECT NO.	E2453658
DRAWN BY	TDA
CHECKED BY	JRL
CFN	3658CS
SHEET	1 OF 9

PROJECT:
3861 SOUTH NINTH STREET
SALINA, KANSAS

PREPARED FOR:
GREAT PLAINS MFG. JAMES HALL
P.O. BOX 5060
SALINA, KANSAS 67402-5060

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER SURVEYING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION NO. LS-20. EXPIRES 12/31/24

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

CODE INFORMATION

OCCUPANCY OVERALL: F1 INDUSTRIAL/MFG.
OCCUPANCY GROUPS: B OFFICE
NON-SEPERATED IBC 508.3

CONSTRUCTION TYPE: II B
BASIC ALLOWABLE AREA: F1 UNLIMITED SF
IBC SEC. 507.1
BUILDING AREA:
FIRST FLOOR 57,150 SF
MEZZANINE 6,362 SF

BASIC ALLOWABLE STORIES: 2
ACTUAL STORIES: 1
BASIC ALLOWABLE HEIGHT: 55'
ACTUAL HEIGHT: 40'

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS

	II B
EXTERIOR BEARING WALLS:	0 HOUR
STRUCTURAL FRAME:	0 HOUR
INTERIOR BEARING WALLS:	0 HOUR
INTERIOR NON-BEARING WALLS:	0 HOUR
SHAFT ENCLOSURES:	NA
FLOOR/CEILING ASSEMBLY:	0 HOUR
CEILING/ROOF ASSEMBLY:	0 HOUR

OCCUPANT LOAD: XXXXXXX
EXITING: REFERENCE PLAN
OCCUPANT LOAD FACTORS: NONE

OCCUP.	USE	LOAD FACTOR	1 EXIT
F1	FACTORY	100 sf/OCCUPANT	49 1st STORY
S1	STORAGE	500 sf/OCCUPANT	49 1st STORY
B	OFFICE	100 sf/OCCUPANT	49 1st STORY
B	BREAKRM	50 sf/OCCUPANT	49 1st STORY
B	CLASSRM	20 sf/OCCUPANT	49 1st STORY

OCCUPANCY SEPARATIONS: *(NON-SEPERATED USES. PER IBC SEC. 508.3)*
ALLOWABLE AREA & HEIGHT CALCULATIONS ARE BASED ON THE MOST RESTRICTIVE USE. DIFFERENT USES ARE NOT SEPARATED BY FIRE BARRIERS.

INCIDENTAL SEPARATIONS: *(PER IBC TABLE 509)*

SPECIAL CONDITIONS:
EXIT & EMERGENCY LIGHTING
PORTABLE FIRE EXTINGUISHERS

AUTOMATIC FIRE SUPPRESSION SYSTEM:
EXISTING & PROVIDED AT ADDITION

FIRE ALARM REQUIREMENTS:
NOT REQUIRED, PROVIDED SOME LOCATIONS

EMERGENCY POWER SOURCE:
EXIT SIGNS, EXIT ILLUMINATION & EMERGENCY LIGHTING BY BATTERY BACK-UP

NOTE- EMERGENCY BACK-UP LIGHTING IS INTEGRATED WITH INTERIOR LED LIGHTING SYSTEM FIXTURES.

HAZARDOUS MATERIALS: *(PER IBC TABLE 307.1(1))*
OIL, DIESEL FUEL STORED IN U.L. LISTED CONTAINERS IN QUANTITIES ALLOWED BY IFC.

SMOKE PARTITIONS: NOT REQUIRED
SMOKE CONTROL: NOT REQ'D
STANDPIPES: CLASS III REQ'D
SMOKE & HEAT VENTS: NO UNDIVIDED AREA OF 50K SF

PROJECT INFORMATION

TYPE OF CONSTRUCTION	NEW BUILDING
OWNER/FACILITY NAME	GREAT PLAINS - KUBOTA
OWNER/FACILITY ADDRESS	3861 S 9th St, Salina, KS
REASON FOR SUBMITTAL	BUILDING ADDITION
COUNTY	SALINE COUNTY
FIRE DEPARTMENT	CITY OF SALINA
WATER SUPPLY	CITY OF SALINA
BUILDING INSPECTION DEPT	CITY OF SALINA
AUTHORITY HAVING JURISDICTION	CITY OF SALINA
ARCHITECT	JONES GILLAM RENZ ARCHITECTS, INC. 730 N. NINTH ST. SALINA, KS 67401 ph: 785-827-0386
CODES/REGULATIONS	2012 INTERNATIONAL BUILDING CODE 2012 UNIFORM PLUMBING CODE 2012 INTERNATIONAL MECHANICAL CODE 2011 NATIONAL ELECTRICAL CODE 2012 INTERNATIONAL FIRE CODE 2010 ADA STANDARDS for ACCESSIBLE DESIGN 2009 INTERNATIONAL ENERGY CODE KANSAS FIRE PREVENTION CODE

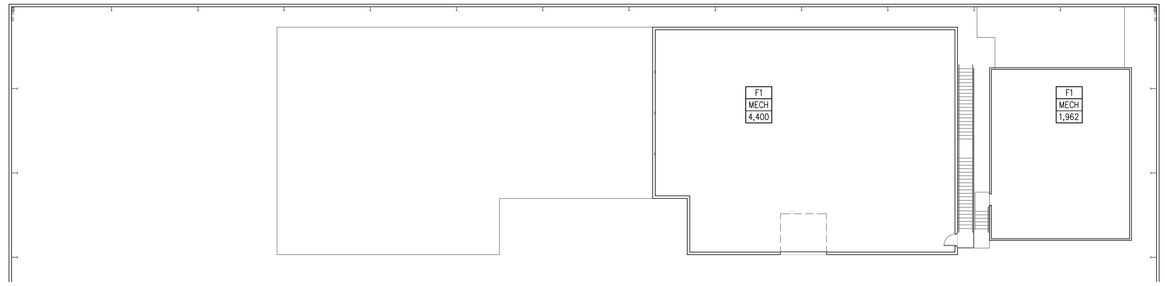
LEGEND

DESIGNATED EMERGENCY EXIT — 68"/24.4" ← EXIT WIDTH (ACTUAL/REQUIRED); 122/340 ← OCCUPANT LOAD (ACTUAL/ALLOWED)
0 HOUR CONSTRUCTION
EXIT LIGHT
EMERGENCY LIGHT
EXIT/EMERGENCY LIGHT
FIRE EXTINGUISHER — FE
FIRE HYDRANT — FH

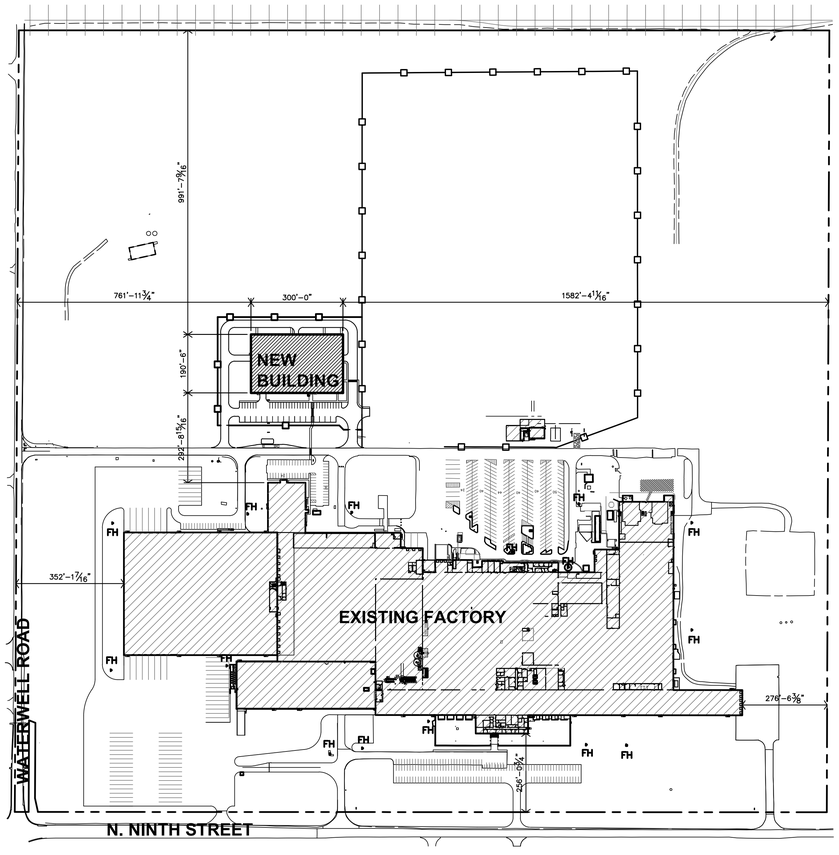
OCCUPANCY GROUP (AU - ACCESSORY USE)
OCCUPANCY USE
ROOM SQUARE FOOTAGE/OCCUPANT LOAD FACTOR
OCCUPANT LOAD/REQUIRED NUMBER OF EXITS

EXAMPLE:

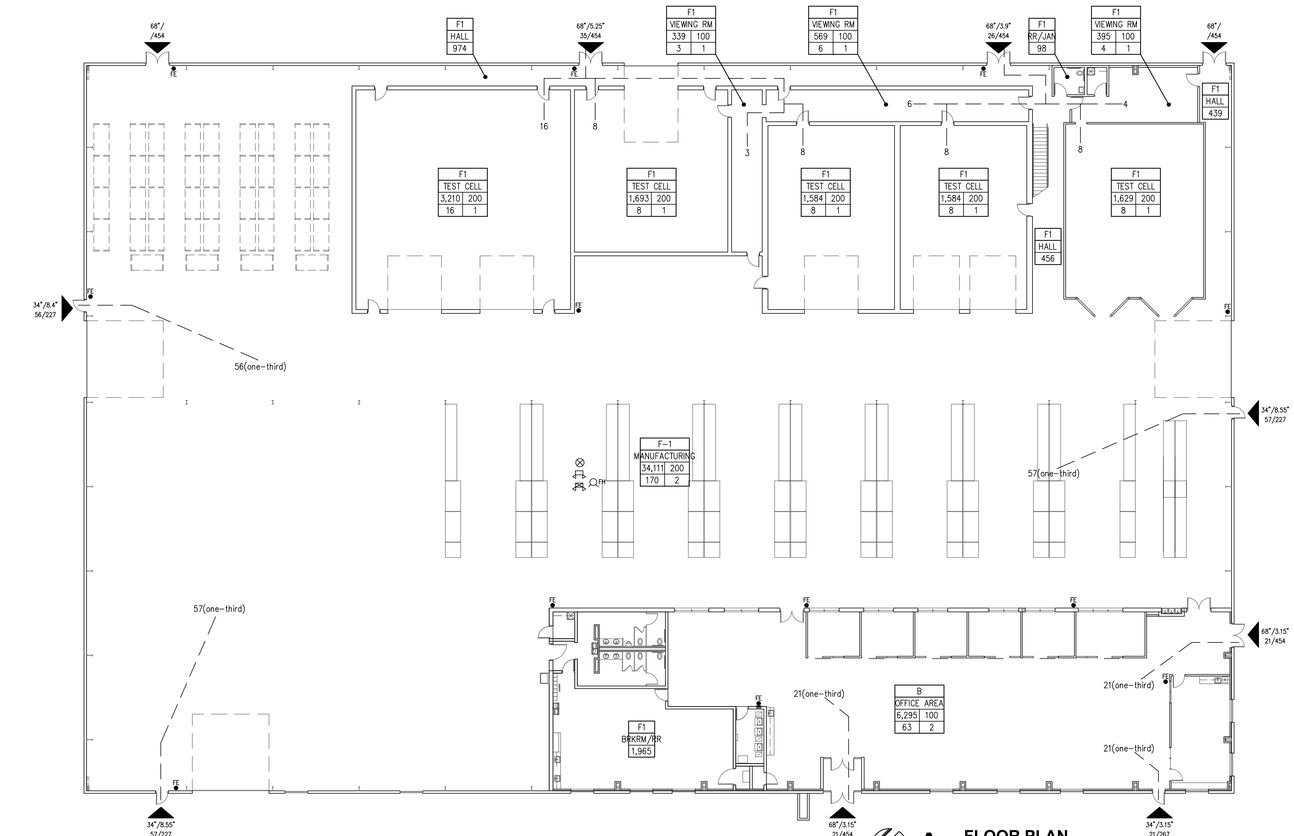
A-1	
ASSEMBLY HALL	
5,550	15
370	2



B MEZZANINE FLOOR PLAN
0 8' 16' 32'



C SITE PLAN
0 100' 200' 400'



A FLOOR PLAN
0 8' 16' 32'

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

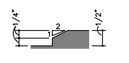
CHARLES A. RENZ — 5502 — 5-6-2026 — KANSAS — REGISTERED PROFESSIONAL ARCHITECT

REVISION:

DATE: 5-6-2026
JOB: 23-3315
SHEET NO.:

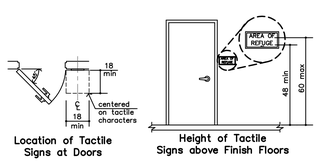
CFP

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Beveled Change in Level

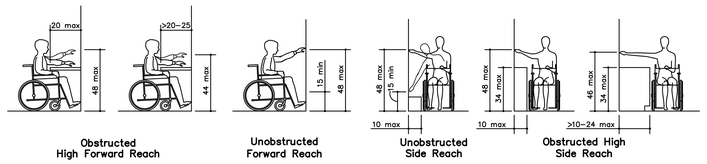
P THRESHOLD ADA DIAGRAMS
NO SCALE



Location of Tactile Signs at Doors

Height of Tactile Signs above Finish Floors

O TACTILE SIGN DIAGRAM
NO SCALE



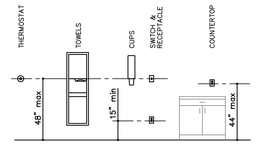
Obstructed High Forward Reach

Unobstructed Forward Reach

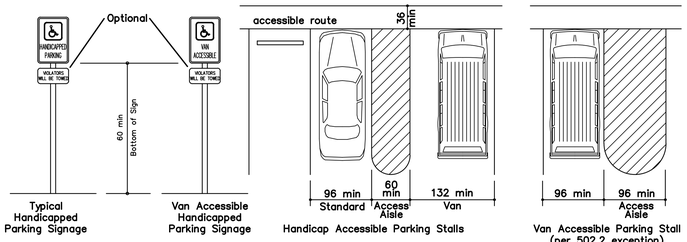
Unobstructed Side Reach

Obstructed High Side Reach

N STANDARD REACH ADA DIAGRAMS
NO SCALE



M STANDARD CONTROL REACH LIMITATIONS DETAILS
NO SCALE



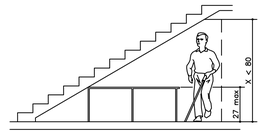
Typical Handicapped Parking Signage

Van Accessible Handicapped Parking Signage

Handicap Accessible Parking Stalls

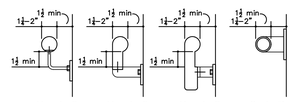
Van Accessible Parking Stall (per 502.2 exception)

L STANDARD PARKING ADA DIAGRAMS
NO SCALE



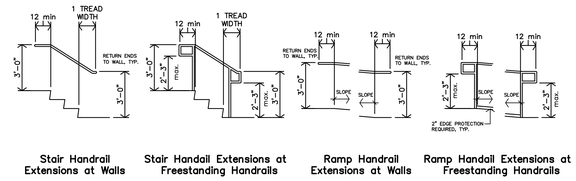
Vertical Clearance

K STANDARD VERTICAL CLEARANCE
NO SCALE



Handrail Handrail Handrail Grab Bar

J STANDARD HANDRAIL/GRAB BAR DETAILS
NO SCALE



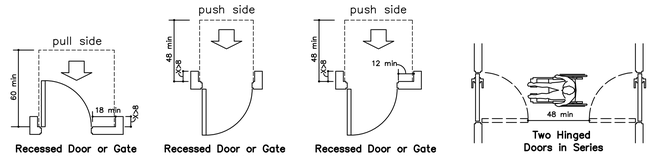
Stair Handrail Extensions at Walls

Stair Handail Extensions at Freestanding Handrails

Ramp Handrail Extensions at Walls

Ramp Handail Extensions at Freestanding Handrails

H STANDARD RAMP/STAIR HANDRAIL EXTENSIONS
NO SCALE

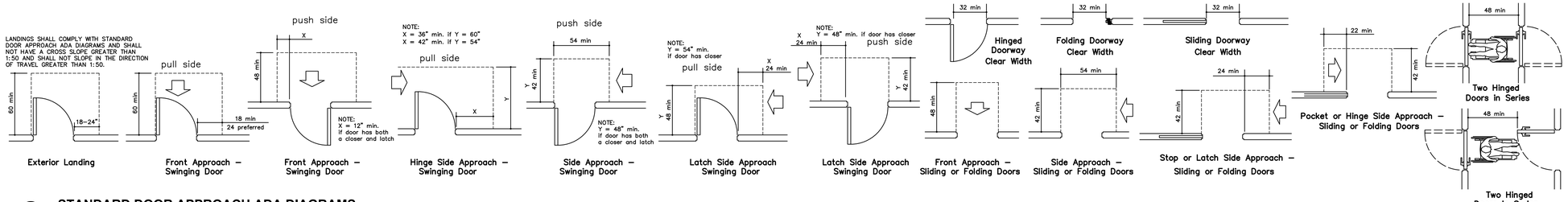


Recessed Door or Gate Pull Side

Recessed Door or Gate Push Side

Recessed Door or Gate with Closer and Latch

Two Hinged Doors in Series



Exterior Landing

Front Approach – Swinging Door

Front Approach – Swinging Door

Hinge Side Approach – Swinging Door

Side Approach – Swinging Door

Latch Side Approach Swinging Door

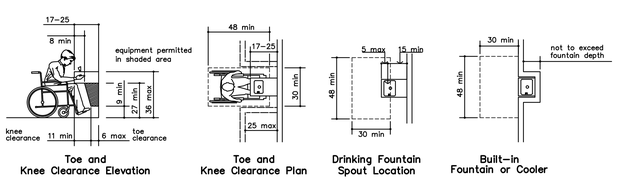
Latch Side Approach Swinging Door

Front Approach – Sliding or Folding Doors

Side Approach – Sliding or Folding Doors

Stop or Latch Side Approach – Sliding or Folding Doors

G STANDARD DOOR APPROACH ADA DIAGRAMS
NO SCALE



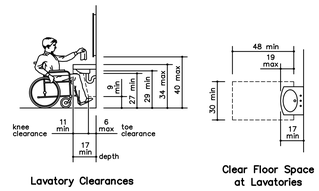
Toe and Knee Clearance Elevation

Toe and Knee Clearance Plan

Drinking Fountain Spout Location

Built–in Fountain or Cooler

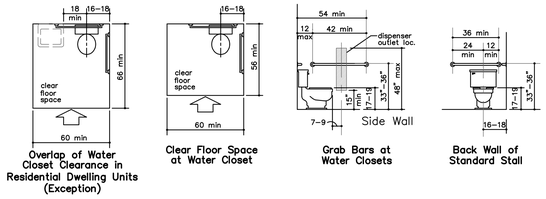
F STANDARD DRINKING FOUNTAIN DETAILS
NO SCALE



Lavatory Clearances

Clear Floor Space at Lavatories

E STANDARD LAVATORY DETAILS
NO SCALE



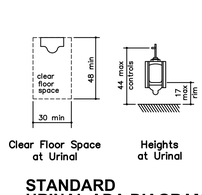
Overlap of Water Closet Clearance in Residential Dwelling Units (Exception)

Clear Floor Space at Water Closet

Grab Bars at Water Closets

Back Wall of Standard Stall

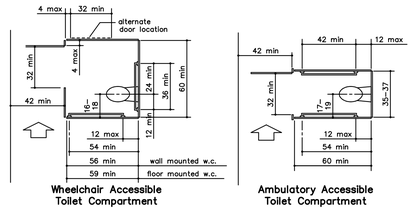
D STANDARD TOILET ADA DIAGRAMS
NO SCALE



Clear Floor Space at Urinal

Heights at Urinal

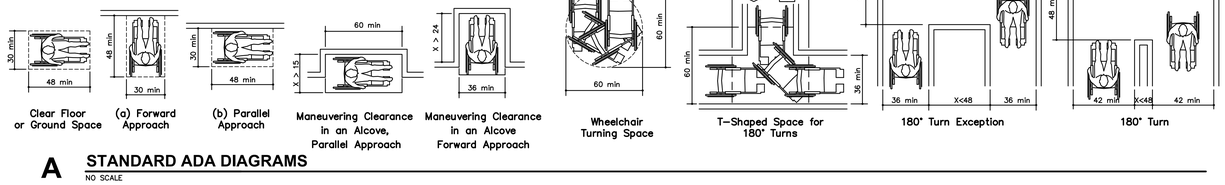
C STANDARD URINAL ADA DIAGRAMS
NO SCALE



Wheelchair Accessible Toilet Compartment

Ambulatory Accessible Toilet Compartment

B STANDARD TOILET STALL ADA DIAGRAMS
NO SCALE



Clear Floor or Ground Space

(a) Forward Approach

(b) Parallel Approach

Maneuvering Clearance in an Alcove, Parallel Approach

Maneuvering Clearance in an Alcove Forward Approach

Wheelchair Turning Space

T–Shaped Space for 180° Turns

180° Turn Exception

180° Turn

A STANDARD ADA DIAGRAMS
NO SCALE

FOR REFERENCE ONLY

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Kansas City, MO 64108
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730 N. Ninth
Salina, KS 67401
785.827.0386

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NEW CE TESTING FACILITY
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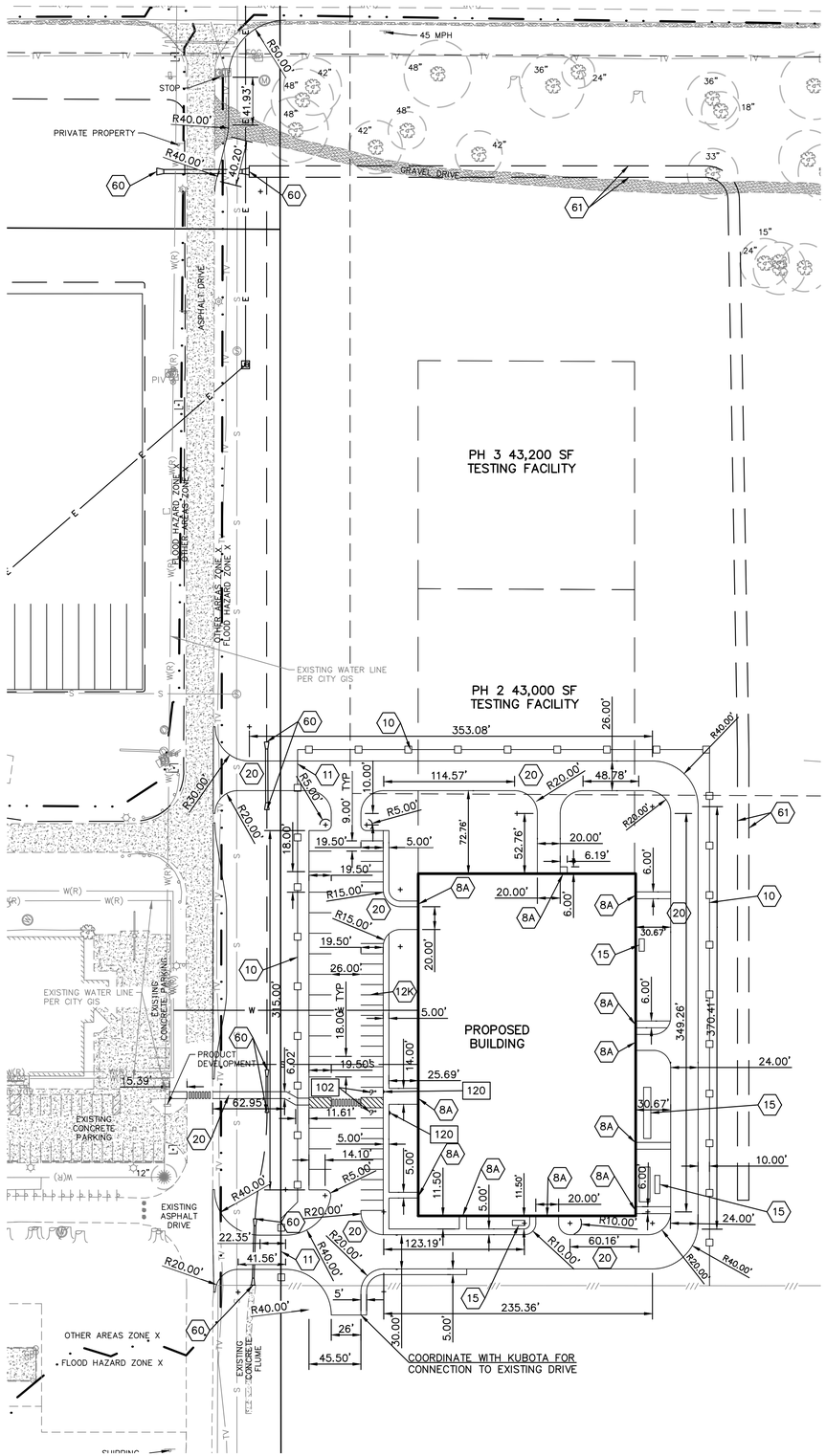
CHARLES A. RENZ
5502
5–6–2026
KANSAS
REGISTERED PROFESSIONAL ARCHITECT

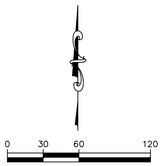
REVISION:

DATE: 5–6–2026
JOB: 23–3315
SHEET NO.:

ADA

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THE COORDINATES PROVIDED IN THESE PLANS ARE FOR INFORMATION AND CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE COORDINATES SHOWN IN THE TABLE HEREON BEFORE CONSTRUCTION.

NOTE:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

3. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

4. ALL DIMENSIONS ARE PERPENDICULAR TO PROPERTY LINE.

5. ACTUAL SIGN LOCATIONS TO BE COORDINATED WITH CONSTRUCTION MANAGER.

DETAILS – SEE DETAIL SHEET NO. C04 FOR THE FOLLOWING DETAILS

102 ACCESSIBLE STRIPING
120 ACCESSIBLE PARKING SIGN

NOTES:

8A ENTRY (SEE ARCH. PLANS)
10 SECURITY FENCE (SEE ARCH. PLANS)(COORDINATE WITH OWNER FOR EXACT LOCATION)
11 GATE (SEE ARCH. PLANS)(COORDINATE WITH OWNER)
12K WHITE PARKING LOT STRIPING (SHERWIN–WILLIAMS TM 2160 LEAD FREE OR APPROVED EQUAL)
15 MECHANICAL UNITS. REFER TO ARCHITECTURAL AND MEP PLANS
20 CONCRETE PAVEMENT (COORDINATE WITH OWNER ON PAVING DETAILS)
60 STORM SEWER STRUCTURE (SEE UTILITY PLAN)
61 PROPOSED DRAINAGE DITCH (SEE GRADING PLAN)

2 EXTENSIVE REVISIONS

CONSTRUCTION NOTES:

1. COORDINATE START–UP AND ALL CONSTRUCTION ACTIVITIES WITH OWNER.

2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CITY OF SALINA STANDARD SPECIFICATIONS.

3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.

4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO HIGHWAYS IN THE CONSTRUCTION AREA.

5. ONE IN EIGHT ACCESSIBLE PARKING STALLS MUST HAVE A SIGN DESIGNATING "VAN–ACCESSIBLE". SEE DETAIL 102 AND 120.

6. ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND OPERATIONS SHALL CONFORM WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

7. PAINT FOR STRIPING ON PUBLIC STREETS, HIGHWAYS AND ENTRANCES SHALL BE REFLECTORIZED PAINT CONFORMING TO THE SPECIFICATIONS OR REQUIREMENTS OF THE AUTHORITY GOVERNING THE STREET OR HIGHWAY.

8. CONTRACTOR TO COORDINATE WITH OWNER FOR ALL SITE DEMOLITION, RELOCATION OF EXISTING STRUCTURES, AND UTILITY COORDINATION.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL, CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/26	EAST ROAD ADJUSTMENT	MJR	TDA	MJR
1	03/09/26	REVISED PER UPDATED MEP AND ARCH PLANS	MJR	ZEK	MJR
0	10/31/25	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE
LICENSED
29241
5/6/26
KANSAS
PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

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SALINA, KANSAS 67401
PH. (785) 823–3400
sd@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY THE STATE OF KANSAS CERTIFICATE OF AUTHORIZATION # E-415. EXPIRES 12/31/26

CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
SITE PLAN

PROJ. NO. E24D3658
DESIGNER MJR | DRAWN BY TDA
CFN 3658SP_RD
SHEET C01 | REV 2

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

0 20 40 80

SCALE: 1" = 40'

UTILITY NOTES:

1. CONSTRUCTION SHALL NOT START ON ANY PUBLIC WATER OR SANITARY SEWER SYSTEM UNTIL WRITTEN APPROVAL OR PERMITS HAVE BEEN RECEIVED FROM THE OWNER.

2. ALL UTILITY AND STORM SEWER TRENCHES CONSTRUCTED UNDER AREAS THAT RECEIVE PAVING SHALL BE BACKFILLED TO 18 INCHES ABOVE THE TOP OF THE PIPE WITH SELECT GRANULAR MATERIAL PLACED ON EIGHT-INCH LIFTS, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

3. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS.

4. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR UNDER SUPERVISION OF A REPRESENTATIVE OF THE CITY WATER DEPARTMENT. CONTRACTOR SHALL NOTIFY THE CITY OF SALINA WATER DEPARTMENT 24 HOURS MINIMUM, PRIOR TO ANY TESTING.

5. ALL WATER AND SANITARY SEWER SYSTEMS THAT ARE TO BE PUBLIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS PREVIOUSLY APPROVED BY THE CITY OF SALINA AND THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT AND SHALL BE INSPECTED BY THE CITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THIS INSPECTION OCCURS.

6. LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER, TO AVOID CONFLICTS.

7. CONTRACTOR TO INSTALL TRACING WIRE ALONG ALL NON-METALLIC WATER MAINS AND SERVICE LINES PER SPECIFICATIONS.

8. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.

9. WATER LINES SHALL HAVE A MINIMUM COVER OF 42 INCHES. ALL VALVES ON MAINS AND FIRE HYDRANT LEADS SHALL BE WITH VALVE BOX ASSEMBLIES. THE SIZE OF VALVE BOX ASSEMBLY TO BE INSTALLED IS DETERMINED BY THE TYPE AND SIZE OF VALVE. VALVE BOX CAPS SHALL HAVE THE WORD "WATER".

10. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN PARALLEL WATER (MAINS AND SERVICE) AND GRAVITY SANITARY SEWER (MAINS AND SERVICE) LINES. WHEN IT IS NECESSARY FOR ANY WATER LINE TO CROSS A GRAVITY SANITARY SEWER LINE, THE SEWER LINE SHALL BE ENCASED IN CONCRETE OR CONSTRUCTED OF DUCTILE IRON PIPE OR PVC PIPE WITH NO JOINTS WITHIN 10 FEET OF THE CROSSING UNLESS THE WATER LINE IS AT LEAST 2 FEET CLEAR DISTANCE ABOVE THE GRAVITY SANITARY SEWER LINE. WHERE A WATER LINE (SERVICE LINE) CROSSES A NEW (EXISTING) FORCE MAIN (FORCE SERVICE LINE), THE WATER LINE (SERVICE LINE) MUST ALWAYS CROSS OVER THE FORCE MAIN (FORCE SERVICE LINE) WITH A MINIMUM VERTICAL SEPARATION DISTANCE OF 2 FEET. FORCE SEWER LINE (FORCE SERVICE LINE) JOINTS ARE TO BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTED WATER LINE.

11. CONTRACTOR TO COORDINATE WITH OWNER AND MEP FOR DETAILS ON ALL UTILITIES.

12. PIPE LENGTHS ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTION.

UNDERGROUND UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE DEPICTED FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL UNDERGROUND UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION DEPICTED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE DEPICTED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

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DETAILS – SEE DETAIL SHEET NO. C04 FOR THE FOLLOWING DETAILS

442 END SECTION

NOTES:

17 GAS SERVICE LINE. COORDINATE WITH OWNER AND GAS COMPANY FOR EXACT LOCATION AND DETAILS

17A GAS SERVICE CONNECTION TO BUILDING. CONTRACTOR TO REFER TO MEP PLANS AND COORDINATE WITH OWNER

17B CONNECT GAS SERVICE TO EXISTING GAS LINE. CONTRACTOR TO COORDINATE WITH OWNER AND GAS COMPANY

20 2" DOMESTIC WATER SERVICE LINE

20A DOMESTIC WATER SERVICE CONNECTION TO THE BUILDING (SEE MEP PLANS)

20B CONNECT PROPOSED DOMESTIC WATER SERVICE LINE TO EXISTING WATER MAIN USING TAPPING SLEEVE AND VALVE. CONTRACTOR TO COORDINATE WITH THE OWNER

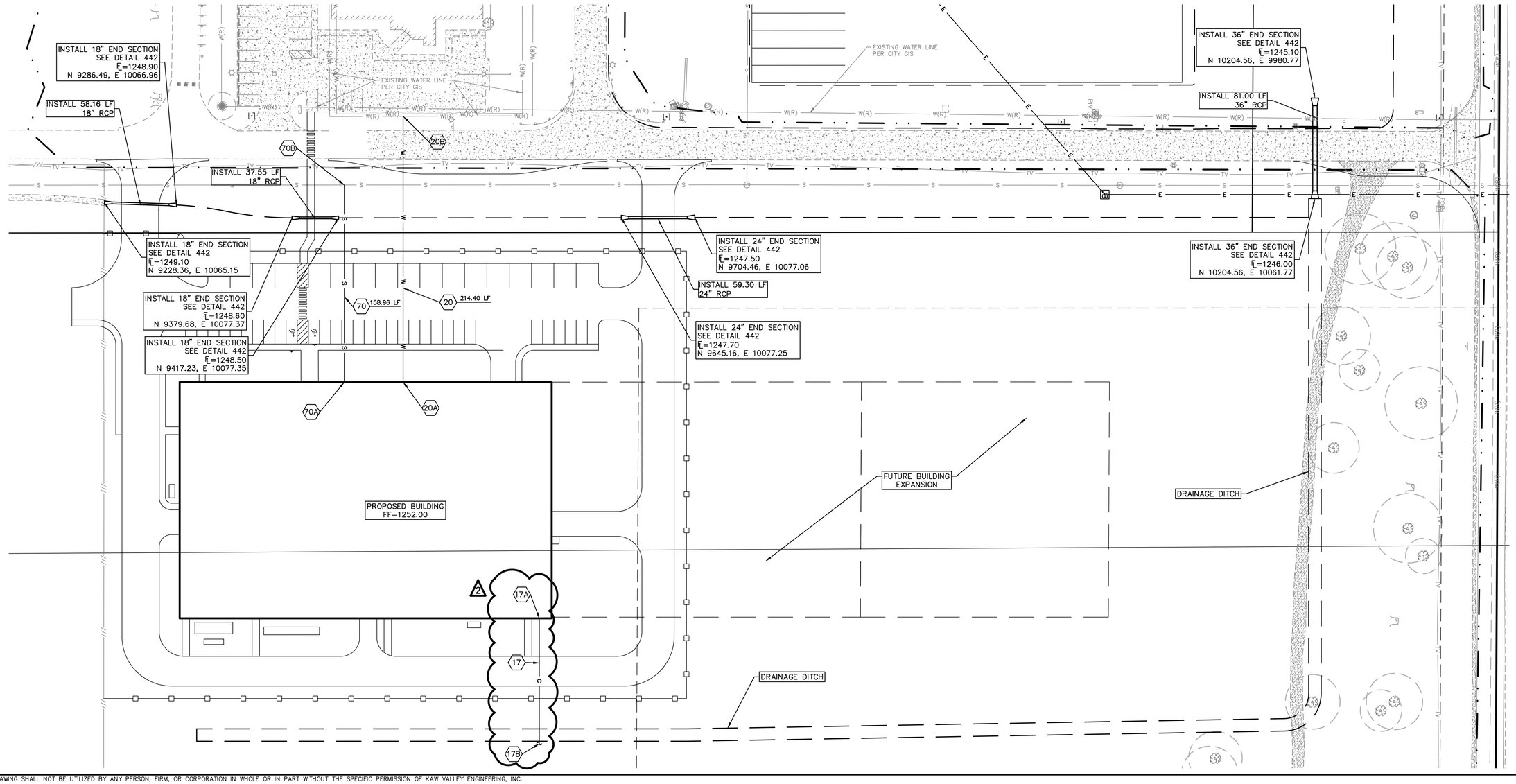
70 4" SANITARY SEWER SERVICE LINE, PVC SDR 26 AT MINIMUM 2% SLOPE

70A SANITARY SEWER SERVICE CONNECTION TO BUILDING (SEE MEP PLANS)

72B POINT OF CONNECTION TO SANITARY SEWER MAIN

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.



REV	DATE	DESCRIPTION	DSN	DWN	CHK
					M.JR
					TDA
			M.JR	ZEK	M.JR
			M.JR	M.JR	TDA
2	04/01/26	ADDED GAS LINE AND NOTES	M.JR	M.JR	M.JR
1	03/09/26	REVISED PER UPDATED MEP AND ARCH PLANS	M.JR	M.JR	M.JR
0	10/31/25	INITIAL ISSUE	M.JR	M.JR	M.JR

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5/16/26
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PROFESSIONAL ENGINEER

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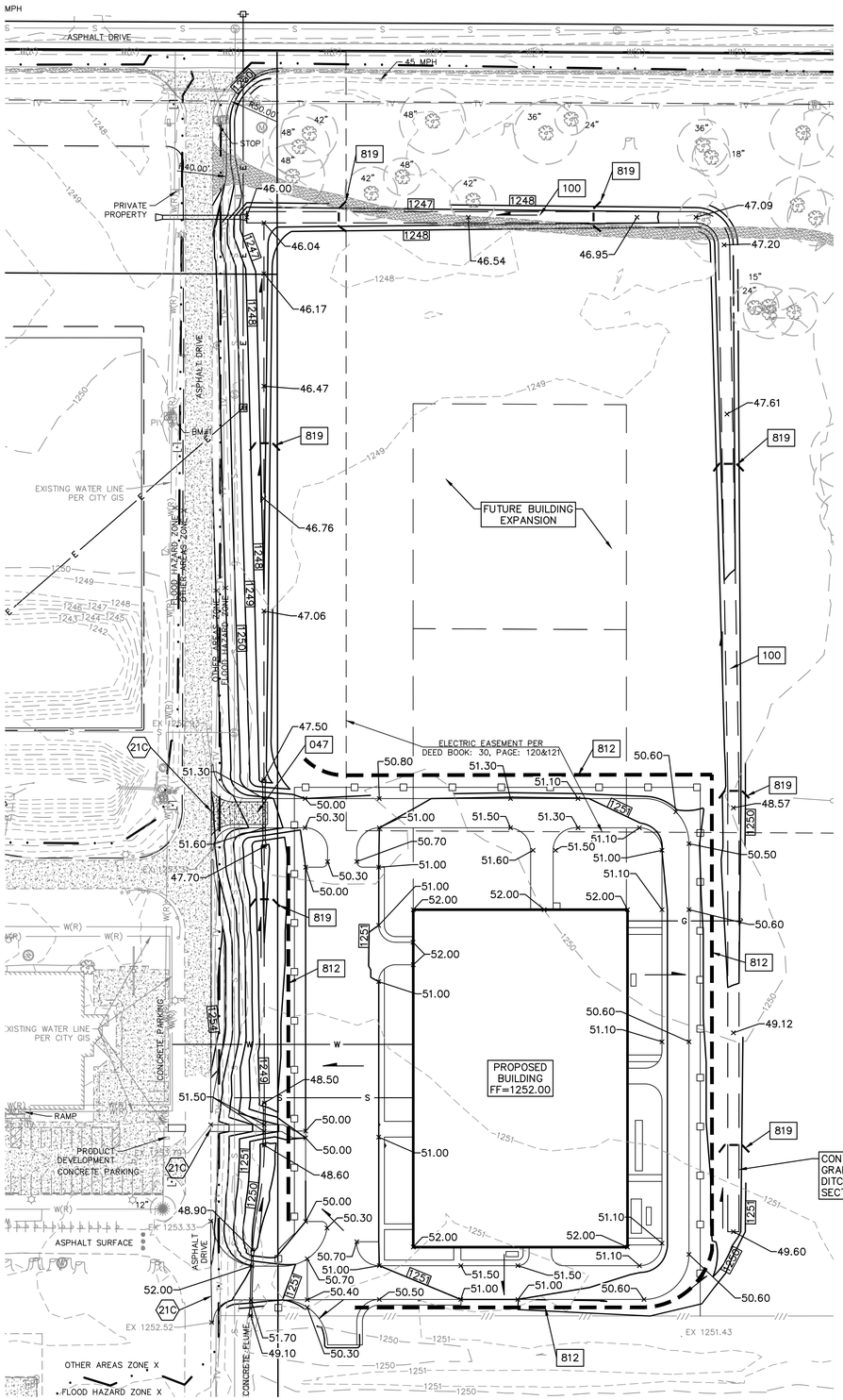
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/26

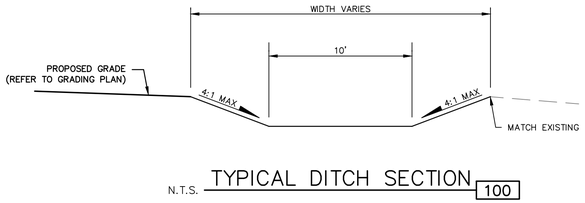
CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
UTILITY PLAN

PROJ. NO.	E24D3658
DESIGNER	MJR
DRAWN BY	TDA
CFN	3658UP_RD
SHEET	C02
REV	2

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.





N.T.S. TYPICAL DITCH SECTION 100

EROSION & PROPOSED IMPROVEMENTS LEGEND:

- 82.95 SPOT ELEVATION (ADD 1200)
- X TOP OF PAVEMENT
- FLOW DIRECTION
- 1250 EXISTING GROUND CONTOUR (1' INTERVALS)
- 1250 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- SEDIMENTATION FENCE
- STRAW WATTLE
- DETAILS – SEE DETAIL SHEET C04 FOR THE FOLLOWING DETAILS
  - 047 CONSTRUCTION ENTRANCE DETAIL
  - 100 TYPICAL DITCH SECTION (SEE THIS SHEET)
  - 812 SEDIMENTATION FENCE
  - 819 STRAW WATTLE
- NOTES:
  - 21C MATCH EXISTING PAVEMENT ELEVATIONS

0 30 60 120
SCALE: 1" = 60'

1 EXTENSIVE REVISIONS

GRADING NOTES:

1. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES PROVIDED THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PARKING AREA. BURNING OF TIMBER WILL NOT BE PERMITTED UNLESS APPROVAL IS OBTAINED FROM GOVERNING OFFICIALS. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES.

2. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 8-INCH DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.

3. OFF-SITE FILL MATERIAL SHALL HAVE A PLASTICITY INDEX OF 25 OR LESS, A LIQUID LIMIT OF 45 OR LESS AND CONTAIN NO ROCK LARGER THAN THREE INCHES. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE OWNER PRIOR TO BRINGING ON SITE.

4. EARTHWORK UNDER THE BUILDING SHALL COMPLY WITH THE PROJECT ARCHITECTURAL PLANS. OTHER FILL MATERIAL SHALL BE MADE IN LIFTS NOT TO EXCEED EIGHT INCHES DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. FILL MATERIAL MAY INCLUDE ROCK FROM ON-SITE EXCAVATION IF CAREFULLY PLACED SO THAT LARGE STONES ARE WELL DISTRIBUTED AND VOIDS ARE COMPLETELY FILLED WITH SMALLER STONES, EARTH, SAND OR GRAVEL TO FURNISH A SOLID EMBANKMENT. NO ROCK LARGER THAN THREE INCHES IN ANY DIMENSION NOR ANY SHALE SHALL BE PLACED IN THE TOP 12 INCHES OF EMBANKMENT.

5. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.

6. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOFROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

8. ALL SLOPES ARE TO BE 4:1 OR FLATTER UNLESS OTHERWISE INDICATED.

9. ALL SLOPES EXCEEDING 4:1 SHALL BE PROTECTED BY RIP RAP, CONCRETE PAVING, OR OTHER METHODS INDICATED ON THESE PLANS, THAT WILL PREVENT EROSION AND PLACED SUCH THAT THE SURFACE IS FLUSH WITH SURROUNDING GROUND AND SHAPED TO CHANNEL WATER IN DIRECTIONS INDICATED.

10. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

11. CONTRACTOR SHALL USE SILT FENCE, STRAW WATTLE OR OTHER MEANS OF CONTROLLING EROSION ALONG THE EDGE OF THE PROPERTY OR OTHER BOTTOM OF SLOPE LOCATIONS.

12. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.

13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

14. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.

15. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTIONS.

16. HANDICAP STALLS SHALL MEET ADA REQUIREMENTS AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION AT THE BUILDING ENTRY AND ACCESSIBLE PARKING STALLS. SLOPES EXCEEDING 2.0% WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

IF DISCREPANCIES EXIST BETWEEN THE GRADING NOTES BELOW AND THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT, THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT SHALL GOVERN.

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACT DOCUMENTS.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

THE COORDINATES PROVIDED ON THIS PLAN ARE FOR INFORMATION AND CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE COORDINATES SHOWN HEREON BEFORE CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
			MJR	ZEK	MJR
			MJR	TDA	MJR
1	05/06/26	EAST ROAD ADJUSTMENT	MJR		
0	10/31/25	INITIAL ISSUE	MJR		

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KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-1113.
EXPIRES 12/31/26

CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
GRADING & EROSION CONTROL PLAN

PROJ. NO.	E24D3658
DESIGNER	MJR
DRAWN BY	TDA
CFN	3658GP_RD
SHEET	C03
REV	1

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

GENERAL NOTES:

1. PROPERTY LINE IS LIMITS OF CONSTRUCTION EXCEPT AS SHOWN.

2. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS.

3. THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION.

4. ALL SILT SHALL REMAIN ON SITE AND SURROUNDING STREETS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.

5. A SEDIMENTATION BARRIER IS TO BE INSTALLED AS SHOWN.

6. ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.

7. SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.

8. CURB INLET SEDIMENTATION BARRIERS ARE TO BE INSTALLED AROUND INLETS AND WEIRS WHERE SEDIMENTATION IS A CONCERN. INLET BARRIERS SHALL BE EITHER BLOCK AND GRAVEL, OR SECURED STRAW BALES, OR SILT FENCE.

9. SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS.

10. RIPRAP IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).

11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY.

12. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION AND SILTATION CONTROLS REQUIRED TO PREVENT SOIL EROSION FROM LEAVING THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT METHODS UTILIZED ARE ADEQUATE AND COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

13. TEMPORARY SEDIMENT FENCE/STRAW BALES TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

14. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.

15. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES.

16. INSTALL CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.

17. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED USING MULCH OR EQUIVALENT STABILIZING BMP, SODDED, OR LANDSCAPED AS SHOWN ON THE LANDSCAPE PLAN WITHIN 14 DAYS.

18. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.

19. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.

20. ROCK LINING (RIPRAP) SHALL BE DURABLE STONE CONTAINING A COMBINED TOTAL OF NOT MORE THAN 10 PERCENT OF EARTH, SAND, SHALE AND NON-DURABLE ROCK. AT LEAST 60 PERCENT OF THE MASS SHALL BE OF PIECES HAVING A MINIMUM WEIGHT OF 150 POUNDS OR MORE PER CUBIC FOOT.

21. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING ADJACENT TO OR DOWNSTREAM FROM PROPERTY BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.

22. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.

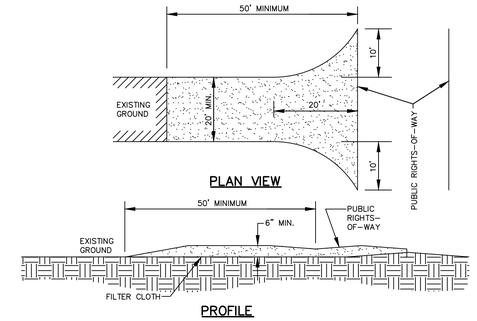
23. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.

24. RIGHT OF WAY TO BE STABILIZED AS REQUIRED BY APWA SECTION 2400.

25. EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.

26. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED, CHUTE ETC. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.

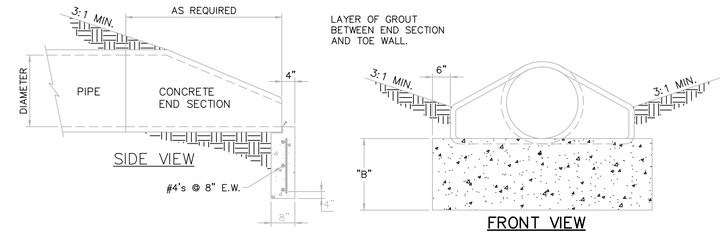
27. EROSION CONTROL SEDIMENT FENCE TO BE INSTALLED 1'-0" BEHIND CURB & GUTTER UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM LOT DRAIN TOWARDS CURB. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.



CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE – USE 2" STONE OR RECLAIMED OR RECYCLED EQUIVALENT.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN (6) INCHES.
4. WIDTH – TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED AFTER EACH RAIN.

CONSTRUCTION ENTRANCE DETAIL 047



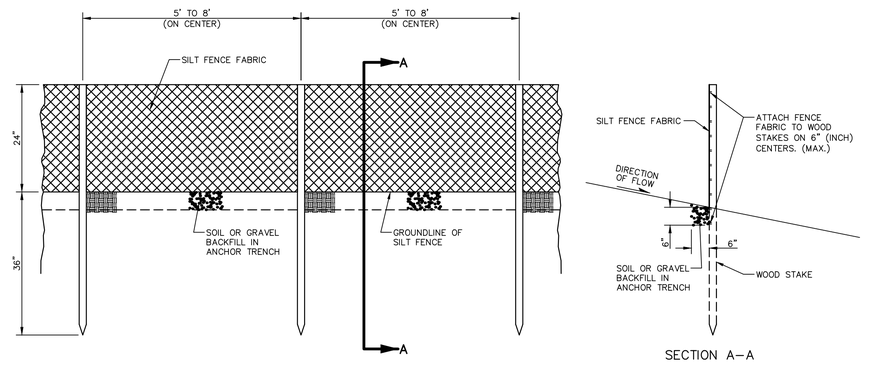
TABLE

TOE WALL DEPTH	
PIPE DIAMETER	"B"
12" – 21"	24"
24" – 48"	30"
54" – 66"	36"

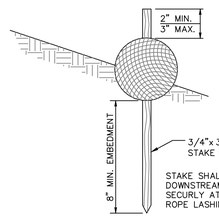
NOTES:

1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
2. ALL CONCRETE SHALL MEET APWA 2600 SPECIFICATIONS.

CONCRETE FLARED END SECTION W/ TOE WALL 442



SEDIMENTATION FENCE 812

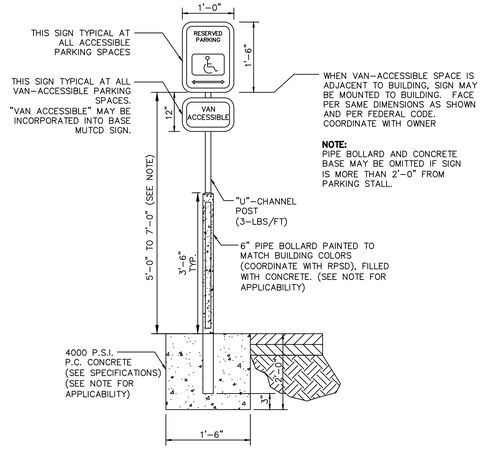


WATTLE NOTES:

1. FIBER LOGS MAY BE USED IN LIEU OF WATTLES.
2. THE DIAMETER OF WATTLE OR FIBER LOG SHALL BE AT LEAST 12-INCHES.
3. WATTLES OR FIBER LOGS MUST BE WRAPPED WITH NON-PLASTIC WRAPPING. COCONUT OR ASPEN FIBER SHALL BE USED FOR FIBER LOGS AND WATTLES.
4. THE WATTLES OR FIBER LOGS SHALL BE INSPECTED AFTER EVERY RAINFALL TO DETERMINE IF ANY PART OF THE BARRIER NEEDS TO BE REPAIRED OR REPLACED. IF IT IS DETERMINED THAT THE BARRIER NEEDS ANY REPAIR OR REPLACEMENT THIS SHALL BE DONE IMMEDIATELY.
5. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH RAINFALL OR BEFORE THEY ACCUMULATE TO 1/2 OF THE WATTLE OR FIBER LOG HEIGHT.
6. INSTALL WATTLES OR FIBER LOGS SNUGLY INTO THE TRENCH. ABUT ADJACENT WATTLES OR FIBER LOGS TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS.
7. STAKES SHALL BE INSTALLED AT EACH END OF WATTLE OR FIBER LOG, AND AT 4' O.C. ALONG ENTIRE LENGTH.
8. PROVIDE MULTIPLE WATTLES UPHILL FOR WATTLE DITCH CHECK CONFIGURATION OR AS NEEDED.
9. WATER FROM TRENCH DEWATERING TO BE PUMPED BEHIND COMPOST BERM OR WATTLE TO BE FILTERED.

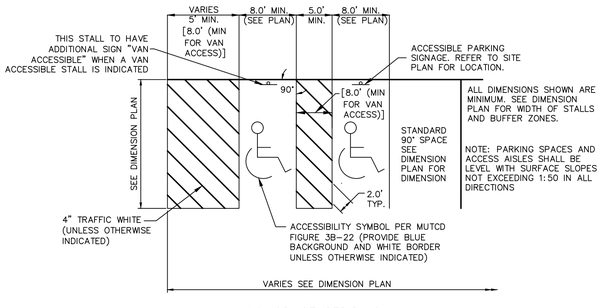
WATTLE INSTALLATION 819

N.T.S.



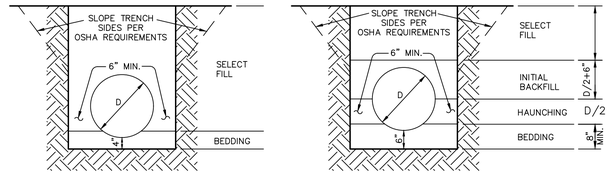
ACCESSIBLE PARKING SIGN 120

HEIGHT ABOVE GRADE FOR POLE MOUNTED SIGNS VARIES. TYPICAL INSTALLATION IS 5'-0" ABOVE GRADE. SIGN SHALL BE MOUNTED AT 7'-0" IF IT FALLS WITHIN A WALKING PATH.



90° SPACE STRIPING

ACCESSIBLE STRIPING 102



RIGID PIPE: INCLUDES REINFORCED CONCRETE, DUCTILE IRON, & CAST IRON

1. BEDDING SHALL BE COMPACTED SAND AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. SELECT FILL SHALL BE NATIVE MATERIAL FREE OF LARGE ROCKS, DEBRIS, AND ORGANICS (3"+) AND SHALL BE PLACED IN 8" MAX. LOOSE LIFTS AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.

FLEXIBLE PIPE: INCLUDES CORRUGATED METAL PIPE. CORRUGATED POLYETHYLENE PIPE AND/OR POLYVINYL CHLORIDE PIPE.

1. BEDDING AND HAUNCHING MATERIAL SHALL BE COMPACTED SAND, UNLESS NOTED OTHERWISE ON PLANS AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. INITIAL BACKFILL MATERIAL SHALL BE GRANULAR MATERIAL OR SELECT MATERIAL (INCLUDING SAND) COMPACTED IN ACCORDANCE TO SPECIFICATIONS.
3. SELECT FILL PLACEMENT AND COMPACTION SAME AS FOR RIGID PIPE.

TRENCH AND BEDDING DETAILS 206

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	10/31/25	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 10/31/25 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING

1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
ssk@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS SINCE CERTIFICATE OF AUTHORIZATION # E-115. EXPIRES 12/31/26

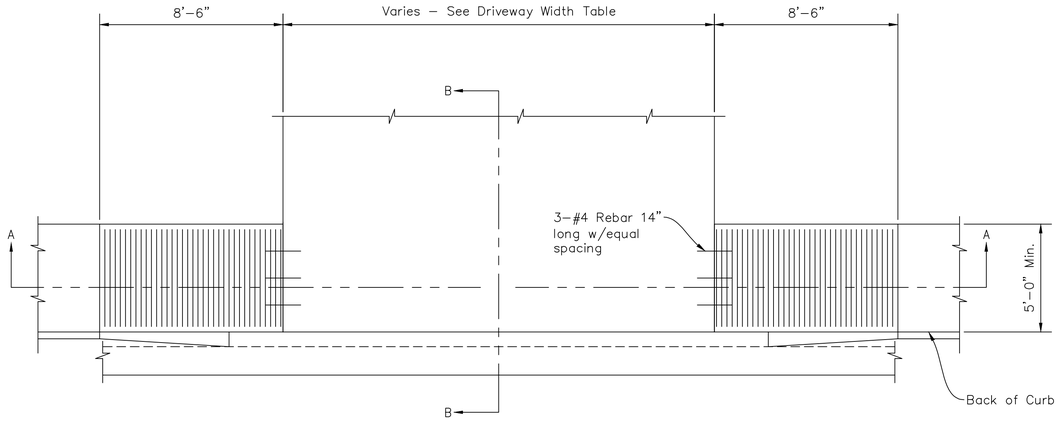
CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
DETAIL SHEET

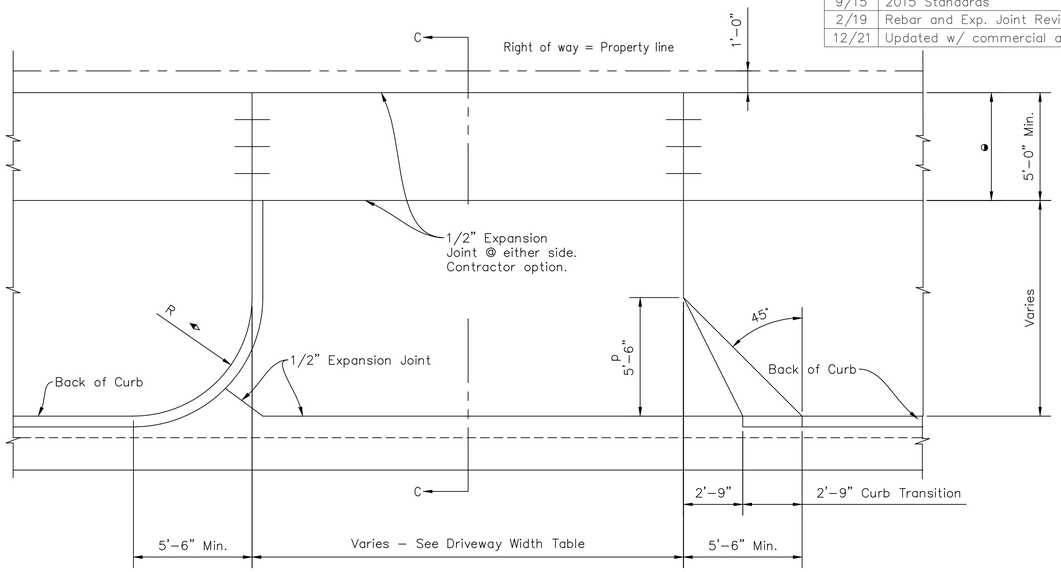
PROJ. NO.	E24D3658
DESIGNER	MJR
DRAWN BY	TDA
CFN	3658TYP_RD
SHEET	C04
REV	0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

DATE	REVISIONS
9/15	2015 Standards
2/19	Rebar and Exp. Joint Revision
12/21	Updated w/ commercial and industrial



TYPICAL DRIVEWAY w/ CURBSIDE SIDEWALK DETAIL



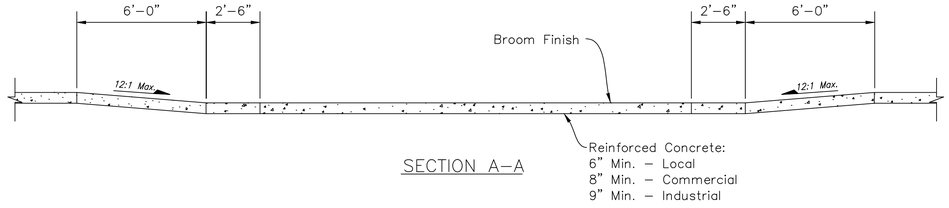
WITH RADIUS

WITH 45° WING

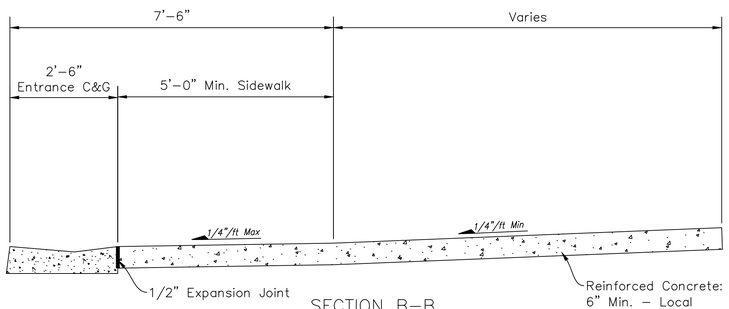
◑ Match adjacent sidewalk width

Driveway Type	Radius
Commercial	15' min.
Single Residential	5.5' min
Double Residential	3' min.

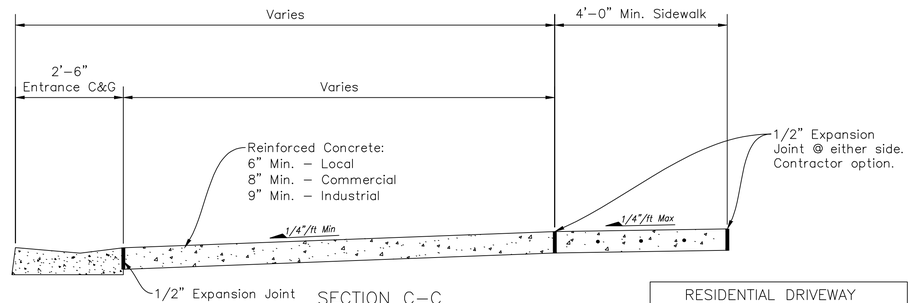
TYPICAL DRIVEWAY w/ PROPERTY LINE SIDEWALK DETAIL



SECTION A–A



SECTION B–B



SECTION C–C

GENERAL NOTES:

1. All driveway approach construction shall be subject to City inspection at all times by the City Engineer or his representative.

2. All driveway approach construction shall be placed normal to center line of roadway in a true and neat manner.

3. All driveway approach construction shall be no less than 5'–6" from adjacent property unless with written consent from adjacent property owner.

4. Before placement of concrete, the subgrade shall be thoroughly moistened. Concrete may not be placed on frozen or muddy subgrade or when ambient air temperature is 40° F. or less without adequate frost protection.

5. All concrete within the right–of–way shall be placed with a minimum 4,000 psi concrete mix design. Upon placement of concrete, the surface shall be broom finished and protected against premature drying with white pigmented curing compound for a period no less than seven (7) days. (When the ambient air temperature is expected to remain at or below 40° F, the white pigmented curing compound will be substituted with thermal blankets).

6. Entrance and driveway pavements shall have a uniform thickness:
   a. Residential– 6"concrete and reinforced with a minimum 6X6– W1.4xW1.4 welded wire reinforcement. Approximate weight of welded wire mesh = 21 lbs. per 100 sq. ft.
   b. Commercial– 8" min. concrete with #4 rebar mat.
   c. Industrial– 9" min. concrete with #4 rebar mat.

Expansion joints will be that of a preformed material, one half (1/2") thickness, and shall be placed wherever new work joins existing work; at ends of all driveway, alley and street returns where returns meet existing construction; and at intervals not to exceed one hundred fifty (150') feet for all straight runs.

7. Concrete Pavement shall be jointed w/ 1/8" wide, T/3 depth, contraction joints not to exceed 10' x 10' slabs.

RESIDENTIAL DRIVEWAY WIDTH TABLE	
LOT WIDTH	MAXIMUM DRIVEWAY
50 ft or Less	20 ft
51 ft to 60 ft	24 ft
61 ft' to 74 ft	30 ft
75 ft or Greater	30 ft
*with front facing attached 3 car garage or carport	36 ft
Minimum Driveway Width = 8'–0"	

200

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
DRIVEWAY DETAILS

PROJ NO:	DATE:	SHEET:
FILENAME: 4_Driveway Details.1706.dwg	BY:	4

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	10/31/25	INITIAL ISSUE	MJR	TDA	MJR

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KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E–11,5. EXPIRES 12/31/26

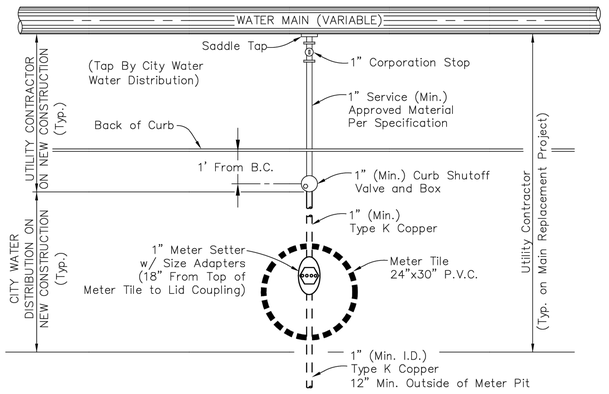
CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
DETAIL SHEET

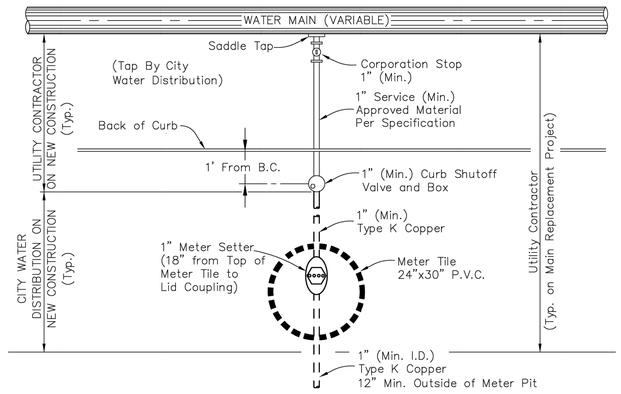
PROJ. NO. E24D3658
DESIGNER MJR | DRAWN BY TDA
CFN 3658TYP_RD
SHEET C05 | REV 0

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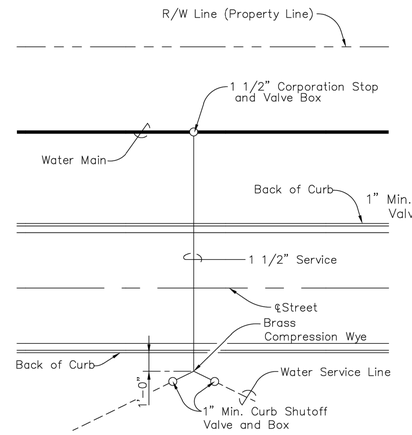
DATE	REVISIONS
11/14	Issued for Standards
02/15	Service Line Material
03/16	1.5" & 2" Service Line Material
07/23	Line Material
10/24	Service Line Material



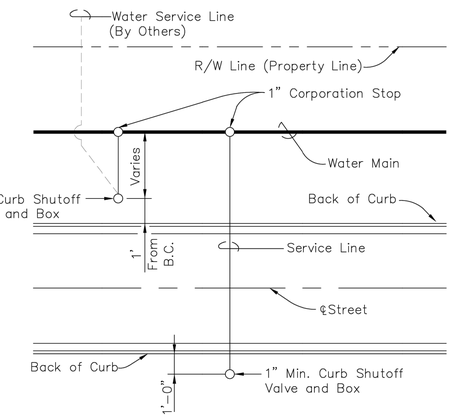
STANDARD FOR 5/8" & 3/4" METER SETTINGS
Not to Scale



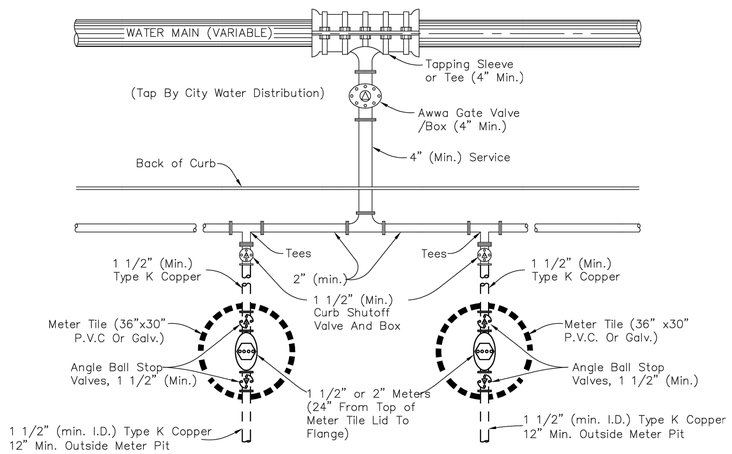
STANDARD FOR 1" METER SETTINGS
Not to Scale



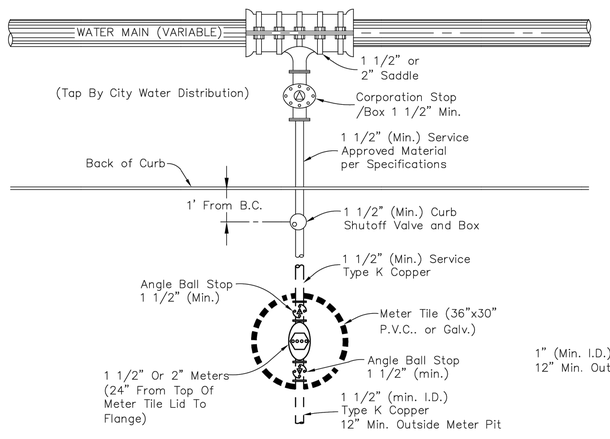
TYPICAL 1 1/2" WATER SERVICE
Not to Scale



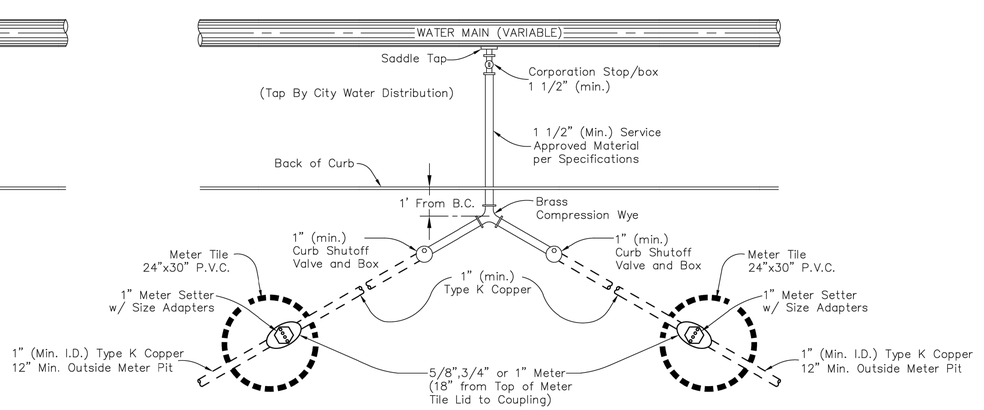
TYPICAL TAP AND CURB SHUTOFF INSTALLATION
Not to Scale



STANDARD FOR 1 1/2" AND 2" MULTIPLE METER SETTINGS
Not to Scale



STANDARD FOR 1 1/2" AND 2" METER SETTINGS
Not to Scale



STANDARD FOR "Y" BRANCH 5/8", 3/4", & 1" MULTIPLE METER SETTINGS
Not to Scale

NOTES:
1. Deviations may be made to Typical Layout with Prior Approval from the Utility Engineer when Field Conflicts are Identified.
2. 24" Meter Pits: There shall be no Connection, Valves, Drains, Backflow Valves, Fittings (Other than the Meter Setter) or other Attachments Located Inside the Meter Pit.
3. 36" Meter Pits: There Shall be no Connection, Valves (Other than the Angle Ball Stops), Drains, Backflow Valves, or other Attachments Located Inside the Meter Pit.

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
WATER SERVICE

PROJ. NO.	DATE:	SHEET:
FILENAME: 14_Water Service Details1803.dwg	BY:	14

REV	DATE	DESCRIPTION	DSN	DWN	CHK
1	03/09/26	REVISED PER UPDATED MEP AND ARCH PLANS	MJR	ZEK	MJR
0	10/31/25	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 5/6/26 KANSAS PROFESSIONAL ENGINEER

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KS # 29241

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KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-115. EXPIRES 12/31/26

CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

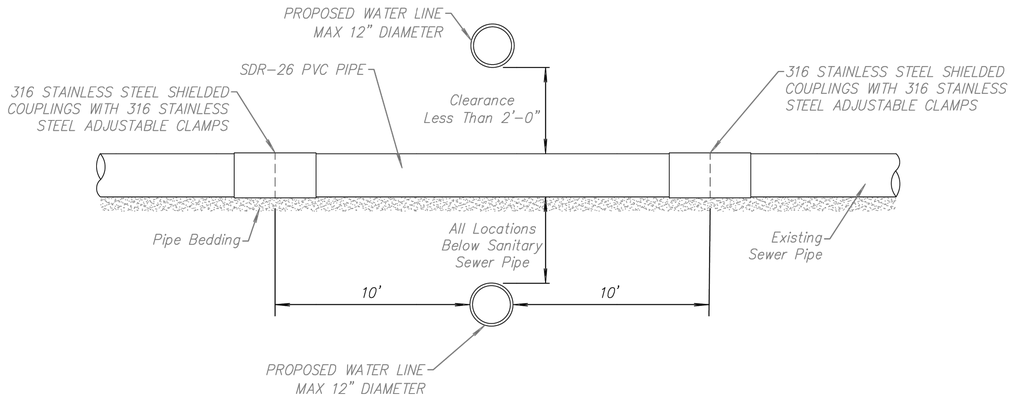
CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3658
DESIGNER	MJR
DRAWN BY	TDA
CFN	3658TYP_RD
SHEET	C06
REV	1

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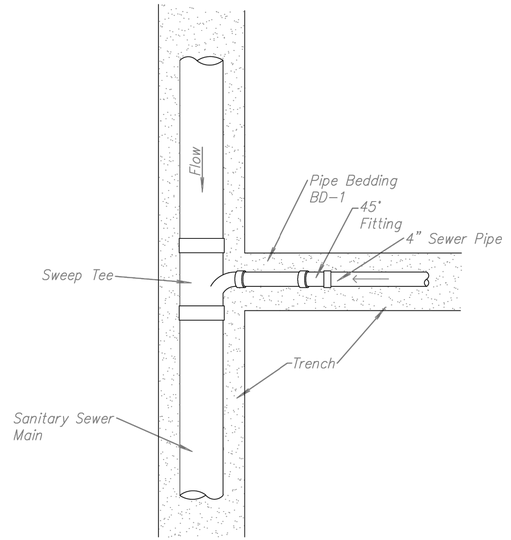
DATE	REVISIONS
5/17	2017 Standard Details
4/20	Sanitary–Water Crossing Detail

8/26/2020 – Added Sweep Tee Detail
5/6/2022 – Added Water Main Below
10/27/2023 – Revised Profile

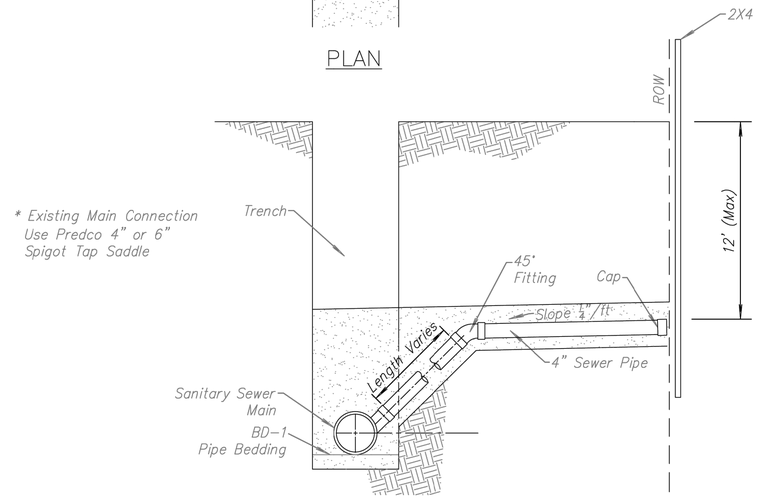


Profile

Water Line Crossing Sanitary Sewer Detail



PLAN



CROSS SECTION

SEWER CONNECTION
NEW CONSTRUCTION

CITY OF SALINA, KANSAS
PUBLIC WORKS – ENGINEERING – UTILITIES

STANDARD DETAILS
SANITARY SEWER

PROJ NO:	DATE: 3–16–2017	SHEET: 27
FILENAME: 27_Sanitary Sewer Wye.1705_KPU.dwg	BY:	

REV	DATE	DESCRIPTION	DSN	DWN	CHK
			MJR	ZEK	MJR
1	03/09/26	REVISED PER UPDATED MEP AND ARCH PLANS	MJR	TDA	MJR
0	10/31/25	INITIAL ISSUE	MJR		

MATTHEW J. ROWE
LICENSED
29241
5/14/26
KANSAS
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KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E–113. EXPIRES 12/31/26

CE R&D BUILDING
3861 SOUTH NINTH STREET
SALINA, KANSAS 67401

CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3658
DESIGNER	DRAWN BY
MJR	TDA
CFN	3658TYP_RD
SHEET	REV
C07	1

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SITE DEMOLITION NOTES

K–D2.2
PHOTO DESIGNATION

GENERAL

1. WHERE EXIST. BLDG. COMPONENTS ARE TO BE REMOVED; PATCH & REPAIR THE SURFACES TO MATCH EXIST. FINISH, UNLESS NEW FINISHES ARE CALLED FOR IN THE FINISH SCHEDULE.
2. REMOVE EXIST. BLDG. COMPONENTS AS INDICATED, IMPLIED OR AS REQUIRED SCHEMATICALLY SHOWN AS DASHED LINES. FIELD VERIFY ALL LOCATIONS.
3. THE ELECTRICAL & MECHANICAL CONTRACTORS SHALL BE RESPONSIBLE FOR ALL CORE DRILLING FOR PIPING & CONDUIT INSTALLATION.
4. ALL OTHER CUTTING, PATCHING & FINISHING, U.N.O. SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
5. SHORING OF EXISTING STRUCTURE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
6. NOTIFY ARCHITECT IMMEDIATELY IF ASBESTOS OR OTHER HAZARDOUS MATERIAL IS SUSPECTED ON SITE. DO NOT DISTURB UNLESS DIRECTED.
7. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE THE DEMOLITION BY DIFFERING TRADES.
8. CONTRACTOR COORDINATE SCHEDULE & LOCATION OF ANY OR ALL EXISTING RECEPTACLES, SWITCHES, DEVICES, ETC. PRIOR TO DEMOLITION, RELOCATE OR ABANDON ACCORDINGLY.
9. COORDINATE & REFERENCE MECHANICAL & ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION ITEMS AND DETAILS

SPECIFIC

1. REMOVE EXISTING GRAVEL DRIVE AS REQUIRED.
2. REMOVED EXISTING TREE/VEGETATION.
3. SAWCUT & REMOVE EXISTING CURB & GUTTER.
4. REMOVE PORTION OF EXISTING FENCE FOR NEW SLIDING GATE.
5. SAWCUT & REMOVE PORTION OF EXISTING CONCRETE SIDEWALK.
6.

EXISTING BUILDING

A SITE DEMOLITION PLAN
1"=30'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

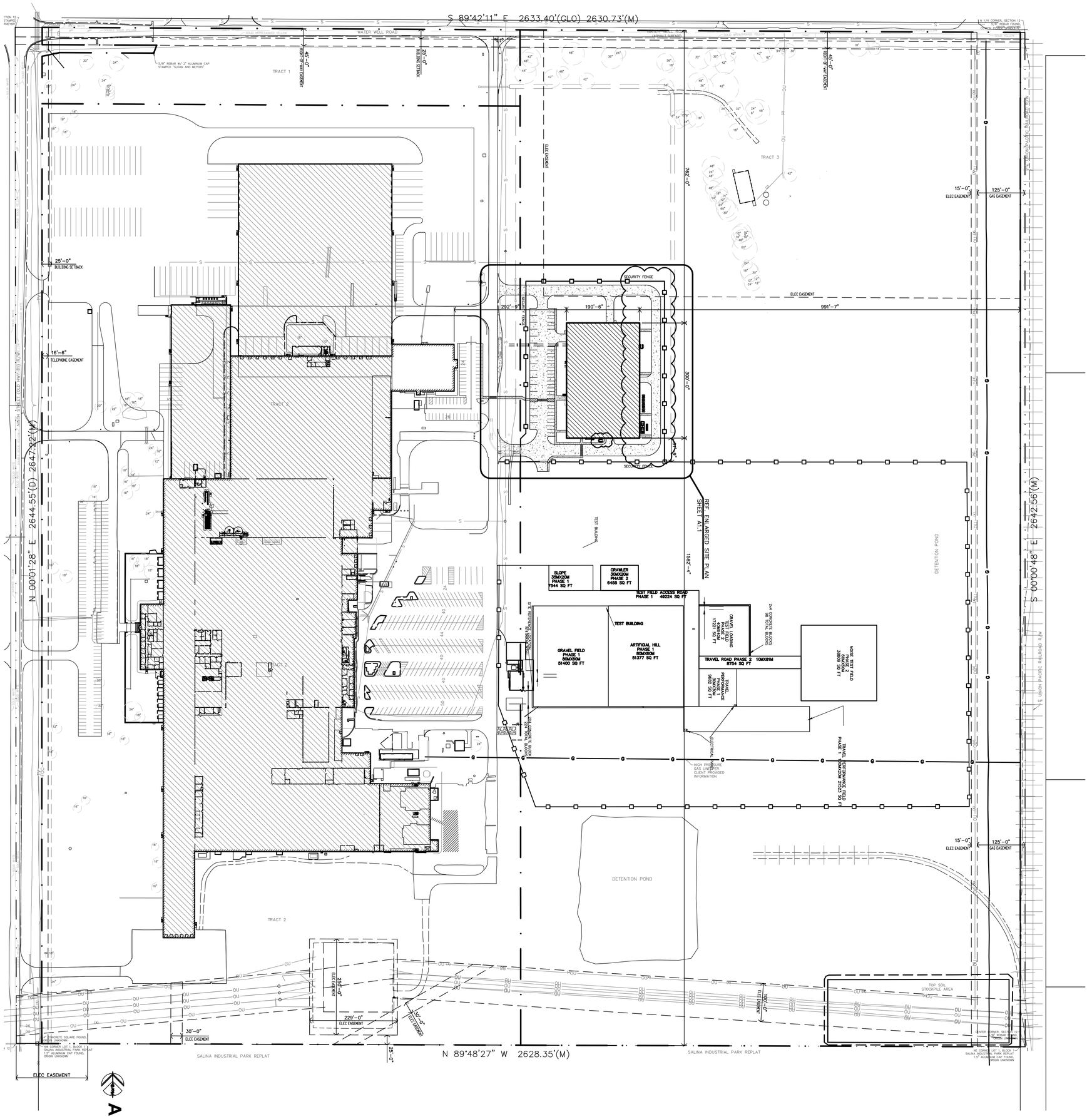
CHARLES A. RENZ
NO. 5502
5-6-2026
REGISTERED PROFESSIONAL ARCHITECT

REVISION:

DATE: 5-6-2026
JOB: 23-3315
SHEET NO.:

D1.1

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A
COMPOSITE SITE PLAN
1"=100'-0"

GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

SHEET NO.:	A1.0
JOB:	23-3315
DATE:	5-6-2026
REVISION:	

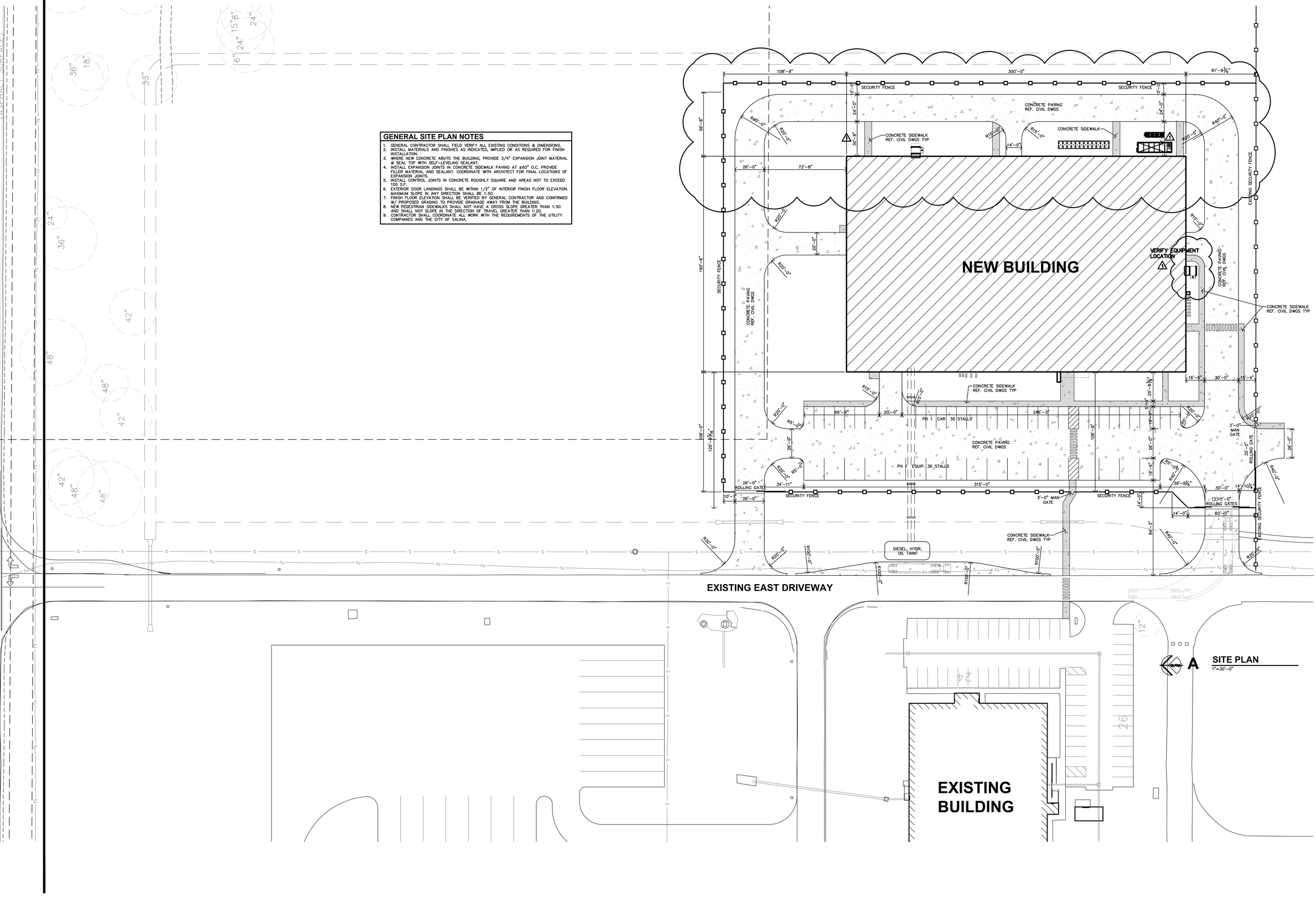
CHARLES E. RENZ 5507 5-6-2026 REGISTERED PROFESSIONAL ARCHITECT

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GENERAL SITE PLAN NOTES

1. GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS.
2. INSTALL MATERIALS AND FINISHES AS INDICATED, IMPLIED OR AS REQUIRED FOR FINISH INSTALLATION.
3. WHERE NEW CONCRETE ABUTS THE BUILDING, PROVIDE 3/4" EXPANSION JOINT MATERIAL & SEAL TOP WITH SELF-LEVELING SEALANT.
4. INSTALL EXPANSION JOINTS IN CONCRETE SIDEWALK PAVING AT ±60' O.C. PROVIDE FILLER MATERIAL AND SEALANT. COORDINATE WITH ARCHITECT FOR FINAL LOCATIONS OF EXPANSION JOINTS.
5. INSTALL CONTROL JOINTS IN CONCRETE ROUGHLY SQUARE AND AREAS NOT TO EXCEED 100 S.F.
6. EXTERIOR DOOR LANDINGS SHALL BE WITHIN 1/2" OF INTERIOR FINISH FLOOR ELEVATION. MAXIMUM SLOPE IN ANY DIRECTION SHALL BE 1:50
7. FINISH FLOOR ELEVATION SHALL BE VERIFIED BY GENERAL CONTRACTOR AND CONFIRMED W/ PROPOSED GRADING TO PROVIDE DRAINAGE AWAY FROM THE BUILDING.
8. NEW PEDESTRIAN SIDEWALKS SHALL NOT HAVE A CROSS SLOPE GREATER THAN 1:50 AND SHALL NOT SLOPE IN THE DIRECTION OF TRAVEL GREATER THAN 1:20.
9. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE REQUIREMENTS OF THE UTILITY COMPANIES AND THE CITY OF SALINA.



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Kansas City, MO 64108
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GREAT PLAINS MANUFACTURING

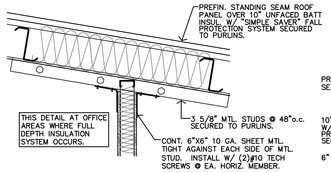
NEW CE TESTING FACILITY

SALINA, KANSAS

CHARLES A. RENZ
ARCHITECT
5502
5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

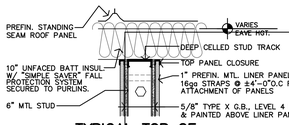
REVISION:	
1	4-17-2026
DATE:	5-6-2026
JOB:	23-3315
SHEET NO.:	A1.1

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TYPICAL TOP OF WALL DETAIL

NO SCALE

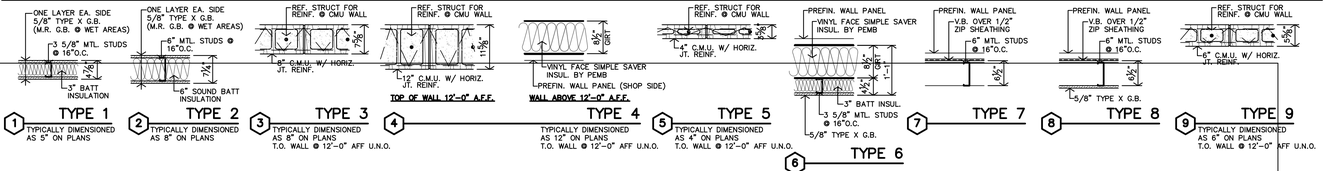


TYPICAL TOP OF WALL DETAIL

NO SCALE

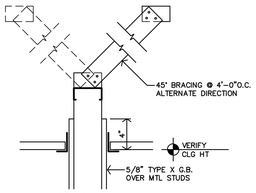
WALL TYPE SCHEDULE

• NON-FULL HT. WALLS TO 12'-0"AFF. UNLESS NOTED OTHERWISE. • BRACE NON-FULL HT. G.B. WALLS TO STRUCTURE ABOVE THE CEILING AS LOW AS POSSIBLE.



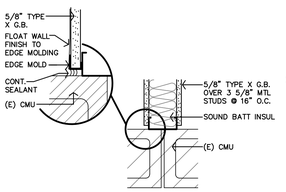
ARCHITECTURAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & CONDITIONS.
2. INSTALL MATERIALS AND/OR FINISHES AS INDICATED, IMPLIED OR AS REQUIRED FOR COMPLETE & FINISHED INSTALLATION.
3. ALL WORK SHALL BE IN CONFORMANCE W/ APPLICABLE BUILDING CODES & ORDINANCES.
4. ALL NEW CONSTRUCTION SHALL BE IN CONFORMANCE TO ADA REQUIREMENTS. REF. ADA FOR TYPICAL MINIMUM CLEARANCE REQ.
5. ALL NEW DOOR HARDWARE SHALL BE LEVER TYPE LATCH SETS UNLESS NOTED OTHERWISE, COORDINATE W/ MFR. COORDINATE KEYING REQUIREMENTS WITH OWNER.
6. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS, NOTIFY ARCHITECT. PRIOR TO PROCEEDING WITH WORK SO THAT ANY ISSUES MAY BE CLARIFIED.
7. DOORS ARE TYPICALLY LOCATED WITH HINGE-SIDE JAMB 4" FROM ADJACENT WALL. UNLESS NOTED OTHERWISE OR REQUIRED TO MEET LATCH-SIDE CLEARANCE PER ADA.
8. FURNITURE SHOWN IS TO BE PROVIDED BY OWNER.



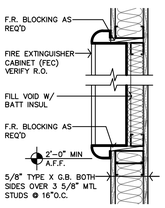
E G.B. WALL BRACING DETAIL

1 1/2"=1'-0"



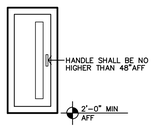
D G.B. WALL TO CMU TRANSITION DETAIL

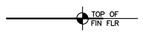
1 1/2"=1'-0"



C FIRE EXTINGUISHER CABINET DTL

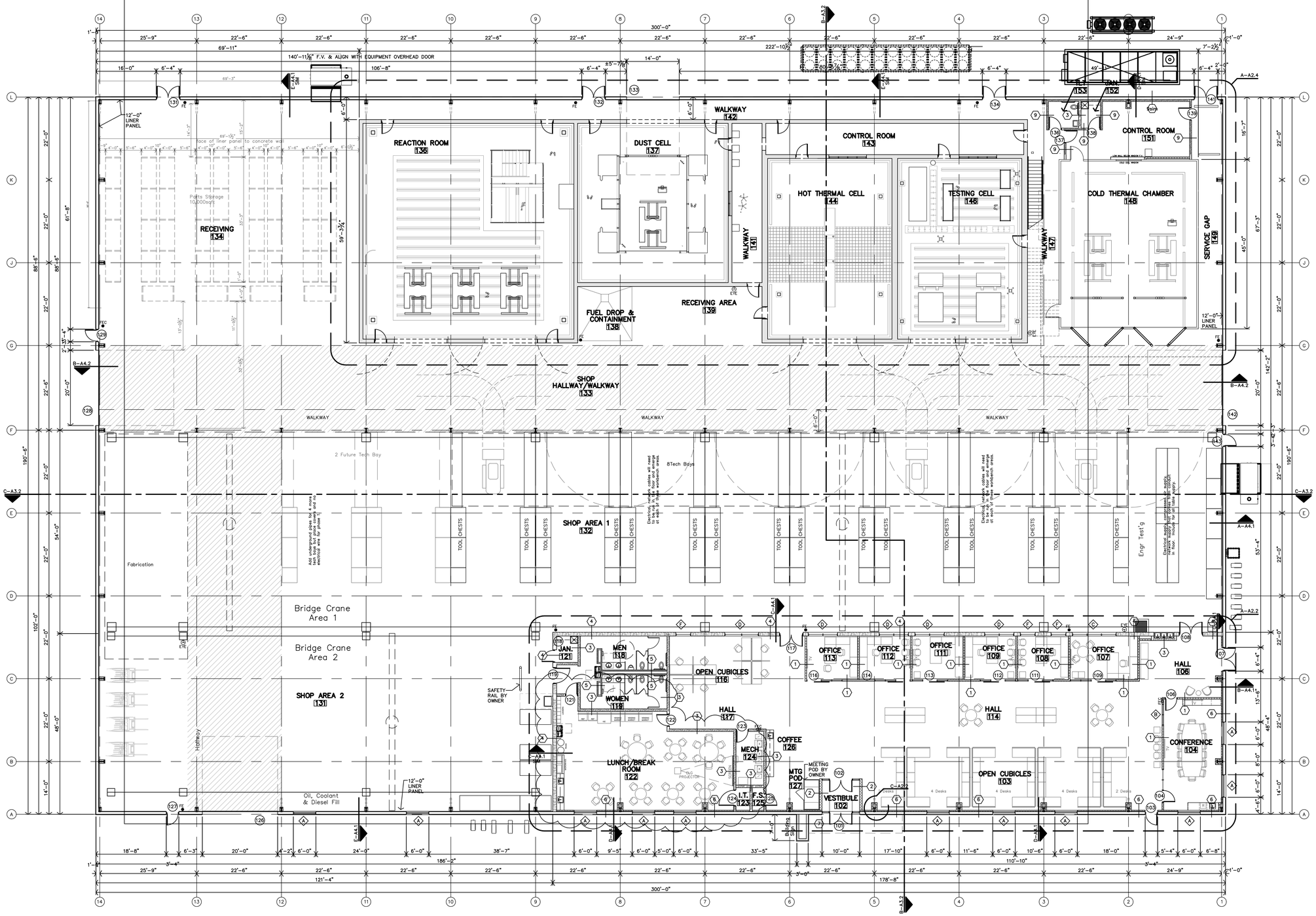
1 1/2"=1'-0"





B TYPICAL FEC MOUNTING HGT

3/4"=1'-0"



A COMPOSITE FLOOR PLAN

3/32"=1'-0"

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

CHARLES A. RENZ
ARCHITECT
5502
5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

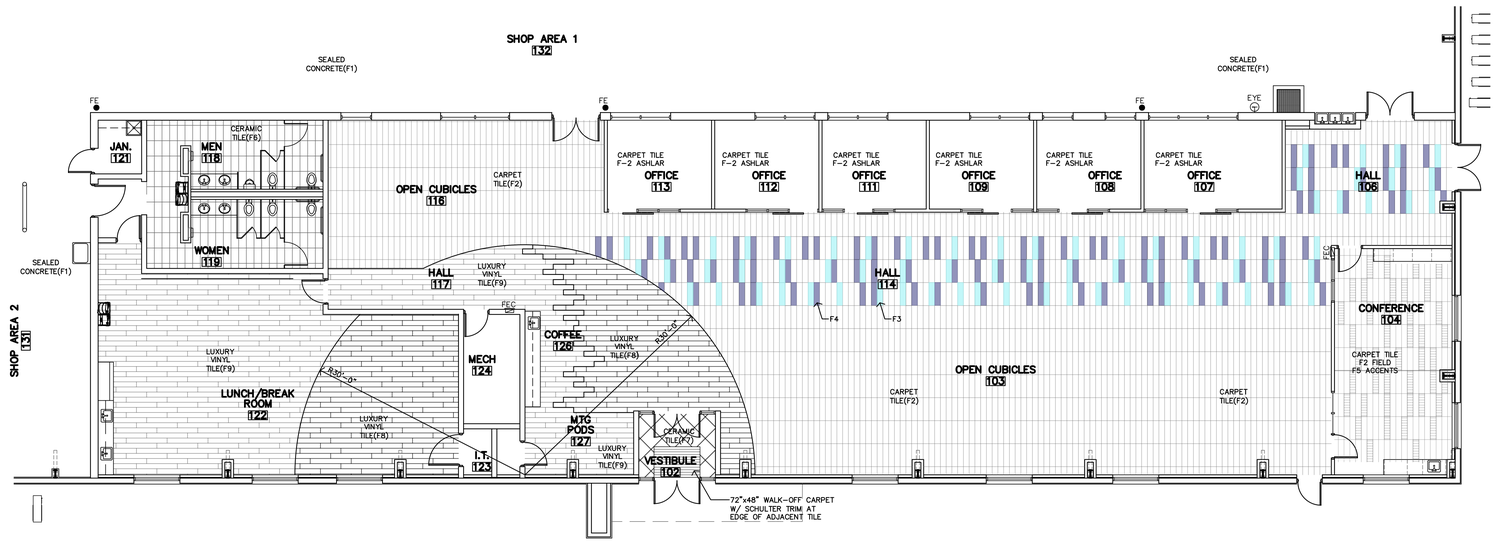
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JOB: 23-3315
SHEET NO.:

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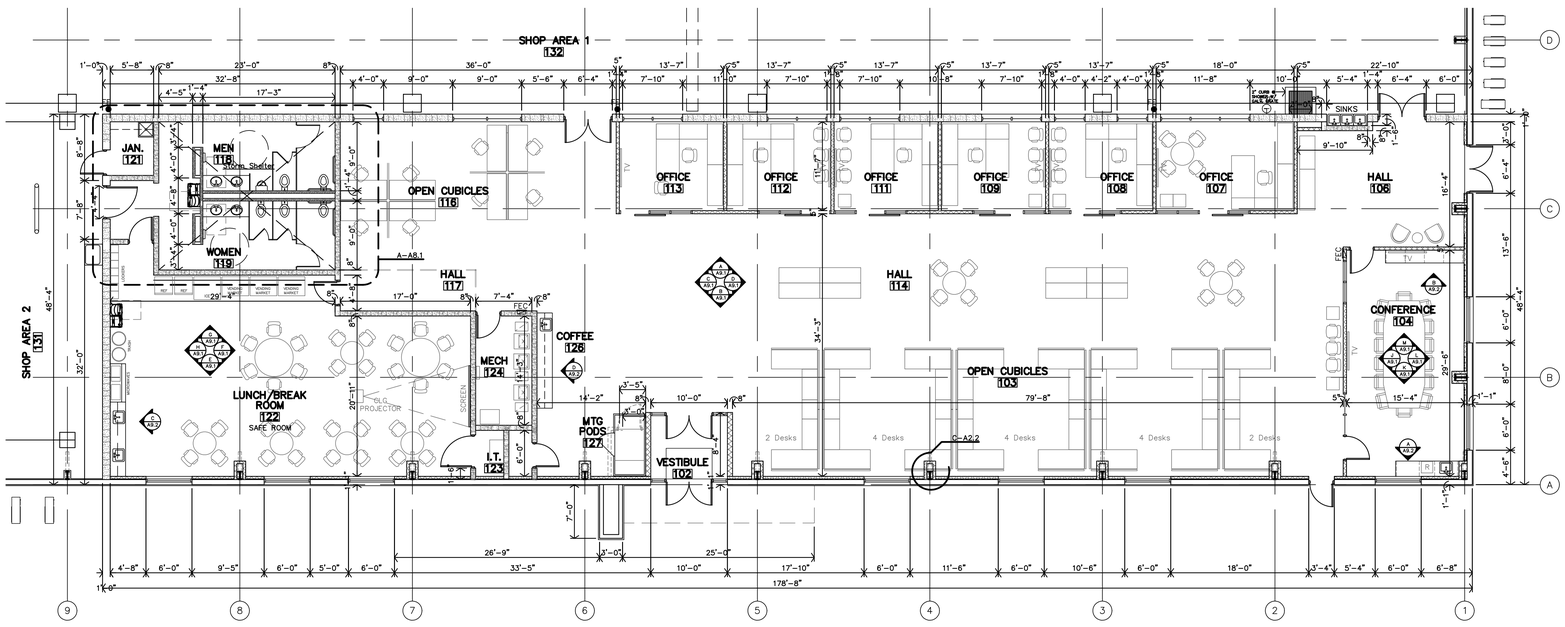
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PLAN NOTES

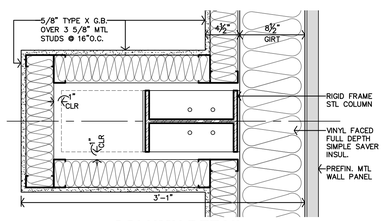
1. REF SHEET A2.1 FOR UNIT GENERAL NOTES & PARTITION SCHEDULE



B OFFICE FLOOR FINISH PLAN
1/8"=1'-0"



A OFFICE FLOOR PLAN
1/8"=1'-0"



C COLUMN DETAIL
1 1/2"=1'-0"

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NEW CE TESTING FACILITY

SALINA, KANSAS

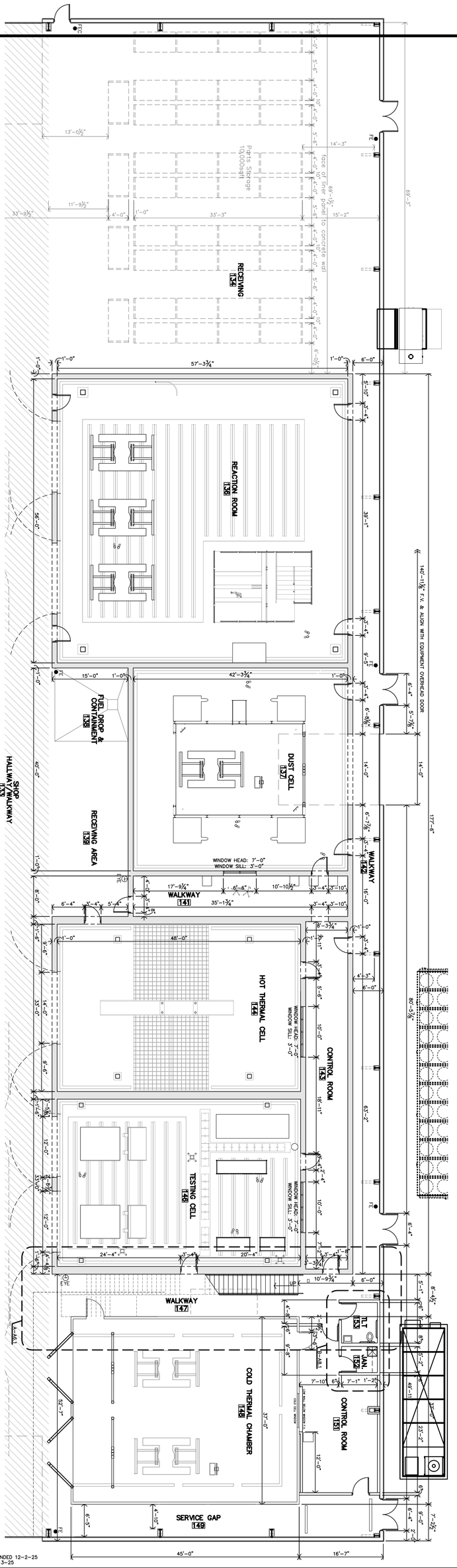
CHARLES A. RENZ
STATE OF KANSAS
LICENSED
5502
5-6-2026
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A2.2

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A TEST CELLS FLOOR PLAN
1/8"=1'-0"

COLD CHAMBER EXPANDED 12-2-25
RACKING SHOWN 11-13-25

A2.3

DATE: 5-6-2026
JOB: 23-3315
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REVISION:

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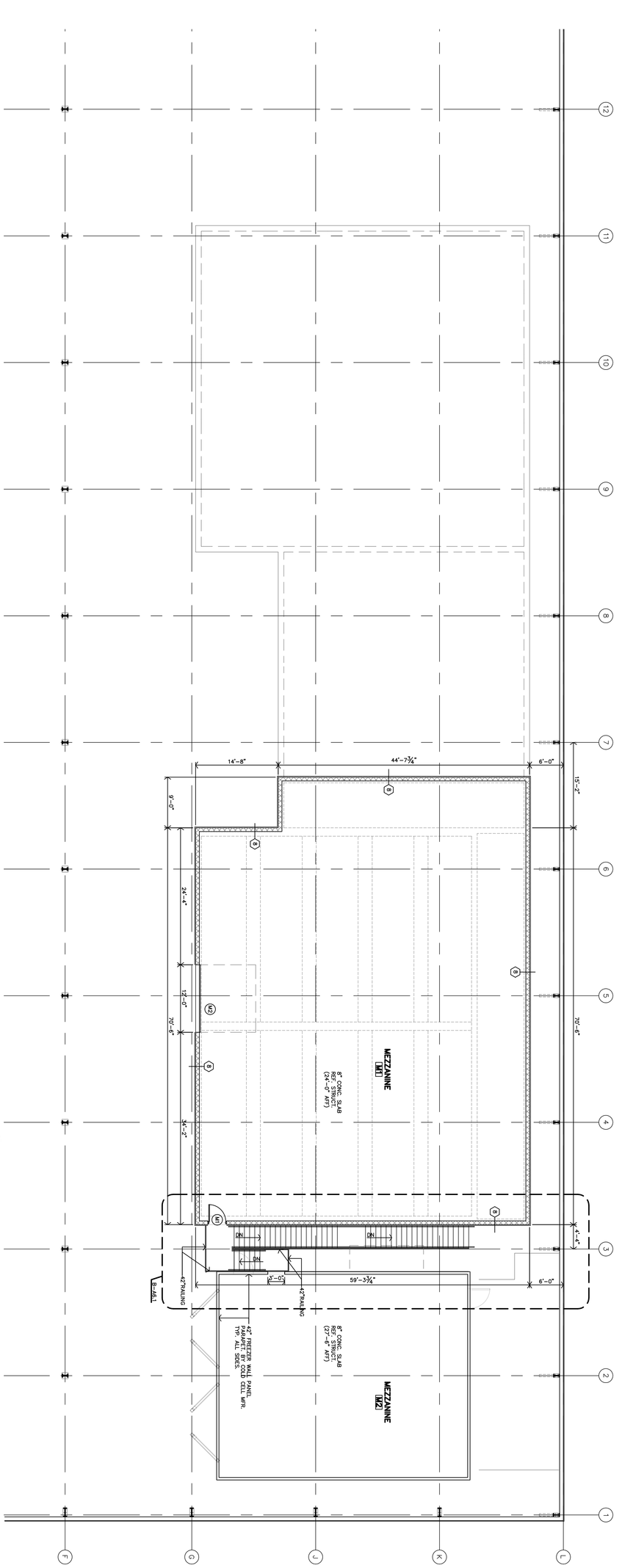
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NEW CE TESTING FACILITY

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B MEZZANINE FLOOR PLAN

1/8"=1'-0"

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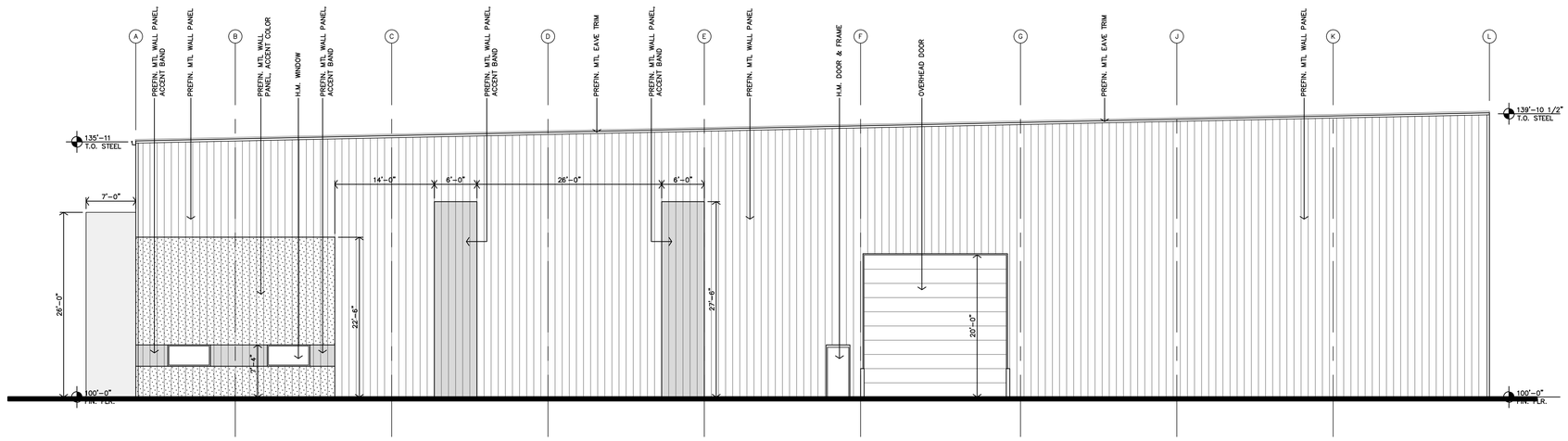
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5502
5-6-2026
REGISTERED ARCHITECT

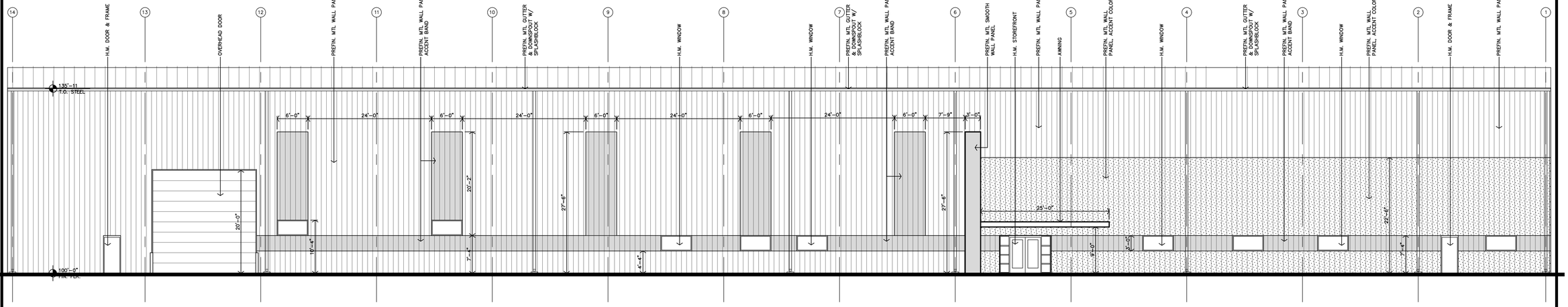
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DATE: 5-6-2026
JOB: 23-3315
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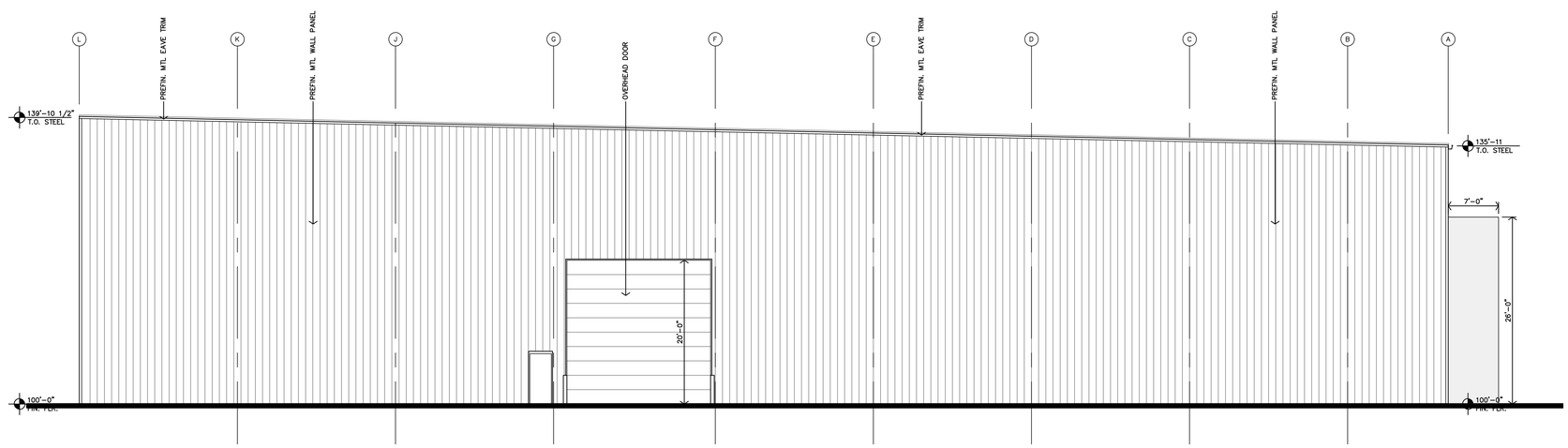
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C SOUTH ELEVATION
1/8"=1'-0"



B WEST ELEVATION
1/8"=1'-0"



A NORTH ELEVATION
1/8"=1'-0"

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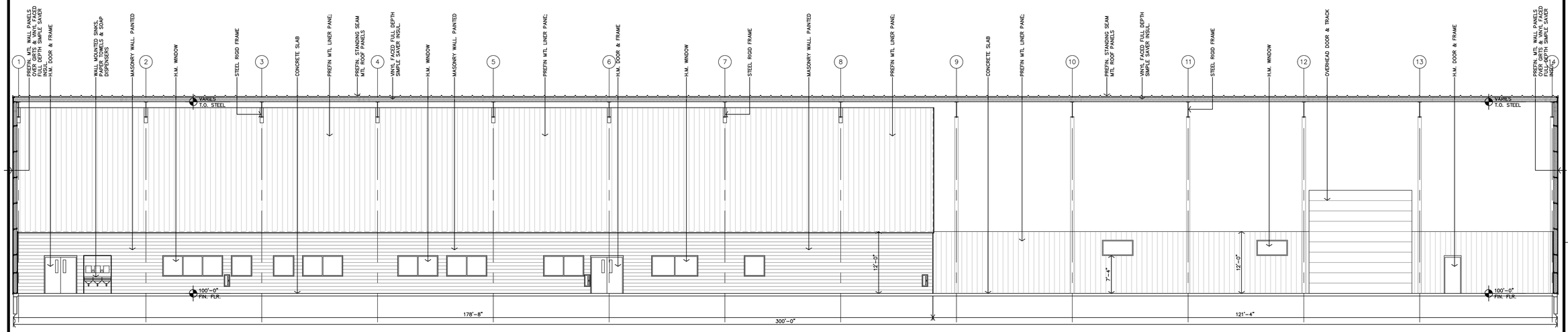
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5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

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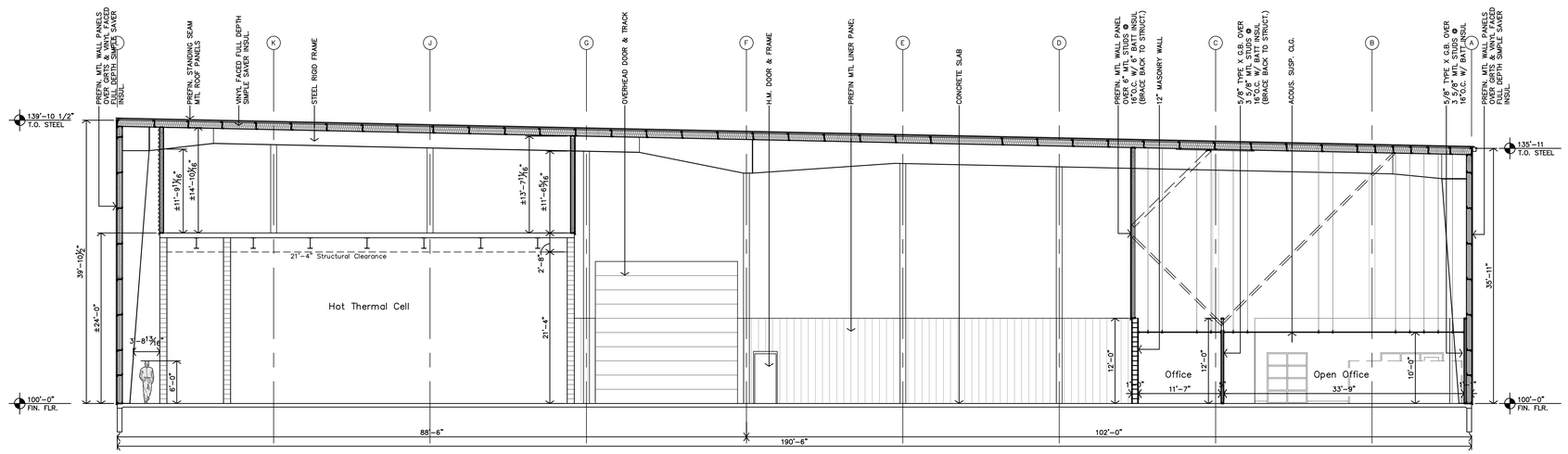
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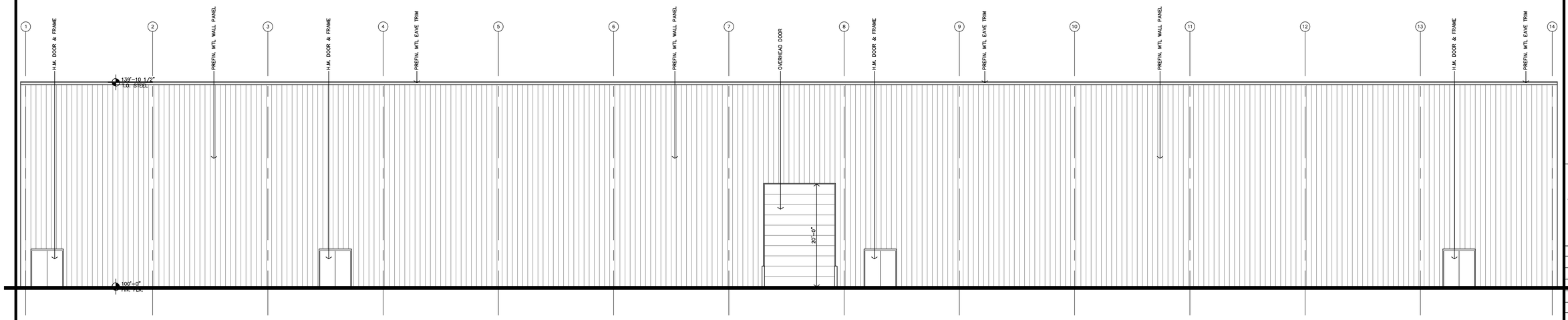
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C BUILDING SECTION
1/8"=1'-0"



B BUILDING SECTION
1/8"=1'-0"



A EAST ELEVATION
1/8"=1'-0"

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NEW CE TESTING FACILITY
SALINA, KANSAS

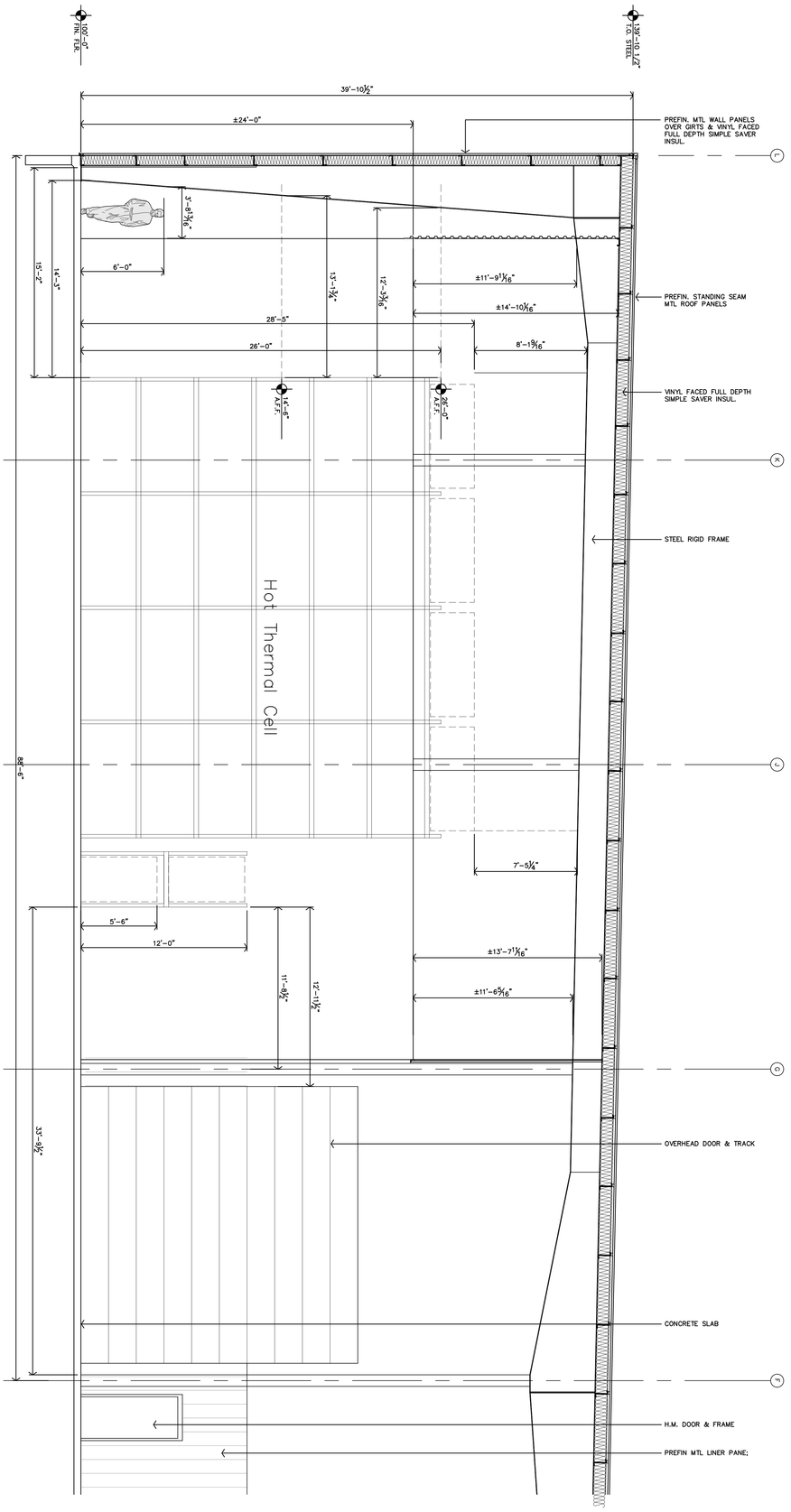
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A3.2

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A BUILDING SECTION
not to scale

A3.3

DATE: 5-6-2026
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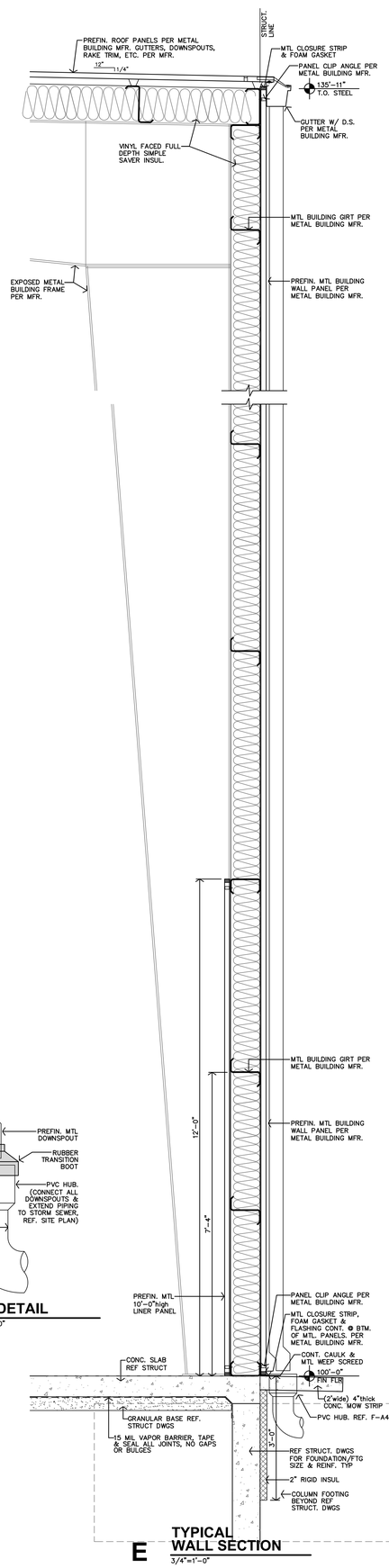
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SALINA, KANSAS

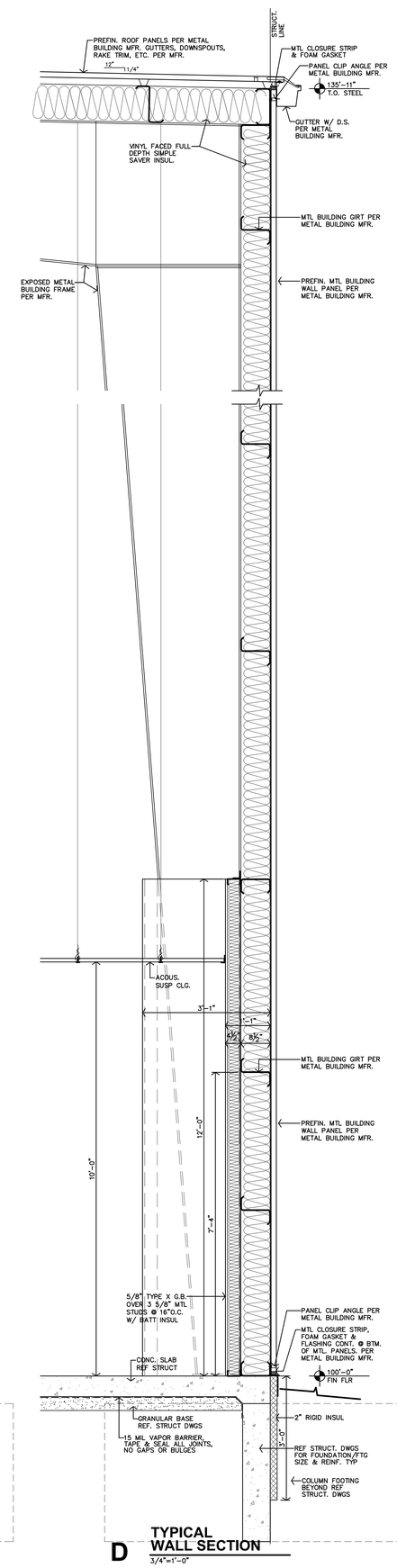
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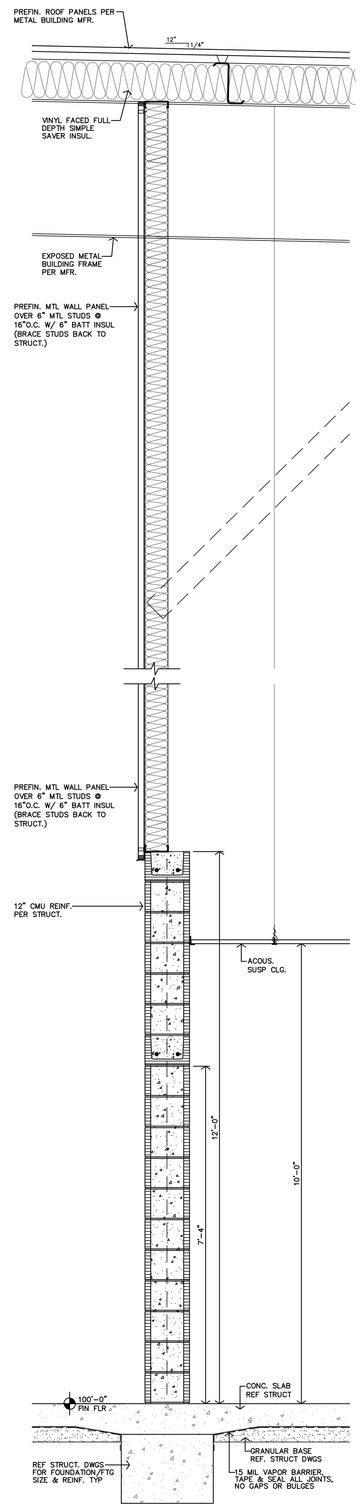


F **HUB DETAIL**
1 1/2"=1'-0"

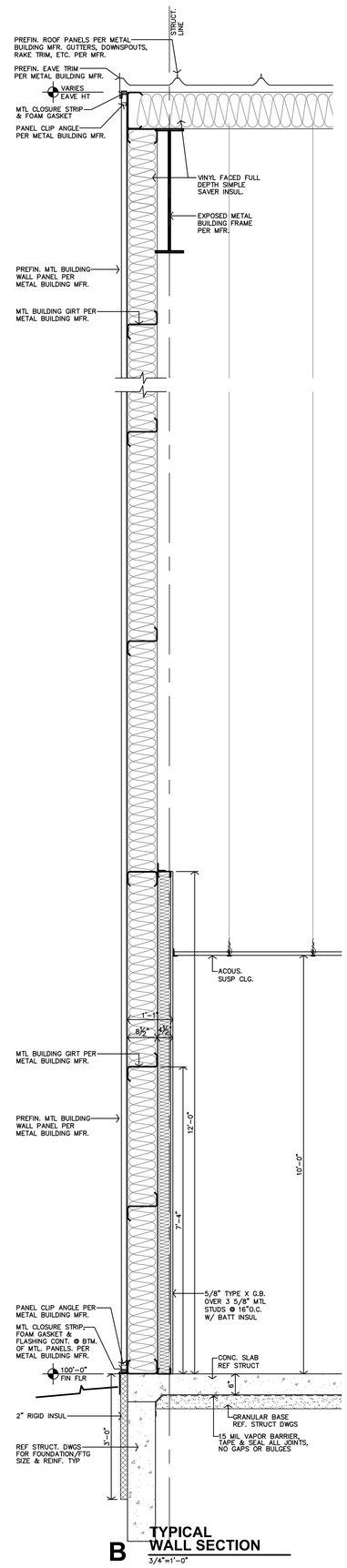
E **TYPICAL WALL SECTION**
3/4"=1'-0"



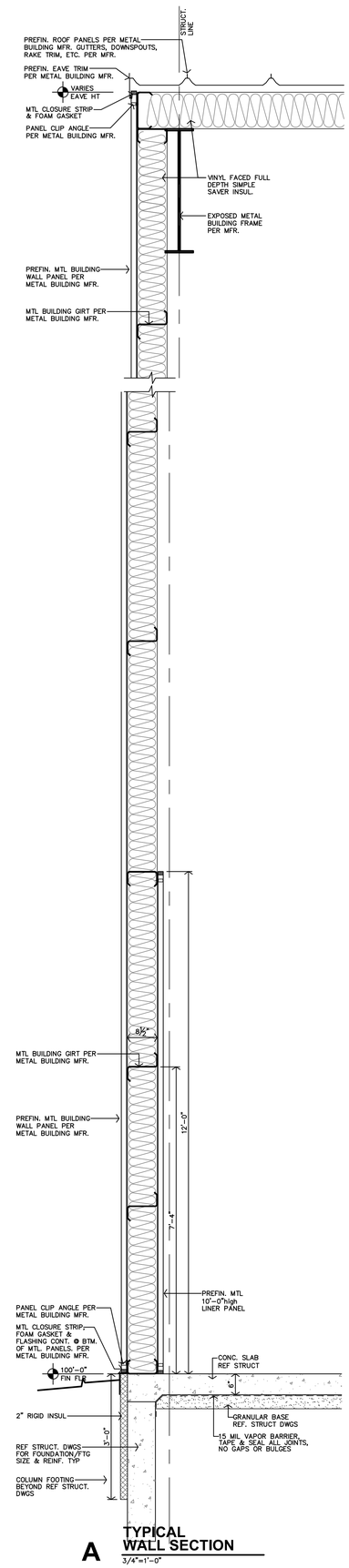
D **TYPICAL WALL SECTION**
3/4"=1'-0"



C **TYPICAL WALL SECTION**
3/4"=1'-0"



B **TYPICAL WALL SECTION**
3/4"=1'-0"



A **TYPICAL WALL SECTION**
3/4"=1'-0"

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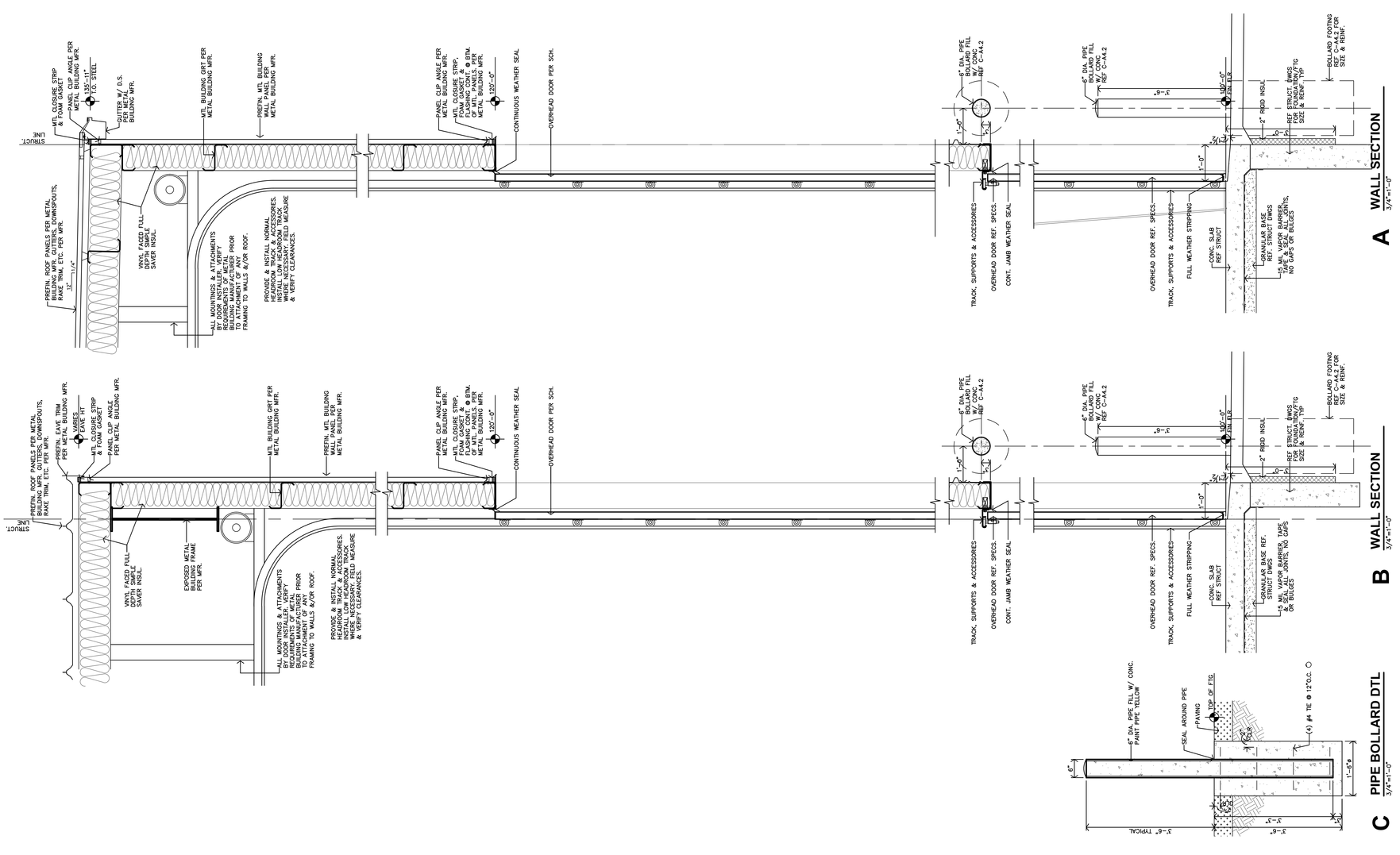
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PRE-ENGINEERED METAL BUILDING (PEMB) NOTES

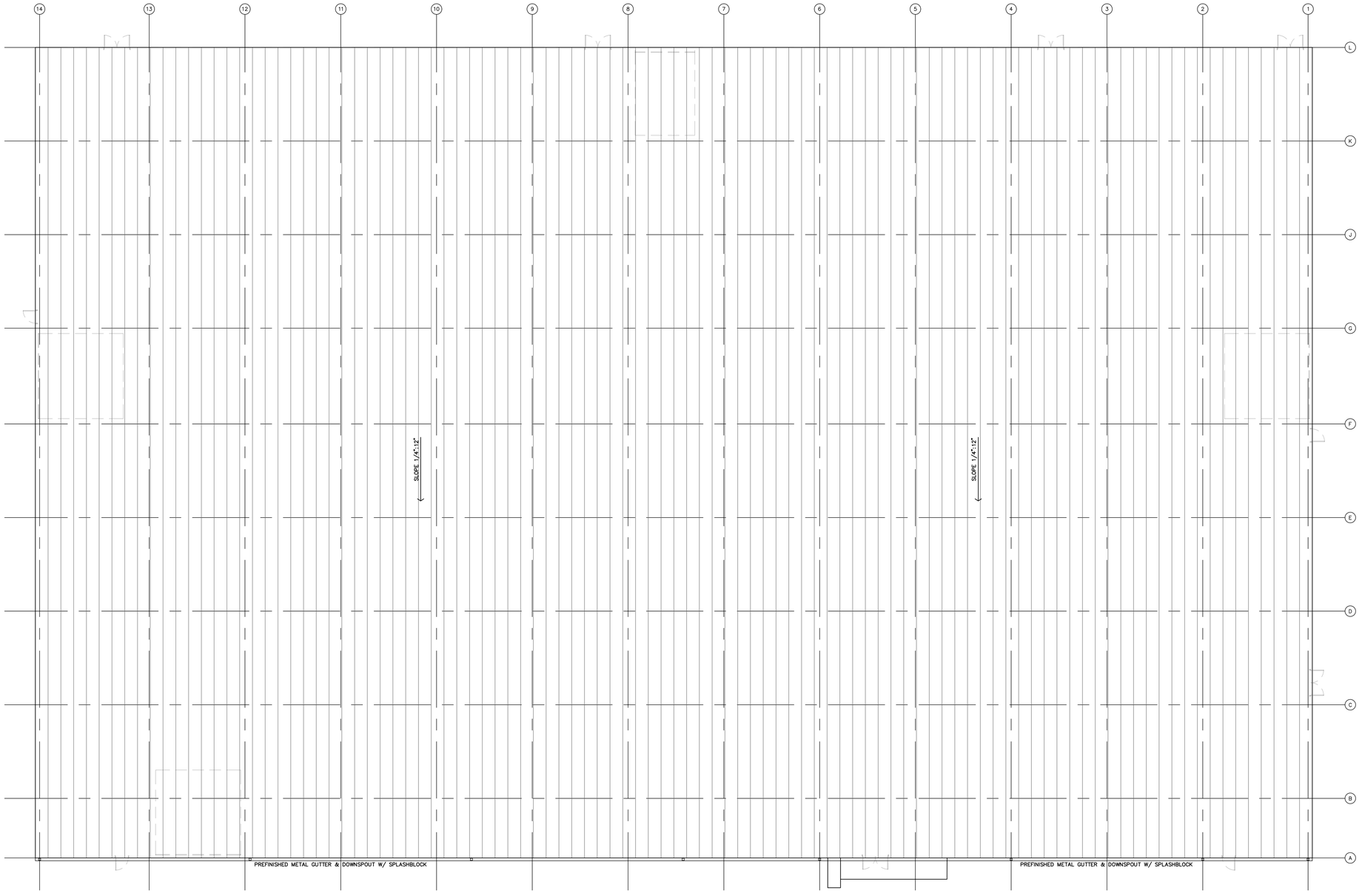
1. DETAILS SHOWN ARE TYPICAL METAL BUILDING AND COMPONENT DETAILS. ACTUAL DETAILS MAY VARY BETWEEN MANUFACTURES. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE PEMB MANUFACTURER TO COORDINATE DISCREPANCIES AND WEATHERTIGHT CONSTRUCTION METHODS.
2. FOR DETAILING PURPOSES, STANDARD RIBBED METAL BUILDING PANELS ARE SHOWN. REFERENCE THE SPECIFICATIONS FOR ACTUAL PANEL TYPES.
3. FASTENER TYPES SHALL BE DETERMINED BY AND SUPPLIED BY THE PEMB MANUFACTURER. EXPOSED FASTENERS SHALL HAVE INTEGRAL NEOPRENE WASHERS.
4. EXPOSED BREAK METAL TRIM AND CLOSURES SHALL BHAVE CRIMPED EDGES, TYPICALLY.
5. COORDINATE WITH THE ENTIRETY OF THE CONSTRUCTION DOCUMENTS FOR SPECIAL DETAILS, COMPONENTS, TRANSITIONS, TERMINATIONS, ETC.
6. THE PEMB SHALL BE CONSTRUCTED OF A COMPLETELY WEATHER TIGHT ASSEMBLY, 20 YEAR NDL WARRANTY.
7. REFERENCE THE ENTIRETY OF THE CONSTRUCTION DOCUMENTS FOR SPECIAL INSULATION CONDITIONS. NOTABLY, THE NORTH "OFFICE" AREAS SHALL RECEIVE FULL DEPTH INSULATION SYSTEM EQUAL TO "SIMPLE SAVER". CONTRACTOR AND BUILDING ERECTOR SHALL COORDINATE WITH THE INSTALLATION REQUIREMENTS FOR FULL DEPTH INSULATION.
8. SNOW AND ICE GUARDS SHALL BE INSTALLED OVER THE BUILDING ENTRANCES. GUARDS SHALL NOT BE SCREWED THROUGH THE PEMB ROOF COMPONENTS.

ROOF PLAN GENERAL NOTES

1. COORDINATE WITH THE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY THRU-ROOF PENETRATIONS. ALL PENETRATIONS SHALL BE SEALED PER THE PEMB MANUFACTURER'S RECOMMENDATIONS. ALL PENETRATIONS AND FLASHING ASSEMBLIES SHALL BE INCLUDED IN THE MANUFACTURER'S 20 YEAR WARRANTY.
2. COORDINATE DOWNSPOUT LOCATIONS WITH BUILDING EXTERIOR ELEVATIONS.

ROOF PLAN SPECIFIC NOTES

(1) SNOW PROTECTION SYSTEM. TWO (2) ALUMINUM RODS ATTACHED TO STANDING SEAM ROOF BY S-5! CLIPS AT EACH ROOF PANEL SEAM. SYSTEM EQUAL TO S-5! SNO-FENCE WITH SNOW CLIP III AT EACH ROOF PANEL.



A1.1 **A** **ROOF PLAN**
3/32"=1'-0"

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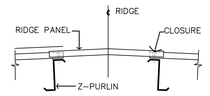
CHARLES A. RENZ
2021 CERTIFICATE
5502
5-6-2026
KANSAS
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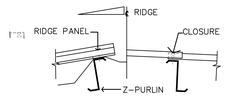
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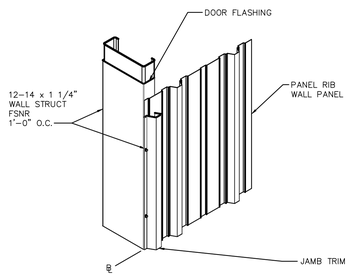
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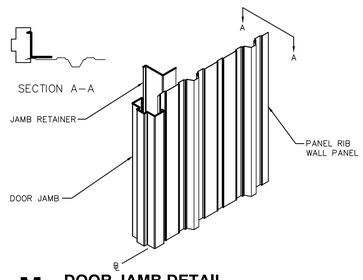
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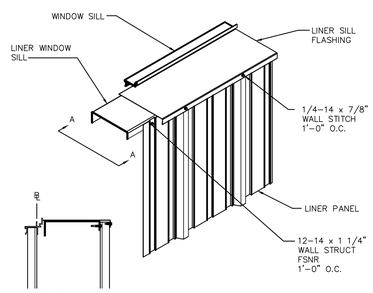




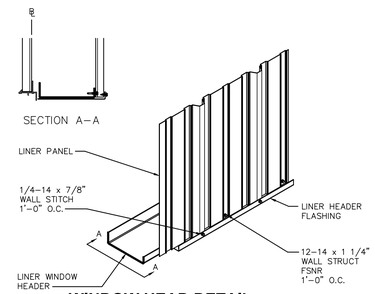
P **OPENING or O.H. DR JAMB**
NO SCALE



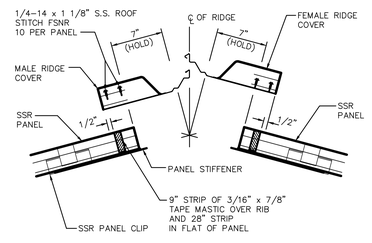
M **DOOR JAMB DETAIL**
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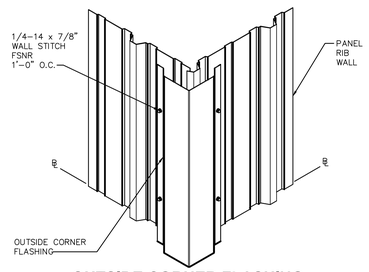
L **WINODW SILL DETAIL**
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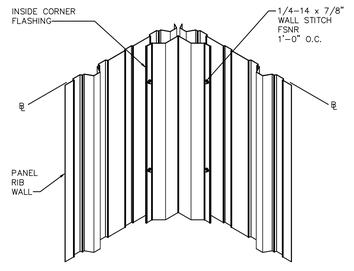
H **WINDOW HEAD DETAIL**
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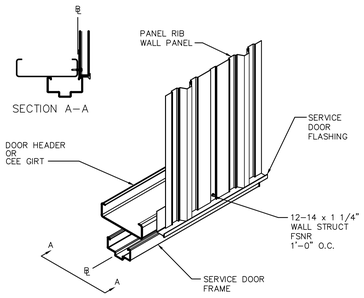
G **RIDGE DETAIL**
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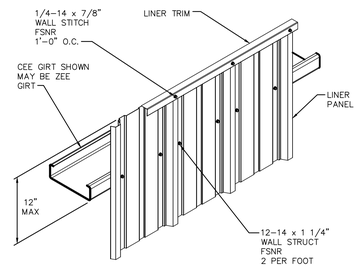
D **OUTSIDE CORNER FLASHING**
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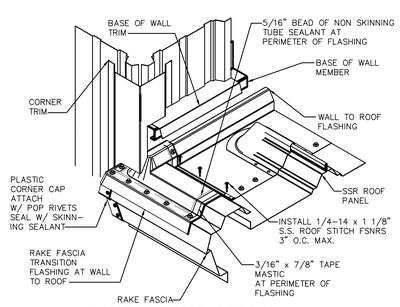
C **INSIDE CORNER FLASHING**
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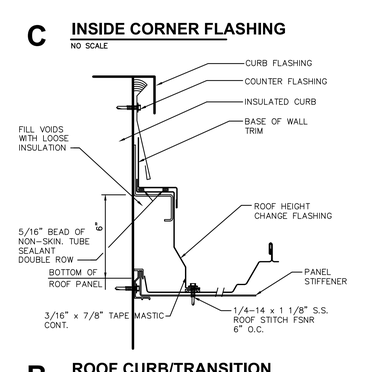
O **DOOR HEAD DETAIL**
NO SCALE



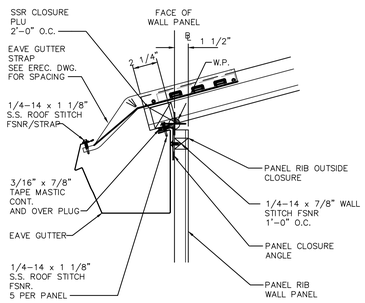
K **LINER PANEL TERMINATION**
NO SCALE



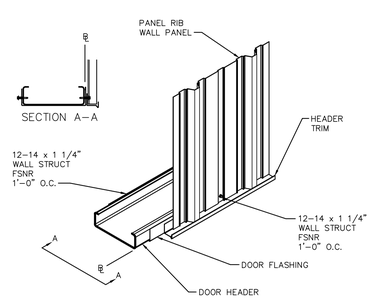
F **RAKE TO WALL DETAIL**
NO SCALE



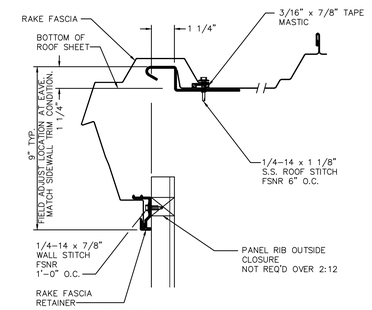
B **ROOF CURB/TRANSITION**
NO SCALE



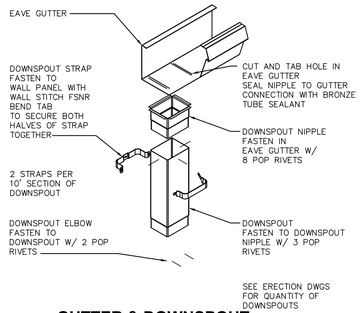
N **GUTTER DETAIL**
NO SCALE



J **OPENING or O.H. DR HEAD**
NO SCALE



E **RAKE DETAIL**
NO SCALE



A **GUTTER & DOWNSPOUT**
NO SCALE

PRE-ENGINEERED METAL BUILDING COMPONENTS, CONDITIONS VARY
1. TYPICAL MANUFACTURER'S DETAILS ACTUAL CONDITIONS MAY VARY, REFER AND COORDINATE W/ BUILDING DETAILS PROVIDING THE MANUFACTURER'S MOST STRINGENT REQUIREMENTS, RECOMMENDATIONS, NECESSARY TO ACHIEVE COMPLETE WATERTIGHT WARRANTY.

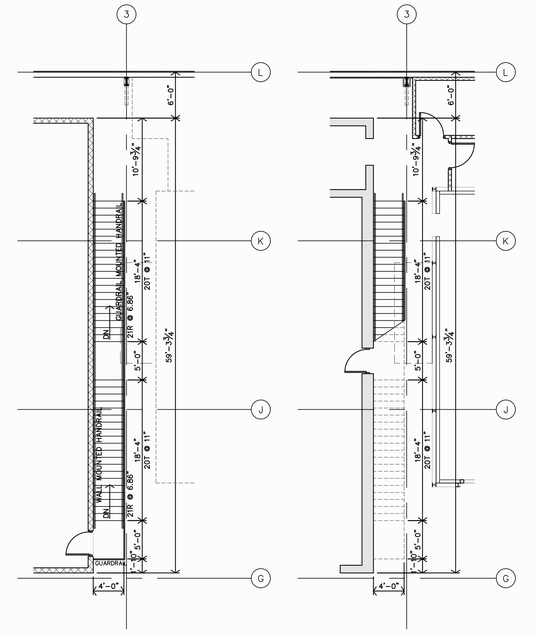
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Kansas City, MO 64108
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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

CHARLES A. RENZ
ARCHITECT LICENSED
5502
5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

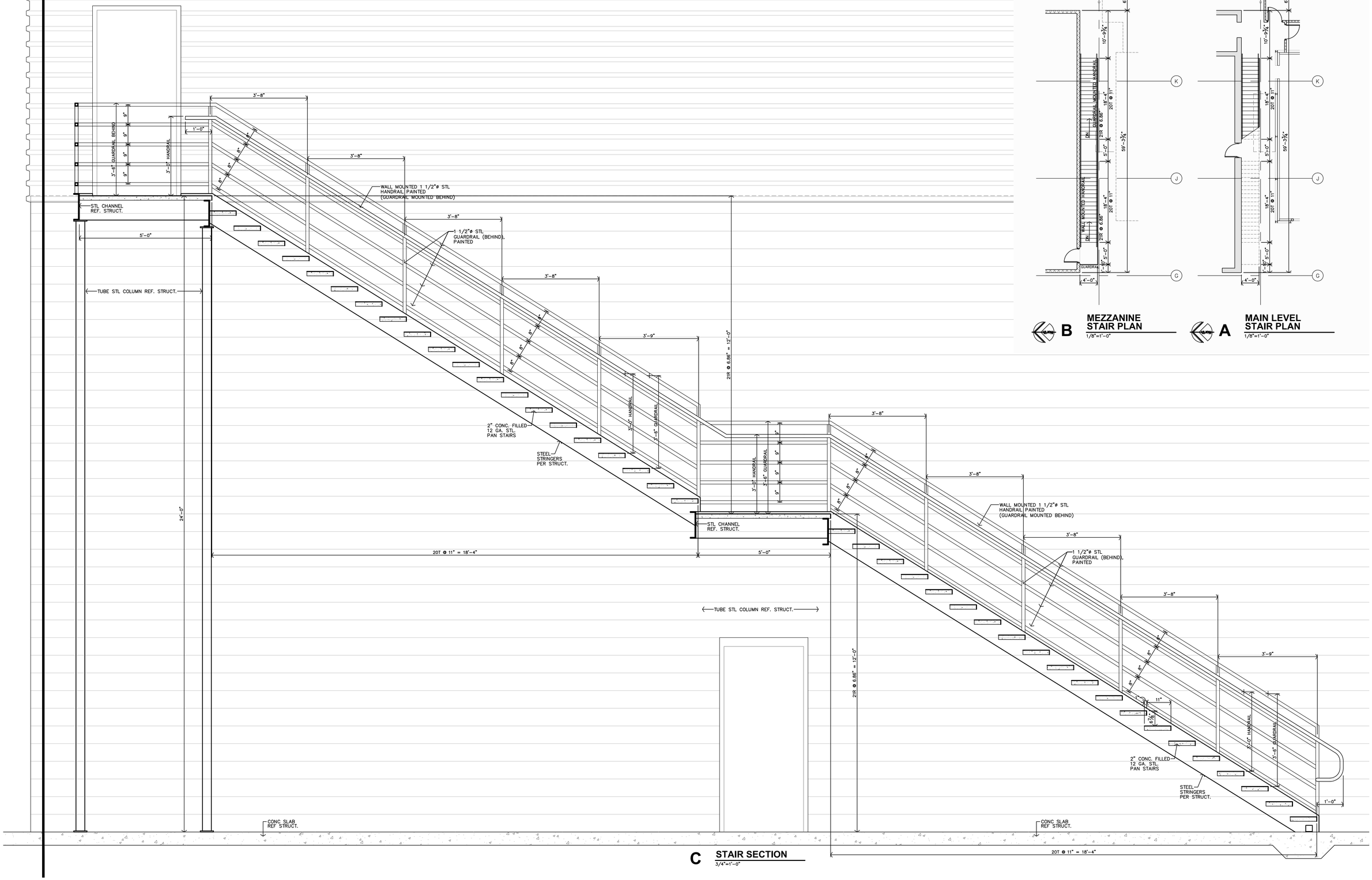
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DATE:	5-6-2026
JOB:	23-3315
SHEET NO.:	A5.2

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B **MEZZANINE STAIR PLAN**
1/8"=1'-0"

A **MAIN LEVEL STAIR PLAN**
1/8"=1'-0"



C **STAIR SECTION**
3/4"=1'-0"

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5-6-2026
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REVISION:

DATE: 5-6-2026
JOB: 23-3315
SHEET NO.:

A6.1

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REFLECTED CEILING PLAN NOTES

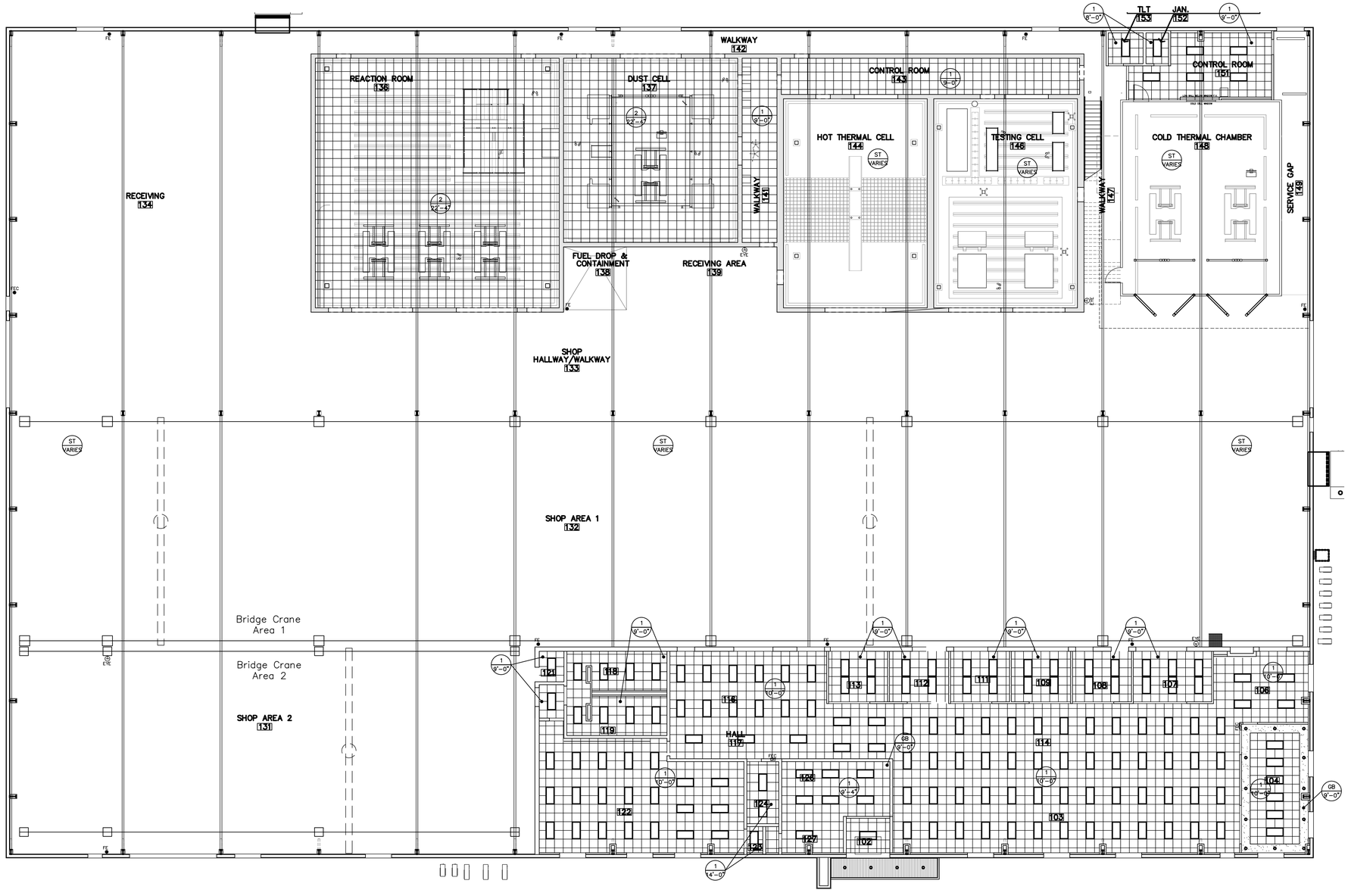
GENERAL

1. CONTRACTOR SHALL COORDINATE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL FIXTURE LOCATIONS. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICT OF DISCREPANCY.
2. MECHANICAL/ELCTRICAL FIXTURES AT RATED CEILINGS SHALL BE HUNG IN CONFORMANCE TO U.L. SYSTEM REQUIREMENTS.
3. CEILING MOUNTED MECHANICAL EQUIPMENT AND SUSPENDED MECHANICAL EQUIPMENT MUST BE SUSPENDED DIRECTLY FROM THE STRUCTURE.
4. AREAS ABOVE THE FINISHED CEILING ARE PART OF A RETURN AIR PLENUM ALL MATERIALS INCLUDING THE INSULATION SHALL HAVE FLAME SPREAD LESS THAN 25 AND SMOKE DEVELOPED LESS THAN 50
5. SPECIAL CEILING GRID FRAMING IS REQUIRED AT SOME CEILING MOUNTED MECHANICAL EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH MECHANICAL UNITS AND PROVIDED ALL SUSPENSION, TRIM, CLIPS, ETC. AS REQUIRED FOR A NEAT, FINISHED, AND SECURE CEILING SYSTEM.
6. WHERE SUSPENSION DEVICES, WIRES, RODS, ETC. PENETRATE CEILING GRID AND/OR TILE OR G.B. PENETRATIONS SHALL BE NEAT AND CLEANLY CUT. PENETRATION OPENING SHALL BE AS SMALL AS POSSIBLE. SEAL AT G.B.
7. ALL SOUND WALLS SHALL EXTEND TO STRUCTURE OR DECK. TAPE SEAL AT TOP.
8. SEAL VOIDS AT TOPS OF WALLS AND PENETRATIONS WITH U.L. LISTED FIRE BATT INSULATION, PILLOWS, AND/OR FIRE SEALANT AS REQUIRED BY CONDITION AT RATED WALLS.

CEILING TYPES
REFER SPECIFICATIONS

1	2x2 FISSURED
2	2x2 VINYL FACE G.B.
GB	GYP BD (PAINTED)
ST	EXPOSED STRUCTURE

1 / 9'-8" — CLG. TYPE / CLG. HEIGHT A.F.F.



A **REFLECTED CEILING PLAN**
3/32"=1'-0"

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

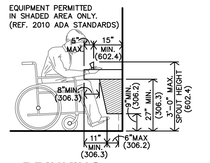
CHARLES A. REEF — 5502 — 5-6-2026 — KANSAS — PROFESSIONAL ARCHITECT

REVISION:

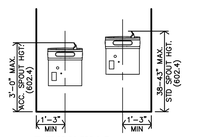
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JOB: 23-3315
SHEET NO.:

A7.1

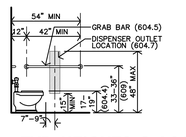
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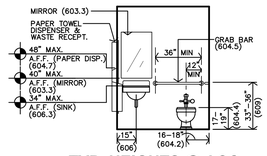
N **DRINKING FOUNTAIN DETAIL**
3/8"=1'-0" FOR ACC. HEIGHTS & LOCATION ONLY



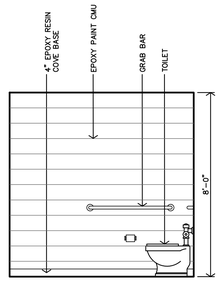
M **DRINKING FOUNTAIN ELEVATION**
3/8"=1'-0" FOR ACC. HEIGHTS & LOCATION ONLY



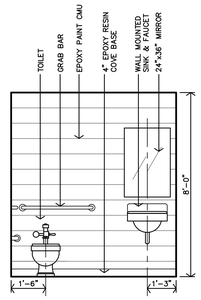
L **TYP. HEIGHTS @ ACC. TOILET SIDE WALL**
1/4"=1'-0" FOR ACC. HEIGHTS & LOCATION ONLY



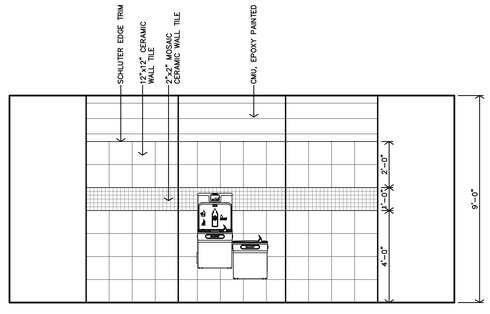
K **TYP. HEIGHTS @ ACC. TOILET BACK WALL**
1/4"=1'-0" FOR ACC. HEIGHTS & LOCATION ONLY



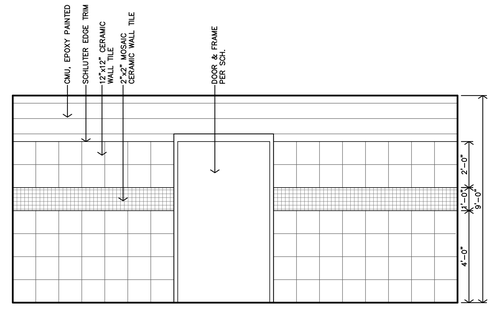
J **TOILET #153 INTERIOR ELEVATION**
3/8"=1'-0"



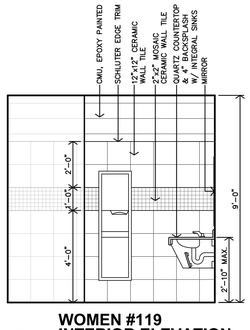
H **TOILET #153 INTERIOR ELEVATION**
3/8"=1'-0"



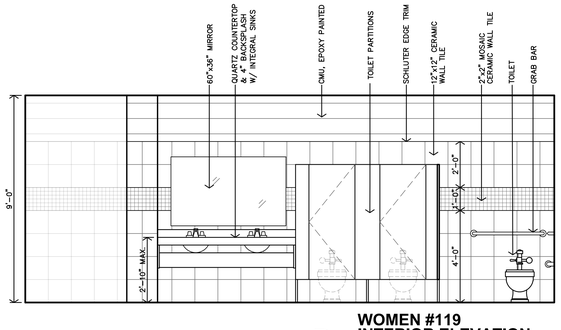
G **INTERIOR ELEVATION**
3/8"=1'-0"



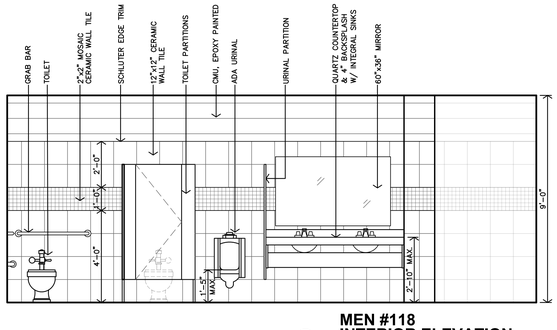
F **INTERIOR ELEVATION**
3/8"=1'-0"



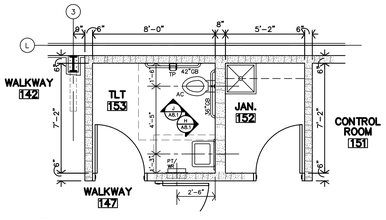
E **WOMEN #119 INTERIOR ELEVATION**
3/8"=1'-0"



D **WOMEN #119 INTERIOR ELEVATION**
3/8"=1'-0"

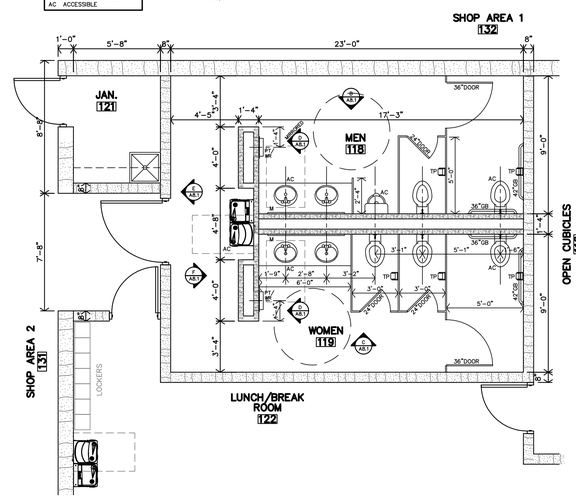


C **MEN #118 INTERIOR ELEVATION**
3/8"=1'-0"



B **ENLARGED RESTROOM PLAN**
1/4"=1'-0"

LEGEND	
M	MIRROR
TP	TOILET PAPER DISPENSER
GB	GRAB BAR
PT	PAPER TOWEL DISPENSER
WR	WASTE RECEPTACLE
AC	ACCESSIBLE



A **ENLARGED RESTROOM PLAN**
1/4"=1'-0"

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NEW CE TESTING FACILITY

SALINA, KANSAS

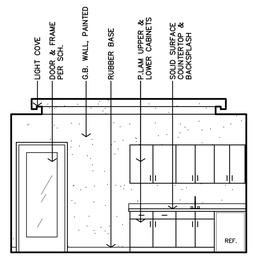
CHARLES A. REEL — 5502 — 5-6-2026 — KANSAS — PROFESSIONAL ARCHITECT

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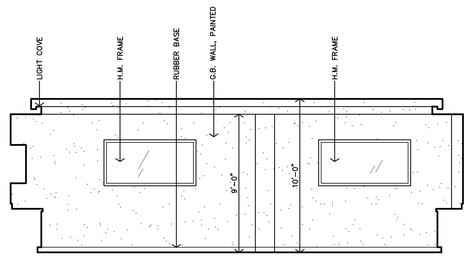
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JOB: 23-3315
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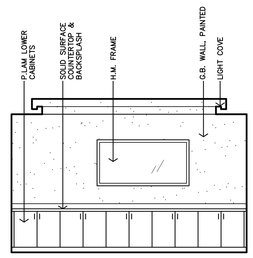
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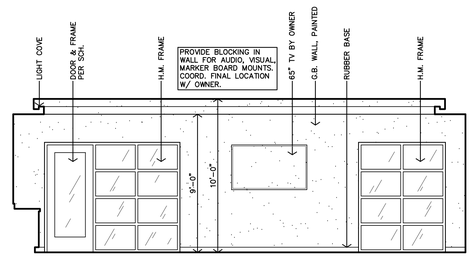
M CONFERENCE ROOM #104 INTERIOR ELEVATION
1/4"=1'-0"



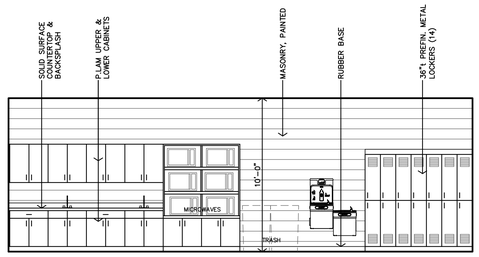
L CONFERENCE ROOM #104 INTERIOR ELEVATION
1/4"=1'-0"



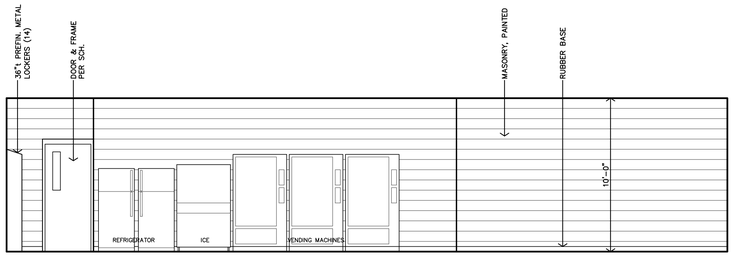
K CONFERENCE ROOM #104 INTERIOR ELEVATION
1/4"=1'-0"



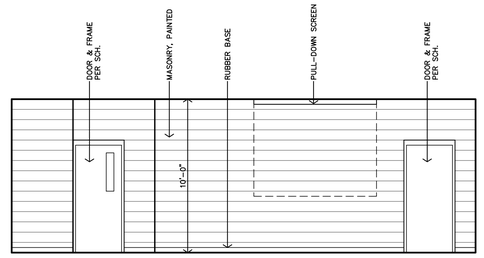
J CONFERENCE ROOM #104 INTERIOR ELEVATION
1/4"=1'-0"



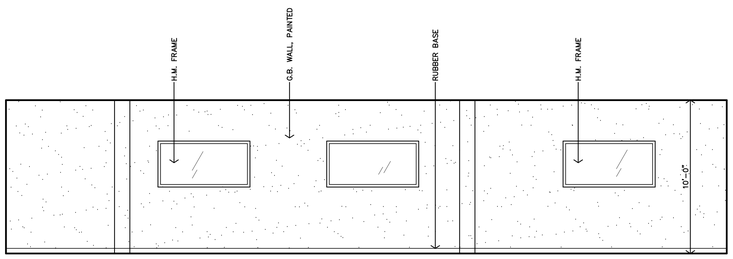
H BREAK ROOM #122 INTERIOR ELEVATION
1/4"=1'-0"



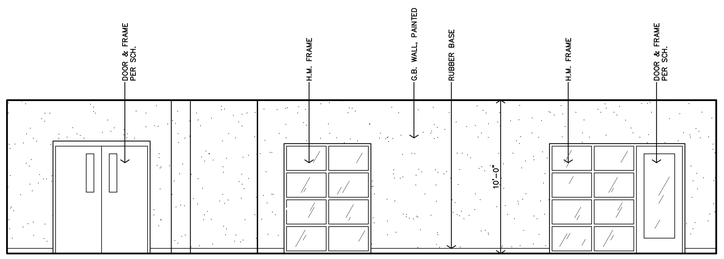
G BREAK ROOM #122 INTERIOR ELEVATION
1/4"=1'-0"



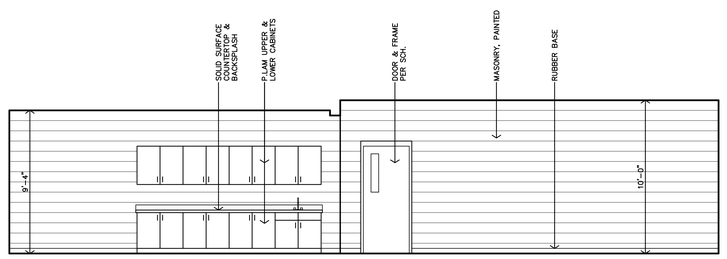
F BREAK ROOM #122 INTERIOR ELEVATION
1/4"=1'-0"



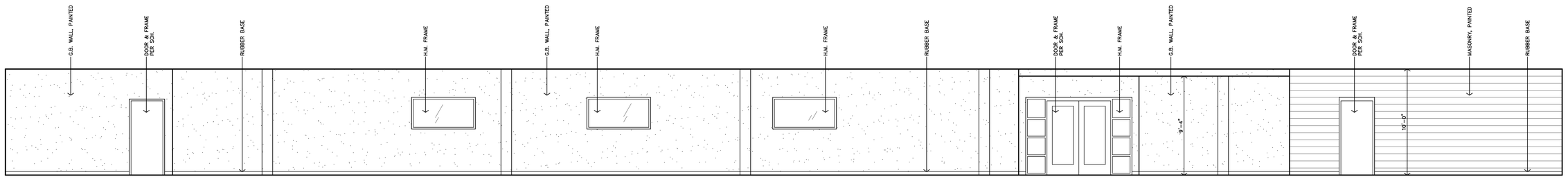
E BREAK ROOM #122 INTERIOR ELEVATION
1/4"=1'-0"



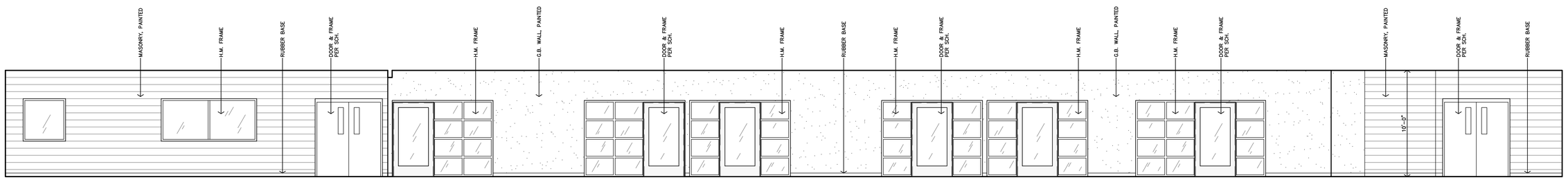
D HALL 114 INTERIOR ELEVATION
1/4"=1'-0"



C HALL 114 INTERIOR ELEVATION
1/4"=1'-0"



B HALL 114 INTERIOR ELEVATION
1/4"=1'-0"



A HALL 114 INTERIOR ELEVATION
1/4"=1'-0"

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NEW CE TESTING FACILITY

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CHARLES A. RENZ
5502
5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

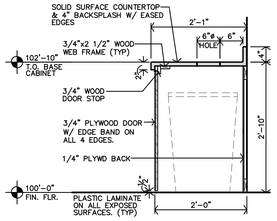
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SHEET NO.:

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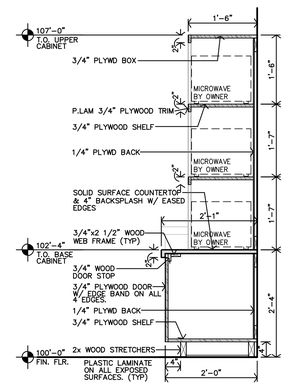
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CASEWORK NOTES

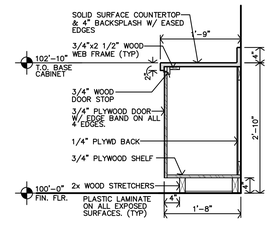
1. SOLID SURFACE COUNTERTOPS & BACKSPLASHES W/ EASED EDGES, U.N.O.
2. 3MM PVC EDGE BAND AT ALL EXPOSED EDGES OF DOORS & DRAWERS.
3. ENTIRE CABINET DOOR (INTERIOR & EXTERIOR) TO BE PLASTIC LAMINATE.
4. COUNTERTOPS & BACKSPLASHES TO BE P.LAM W/ EASED EDGES.
5. PROVIDE ALL NECESSARY FILLERS OF MATCHING MATERIALS. INSTALL CONTINUOUS FINISH FLOORING BASE @ CASEWORK TOEKICK.
6. ALL ADJUSTABLE SHELVING SHALL BE 3/4" THICK MATERIAL.
7. EXPOSED ADJUSTABLE SHELVING SHALL HAVE FULL THICKNESS PLASTIC LAMINATE AT ALL FOUR EDGES. TAPE IS NOT ACCEPTABLE.
8. ALL UPPER CABINETS SHALL HAVE (2) ADJUSTABLE SHELVES PER EACH CABINET, U.N.O.
9. ALL BASE CABINETS SHALL HAVE (1) ADJUSTABLE SHELF PER EACH CABINET, U.N.O.
10. REFERENCE ELEVATIONS FOR NUMBER OF ADJUSTABLE SHELVES AT LOWER CABINET UNITS.
11. MULTIPLE LAMINATES (PREMIUM FINISHES) WILL BE SELECTED BY ARCHITECT.
12. CABINETS TO BE FLUSH OVERLAY, U.N.O.
13. PROVIDE BLOCKING BEHIND WALL FOR SUPPORT OF CABINETRY.
14. PROVIDE & INSTALL ANGLE SUPPORT BRACKETS WHERE COUNTERTOP SPAN EXCEEDS 36"inch WIDTH.



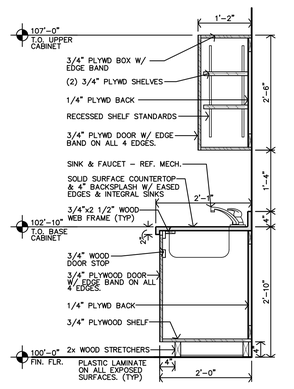
H TRASH CASEWORK SECTION
3/4"=1'-0"



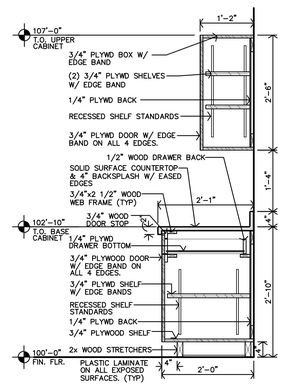
J BREAK ROOM #122 CASEWORK SECTION
3/4"=1'-0"



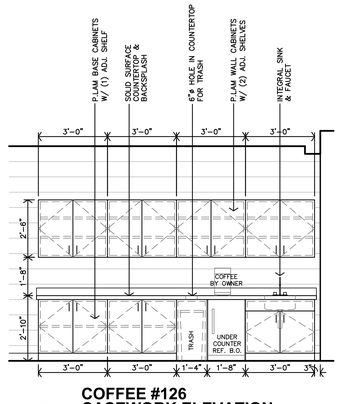
G CONFERENCE #104 CASEWORK SECTION
3/4"=1'-0"



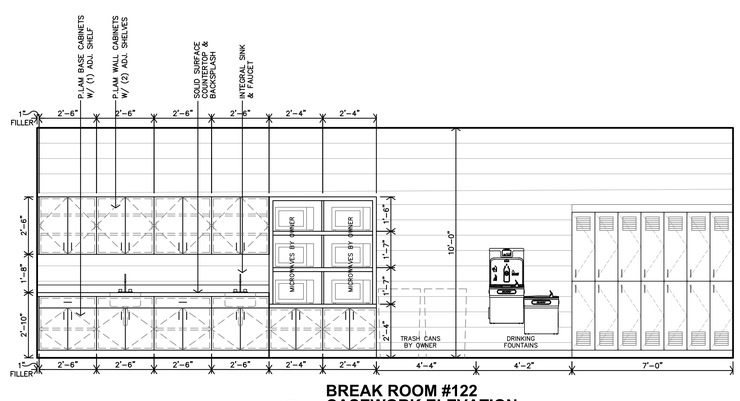
F TYPICAL CASEWORK SECTION
3/4"=1'-0"



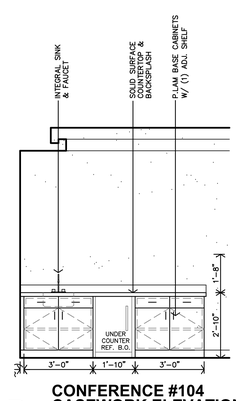
E TYPICAL CASEWORK SECTION
3/4"=1'-0"



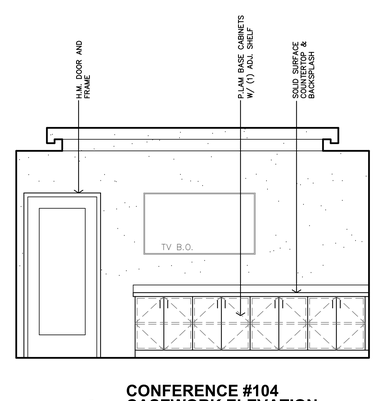
D COFFEE #126 CASEWORK ELEVATION
3/8"=1'-0"



C BREAK ROOM #122 CASEWORK ELEVATION
3/8"=1'-0"



B CONFERENCE #104 CASEWORK ELEVATION
3/8"=1'-0"



A CONFERENCE #104 CASEWORK ELEVATION
3/8"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

CHARLES A. RENZ
REGISTERED
5502
5-6-2026
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE:	5-6-2026
JOB:	23-3315
SHEET NO.:	

A9.2

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WINDOW SCHEDULE

MARK	WIDTH	HEIGHT	STYLE	INTERIOR	EXTERIOR	DETAILS
A	6'-0"	3'-0"	H.M. WINDOW		●	N/O–A10.1
B	5'-8"	7'-2"	ALUMINUM WINDOW	●		H/J–A10.1
C	11'-8"	4'-0"	H.M. WINDOW	●		K/L–A10.1
D	7'-10"	4'-0"	H.M. WINDOW	●		K/L–A10.1
E	9'-0"	4'-0"	H.M. WINDOW	●		K/L–A10.1
F	4'-0"	4'-0"	H.M. WINDOW	●		K/L–A10.1

GENERAL NOTES:

1. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CONT. CAULK FOR A WEATHER & WATERTIGHT CONDITIONS @ ALL EXTERIOR WINDOW UNITS.
2. CONTRACTOR MUST INSTALL 1/4" INSUL. OR THERMAL BREAK. CONTINUOUS AROUND WINDOW.
3. CONTRACTOR TO PROVIDE & INSTALL MANUFACTURERS COORDINATING PANNING SYSTEM FOR ALUM. ST.
4. PROVIDE & INSTALL SAFETY GLASS AT HAZARDOUS LOCATIONS, PER 2012 IBC CODE 2406. IN DOORS, ADJACENT & WITHIN 24" TO DOORS, LESS THAN 18" ABV FLOOR, IN GUARDS & HANDRAILS, ADJACENT TO STAIRS AND RAMPS, STAIRS AND RAMPS.
5. ALL OPERABLE WINDOWS SHALL HAVE INSECT SCREENS.

GLAZING SCHEDULE

MARK	INTERIOR	EXTERIOR	1/4"	3/4" INSULATED	TINTED	TEMPERED
A1		●		●	●	●
B1	●		●			●

DOOR SCHEDULE

MARK	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MATERIAL ALUMINUM	DOOR MATERIAL HOLLOW METAL	DOOR TYPE	DOOR FINISH PREFINISHED	DOOR FINISH PAINT	FRAME MATERIAL ALUMINUM	FRAME MATERIAL HOLLOW METAL	FRAME TYPE	FRAME FINISH PREFINISHED	FRAME FINISH PAINT	DETAILS	REMARKS
101	PR3'–0"	7'–0"	1 3/4"	●		A	●		●		2	●		P/J–A10.1	1.
102	PR3'–0"	7'–0"	1 3/4"	●		A	●		●		2	●		G/H/J–A10.1	
103	3'–0"	7'–0"	1 3/4"		●	C		●		●	1		●	G/H/J–A10.1	1.
104	3'–0"	7'–0"	1 3/4"	●		A	●		●		3	●		G/H/J–A10.1	
106	3'–0"	7'–0"	1 3/4"	●		A	●		●		1	●		G/H/J–A10.1	
107	PR3'–0"	7'–0"	1 3/4"		●	C		●		●	1		●		1.
108	PR3'–0"	7'–0"	1 3/4"		●	B		●		●	1		●	D/E–A10.1 SIM	
109	4'–0"	7'–0"	1 3/4"	●		A	●		●		4	●		G/H/J–A10.1	
111	4'–0"	7'–0"	1 3/4"	●		A	●		●		5	●		G/H/J–A10.1	
112	4'–0"	7'–0"	1 3/4"	●		A	●		●		5	●		G/H/J–A10.1	
113	4'–0"	7'–0"	1 3/4"	●		A	●		●		5	●		G/H/J–A10.1	
114	4'–0"	7'–0"	1 3/4"	●		A	●		●		6	●		G/H/J–A10.1	
116	4'–0"	7'–0"	1 3/4"	●		A	●		●		6	●		G/H/J–A10.1	
117	PR3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	D/E–A10.1 SIM	
118	3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	D/E–A10.1 SIM	
119	4'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	D/E–A10.1	14ga DOOR
121	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	D/E–A10.1	14ga DOOR
122	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	D/E–A10.1	
123	3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	D/E–A10.1	
124	4'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	D/E–A10.1	
125	3'–0"	7'–0"	1 3/4"	●		C		●		●			●	D/E–A10.1	
126	20'–0"	20'–0"		●			D	●							
127	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	M–A10.1 SIM	1.
128	20'–0"	20'–0"		●			D	●							
129	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	M–A10.1 SIM	1.
131	PR3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	M–A10.1 SIM	1.
132	PR3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	M–A10.1 SIM	1.
133	14'–0"	20'–0"		●			E	●							
134	PR3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	M–A10.1 SIM	1.
136	3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	F–A10.1	
137	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	F–A10.1	
138	3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	F–A10.1	
139	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	F–A10.1	
141	PR3'–0"	7'–0"	1 3/4"	●		C		●		●	1		●	M–A10.1 SIM	1.
142	20'–0"	20'–0"		●			D	●							
143	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	M–A10.1 SIM	1.
MEZZANINE															
M1	3'–0"	7'–0"	1 3/4"	●		B		●		●	1		●	M–A10.1 SIM	1.
M2	12'–0"	10'–0"		●			F	●							

GENERAL NOTES:

A. ALL EXPOSED LINTELS TO BE PAINTED AT INTERIOR AND EXTERIOR.
B. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CONT. CAULK FOR A WEATHER & WATERTIGHT CONDITIONS @ ALL EXTERIOR DOORS & DOOR FRAMES/JAMBS.
C. INSTALL ALUMINUM THRESHOLD/EXPANSION JOINT COVER BETWEEN CONCRETE AND WOOD FLOORS.

SPECIFIC NOTES:

1. INTEGRATE W/ ACCESS CONTROL.

INTERIOR FINISH SCHEDULE

NO.	DESCRIPTION	FLOOR: VINYL PLANK TLFG TILE	FLOOR: CERAMIC TILE	FLOOR: CARPET TILE	FLOOR: WALK–OFF CARPET	FLOOR: SEALED CONCRETE	BASE: SELF COVE RUBBER BASE	BASE: CERAMIC TILE	N.WALL: 5/8" FIRE RATED G.B.	N.WALL: CERAMIC TILE	N.WALL: MASONRY	N.WALL: LINER PANEL	E.WALL: 5/8" FIRE RATED G.B.	E.WALL: CERAMIC TILE	E.WALL: MASONRY	E.WALL: LINER PANEL	S.WALL: 5/8" FIRE RATED G.B.	S.WALL: CERAMIC TILE	S.WALL: MASONRY	S.WALL: LINER PANEL	W.WALL: 5/8" FIRE RATED G.B.	W.WALL: CERAMIC TILE	W.WALL: MASONRY	W.WALL: LINER PANEL	CEILING: 5/8" FIRE RATED G.B.	CEILING: SUSP. C.I.G.	CEILING: STRUCTURE	REMARKS
101	*NOT USED*																											
102	VESTIBULE		F7		W			B1			P			P				P				P					●		
103	OPEN CUBICLES			F2							P			P				P				P					●		1.
104	CONFERENCE			F✱							P			P				P				P					●		3.
106	HALL			F✱							P			P		P		P				P					●		3.
107	OFFICE			F2							P					P		P				P					●		
108	OFFICE			F2							P					P		P				P					●		
109	OFFICE			F2							P					P		P				P					●		
111	OFFICE			F2							P					P		P				P					●		
112	OFFICE			F2							P					P		P				P					●		
113	OFFICE			F2							P					P		P				P					●		
114	HALL			F✱																							●		3.
116	OPEN CUBICLES			F2						P						P											●		
117	HALL			F✱						P											P						●		3.
118	MEN			F6			B2		W1/2	P			W1/2	P			W1/2	P			W1/2	P					●		
119	WOMEN			F6			B2		W1/2	P			W1/2	P			W1/2	P			W1/2	P					●		
121	JANITOR				F1						P							P					P				●		2.
122	LUNCH/BREAK ROOM			F✱							P							P					P				●		3.
123	I.T.				F1						P							P			P						●		
124	MECHANICAL				F1						P							P						P			●		
125	FIRE SPRINKLER EQ				F1						P							P			P						●		
126	COFFEE			F✱						P																	●		1,3.
127	MEETING PODS			F✱						P							P				P						●		3.
128	*NOT USED*																												
129	*NOT USED*																												
131	SHOP AREA 2				F1							X				X				X				X				X	
132	SHOP AREA 1				F1							X				X				X				X				X	
133	SHOP HALLWAY/WALKWAY				F1							X				X				X				X				X	
134	RECEIVING				F1							X				X				X				X				X	
136	REACTION ROOM				F1												FINISHES PER MANUFACTURER												
137	DUST CELL				F1												FINISHES PER MANUFACTURER												
138	FUEL DROP & CONTAINMENT				F1												FINISHES PER MANUFACTURER											X	
139	RECEIVING AREA				F1												FINISHES PER MANUFACTURER											X	
141	WALKWAY				F1												FINISHES PER MANUFACTURER												
142	WALKWAY				F1												X											X	
143	CONTROL ROOM				F1												FINISHES PER MANUFACTURER												
144	HOT THERMAL CELL				F1												FINISHES PER MANUFACTURER												
146	TESTING CELL				F1												FINISHES PER MANUFACTURER												
147	WALKWAY				F1												FINISHES PER MANUFACTURER											X	
148	COLD THERMAL CHAMBER				F1												FINISHES PER MANUFACTURER												
149	SERVICE GAP				F1							X				X				X				X				X	
151	CONTROL ROOM				F1		B1			P				P				P				P					●		
152	JANITOR				F1		B1			P				P				P			P						●		
153	TOILET				F1		B1			FP				FP				FP			FP						●		
MEZZANINE																													
M1	MEZZANINE				F1		B1			P				P				P				P					●		

GENERAL NOTES:

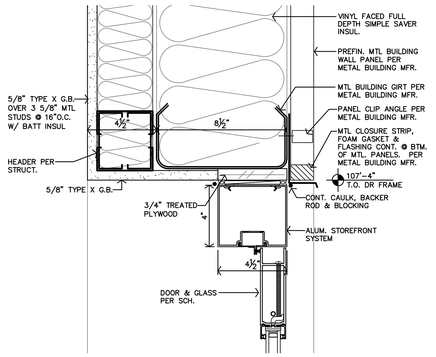
A. INSTALL VINYL, RUBBER, OR ALUMINUM TRANSITION STRIP BETWEEN FLOOR MATERIAL OF DIFFERING HEIGHTS, INCLUDING BUT NOT LIMITED TO CONCRETE/LVT TRANSITIONS.
B. ALL GYPSUM BOARD AREAS WHICH ARE ACCESSORY TO THE ROOM INCLUDING BUT NOT LIMITED TO SOFFITS, BULKHEADS, TRIM, ETC. SHALL BE PAINTED REGARDLESS OF WHETHER IT IS SPECIFICALLY INDICATED PER SCHEDULE.
C. ALL G.B. WALLS & PERMANENT PARTITIONS SHALL RECEIVE RUBBER BASE UNLESS NOTED OTHERWISE.
D. WALL TYPE SHOWN FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL COORDINATE WALL MATERIAL W/ DRAWINGS AND FIELD CONDITIONS, ALL AREAS INDICATED TO RECEIVE NEW FINISH SHALL RECEIVE COMPLETE FINISH AS SCHEDULED, AT ENTRY, ROOM CONTRACTOR SHALL COORDINATE FINISHES AND ACCENTS WITH DETAILS AND INTERIOR ELEVATIONS.
E. FINISH SCHEDULE IS FOR FINISHES ONLY. CONTRACTOR TO REFER TO FLOOR PLANS FOR LOCATIONS AND EXTENT OF INSTALLATION OF ANY FLOORING MATERIALS.
F. CONTRACTOR SHALL VERIFY THAT FLOORS ARE SLOPED/LEVEL/SMOOTH FOR LEVEL TRANSITION BETWEEN DIFFERING MATERIALS.
G. INSTALL PAINTABLE SILICONE SEALANT AT ALL C.B. TO G.W.B. AND C.B. TO CONCRETE WALL TRANSITIONS.
H. ALL CONTROL JOINTS AT EXPOSED CONCRETE FLOORS SHALL RECEIVE SEALANT COMPATIBLE W/ FLOOR SEALER.
I. ALL H.M. DOORS & FRAMES TO BE PAINTED W/ INDUSTRIAL ENAMEL UNLESS NOTED OTHERWISE. H.M. DOORS AND FRAMES SHALL BE SANDED SMOOTH PRIOR TO PAINTING. SPRAY FINISH ONLY, NO BRUSH FINISH.
J. COORDINATE WITH INTERIOR ELEVATIONS, FLOOR PLANS AND MISCELLANEOUS DETAILS TO VERIFY ALL AESTHETIC ACCENTS AND DETAILS.
K. REFERENCE INTERIOR ELEVATIONS, WALL SECTIONS AND DETAILS FOR WOOD BASE AND TRIM LOCATIONS.

SPECIFIC NOTES:

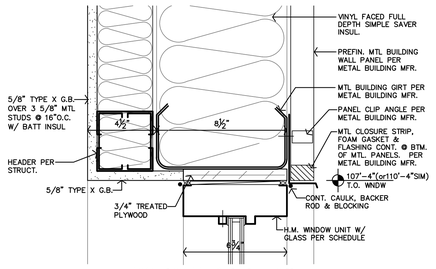
1. REFERENCE REFLECTED CEILING PLAN, COORDINATE LOCATION OF CEILING ACCENTS & SOFFITS.
2. INSTALL FRP PANEL TO 4'–0" ABOVE MOP SINK AND EXTEND 1'–0" MINIMUM BEYOND EDGES OF SINK; CLASS "A" FIRE RESISTIVE MATERIAL.
3. ✱ REPRESENTS VARIOUS COLORS BEING USED. REFERENCE FINISH FLOOR PLAN FOR LOCATIONS, PATTERS AND COLORS.

FINISH LEGEND

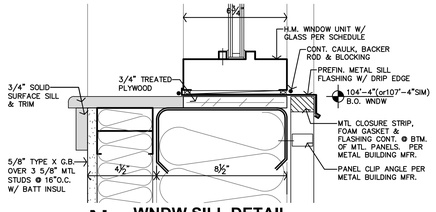
LABEL	DESCRIPTION	MANUFACTURER	FINISH/COLOR	LOCATION
B1	BASE – RUBBER	JOHNSONITE	199 DOCKSIDE, 4" TALL	REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
B2	BASE – TILE	CROSSVILLE	EMPIRE, EMPRESS SILVER, UNPOLISHED, 12x12 GROUT – MAPEI, 27 SILVER, 1/8" THICK	RESTROOMS
CT1	COUNTERTOP – QUARTZ	WILSONART	LAZIO Q1018	ALL AREAS
F1	FLOORING – SEALED CONCRETE			REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
F2	FLOORING – CARPET	SHAW	BASALT II 51198, SLATE 98481	REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
F3	FLOORING – CARPET	SHAW	GRAVEL II 51200, LICHEN 98327	REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
F4	FLOORING – CARPET	SHAW	GRAVEL II 51200, RAIN 98486	REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
F5	FLOORING – CARPET	SHAW	GRAVEL II 51200, STORM 98500	REFERENCE INTERIOR FINISH SCHEDULE & FIN. FLOOR PLAN
F6	FLOORING – CERAMIC TILE	CROSSVILLE	EMPIRE, EMPRESS SILVER, UNPOLISHED, 12x24 GROUT – MAPEI, 27 SILVER, 1/8" THICK	RESTROOMS
F7	FLOORING – CERAMIC TILE	CROSSVILLE	EMPIRE, CADET WHITE, UNPOLISHED, 24x24 GROUT – MAPEI, 93 WARM GRAY, 1/8" THICK	ENTRY VESTIBULE/LOBBY
F8	FLOORING – LUXURY VINYL TILE	J&J FLOORING	LVT TIMELESS, 1008 PARADIGM	LOBBY, BREAK ROOM
F9	FLOORING – LUXURY VINYL TILE	J&J FLOORING	LVT TIMELESS, 1000 NOTABLE	BREAK ROOM
F10	FLOORING – WALK–OFF CARPET	J&J FLOORING	CATWALK/RUNWAY, COLOR TO BE SELECTED	VESTIBULE 134
HW1	HARDWARE – CABINETS	HAFELE	HANDLE, ALUMINUM, TAB COLLECTION, SATIN, 6"	ALL CABINET DRAWERS & DOORS
L1	LAMINATE	FORMICA	BLACK PURE GRAIN NOIR 909–PG	CONFERENCE, WORK AREAS, COFFEE BAR, BREAK
L2	LAMINATE	FORMICA	PLATINUM MATTE FINISH 902–58	RESTROOMS – SINK APRON
P	PAINT	SHERWIN WILLIAMS	SW 7015, REPOSE GRAY	ALL AREAS
W1	WALL FINISH – TILE	CROSSVILLE	EMPIRE, EMPRESS SILVER, UNPOLISHED, 12x12 GROUT – MAPEI, 27 SILVER, 1/8" THICK	RESTROOMS
W2	WALL FINISH – TILE	CROSSVILLE	EMPIRE, EMPRESS SILVER, UNPOLISHED, 2x2 MOSAIC GROUT – MAPEI, 27 SILVER, 1/8" THICK	RESTROOMS
W3	WALL FINISH – LAMINATE	WILSONART	EBONY RECON 7997–38, FINE VELVET FINISH	ENTRY VESTIBULE



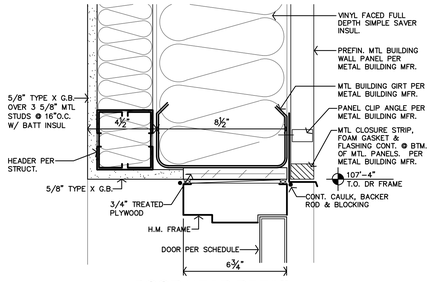
P DOOR HEAD DETAIL
3"=1'–0" JAMB SIMILAR



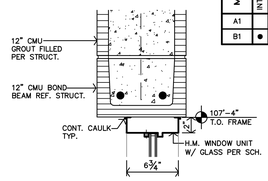
O WNDW HEAD DETAIL
3"=1'–0" JAMB SIMILAR



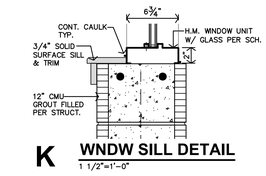
N WNDW SILL DETAIL
3"=1'–0"



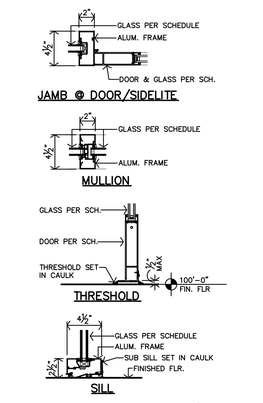
M DOOR HEAD DETAIL
3"=1'–0" JAMB SIMILAR



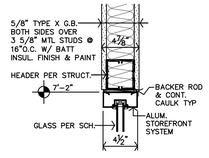
L WNDW HEAD DETAIL
1 1/2"=1'–0" JAMB SIMILAR



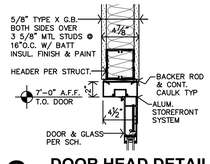
K WNDW SILL DETAIL
1 1/2"=1'–0"



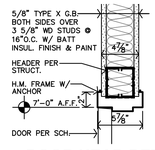
J ALUM. DETAILS
1 1/2"=1'–0"



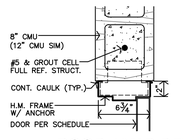
H HEAD DETAIL
1 1/2"=1'–0" JAMB SIMILAR



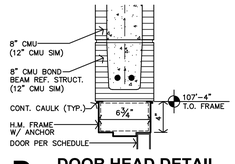
G DOOR HEAD DETAIL
1 1/2"=1'–0" JAMB SIMILAR



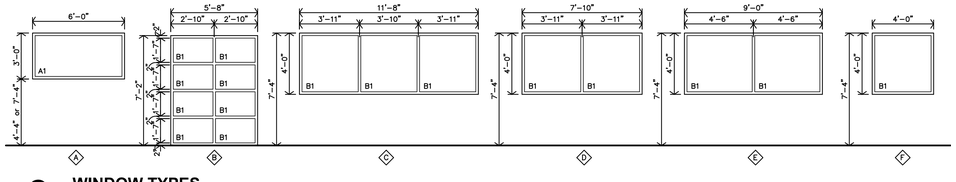
F DOOR HEAD DETAIL
1 1/2"=1'–0" JAMB SIMILAR



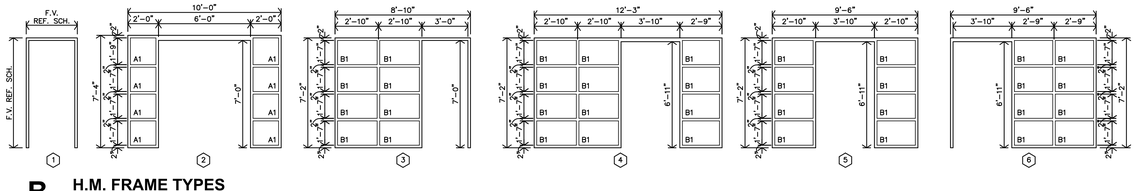
E DOOR JAMB DETAIL
1 1/2"=1'–0"



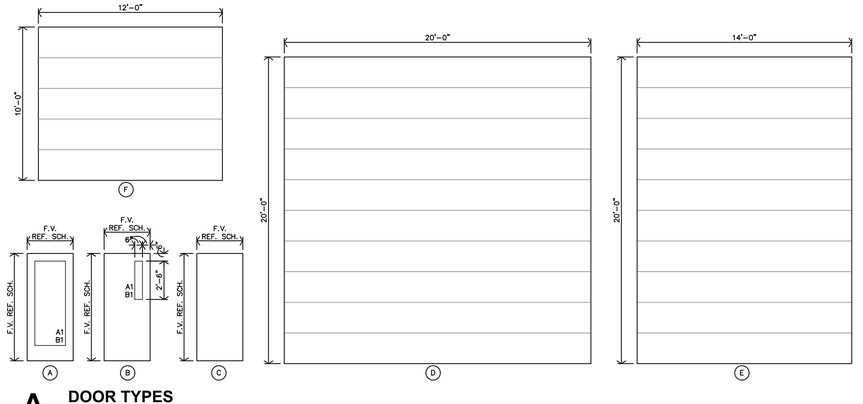
D DOOR HEAD DETAIL
1 1/2"=1'–0"



C WINDOW TYPES
1/4"=1'–0"



B H.M. FRAME TYPES
1/4"=1'–0"



A DOOR TYPES
1/4"=1'–0"

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

CHARLES A. RENZ
KANSAS
5502
5–6–2026
REGISTERED PROFESSIONAL ARCHITECT

REVISION:

DATE: 5–6–2026
JOB: 23–3315
SHEET NO.:

A10.1

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GENERAL STRUCTURAL NOTES

GENERAL

1. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE 2012 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)

2. ELEVATIONS (XXX'-XX") SHOWN ON PLANS ARE TO TOP OF CONCRETE, STEEL, OR WOOD DECK U.N.O.. ELEVATIONS SHOWN ARE BASED ON FIRST FLOOR ELEVATION OF 100'-00" CONFIRM WITH ARCHITECTURAL.

3. ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS AS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES ARISE THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED.

4. ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL CONSULT ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF CURBS, PADS, INSERTS, SLEEVES, DRIPS, REGLETS, REVEALS,FINISHES, DEPRESSIONS, DOOR CLOSERS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

5. SIZE AND LOCATION OF ALL ROOF, FLOOR, AND WALL OPENINGS TO BE VERIFIED WITH MECHANICAL AND ELECTRICAL DRAWINGS AND CONTRACTORS. OPENINGS LESS THAN 12 INCHES ARE GENERALLY NOT SHOWN.

6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS, ERRORS, OR OMISSIONS OF THE CONTRACTOR OR ANY SUB-CONTRACTOR, OR ANY OF THE CONTRACTOR OR SUBCONTRACTORS AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND MANNER OF CONSTRUCTION AND FOR THE SAFETY OF PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATION DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTION AND PROGRAMS.

7. THE ARCHITECT, CONTRACTOR, OWNER, AND END-USER OF THE STRUCTURE SHOULD EXPECT TO SEE SOME DEGREE OF RANDOM CRACKING IN THE SLAB-ON-GRADE. RANDOM CRACKING INCLUDES, BUT IS NOT LIMITED TO: SHRINKAGE CRACKS, CRACKS AT RE-ENTRANT CORNERS, AND CRACKS ADJACENT TO POINTS OF SLAB FIXITY. RANDOM CRACKING GENERALLY DOES NOT INCLUDE CRACKS WITH VERTICAL DISPLACEMENT. RANDOM CRACKS WITHIN THE SLAB-ON-GRADE DO NOT TYPICALLY IMPACT THE STRUCTURAL INTEGRITY OF THE SLAB AND ARE NOT NECESSARILY INDICATIVE OF STRUCTURAL ISSUES OR CONCERNS.

8. MECHANICAL UNITS AND EQUIPMENT SUPPORTED BY ROOF AND ELEVATED FLOOR STRUCTURE ARE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER, AND MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF UNIT SIZE, WEIGHT, AND LOCATION.

9. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. DURING ERECTION OF THE BUILDING, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TEMPORARY GUYING, SHORING, BRACING, FORMING, ETC., TO HOLD THE STRUCTURE IN PROPER ALIGNMENT AND TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED; INCLUDING LATERAL LOADS, TEMPERATURE DIFFERENTIALS, AND STOCKPILES OF MATERIAL AND EQUIPMENT. SUCH MEASURES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY AND UNTIL ALL FRAMING AND CONNECTIONS ARE IN PLACE. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF SUCH TEMPORARY MEASURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. CONSTRUCTION DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.

11. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH THE SUPPLIERS INSTRUCTIONS AND REQUIREMENTS.

12. CONTRACTOR AND SUB-CONTRACTORS SHALL THOROUGHLY REVIEW ALL DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING BIDS. MISCELLANEOUS FASTENERS, CLIPS, ETC., THAT ARE NOT DETAILED ON THE DRAWINGS BUT ARE PART OF THE REQUIREMENTS FOR FULL INSTALLATION OF ALL STRUCTURAL SYSTEMS ARE TO BE PART OF THE BID. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE BID TO ASCERTAIN CONDITIONS WHICH MY ADVERSELY AFFECT THE BID.

13. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DRAWINGS AND/OR SPECIFICATION AND/OR EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

14. CONTRACTOR SHALL REVIEW, STAMP, SIGN, AND DATE ALL SHOP DRAWINGS PRIOR TO FORWARDING TO THE ARCHITECT/ENGINEER. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSION, ETC..

15. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES ALL DEPRESSIONS, DIMENSIONS, ELEVATIONS, SLEEVES, CHASES, HANGERS, OPENING, INSERTS, ANCHORS, EQUIPMENT SUPPORTS, AND DETAILS WITH THE ENTIRE CONTRACT DOCUMENT PACKAGE, INCLUDING SPECIFICATIONS AND ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. FOR CONCRETE CONSTRUCTION, THE INSERTS, EMBEDDED PLATES, ETC., SHALL NOT INTERFERE WITH REINFORCEMENT LOCATIONS.

16. THESE DRAWINGS INCLUDE SPECIFIED COMPONENTS AND PRODUCTS, I.E. EPOXY, METAL DECK. IF A SUPPLIER/MANUFACTURER (HEREIN REFERRED TO AS "SUPPLIER") OTHER THAN SPECIFIED ON THESE DRAWINGS IS DESIRED AS A SUBSTITUTE, A SUBMITTAL SHOWING THE SUBSTITUTE IS EQUIVALENT TO THE PRODUCT SPECIFIED MUST BE PROVIDED TO AND APPROVED BY THE ENGINEER OF RECORD. IT IS THE SUBMITTERS RESPONSIBILITY TO SHOW THE SUBSTITUTE IS EQUIVALENT, NOT THE ENGINEER OF RECORD.

17. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC AS REQUIRED BY THE BUILDING OFFICIAL. INSPECTION REPORTS FOR THE ITEMS LISTED IN THE SPECIAL INSPECTION SCHEDULE SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER OF RECORD IN A TIMELY MANNER AND SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES THAT ARE NOT CORRECTED SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND STRUCTURAL ENGINEER OF RECORD.

DESIGN LOADS

1. DESIGN LOAD BY BUTLER MANUFACTURING, JOB No. 25-019651-01, DATED 09-09-2025

2. ROOF LIVE LOAD	20 PSF
3. GROUND SNOW LOAD	20 PSF
4. ROOF SNOW LOAD	14 PSF
5. OCCUPANCY CATEGORY	II
6. BASIC WIND SPEED (ASCE/SEI 7)	115 M.P.H. EXPOSURE C
7. SEISMIC DESIGN CATEGORY (ASCE/SEI 7)	B
SDS	0.1045
SD1	0.0768
SITE CLASS	D
SEISMIC FORCE RESISTING SYSTEM	MOMENT FRAMES / X-BRACES

PRE-ENGINEERED METAL BUILDING

1. BUILDING DESIGN LOADS PER DESIGN LOAD SECTION OF THE GENERAL STRUCTURAL NOTES.

2. METAL BUILDING SUPPLIER TO PROVIDE COMPLETE ERECTION DRAWINGS AND CALCULATION WITH BUILDING REACTIONS TO ENGINEER AND ARCHITECT PRIOR TO BUILDING FABRICATION.

3. LOCATION OF BUILDING LATERAL SYSTEMS (PORTAL, FRAMES, X-BRACES, WIND COLUMNS) AS NOTED ON DRAWINGS.

4. BUILDING AND STRUCTURAL COMPONENT MAXIMUM DEFLECTION CRITERIA

HORIZONTAL	H/360
VERTICAL (RAFTERS)	H/360
VERTICAL (PURLINS)	H/240

5. COORDINATE SIZE, LOCATION, QUANTITY, AND WEIGHT OF ALL ROOF TOP UNITS AND OTHER MECHANICAL EQUIPMENT SUPPORTED BY THE PEMB WITH THE MECHANICAL DRAWINGS.

FOUNDATION

1. DESIGN ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF PER KAW VALLEY GEOTECHNICAL REPORT NUMBER E24G3658. SOIL SUBGRADE TO BE PREPARED ACCORDING TO THE ABOVE MENTIONED SOILS REPORT RECOMMENDATIONS. ALL EXTERIOR FOOTINGS TO BE 3'-0" BELOW FINISH GRADE UNO.

2. UNLESS NOTED OTHERWISE; CENTER COLUMN FOOTINGS ON COLUMN CENTERLINES, CENTER WALL FOOTINGS ON FOUNDATION WALLS.

3. SLAB ON GRADE SHALL BE UNDERLAIN BY VAPOR BARRIER AND 6 INCHES MINIMUM OF CRUSHED ROCK OR CONCRETE. REINFORCE ALL SLABS ON GRADE WITH #3 AT 18 INCHES EACH WAY IN TOP 1/3 OF SLAB UNLESS NOTED OTHERWISE. AT DROPPED OR DEPRESSED SLABS ON GRADE MAINTAIN GRAVEL THICKNESS, SLAB DEPTH, REINFORCEMENT AND REINFORCEMENT POSITION.

4. BACK FILL AROUND THE EXTERIOR FOUNDATION WALLS WITH A FREE DRAINING GRANULAR MATERIAL TO THE ELEVATION OF THE ROUGH GRADE. PLACEMENT OF BACKFILL IS NOT ALLOWED UNTIL THE SLAB ON GRADE IS IN PLACE AND THE MAIN FLOOR DIAPHRAGM IS COMPLETED. TUNNEL CONCRETE WORK, FREE STANDING AND FOUNDATION WALLS SHALL BE COMPLETE AND AT DESIGN STRENGTH BEFORE BACKFILL IS PLACED.

5. CONTRACTOR TO KEEP EXCAVATIONS DRY AND PROTECTED FROM FROST AT ALL TIMES DURING THE FOUNDATION CONSTRUCTION. NOTIFY ENGINEER IF NATURE OF SOIL AT DEPTHS SHOWN IS NOT SUITABLE FOR FOUNDATIONS.

CAST-IN-PLACE CONCRETE

1. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS

FOOTINGS	4000 PSI (MAX. W/C RATIO OF 0.50)
INTERIOR SLABS ON GRADE	4000 PSI (MAX. W/C RATIO OF 0.45)
SLABS OVER STEEL DECK	3500 PSI (MAX. W/C RATIO OF 0.45)
EXPOSED CONCRETE SLABS AND GARAGE SLABS	4000 PSI (MAX. W/C RATIO OF 0.45)
FOUNDATION WALLS, WALLS, COLUMNS AND BEAMS	4000 PSI (MAX. W/C RATIO OF 0.45)

2. EXTERIOR EXPOSED CONCRETE SHALL HAVE 4 TO 8% ENTRAINED AIR. SLABS WITH HARD TROWELED FINISH TO HAVE NO AIR ENTRAINMENT ADDED. COORDINATE WITH ARCHITECTURAL FOR FINISHES.

3. AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33. MIX DESIGN SHALL CONTAIN A RATIO OF 30-45% COARSE AGGREGATES BY GRADATION REQUIREMENTS (No.67 GRADING SET FORTH IN ASTM C33.

4. PROVIDE MIX DESIGN SUBMITTALS FOR ARCHITECT AND EOR REVIEW WITH A MINIMUM OF 10 TEST BREAK RESULTS FOR EACH MIX.

5. NO ALUMINUM SHALL BE PLACED IN THE CONCRETE.

6. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318-05 (R-05), "CHAPTER 3 FOR STANDARDS FOR TESTS & MATERIALS, CHAPTERS 4, 5, 6 & 7 FOR CONSTRUCTION REQUIREMENTS". REFER TO ACI 302.1R-04 FOR SLAB ON GRADE MIX DESIGN.

7. PIPE OR ELECTRICAL CONDUIT EMBEDDED IN CONCRETE SHALL NOT BE LARGER IN OUTSIDE DIAMETER AT ITS WIDEST (OR FITTING) THAN 1/3 THE THICKNESS OF THE SLAB OR WALL. SLEEVES, CONDUIT, OR PIPES THROUGH SLABS AND WALLS SHALL BE PLACED NO CLOSER THAN THREE DIAMETERS ON CENTER AND THEY DO NOT DISPLACE REINFORCING. DO NOT CUT HOLES IN CONCRETE SLABS, BEAMS, COLUMNS, OR WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

8. LOCATION OF ALL CONSTRUCTION AND CONTROL JOINTS SHALL BE LOCATED AND DETAILED ON SHOP DRAWINGS AND ARE SUBJECT TO ENGINEERS APPROVAL. IF SLAB ON GRADE CONTROL JOINTS ARE NOT SPECIFICALLY LOCATED ON DRAWINGS, PROVIDE CONTROL JOINTS AT 10'-0" ON CENTER MAXIMUM WITH A LENGTH TO WIDTH RATIO OF 1.5. PROVIDE (2) #4x4'-0" AT ALL NON-CONTINUOUS CONTROL JOINTS. PROVIDE (2) #4x4'-0" AND (1) #4x24"x24" CORNER BAR AT ALL REENTRANT CORNERS OF SLAB ON GRADE.

9. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DIMENSION OF CONCRETE REVEALS, NOTCHES, REGLETS, DRIPS, PADS, CURBS, CHAMFERS BLOCKOUTS AT DOORWAYS, AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. CHAMFER ALL EXPOSED CORNERS OF BEAMS, COLUMNS, JOISTS AND WALLS, SUBJECT TO ARCHITECTS APPROVAL.

PRECAST CONCRETE

1. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS

BEAMS AND COLUMNS	5500 PSI
PANELS	4500 PSI
TILT UP PANELS	5000 PSI

2. CONSTRUCTION OF TILT UP PANELS IS TO BE IN ACCORDANCE WITH ACI 551.1R-05 "TILT-UP CONCRETE CONSTRUCTION GUIDE" AND ACI 551.1R-92 "TILT-UP CONCRETE STRUCTURE".

3. PRECAST MEMBERS SHALL BE DESIGNED AND REINFORCED FOR THE SUPERIMPOSED LOADS SHOWN ON THE DRAWINGS. PRECAST MEMBERS SHALL BE DESIGNED TO SUPPORT ANY CONCENTRATED LOADS INDICATED BY THE MECHANICAL AND ARCHITECTURAL DRAWINGS.

4. PRECAST SUPPLIER TO DESIGN PRECAST-TO-PRECAST AND PRECAST-TO-CAST IN PLACE CONCRETE CONNECTIONS.

5. PRECAST SUPPLIER TO DESIGN PRECAST PLANK (DOUBLE TEES) AS A DIAPHRAGM WITH LOADS AND CONDITIONS PER PLANS, INCLUDING THE ADDITIONAL PRESTRESSING STRANDS FOR DIAPHRAGM TENSION CORD MEMBERS, IF NECESSARY. PRECAST SUPPLIER TO DESIGN CONNECTIONS BETWEEN PRECAST PLANK (DOUBLE TEES) AND SHEAR WALLS.

REINFORCING STEEL UNITS TO HAVE 2 HOUR FIRE RATING.

1. TRUSS TYPE MASONRY JOINT REINFORCEMENT: W1.7 (9 GAGE), ASTM A1064, FY=70,000 PSI

2. WELDED WIRE REINFORCING (WWR): ASTM A82 AND A185

3. DEFORMED BARS (REBAR): ASTM A615, GRADE 40 FOR #3; GRADE 60 FOR #4 AND LARGER; ASTM A706 FOR WELDED CONDITIONS.

4. LAP SPLICES:

MASONRY:	48-BAR DIAMETERS AT CELLS WITH SINGLE BAR (HORIZ. AND VERT.) 64-BAR DIAMETERS AT CELLS WITH TWO BARS (HORIZ. AND VERT.)
CONCRETE:	CLASS "B" LAP SPLICE, TYPICAL UNLESS NOTED OTHERWISE.
WELDED WIRE FABRIC:	WIRE SPACING +2"

5. CONCRETE COVER FOR CAST-IN-PLACE AND NON-PRE-STRESSED CONCRETE SHALL BE AS SPECIFIED BELOW U.N.O. ON THESE DRAWINGS:

CONCRETE CAST AGAINST SOIL	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#6 OR GREATER)	2"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#5 OR LESS)	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER (SLAB, WALL, JOIST)	3/4"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER (BEAM, COLUMN)	1 1/2"
SLAB ON GRADE	1 1/2"

6. SECURELY TIE ALL REINFORCING IN PLACE WITH DOUBLE ANNEALED 16-GAUGE IRON WIRE OR APPROVED CLIPS PRIOR TO CONCRETE OR GROUT PLACEMENT.

7. SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION.

TYPICAL CMU WALL REINFORCING

1. UNLESS NOTED OTHERWISE ON THESE DRAWINGS, REINFORCE CMU WALLS AS FOLLOWS:

12" CMU WALLS - RESTROOM
#5 VERT @ 8" O.C. CENTER OF WALL
(2) #5 VERT AT EACH CORNER OF WALL
TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

12" CMU WALLS
#6 VERT @ 24" O.C. CENTER OF WALL
(2) #5 VERT AT EACH CORNER OF WALL
TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

8" CMU WALLS - RESTROOM
#5 VERT @ 8" O.C. CENTER OF WALL
(2) #5 VERT AT EACH CORNER OF WALL
TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

8" CMU WALLS
#5 VERT @ 48" O.C. CENTER OF WALL
(2) #5 VERT AT EACH CORNER OF WALL
TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

6" CMU WALLS
4 VERT @ 48" O.C. CENTER OF WALL
(2) #4 VERT AT EACH CORNER OF WALL
TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

SOLID GROUT AT REINFORCED CELLS ONLY UNO
PROVIDE (2) TYPICAL VERT FULL HEIGHT JAMB STEEL EACH SIDE OF OPENINGS
PROVIDE (2) #4 HORIZ BOND BEAM AT FLOOR AND ROOF LEVELS AND TOP OF WALL

1

MASONRY

1. LIGHT WEIGHT, RUNNING BOND, ASTM C90 CONCRETE MASONRY UNITS WITH NET AREA MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI. ASTM C270 MORTAR TYPE S, MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS. ASTM C476 GROUT WITH MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. NET AREA COMPRESSIVE STRENGTH OF MASONRY, F'M = 1,500 PSI.

2. FILL ALL CELLS WITH REINFORCING, AND OTHER CELLS INDICATED ON DRAWINGS, WITH GROUT IN LIFTS NOT EXCEEDING 5'-4" IN HEIGHT. ALL REINFORCING SHALL BE IN PLACE AND HELD PRIOR TO GROUTING. GROUT SHALL BE CONSOLIDATED AND RE-CONSOLIDATED AFTER INITIAL WATER LOSS BY MECHANICAL VIBRATION.

3. CONTRACTOR SHALL PROVIDE BRACING FOR MASONRY WALLS, AS REQUIRED, UNTIL CONNECTION TO FLOOR AND/OR ROOF DIAPHRAGMS ARE COMPLETED.

4. STRENGTH OF MASONRY ASSEMBLY SHALL BE DETERMINED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH SECTION 2105.2.2.1 OF THE 2006 IBC.

5. PROVIDE HORIZONTAL TRUSS-TYPE REINFORCING AT 16" ON CENTER MAXIMUM UNO.

6. NON-BEARING INTERIOR PARTITIONS SHALL STOP 1" BELOW STRUCTURAL SLABS OR STEEL FRAMING U.N.O.

7. WHERE BOND BEAMS INTERSECT AT CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND BEAM AROUND CORNER FOR TWO BLOCK LENGTHS MINIMUM.

8. WHERE BOND BEAMS INTERSECT PARALLEL AT DIFFERENT ELEVATIONS, LAP BOND BEAMS FOUR BLOCK LENGTHS MINIMUM.

9. PROVIDE CORNER AND INTERSECTION BARS IN ALL BOND BEAMS.

10. CONTROL AND EXPANSION JOINTS SHALL BE PROVIDED IN MASONRY WALLS AT 30' MAXIMUM PER TYPICAL MASONRY DETAILS. SEE ARCHITECTURAL FOR LOCATIONS.

11. PROVIDE (2) #4 VERTICAL EACH SIDE OF ALL OPENINGS IN MASONRY WALLS UNO. COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS.

12. PROVIDE (2) #4 VERTICAL AT ALL WALL CORNERS, ENDS AND INTERSECTIONS UNO. COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS.

13. PROVIDE BOND BEAM WITH (2) #4 CONTINUOUS BENEATH ALL SLAB AND BEAM BEARINGS UNO.

14. PROVIDE 1/2" AIR GAP AROUND SIDES, TOP AND END OF WOOD STRUCTURAL MEMBERS BEARING ON MASONRY.

STRUCTURAL AND MISCELLANEOUS STEEL

1. STEEL CONSTRUCTION MANUAL, 14TH EDITION MATERIAL SPECIFICATIONS U.N.O.

WIDE FLANGE AND S SHAPES	ASTM A992, FY=50KSI
CHANNELS, ANGLES, PLATES AND BARS	ASTM A36, FY=36KSI
HOLLOW STRUCTURAL SHAPES (HSS)	ASTM A500 GR. B, FY=46KSI
PIPE	ASTM A53, GR. B, FY=35KSI
STRUCTURAL BOLTS (U.N.O.)	ASTM A325
MACHINE BOLTS (WHERE NOTED)	ASTM A307
ANCHOR BOLTS AND RODS AND THREADED RODS	ASTM F1554 GRADE 36KSI
HIGH STRENGTH ANCHOR BOLTS AND RODS (AS NOTED)	ASTM F1554 GRADE 105KSI
HEADED OR THREADED STUD ANCHORS (H.S.A. OR T.S.A.)	ASTM A108-69T
DEFORMED BAR ANCHORS (D.B.A.)	ASTM A496 OR ASTM A706
WELDING ELECTRODES	E70XX
NON-SHRINK GROUT (7,000 PSI)	ASTM C1107, GR. A
POWDER ACTUATED FASTENER (PAF OR PDF)	HILTI X-U (0.157" DIA)
EXPANSION BOLTS (CONCRETE)	HILTI KWIK BOLT TZ
EXPANSION BOLTS (MASONRY)	HILTI KWIK BOLT 3
EPOXY ADHESIVE - CONCRETE	HILTI HIT-HY 200
EPOXY ADHESIVE - MASONRY	HILTI HIT-HY 70 W/ SCREEN TUBE

2. ALL STRUCTURAL STEEL ERECTION AND FABRICATION SHALL BE ACCORDING TO THE CURRENT EDITION OF AISC "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

3. ALL STRUCTURAL BOLTED CONNECTIONS SHALL BE ACCORDING TO THE CURRENT EDITION OF RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR SNUG TIGHTENED, PRETENSIONED, OR SLIP-CRITICAL JOINTS. ALL STRUCTURAL BOLTED CONNECTIONS TO BE SNUG TIGHTENED UNO. FOR SLIP-CRITICAL JOINTS, AS NOTED, THE USE OF TENSION INDICATING WASHERS OR TWIST-OFF BOLT ASSEMBLIES SHALL BE PERMITTED ONLY ACCORDING TO THE ABOVE MENTIONED STANDARD.

4. ALL WELDING SHALL BE PREFORMED IN ACCORDANCE WITH AWS D1.1. ALL WELDING SHALL BE PREFORMED BY AWS CERTIFIED WELDERS. ALL WELDING OF STRUCTURAL STEEL SHALL BE PREFORMED IN THE SHOP WHENEVER PRACTICAL. AN EFFORT HAS BEEN MADE TO INDICATE WELDS THAT CAN BE OR SHOULD BE FIELD WELDED. IT IS, HOWEVER, THE FABRICATORS RESPONSIBILITY TO DECIDE WHERE AND HOW THE WELDING IS TO BE ACCOMPLISHED TO ACHIEVE THE INTENDED RESULT.

5. COMPLETE JOINT PENETRATION (CJP) WELDING: PROVIDE BACKER BARS, RUN OFF TABS, AND ACCESS HOLES PER AWS D1.1. BACKER BARS SHALL BE REMOVED AFTER WELDING, THE ROOT WELD BACK GOUGED AND REPAIRED IF NECESSARY AND REINFORCED WITH A FILLET. RUN OFF TABS SHALL BE REMOVED AFTER WELDING WITH THE FLANGE EDGE GROUND SMOOTH.

6. STEEL FABRICATOR SHALL BE AN AISC CERTIFIED SHOP FOR CATEGORY 1 STEEL STRUCTURES AND SHALL MAINTAIN DETAILED QUALITY CONTROL PROCEDURES.

7. BEAMS SHALL BE FABRICATED FOR PLACEMENT OF NATURAL CAMBER UP.

8. STRUCTURAL STEEL SUPPLIER SHALL FURNISH COLUMN ANCHOR RODS.

9. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED. PROVIDE CONNECTIONS REQUIRED FOR ATTACHMENT OF WOOD AND STEEL MEMBERS.

10. USE CONNECTIONS AS DETAILED ON PLANS. WHEREVER CONNECTIONS ARE NOT DETAILED FABRICATOR SHALL REQUEST ENGINEER TO SUPPLY CONNECTION DETAIL.

11. ALL COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC., HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. CONFORMANCE TO OR DEVIATION FROM ALLOWABLE CAPACITIES DURING STEEL ERECTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (SEE GENERAL SECTION OF G.S.N.)

12. PRIOR TO GROUTING, COLUMNS SHALL BE ERECTED AND ALIGNED AS TO PLUMBNESS AND ELEVATION BY MEANS OF STEEL SHIMS OR LEVELING NUTS UNDER THE BASE PLATES. SETTING PLATES SHALL ONLY BE USED AS TEMPLATES TO LOCATE ANCHOR BOLTS DURING CONCRETE PLACEMENT.

COLD FORMED STEEL

1. ALL STRUCTURAL COLD FORMED STEEL FRAMING SHALL CONFORM TO THE CURRENT EDITION OF AISI STANDARD

33 & 43 MILS MATERIAL	ASTM C955 GR. 33 KSI
54, 68 & 97 MILS MATERIAL	ASTM C955 GR. 50 KSI

2. ALL STRUCTURAL PROPERTIES COMPUTED IN ACCORDANCE WITH AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" (AISI NAS-01). DESIGNATIONS GIVEN ON DRAWINGS ARE STEEL STUD MANUFACTURER'S ASSOCIATION (S.S.M.A.).

3. U.N.O. ON THESE DRAWINGS, STUD WALL TRACK TO BE OF THE SAME MATERIAL AND GAUGE AS STUDS. PROVIDE HORIZONTAL BRIDGING AT 5'-0" O.C. MAXIMUM AT NON- BEARING WALLS AND 3'-4" O.C. MAXIMUM AT BEARING WALLS. BEARING WALLS TO BE ERECTED WITH STUD ENDS SEATED AGAINST TRACK WEB TOP AND BOTTOM.

4. SUBMIT SHOP DRAWINGS SHOWING STUD AND JOIST LAYOUT, DIMENSION, SIZES, BRIDGING AND REQUIRED CONNECTION DETAILS FOR REVIEW BY THE ARCHITECT AND ENGINEER OF RECORD.

ABBREVIATIONS

@	AT
#	NUMBER
AB	ANCHOR BOLT
ADD'L	ADDITIONAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ATTM	ATTACHMENT
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BSMT	BASEMENT
BTWN	BETWEEN
CFS	COLD FORMED STEEL
CJ	CONTROL OR CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION WELD
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
COORD	COORDINATE
DBA	DEFORMED BAR ANCHOR
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DF-L	DOUGLAS FIR-LARCH
EA	EACH
EF	EACH FACE
EMBED	EMBEDDED
EN	EDGE NAILING
EOR	ENGINEER OF RECORD
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
FDN	FOUNDATION
FIN	FINISH
FLR	FLOOR
FN	FIELD NAILING
FRP	FIBER-REINFORCED POLYMER
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE
GR	GRADE
HK	HOOK
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SHAPE
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INFO	INFORMATION
LBS	POUNDS
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NIC	NOT IN CONTRACT
NS	NON-SHRINK
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PAF	POWDER ACTUATED FASTENER
PEMB	PRE-ENGINEERED METAL BUILDING
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POINT
QTY	QUANTITY
REINF	REINFORCING
REM	REMAINDER
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
SCHD	SCHEDULE
SIM	SIMILAR
SLV	SHORT LEG VERTICAL
SOG	SLAB-ON-GRADE
SPF	SPRUCE-PINE-FIR
SQ	SQUARE
STD	STANDARD
T&B	TOP AND BOTTOM
THK	THICK
TOF	TOP OF FOOTING
TOM	TOP

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	INSPECTION EXTENT	INSPECTION AGENT*
1704.2.5 Inspection of Fabricators			
Verify fabrication/quality control procedures	In-plant review (3)	Periodic	S.I.
1705.1.1 Special Cases (work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements)	Submittal review, shop (3) and/or field inspection		S.I.
1705.2 Steel Construction			
1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)	Submittal Review	Each submittal	S.I.
2. Material verification of structural steel	Shop (3) and field inspection	Periodic	S.I.
3. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Field inspection	Periodic	S.I.
4. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Field inspection	Periodic	S.I.
5. Structural steel welding:			S.I.
a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Shop (3) and field inspection	Observe or Perform as noted (4)	S.I.
b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2)	Shop (3) and field inspection	Observe (4)	S.I.
c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Shop (3) and field inspection	Observe or Perform as noted (4)	S.I.
d. Nondestructive testing (NDT) of welded joints: *see Commentary*			
1) Complete penetration groove welds 5/16" or greater in *risk category* III or IV	Shop (3) or field ultrasonic testing - 100%	Periodic	S.I.
2) Complete penetration groove welds 5/16" or greater in *risk category* II	Shop (3) or field ultrasonic testing - 10% of welds minimum	Periodic	S.I.
3) Thermally cut surfaces of access holes when material t > 2"	Shop (3) or field magnetic Partical or Penetrant testing	Periodic	S.I.
4) Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1	Shop (3) or field radiographic or Ultrasonic testing	Periodic	S.I.
5) Fabricator's NDT reports when fabricator performs NDT	Verify reports	Each submittal (5)	S.I.
6. Structural steel bolting:	Shop (3) and field inspection		S.I.
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)		Observe or Perform as noted (4)	S.I.
b.Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2)		Observe (4)	S.I.
1) Pre-tensioned and slip-critical joints			S.I.
a) Turn-of-nut with matching markings		Periodic	S.I.
b) Direct tension indicator		Periodic	S.I.
c) Twist-off type tension control bolt		Periodic	S.I.
d) Turn-of-nut without matching markings		Continuous	S.I.
e) Calibrated wrench		Continuous	S.I.
2) Snug-tight joints		Periodic	S.I.
c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)		Perform (4)	S.I.
7. Inspection of steel elements of composite construction prior to concrete placement in accordance with QA tasks listed in AISC 360, Table N6.1	Shop (3) and field inspection and testing	Observe or Perform as noted (4)	S.I.
1705.2.2 Steel Construction Other Than Structural Steel			
1. Material verification of cold-formed steel deck:			S.I.
a. Identification markings	Field inspection	Periodic	S.I.
b. Manufacturer's certified test reports	Submittal Review	Each submittal	S.I.
2. Connection of cold-formed steel deck to supporting structure:	Shop (3) and field inspection		S.I.
a. Welding		Periodic	S.I.
b. Other fasteners (in accordance with AISC 360,Section N6)			S.I.
1) Verify fasteners are in conformance with approved submittal		Periodic	S.I.
2) Verify fastener installation is in conformance with approved submittal and manufacturer's recommendations		Periodic	S.I.
3. Reinforcing steel	Shop (3) and field inspection		S.I.
a. Verification of weldability of steel other than ASTM A706		Periodic	S.I.
b. Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, boundary elements of special concrete structural walls and shear reinforcement		Continuous	S.I.
c. Shear reinforcement		Continuous	S.I.
d. Other reinforcing steel		Periodic	S.I.
4. Cold-formed steel trusses spanning 60 feet or greater			S.I.
a. Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Field inspection	Periodic	S.I.
1705.3 Concrete Construction			
1. Inspection of reinforcing steel installation (see 1705.2.2 for welding)	Shop (3) and field inspection	Periodic	S.I.
2. Inspection of prestressing steel installation	Shop (3) and field inspection	Periodic	S.I.
3. Inspection of anchors cast in concrete	Shop (3) and field inspection	Periodic	S.I.
4. Inspection of anchors and reinforcing steel post-installed in hardened concrete. Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection	Periodic or as required by the research report issued by an approved source	S.I.
5. Verify use of approved design mix	Shop (3) and field inspection	Periodic	S.I.
6. Fresh concrete sampling, perform slump and air content tests and determine temperature of concrete	Shop (3) and field inspection	Continuous	S.I.
7. Inspection of concrete and shotcrete placement for proper application techniques	Shop (3) and field inspection	Continuous	S.I.
8. Inspection for maintenance of specified curing temperature and techniques	Shop (3) and field inspection	Periodic	S.I.
9. Inspection of prestressed concrete:	Shop (3) and field inspection		S.I.
a. Application of prestressing force		Continuous	S.I.
b. Grouting of bonded prestressing tendons in the seismic-force-resisting system		Continuous	S.I.
10. Erection of precast concrete members			S.I.
a. Inspect in accordance with construction documents	Field inspection	In accordance with construction documents	S.I.
b. Perform inspections of welding and bolting in accordance with Section 1705.2	Field inspection	In accordance with Section 1705.2	S.I.
11. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs	Review field testing and laboratory reports	Periodic	S.I.

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	INSPECTION EXTENT	INSPECTION AGENT*
12. Inspection of formwork for shape, lines, location and dimensions	Field inspection	Periodic	S.I.
13. Concrete strength testing and verification of compliance with construction documents	Field testing and review of laboratory reports	Periodic	S.I.
1705.4 Masonry Construction			
Level - B - Quality Assurance			
(A) Level A, B and C Quality Assurance:			
1. Verify compliance with approved submittals	Field Inspection	Periodic	S.I.
(B) Level B Quality Assurance:			
1. Verification of f'm and f'_{AAC} prior to construction	Testing by unit strength method or prism test method	Periodic	S.I.
(C) Level C Quality Assurance:			
1. Verification of f'm and f'_{AAC} prior to construction and for every 5,000 SF during construction	Testing by unit strength method or prism test method	Periodic	S.I.
2. Verification of proportions of materials in premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout, as delivered to the project site	Field inspection	Continuous	S.I.
3. Verify placement of masonry units	Field Inspection	Periodic	S.I.
(D) Levels B and C Quality Assurance:			
1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	Field testing	Continuous	S.I.
2. Verify compliance with approved submittals	Field inspection	Periodic	S.I.
3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons	Field Inspection	Periodic	S.I.
4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	Field Inspection	Periodic	S.I.
5. Verify construction of mortar joints	Field Inspection	Periodic	S.I.
6. Verify placement of reinforcement, connectors, and prestressing tendons and anchorages	Field Inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
7. Verify grout space prior to grouting	Field Inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
8. Verify placement of grout and prestressing grout for bonded tendons	Field Inspection	Continuous	S.I.
9. Verify size and location of structural masonry elements	Field Inspection	Periodic	S.I.
10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
11. Verify welding of reinforcement (see 1705.2.2)	Field inspection	Continuous	S.I.
12. Verify preparation, construction, and protestion of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	Field inspection	Periodic	S.I.
13. Verify application and measurement of prestressing force	Field Inspection	Continuous	S.I.
14. Verify placement of AAC masonry units and construction of thin-bed mortar joints (first 5000 SF of AAC masonry).	Field inspection	Continuous	S.I.
15. Verify placement of AAC masonry units and construction of thin-bed mortar joints (after the first 5000 SF of AAC masonry)	Field inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
16. Verify properties of thin-bed mortar for AAC masonry (first 5000 SF of AAC masonry)	Field inspection	Continuous	S.I.
17. Verify properties of thin-bed mortar forAAC masonry (after the first 5000 SF of AAC masonry)	Field inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
18. Prepare grout and mortar specimens	Field testing	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
19. Observe preparation of prisms	Field inspection	Level B - Periodic	S.I.
		Level C - Continuous	S.I.
20. Inspection of anchors and reinforcing steel post-installed (epoxy, expansion, etc.): Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, location to masonry joints, masonry minimum thickness, anchor embedment and tightening torque	Field inspection	Periodic or as required by the research report issued by an approved source	S.I.
1705.6 Soils			
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection	Periodic	G.E. or S.I.
2. Verify excavations are extended to proper depth and have reached proper material.	Field inspection	Periodic	G.E. or S.I.
3. Perform classification and testing of controlled fill materials.	Field inspection	Periodic	G.E. or S.I.
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill	Field inspection	Continuous	G.E. or S.I.
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly	Field inspection	Periodic	G.E. or S.I.

*** INSPECTION AGENTS**

	FIRM	ADDRESS
1.	G.E. Geotechnical Engineer	
2.	S.I. Special Inspector - Not Yet Selected	
3.		
4.		

Notes:
1. *The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.*
2. *If the list of Inspection Agents is noted as "Not Yet Selected" the General Contractor shall coordinate submittal of special inspection agencies for approval by the Building Offical and the Design Professional.*
3. *Special Insepctions as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.2*
4. *Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel element.*
5. *NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N7.*

STATEMENT OF SPECIAL INSPECTIONS

1. THIS STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS IS INCLUDED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE BUILDING CODE. THE TABLE OF REQUIRED SPECIAL INSPECTIONS IDENTIFIES THE STRUCTURAL ITEMS TO BE INSPECTED APPLICABLE TO THIS PROJECT AS WELL AS IDENTIFYING THE APPROVED AGENCIES TO BE RETAINED FOR CONDUCTING THESE INSPECTIONS AND TESTS.
2. SPECIAL INSPECTIONS SHALL BE PERFORMED BY PERSONNEL AS INDICATED IN THE TABLE.
   S.I. SPECIAL INSPECTOR
   G.E. GEOTECHNICAL ENGINEER
3. IF SPECIAL INSPECTION IS WAIVED BY THE GOVERNING AUTHORITIES, THE GENERAL CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD A COPY OF THE BUILDING OFFICIALS WRITTEN EXEMPTION FOR SPECIAL INSPECTION PRIOR TO STARTING WORK.

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

BRENT ENGELLAND LICENSED KANSAS 6384 PROFESSIONAL ENGINEER

REVISION:

DATE: 10/31/2025
JOB: 23-3315
SHEET NO.:

S0.1

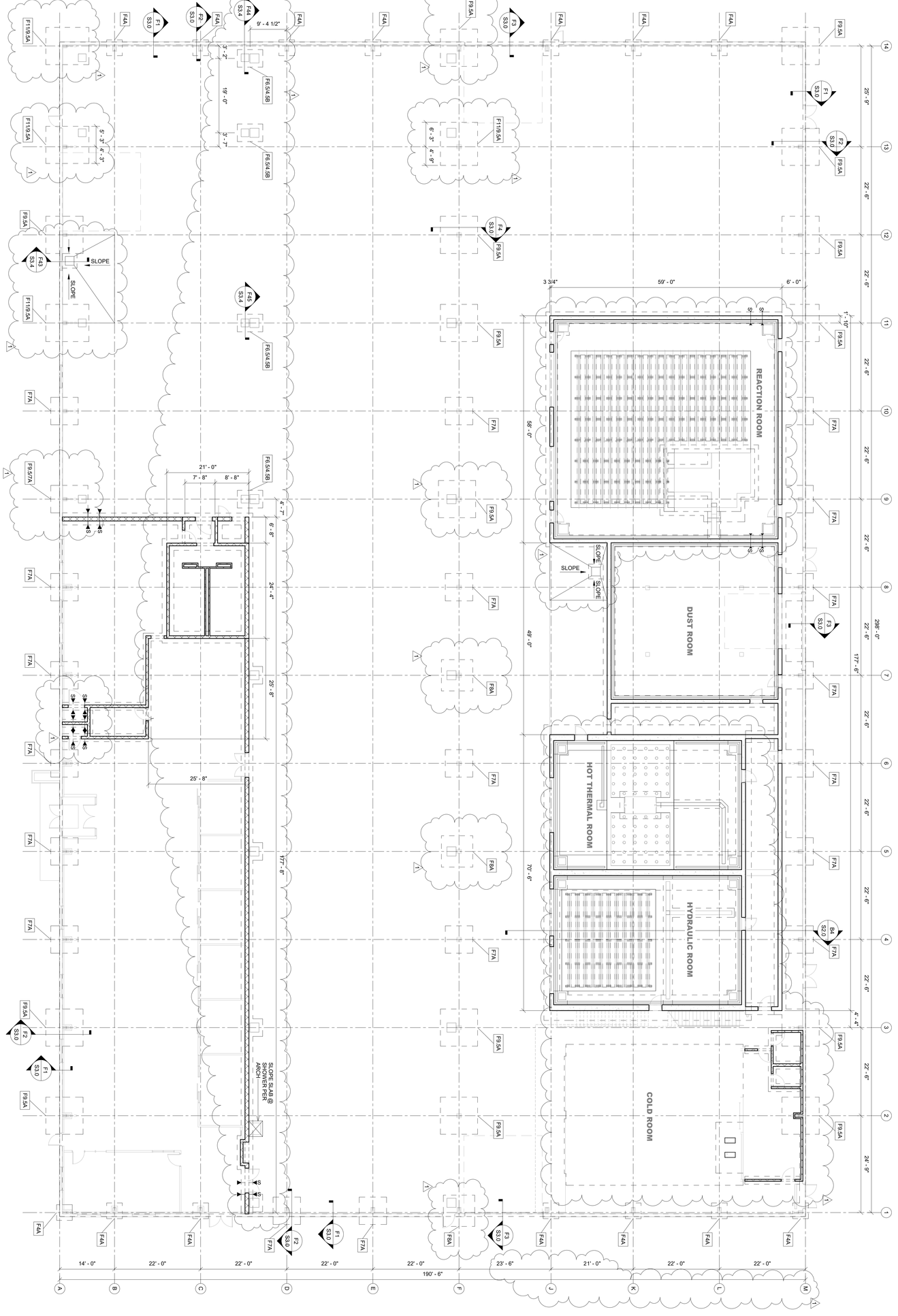
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PLAN NOTES

1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. SLAB SPECIFICATIONS
   TEST CELLS: 8" CONCRETE SLAB ON GRADE W/ #3 @18" O.C. ON 8" CRUSHED ROCK BASE. U.N.O.
   TYPICAL 6" CONCRETE SLAB ON GRADE W/ 6x6 W2.9xW2.9 WWR 1.1/2" FROM TOP OF SLAB ON 6" CRUSHED ROCK BASE. U.N.O.
4. AT ALL SLAB RE-ENTRANT CORNERS, PROVIDE (1) #4x24"x24" CORNER BAR AND (2) #4x48" BARS
5. PROVIDE (2) #4x48" BARS AT ALL NON-CONTINUOUS CONTROL JOINTS
6. SLAB CONTROL JOINTS TO BE SPACED A MAXIMUM OF 16'-0" O.C. WITH A LENGTH TO WIDTH RATIO OF 1.5 MAXIMUM UNLESS SHOWN OTHERWISE ON PLAN. SAWING OF CONTROL JOINTS SHALL BE DONE EARLY ENOUGH TO PREVENT SHRINKAGE CRACKS FRAYING, CORING & AS SOON AS CONCRETE IS HARD ENOUGH TO BE CUT WITHOUT
7. SEE GSN SHEET S0.0 FOR TYPICAL CMU WALL REINFORCING
8. TEST CELL FOUNDATION WALLS TO BE BACKFILLED AND COMPACTED IN 8" LIFTS OF AGGREGATE OR APPROVED GRANULAR MATERIAL. TEST CELL FOUNDATION WALLS MUST REACH DESIGN STRENGTH PRIOR TO BACKFILLING.
9. ▶ —◀ S : STEP FOOTING

FOOTING SCHEDULE

Mark	Size	Footing Reinforcing	Remarks
F4A	4'-0" x 4'-0" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F6,5/4,5B	6'-6" x 4'-6" x 1'-0"	#5 @ 12" O.C. EA WAY. TOP & BOT	
F6A	6'-0" x 6'-0" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F7A	7'-0" x 7'-0" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F8A	8'-0" x 8'-0" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F9,5/7A	9'-6" x 7'-0" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F9,5A	9'-6" x 9'-6" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	
F11/9.5A	11'-0" x 9'-6" x 3'-4"	#6 @ 12" O.C. EA WAY. TOP & BOT	



1 FOUNDATION PLAN
3/32" = 1'-0"

NORTH

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S1.0

REVISION:		
1	Addendum 1	04/02/2026
DATE:		10/31/2025
JOB:		23-3315
SHEET NO.:		

GREAT ENGELBRECHT LICENSED PROFESSIONAL ENGINEER 24864 KANSAS

GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

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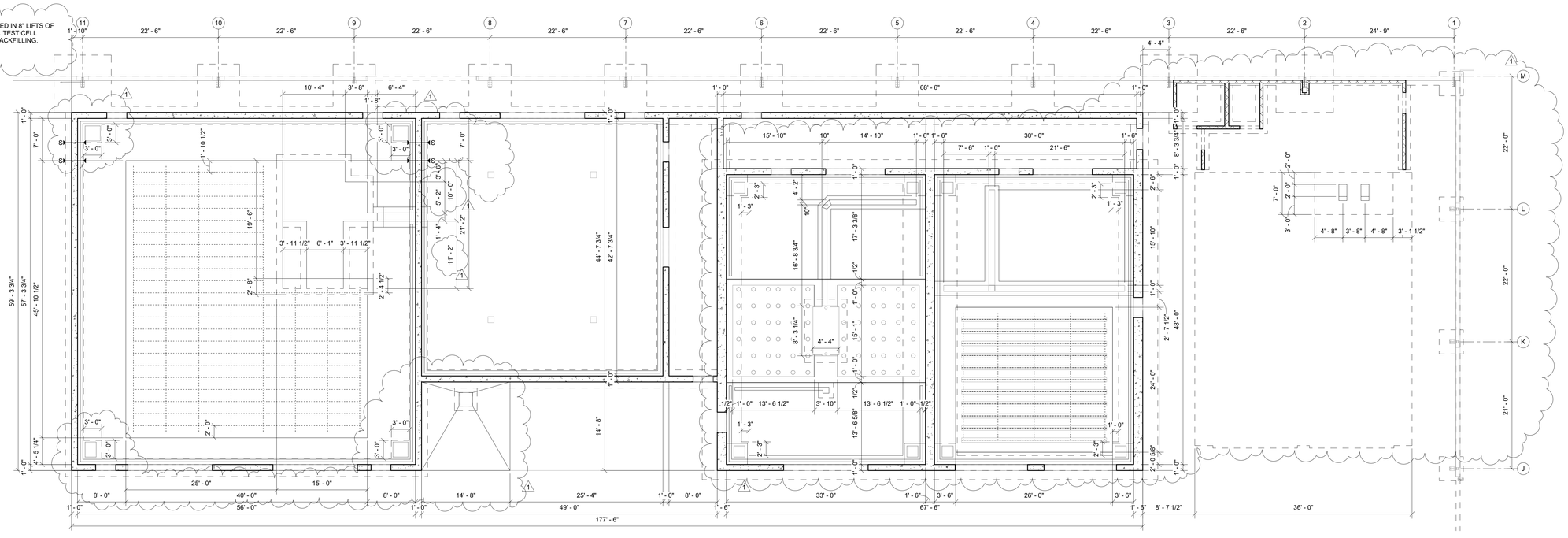
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3. SLAB SPECIFICATIONS

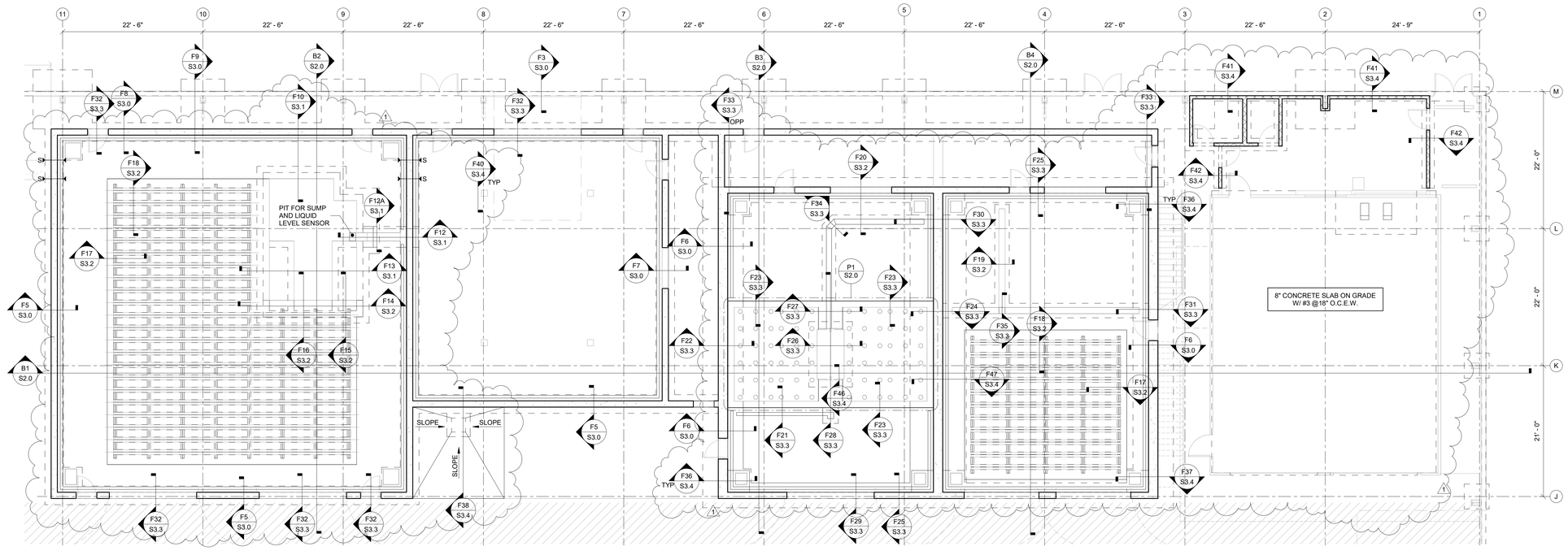
   TEST CELLS: 8" CONCRETE SLAB ON GRADE W/ #3 @18" O.C. ON 8" CRUSHED ROCK BASE, U.N.O.

   TYPICAL: 6" CONCRETE SLAB ON GRADE W/ 6x6 W2.9xW2.9 WWR 1.1/2" FROM TOP OF SLAB ON 6" CRUSHED ROCK BASE, U.N.O.
4. AT ALL SLAB RE-ENTRANT CORNERS, PROVIDE (1) #4x24"x24" CORNER BAR AND (2) #4x48" BARS
5. PROVIDE (2) #4x48" BARS AT ALL NON-CONTINUOUS CONTROL JOINTS
6. SLAB CONTROL JOINTS TO BE SPACED A MAXIMUM OF 10'-0" O.C. WITH A LENGTH TO WIDTH RATIO OF 1.5 MAXIMUM UNLESS SHOWN OTHERWISE ON PLAN. SAWING OF CONTROL JOINTS SHALL BE DONE EARLY ENOUGH TO PREVENT SHRINKAGE CRACKS FROM OCCURING & AS SOON AS CONCRETE IS HARD ENOUGH TO BE CUT WITHOUT FRAYING.
7. SEE GSN SHEET S0.0 FOR TYPICAL CMU WALL REINFORCING
8. TEST CELL FOUNDATION WALLS TO BE BACKFILLED AND COMPACTED IN 8" LIFTS OF AB-3 OR OTHER APPROVED LVC MATERIAL PER GEOTECH REPORT. TEST CELL FOUNDATION WALLS MUST REACH DESIGN STRENGTH PRIOR TO BACKFILLING.
9. ►—◄S : STEP FOOTING



2 FOUNDATION PLAN - TEST CELL DIMENSIONS
1/8" = 1'-0"

NORTH



1 FOUNDATION PLAN - TEST CELL SECTIONS & DETAILS
1/8" = 1'-0"

NORTH

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GREAT PLAINS MANUFACTURING

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S1.1

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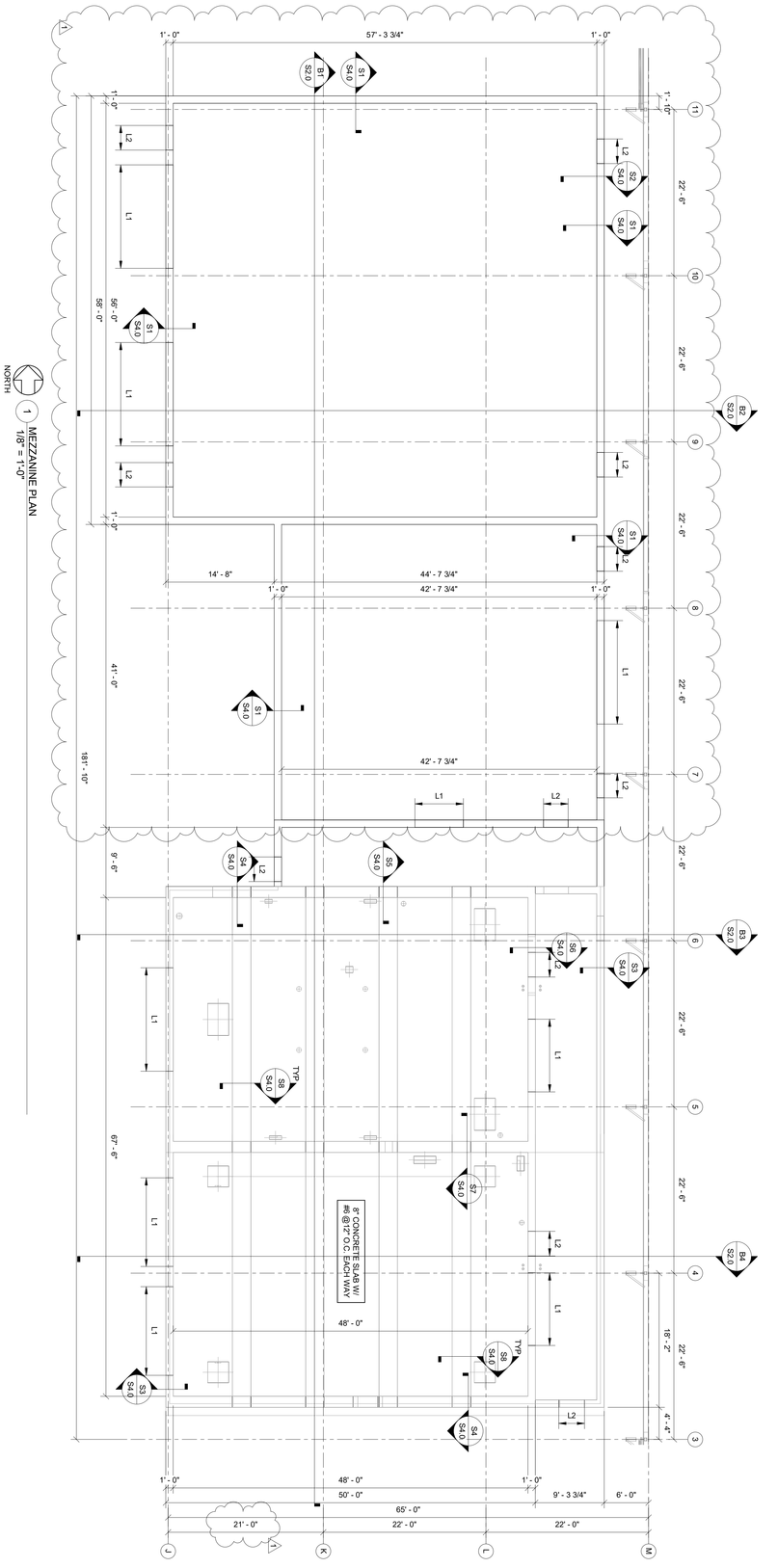
PLAN NOTES

1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND THEIR NOTED SUPPORTS AND PENETRATIONS WITH MECHANICAL DRAWINGS. ALL MECHANICAL UNITS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. VERIFY ALL MECHANICAL UNITS WITH MECHANICAL DRAWINGS.
4. LINTELS PER LINTEL SCHEDULE.

CONCRETE LINTEL SCHEDULE

MK NO.	LINTEL REINF. SIZE	JAMB REINF. SIZE	REMARKS
L1	(2) #6	(2) #6	NOTE 1 & 2
L2	(2) #5	(2) #5	NOTE 1 & 2

NOTES:
1. ALL LINTEL REINFORCING TO EXTEND 36" BEYOND OPENING.
2. JAMB REINF TO EXTEND FULL HEIGHT OFWALL.



1 MEZZANINE PLAN
1/8" = 1'-0"
NORTH

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SHEET NO.: **S1.2**

BRENT ENGELKEN — LICENSED PROFESSIONAL ENGINEER — 19884 — STATE OF KANSAS

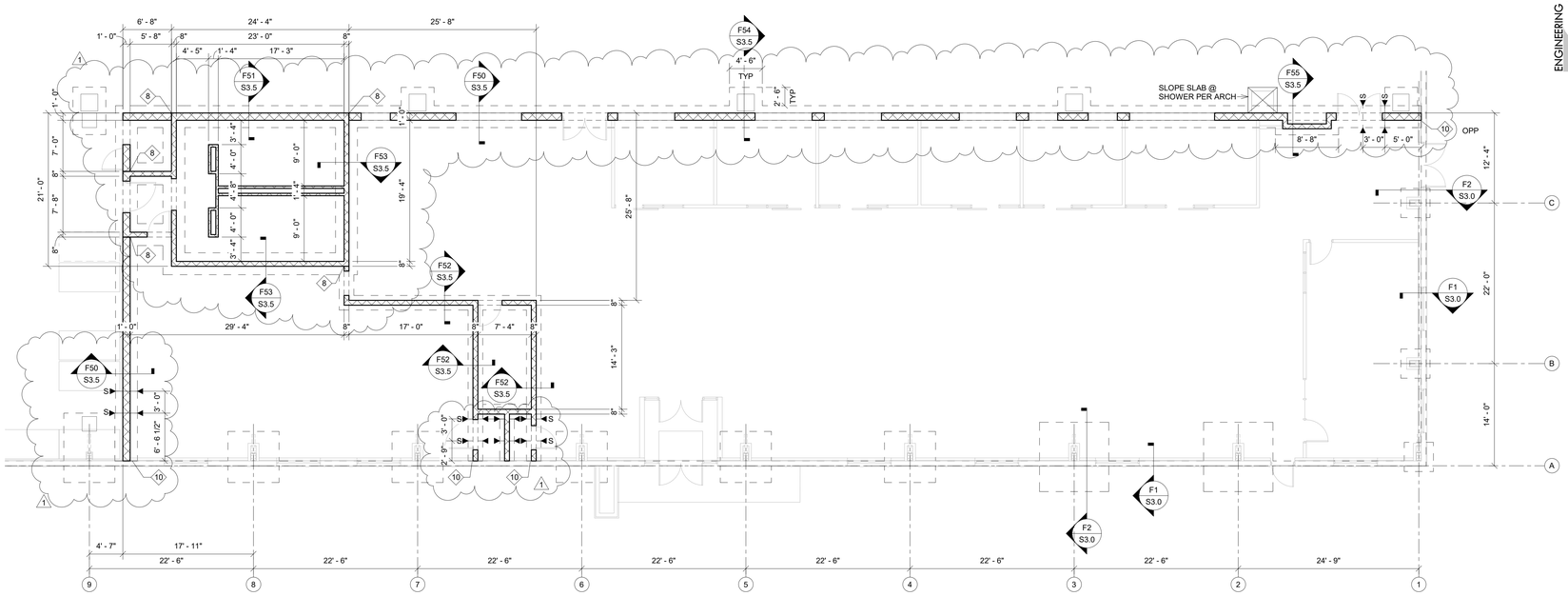
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PLAN NOTES

1. FOR GENERAL STRUCTURAL NOTES (GSN) SEE SHEET S0.0
2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
3. SLAB SPECIFICATIONS

   TEST CELLS: 8" CONCRETE SLAB ON GRADE W/ #3 @18" O.C. ON 8" CRUSHED ROCK BASE, U.N.O.

   TYPICAL: 6" CONCRETE SLAB ON GRADE W/ 6x6 W2.9xW2.9 WWR 1.1/2" FROM TOP OF SLAB ON 6" CRUSHED ROCK BASE, U.N.O.
4. AT ALL SLAB RE-ENTRANT CORNERS, PROVIDE (1) #4x24"x24" CORNER BAR AND (2) #4x48" BARS
5. PROVIDE (2) #4x48" BARS AT ALL NON-CONTINUOUS CONTROL JOINTS
6. SLAB CONTROL JOINTS TO BE SPACED A MAXIMUM OF 10'-0" O.C. WITH A LENGTH TO WIDTH RATIO OF 1.5 MAXIMUM UNLESS SHOWN OTHERWISE ON PLAN. SAWING OF CONTROL JOINTS SHALL BE DONE EARLY ENOUGH TO PREVENT SHRINKAGE CRACKS FROM OCCURING & AS SOON AS CONCRETE IS HARD ENOUGH TO BE CUT WITHOUT FRAYING.
7. SEE GSN SHEET S0.0 FOR TYPICAL CMU WALL REINFORCING
8. PROVIDE CMU JOINT AT RESTROOM WALLS, NO HORIZONTAL BARS TO CONT THRU JOINT.
9. ►— —◄ S : STEP FOOTING
10. CMU WALL FOOTING REINFORCEMENT TO HAVE 4" EPOXY EMBEDMENT INTO PERIMETER GRADE BEAM.

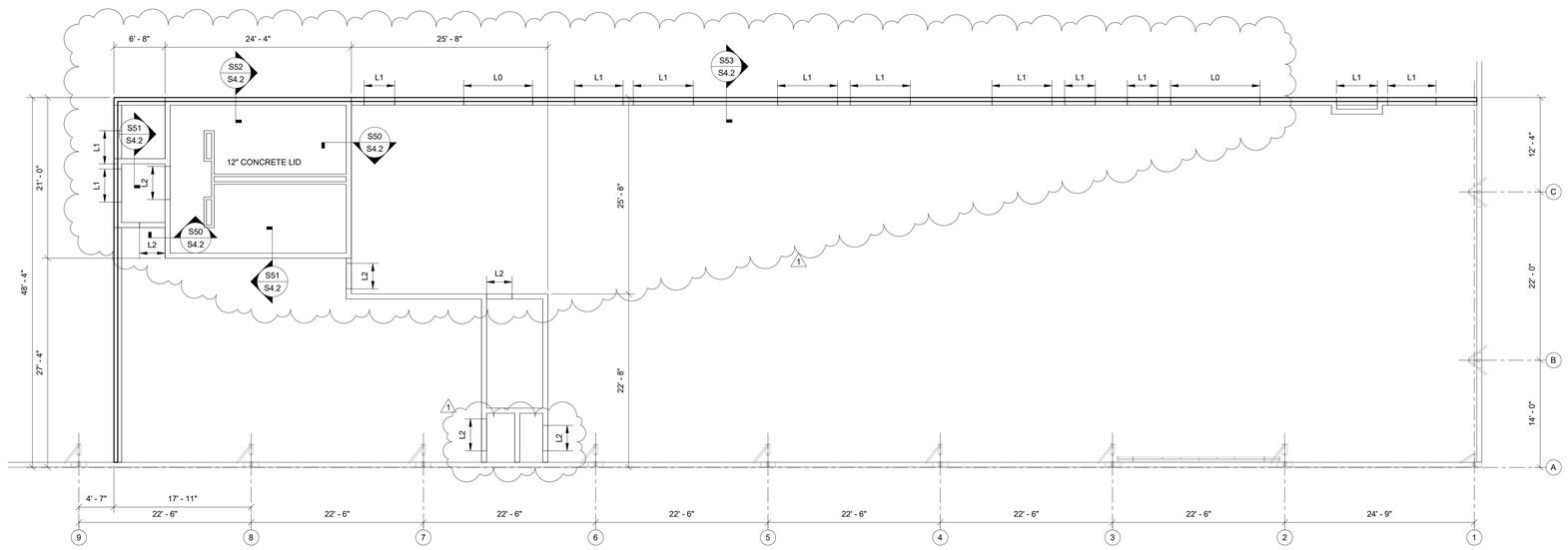


NORTH

1 FOUNDATION PLAN - ENLARGEED OFFICE AREA
1/8" = 1'-0"

PLAN NOTES

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4. LINTERLS PER LINTEL SCHEDULE.



NORTH

2 FRAMING PLAN - ENLARGED OFFICE AREA
1/8" = 1'-0"

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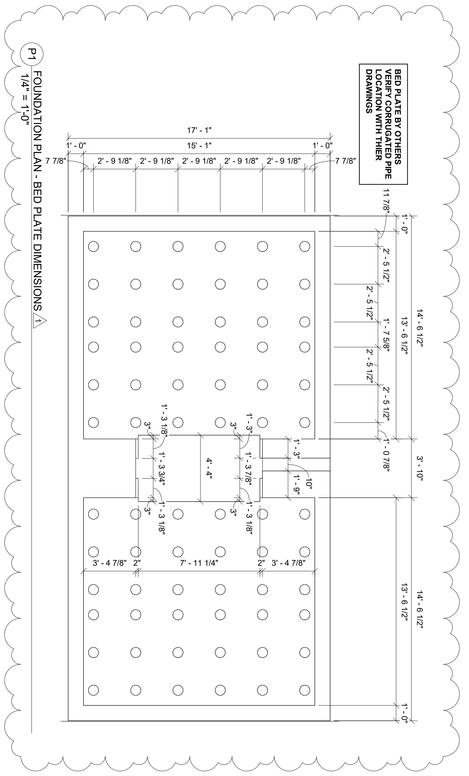
BRENT ENGELLAND LICENSED 16384 KANSAS PROFESSIONAL ENGINEER

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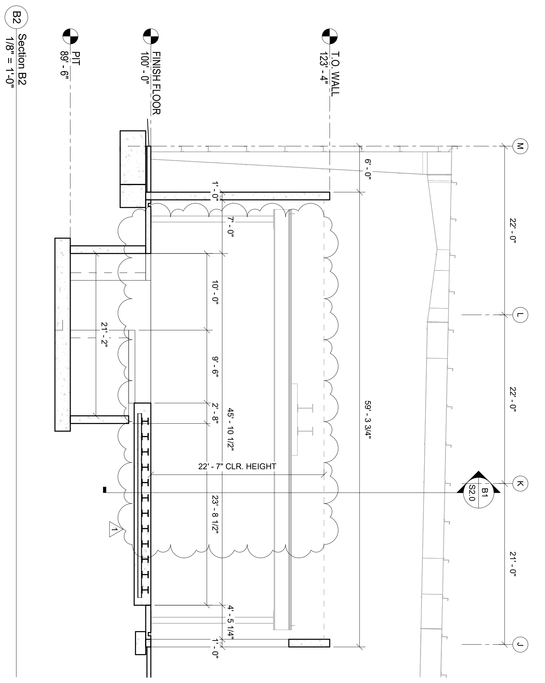
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JOB: 23-3315
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S1.3

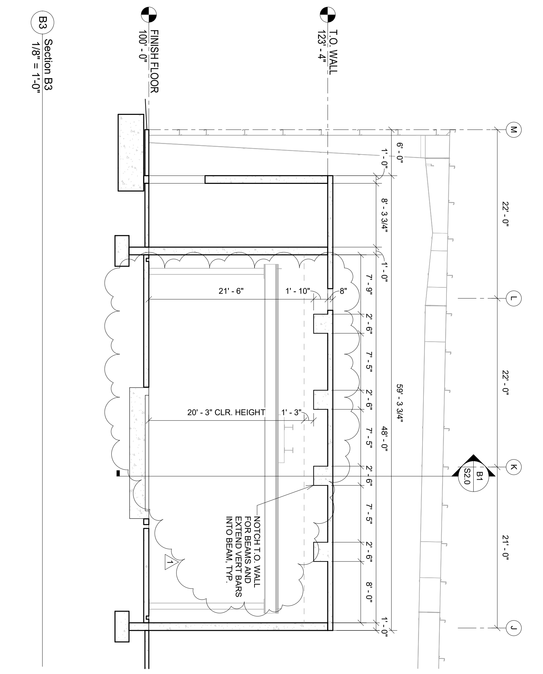
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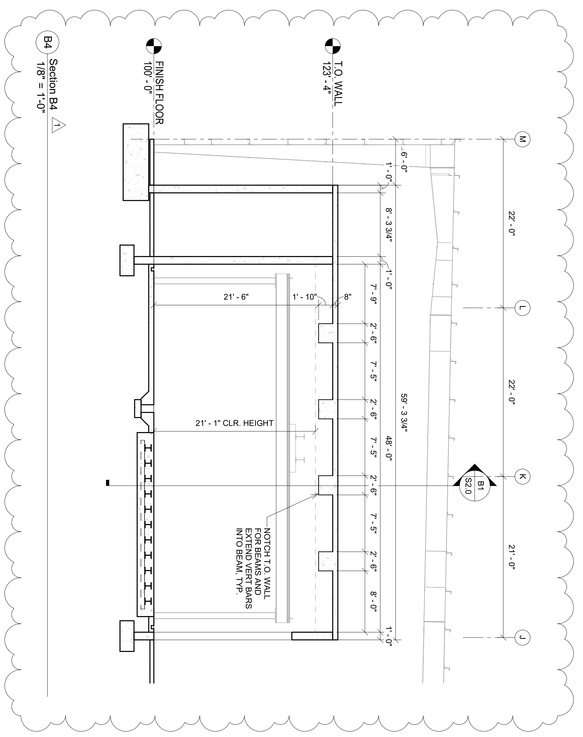
P1 FOUNDATION PLAN - BED PLATE DIMENSIONS
1/4" = 1'-0"



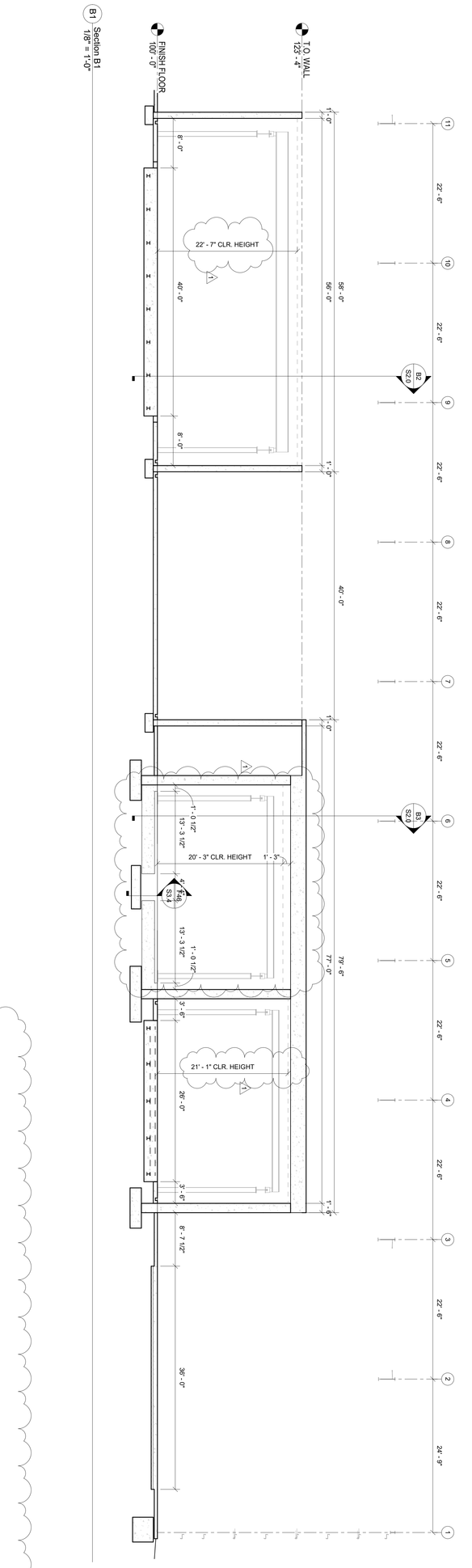
B2 Section B2
1/8" = 1'-0"



B3 Section B3
1/8" = 1'-0"



B4 Section B4
1/8" = 1'-0"



B1 Section B1
1/8" = 1'-0"

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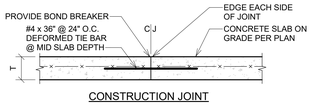
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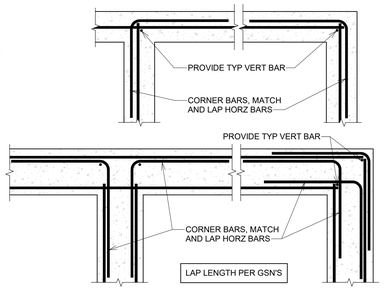
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1	Addendum 1 — 04/03/2026

DATE: 10/31/2025
JOB: 23-3315
SHEET NO.: S2.0

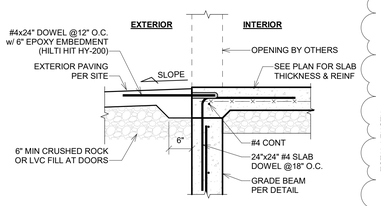
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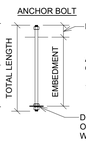
1 SLAB ON GRADE JOINTS
3/4" = 1'-0"



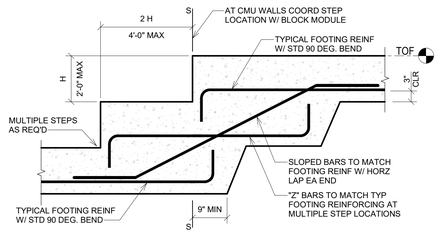
2 TYPICAL WALL REINFORCING
3/4" = 1'-0"



3 TYPICAL REINFORCING AT DOORWAYS
3/4" = 1'-0"

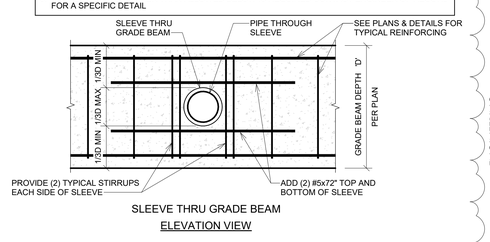


4 ANCHOR BOLTS
NTS



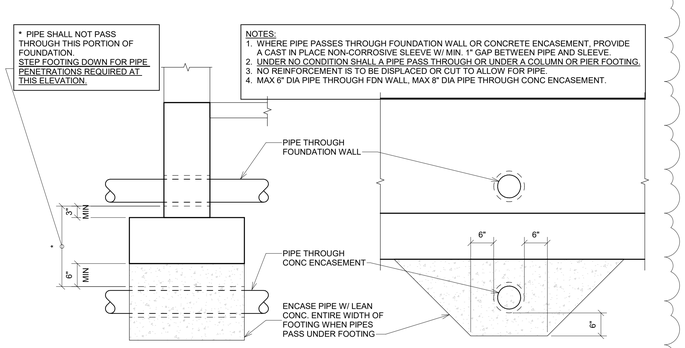
5 TYPICAL STEP FOOTING
3/4" = 1'-0"

NOTES:
1. PROVIDE A CAST IN PLACE NON-CORROSIVE SLEEVE W/ MIN. 1" GAP BETWEEN PIPE AND SLEEVE.
2. UNDER NO CONDITION SHALL A PIPE PASS THROUGH OR UNDER A COLUMN OR PIER.
3. IF PIPE ELEVATION OTHER THAN ALLOWED BELOW IS REQUIRED CONTACT ENGINEER OF RECORD FOR A SPECIFIC DETAIL

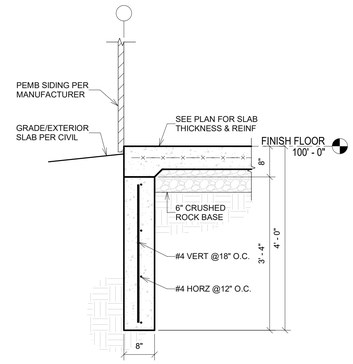


SLEEVE THRU GRADE BEAM
ELEVATION VIEW

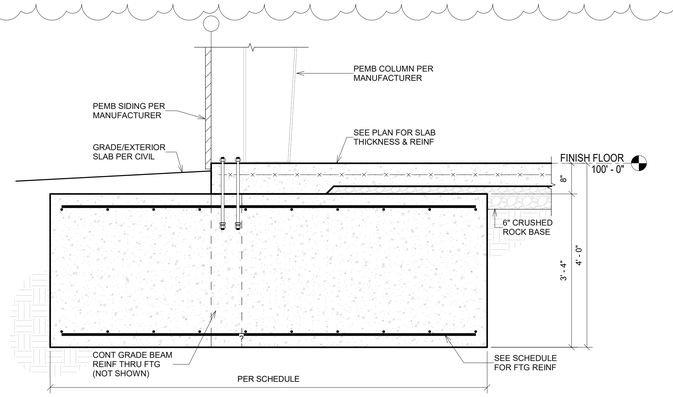
6 PIPE PENETRATION AT GRADE BEAM
3/4" = 1'-0"



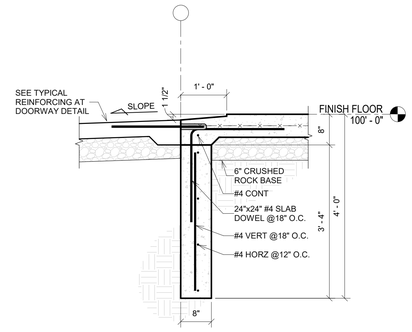
7 PIPE PENETRATION AT FOUNDATION WALL
3/4" = 1'-0"



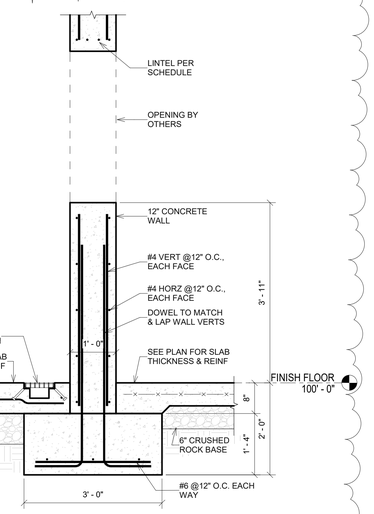
F1 Section F1
3/4" = 1'-0"

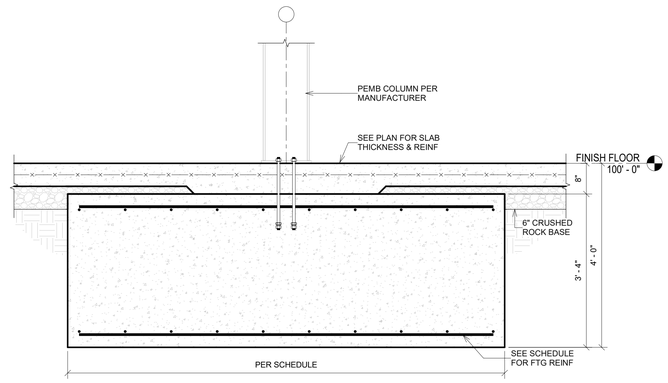


F2 Section F2
3/4" = 1'-0"

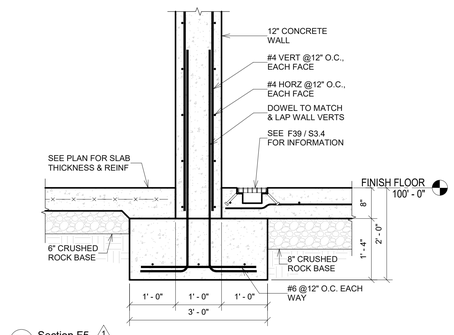


F3 Section F3
3/4" = 1'-0"

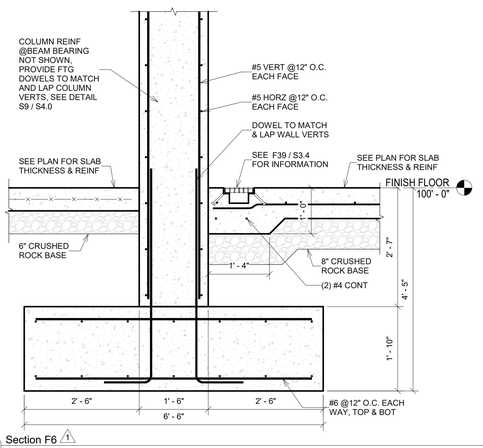




F4 Section F4
3/4" = 1'-0"

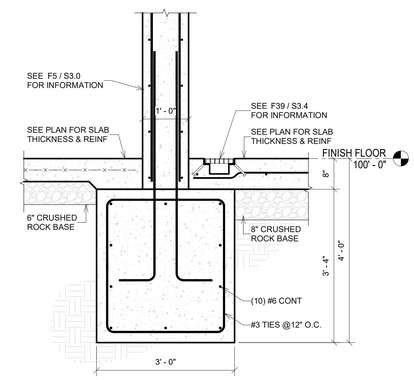


F5 Section F5
3/4" = 1'-0"

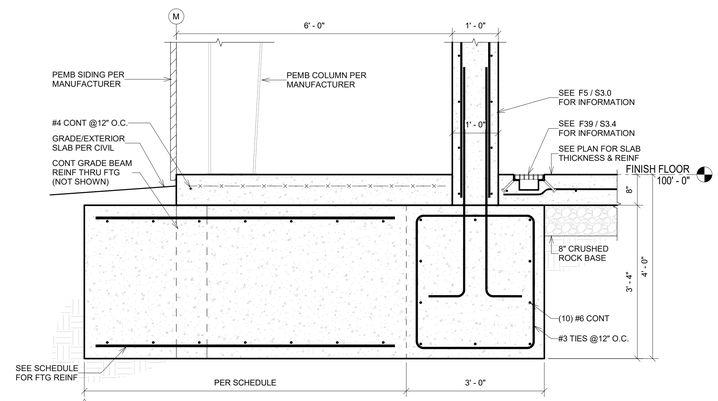


F6 Section F6
3/4" = 1'-0"

F7 Section F7
3/4" = 1'-0"



F8 Section F8
3/4" = 1'-0"



F9 Section F9
3/4" = 1'-0"

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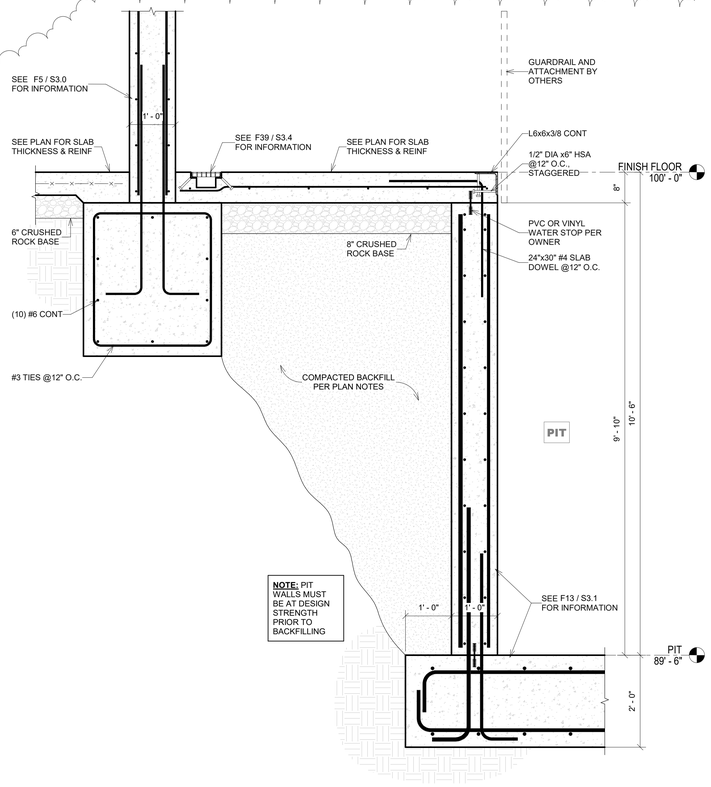
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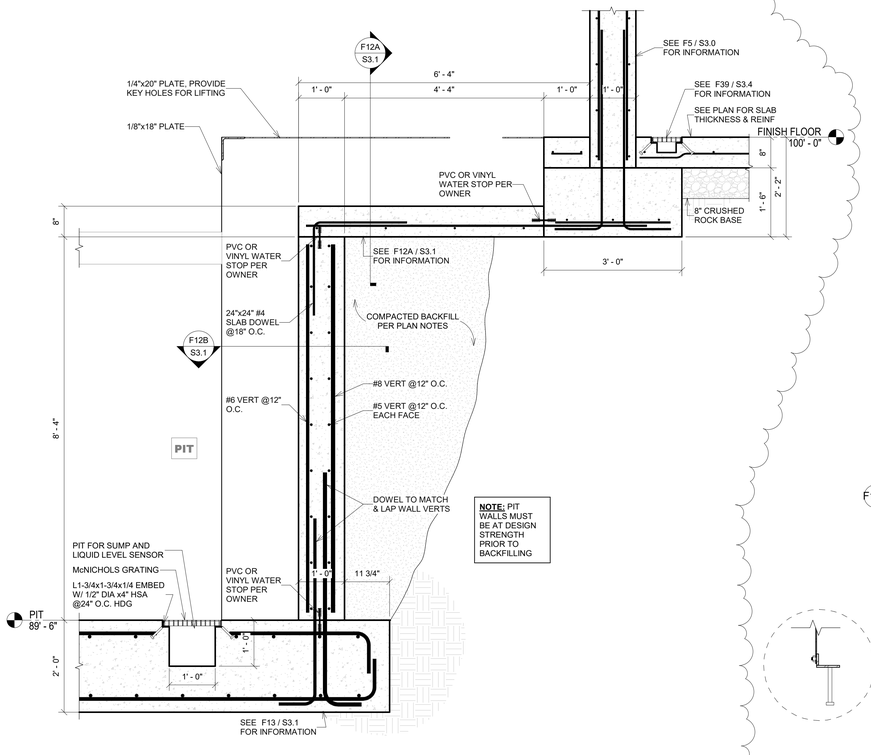
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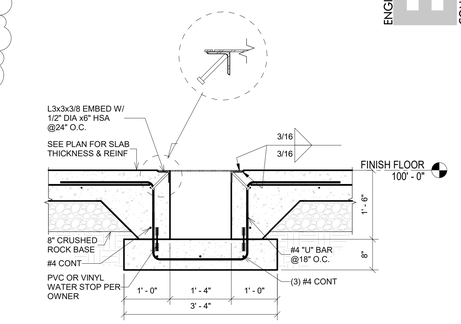
F10 Section F10 3/4" = 1'-0"

NOT USED

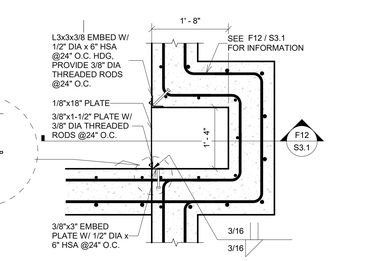


F11 Section F11 3/4" = 1'-0"

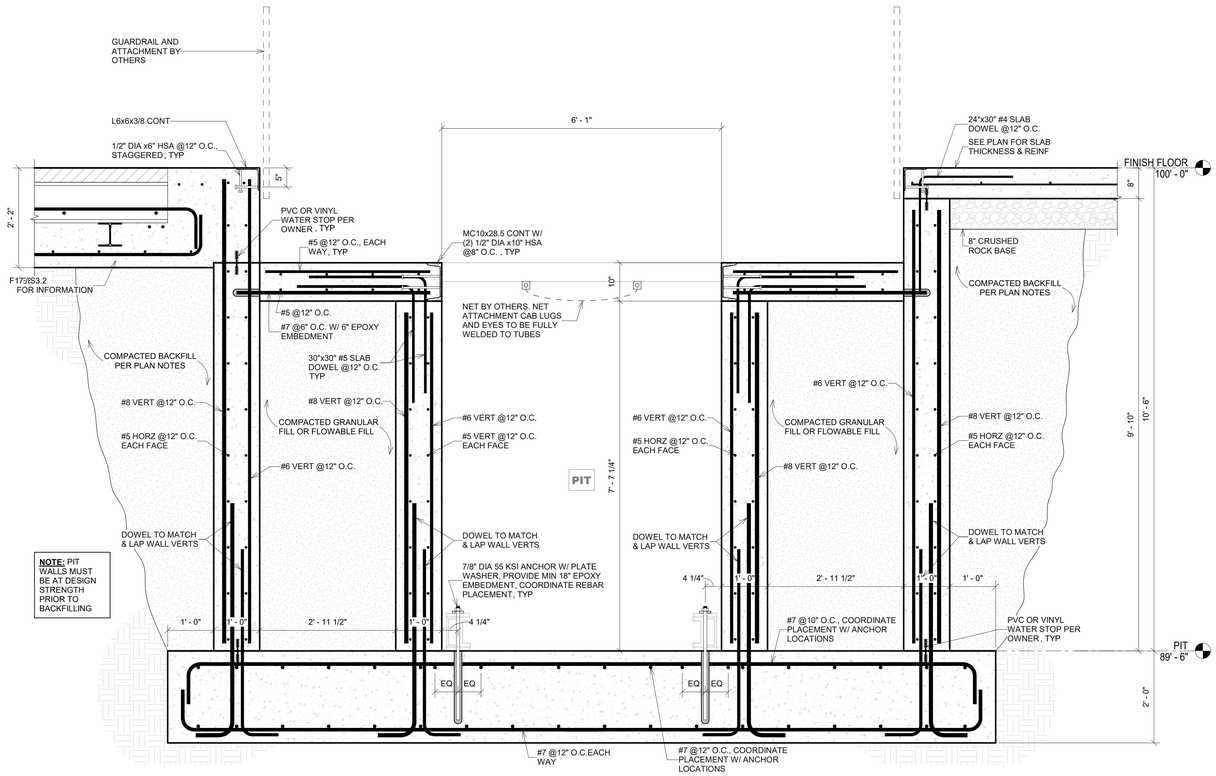
F12 Section F12 3/4" = 1'-0"



F12A Section F12A 3/4" = 1'-0"



F12B Section F12B 3/4" = 1'-0"



F13 Section F13 3/4" = 1'-0"

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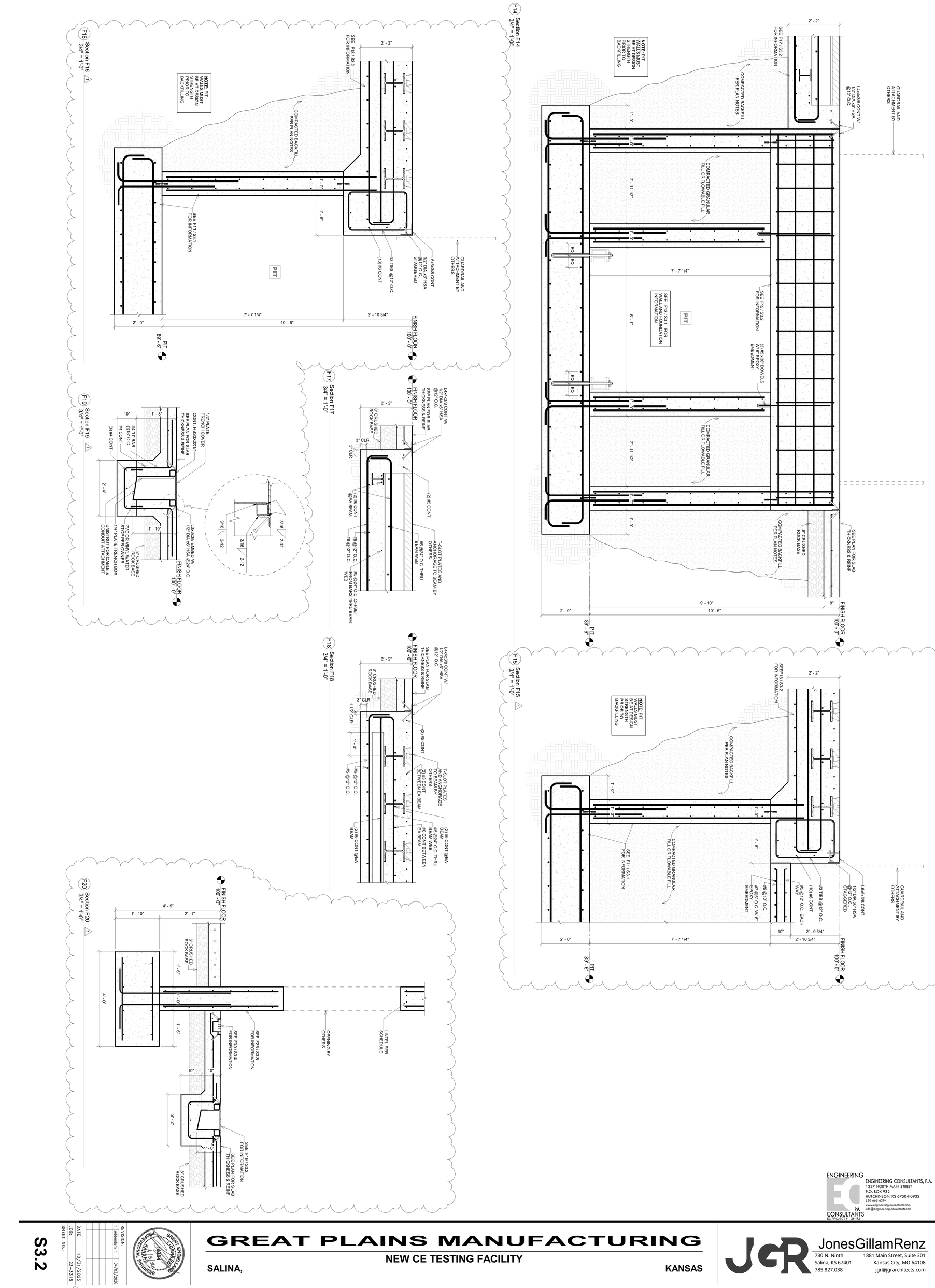
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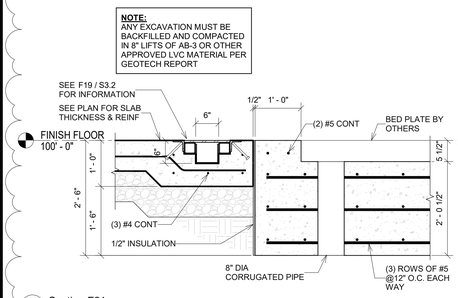
NEW CE TESTING FACILITY

SALINA, KANSAS

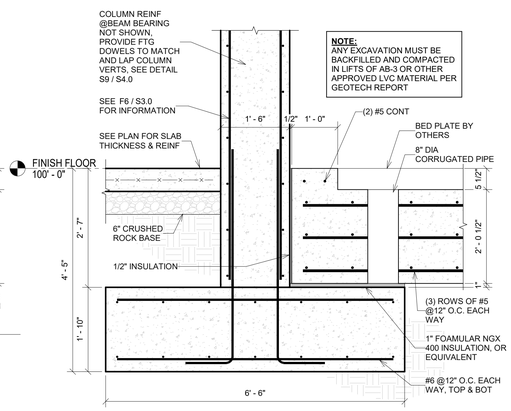
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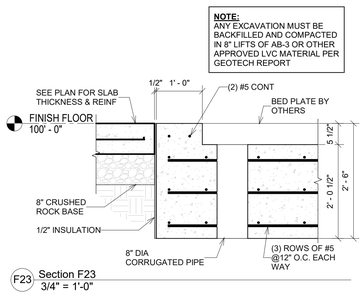
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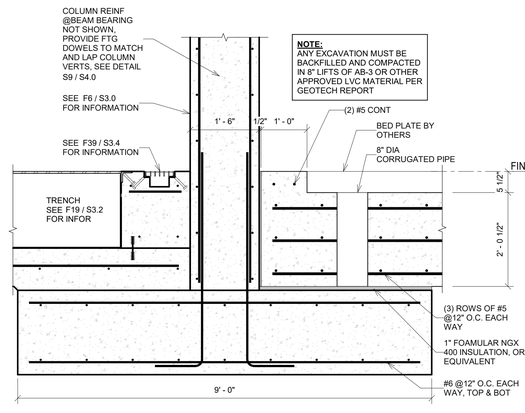
F21 Section F21
3/4" = 1'-0"



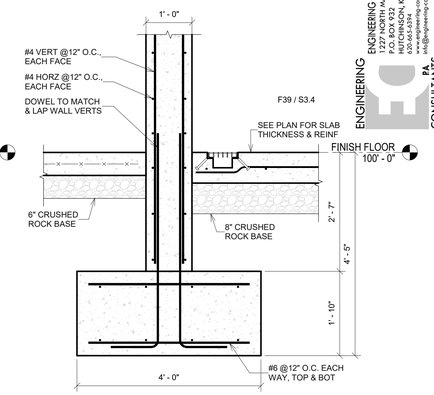
F22 Section F22
3/4" = 1'-0"



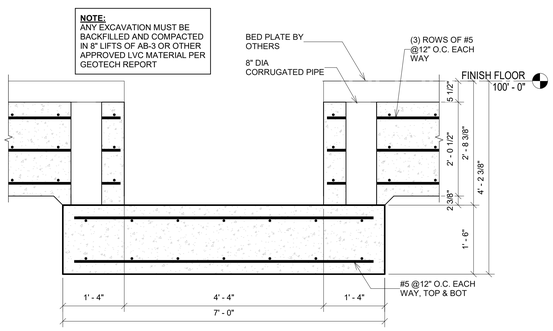
F23 Section F23
3/4" = 1'-0"



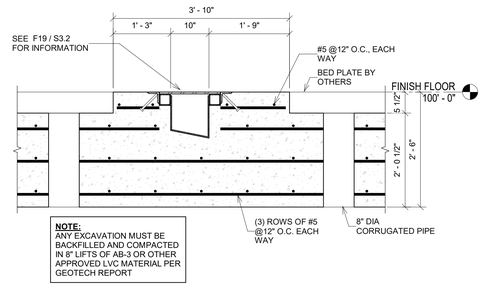
F24 Section F24
3/4" = 1'-0"



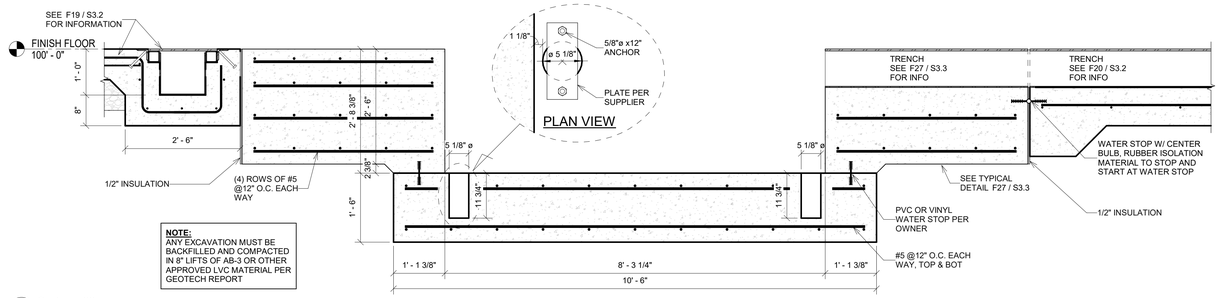
F25 Section F25
3/4" = 1'-0"



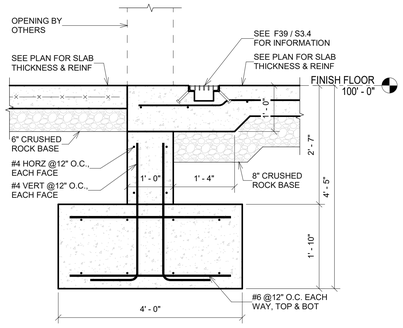
F26 Section F26
3/4" = 1'-0"



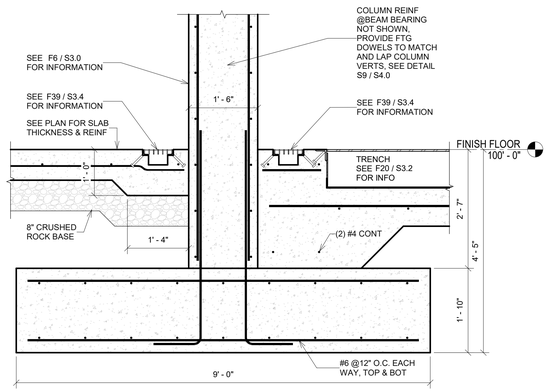
F27 Section F27
3/4" = 1'-0"



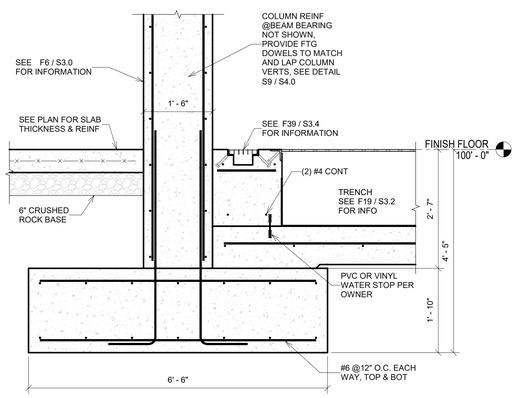
F28 Section F28
3/4" = 1'-0"



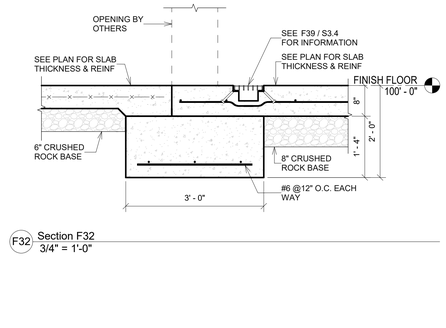
F29 Section F29
3/4" = 1'-0"



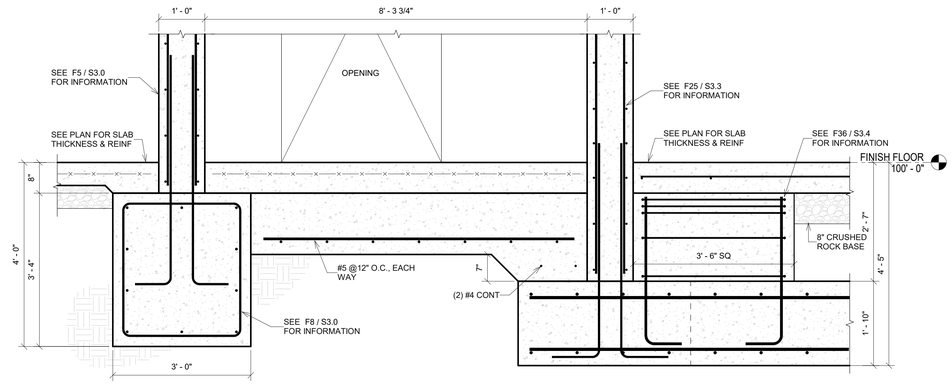
F30 Section F30
3/4" = 1'-0"



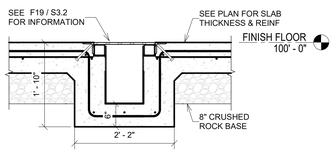
F31 Section F31
3/4" = 1'-0"



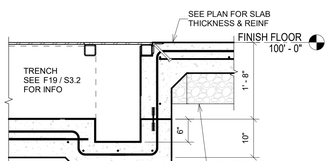
F32 Section F32
3/4" = 1'-0"



F33 Section F33
3/4" = 1'-0"



F34 Section F34
3/4" = 1'-0"



F35 Section F35
3/4" = 1'-0"

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NEW CE TESTING FACILITY

SALINA, KANSAS

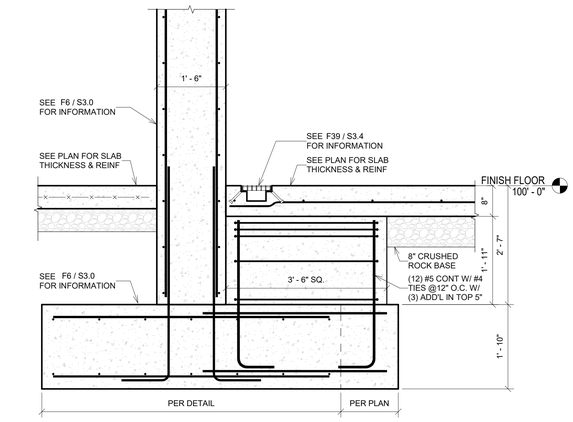
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REVISION:		
1	Addendum 1	04/03/2026

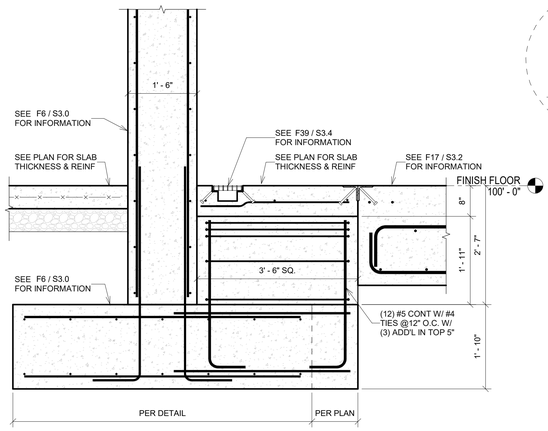
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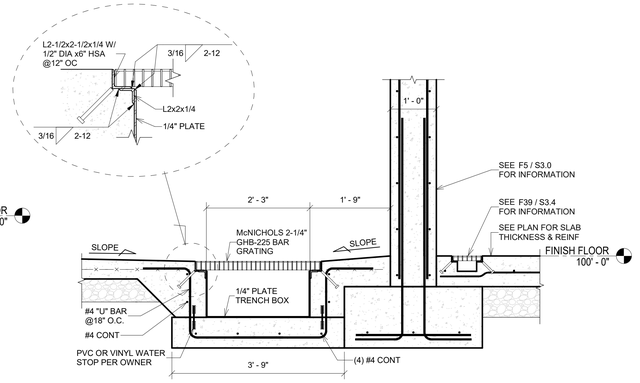
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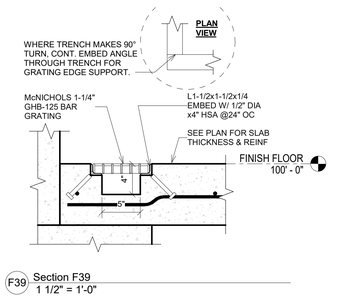
F36 Section F36
3/4" = 1'-0"



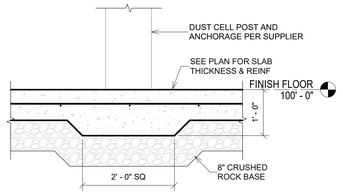
F37 Section F37
3/4" = 1'-0"



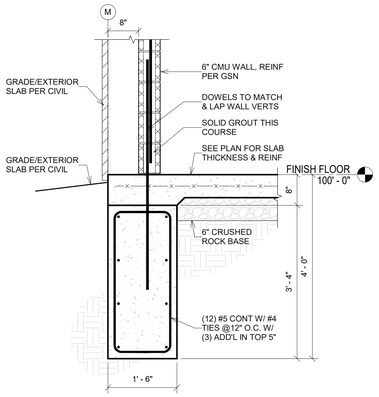
F38 Section F38
3/4" = 1'-0"



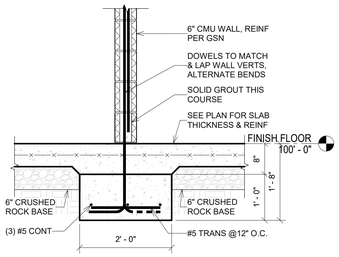
F39 Section F39
1 1/2" = 1'-0"



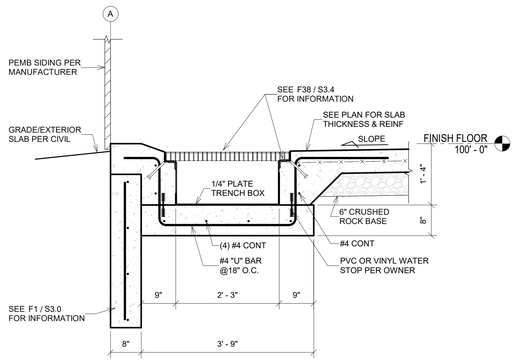
F40 Section F40
3/4" = 1'-0"



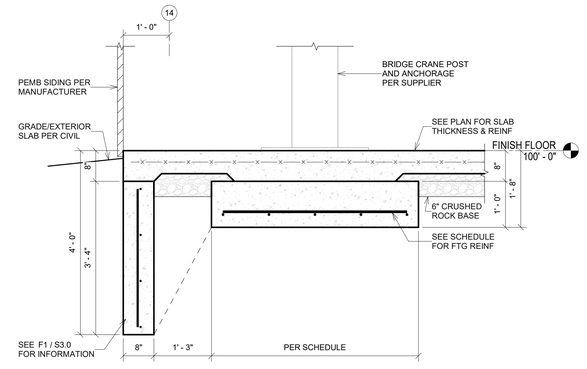
F41 Section F41
3/4" = 1'-0"



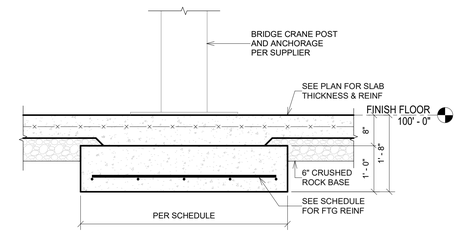
F42 Section F42
3/4" = 1'-0"



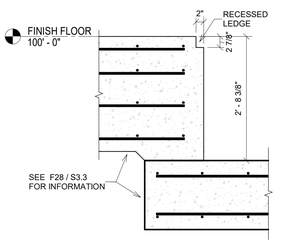
F43 Section F43
3/4" = 1'-0"



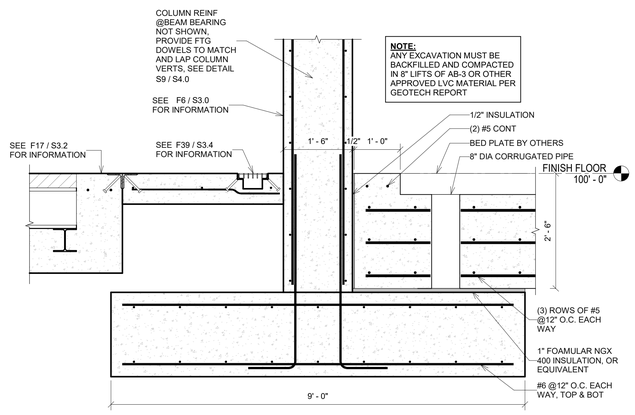
F44 Section F44
3/4" = 1'-0"



F45 Section F45
3/4" = 1'-0"



F46 Section F46
3/4" = 1'-0"



F47 Section F47
3/4" = 1'-0"

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

BRENT ENGELLAND LICENSED ENGINEER 16384 KANSAS PROFESSIONAL ENGINEER

REVISION:		
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EC PROJECT # 24-172

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REVISION:	DATE
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GREAT PLAINS MANUFACTURING

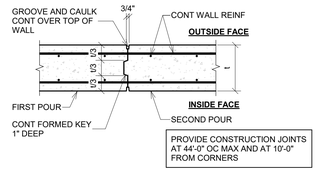
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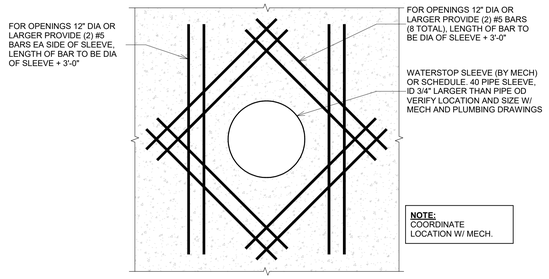
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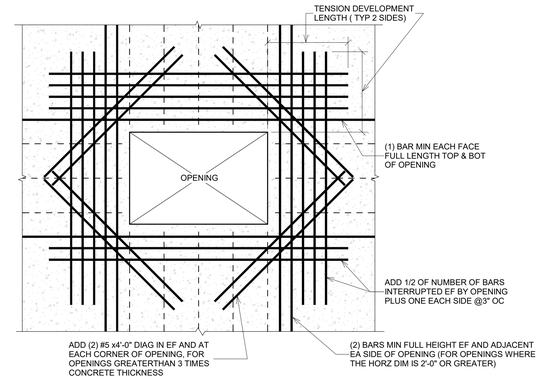


1 TYPICAL BEAM CONNECTION
3/4" = 1'-0"

2 BUILDING WALL CONSTRUCTION JOINT
3/4" = 1'-0"

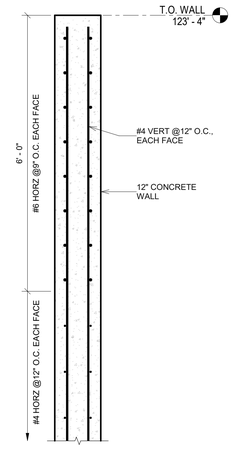


3 WALL REINFORCING DETAIL AT SLEEVE LOCATIONS
NTS



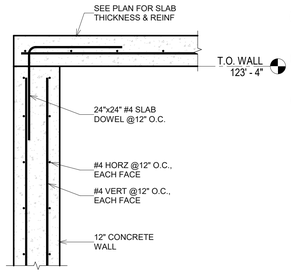
5 WALL & SLAB OPENING DETAIL
NTS

NOT USED

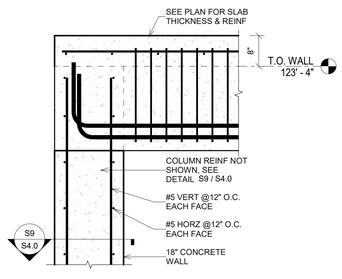


S1 Section S1
3/4" = 1'-0"

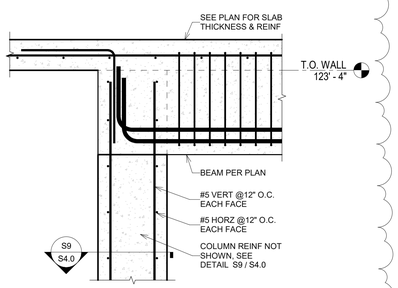
S2 Section S2 (NOT USED)
3/4" = 1'-0"



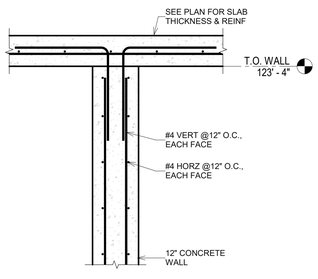
S3 Section S3
3/4" = 1'-0"



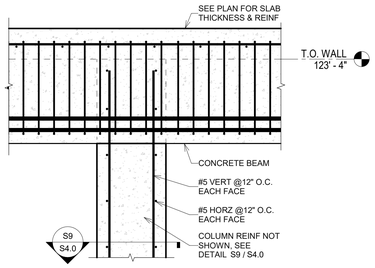
S4 Section S4
3/4" = 1'-0"



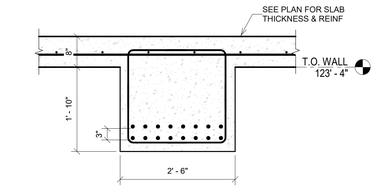
S5 Section S5
3/4" = 1'-0"



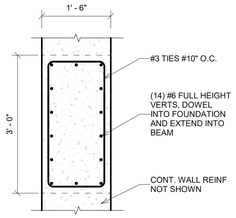
S6 Section S6
3/4" = 1'-0"



S7 Section S7
3/4" = 1'-0"



S8 Section S8
3/4" = 1'-0"



S9 SECTION S9
3/4" = 1'-0"

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA, KANSAS

BRENT ENGELLAND LICENSED 16384 KANSAS PROFESSIONAL ENGINEER

REVISION:		
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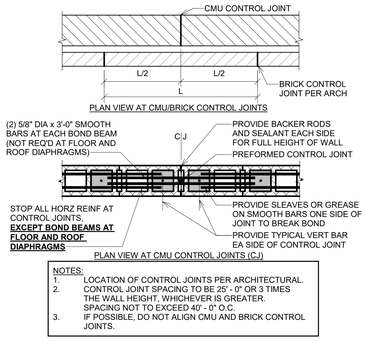
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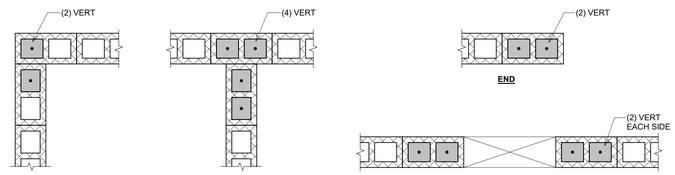
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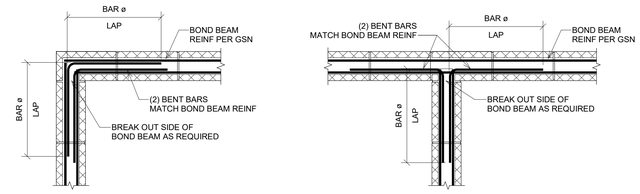


NOTES:
1. LOCATION OF CONTROL JOINTS PER ARCHITECTURAL.
2. CONTROL JOINT SPACING TO BE 25' - 0" OR 3 TIMES THE WALL HEIGHT, WHICHEVER IS GREATER. SPACING NOT TO EXCEED 40' - 0" O.C.
3. IF POSSIBLE, DO NOT ALIGN CMU AND BRICK CONTROL JOINTS.

1 MASONRY CONTROL JOINTS
3/4" = 1'-0"



2 MAS 102 - TYPICAL CMU VERTICAL REINF. DETAIL
3/4" = 1'-0"



3 MAS 103 - TYPICAL CMU BOND BEAM DETAILS
3/4" = 1'-0"

NOT USED

4 SHELTER PIPE OPENING SHROUD
3/4" = 1'-0"

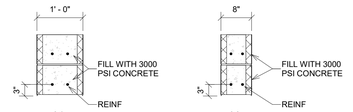
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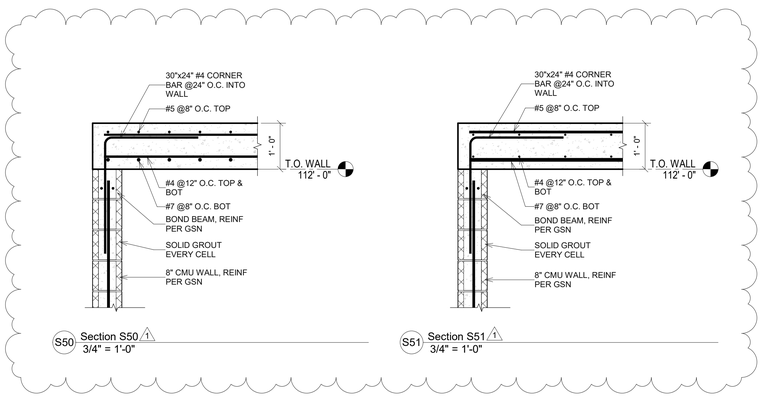
5 MAS 107 - DUCT LINTEL DETAIL
3/4" = 1'-0"

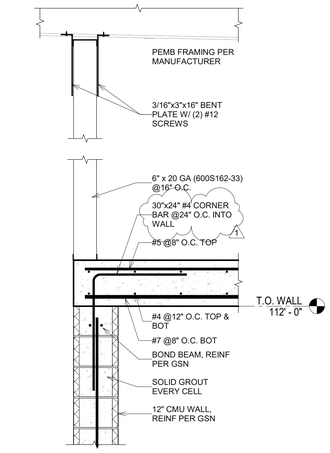
CMU LINTEL SCHEDULE

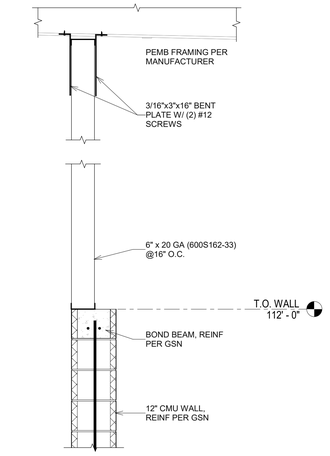
MK NO.	LINTEL		REMARKS
	SIZE	PLATE OR ANGLE	
L0	12"x24" BOND BEAM W/ (2) #5		NOTE 1 & 2
L1	12"x16" BOND BEAM W/ (2) #5		NOTE 1 & 2
L2	8"x16" BOND BEAM W/ (2) #5		NOTE 1 & 2

LINTEL SCHEDULE NOTES:
1. FILL CMU LINTELS WITH 3,000 PSI CONCRETE.
2. ALL CMU LINTELS SHALL HAVE 8" MIN. BEARING EA SIDE OF OPENING.









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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA, KANSAS

BRENT ENGELLAND LICENSED 16384 KANSAS PROFESSIONAL ENGINEER

REVISION:		
1	Addendum 1	04/03/2026

DATE: 10/31/2025
JOB: 23-3315
SHEET NO.:

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Project 24056 **05/01/2026**

General Plan Symbols

- Plan Revision Number
- Detail Number on Sheet / Sheet Number Where Detail is Placed
- Keynote Symbol
- Continuation Symbol
- Point Where New Connects To Existing
- Room / 1 — Room Name / Number
- Area Being Demolished
- Area Not In Contract
- Electrical Equipment. Do not route HVAC installation above or below equipment. Maintain working clearance as indicated by dashed line.

HVAC Symbols

- 24"/12" — Sq. Duct Size (Width/Height)
- 24"x12"FO — Oval Duct Size (Width x Height)
- 18"Ø — Round Duct Size (Diameter)
- (E) — Existing Duct To Remain
- Duct To Be Demolished
- S/A — Supply Air
- V/A — Ventilation Air
- O/A — Outdoor Air
- R/A — Return Air
- T/A — Transfer Air
- E/A — General Exhaust Air
- KED — Kitchen Exhaust Duct
- FLUE — Flue Gas Vent
- C/A — Combustion Air
- Rect. Supply Duct Rise / Drop
- Round Supply Duct Rise / Drop
- Rect. Return Duct Rise / Drop
- Round Return Duct Rise / Drop
- Rect. Exhaust Duct Rise / Drop
- Round Exhaust Duct Rise / Drop

Grille, Register, Diffusers

Square Ceiling Diffuser — CD- 500 / 10'Ø/24x24 — Type (See Schedule); Airflow; Neck Size / Module Size

Round Ceiling Diffuser — CD11 100 / 6"Ø / TYP. X 4 — Type (See Schedule); Airflow; Neck Size; Type Count for Space

Sidewall Supply Grille — SGS 300 / 18"/6" / AFF:0" — Type (See Schedule); Airflow; Nominal Duct Size; Mounting Elevation (Centerline)

Linear Diffuser — SD- 200 / 8'Ø/2x/4'-0"L — Type (See Schedule); Airflow; Neck Size/ Slot(s)/ Active Length

Sidewall Return Grille — RG6 200 / 12"/6"/--- / AFF:0" — Type (See Schedule); Airflow; Nominal Duct Size; Mounting Elevation (Centerline)

Ceiling Return — CR2 200 / 8'Ø/24x24 — Type (See Schedule); Airflow; Neck Size / Module Size

Mechanical Equipment

- RTU-1 — Unit Identity
- (E)AHU-2 — Existing to Remain Equipment
- (R)AHU-3 — Existing Relocated Equipment
- Equipment By Others (Refer To Other Disciplines)

Mechanical Control Devices

- T — Thermostat
- H — Humidistat
- TS — Temperature Sensor
- HS — Humidity Sensor
- CO2 — Carbon Dioxide Detector
- HZG — Hazardous Gas Detector

Damper Types

- B — Manual Damper
- M — Motorized Damper
- BD — Backdraft Damper
- S — Smoke Damper
- F — Fire Damper
- F/S — Comb. Fire/ Smoke Damper

Abbreviations

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MUA	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

Equipment Abbreviations

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

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GENERAL HVAC NOTES

A. CONTRACTOR SHALL LOCATE THERMOSTATS AND HUMIDISTATS AT 4'-0" AFF UNLESS NOTED OTHERWISE. MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 8" FROM LIGHT SWITCHES.
B. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER. WHERE INSTALLED ABOVE CEILINGS, CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH MINIMUM 1/2" FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET.
C. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.
D. COORDINATE THE EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH LIGHTING.
E. PROVIDE DIFFUSERS AND REGISTERS WITH 4-WAY BLOW PATTERN UNLESS OTHERWISE NOTED.
F. HVAC EQUIPMENT SHALL NOT BE UTILIZED UNTIL ALL DUCT PRODUCING CONSTRUCTION ACTIVITY HAS BEEN COMPLETED. CONTRACTOR SHALL BE REQUIRED TO OBTAIN APPROVAL FROM OWNER PRIOR TO EQUIPMENT STARTUP, AND TO REPLACE FILTERS ON HVAC EQUIPMENT UPON FINAL COMPLETION.
G. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
H. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
I. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
J. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOFS WITHOUT A 42" HIGH PARAPET OR GUARD RAIL. WHERE PROVIDING 10'-0" SEPARATION FROM ROOF EDGE IS NOT POSSIBLE, PROVIDE PERMANENT FALL ARREST ANCHORS COMPLIANT WITH ANSI/ASSP Z359.1. COORDINATE WITH GENERAL CONTRACTOR.
K. LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT OUTSIDE OF THE NEC REQUIRED CLEAR SPACE ABOVE AND AROUND ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR.
L. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE U.L. LISTED. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED ASSEMBLIES.
M. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
N. MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE, VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.
O. TRANSITION FROM PIPING AND DUCTWORK SIZES SHOWN TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
P. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
Q. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
R. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
S. PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT AND MATERIALS. SUBSTITUTE EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL SHALL BE SUBJECT TO REPLACEMENT AT CONTRACTOR'S EXPENSE.
T. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.
U. PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.

GENERAL MECHANICAL DEMOLITION NOTES

A. ALL PIPING TAKEN OUT OF SERVICE SHALL BE REMOVED. WHERE PIPING TO BE REMOVED IS CONNECTED TO EXISTING PIPING TO REMAIN, PIPING SHALL BE REMOVED BACK TO MAIN AND CAPPED, UNLESS INDICATED OTHERWISE. CONTRACTOR SHALL DISPOSE OF PIPING OR DELIVER TO OWNER, AS DIRECTED BY OWNER.
B. WHERE PIPING TAKEN OUT OF SERVICE IS LOCATED BELOW SLAB AND IS UNABLE TO BE REMOVED, CAP BELOW SLAB.
C. ALL DUCTWORK TAKEN OUT OF SERVICE SHALL BE REMOVED.
D. COORDINATE CUTTING, PATCHING OF EXISTING WALLS, CEILINGS, ROOF AND FLOORS AFFECTED BY MECHANICAL DEMOLITION WITH G.C.
E. ALL EQUIPMENT TAKEN OUT OF SERVICE SHALL BE REMOVED. EQUIPMENT SHALL BE DELIVERED TO OWNER OR DISPOSED OF AS DIRECTED BY OWNER.
F. REMOVE ALL MECHANICAL INSTALLATION FROM PROJECT AREA, UNLESS REQUIRED FOR NEW WORK OR EXISTING INSTALLATION NOT AFFECTED BY REMODEL. COORDINATE WITH OWNER AND G.C.
G. SERVICES TO ITEMS NOT REMOVED AS PART OF THIS WORK SHALL BE RESTORED UPON COMPLETION OF THIS WORK TO FULLY OPERATIONAL CONDITION.
H. NOT ALL ITEMS REQUIRED TO BE DEMOLISHED MAY BE INDICATED ON DRAWINGS. ALL DEMOLITION OF AFFECTED SPACE SHALL BE PERFORMED AS IF INDICATED.
I. FIELD VERIFY EXACT LOCATION OF ALL EXISTING MECHANICAL INSTALLATION INDICATED ON DRAWINGS.
J. ALL ITEMS TO BE RE-USED OR RELOCATED SHALL BE CLEANED, REPAIRED, AND RESTORED TO LIKE NEW CONDITION PRIOR TO RE-USE.

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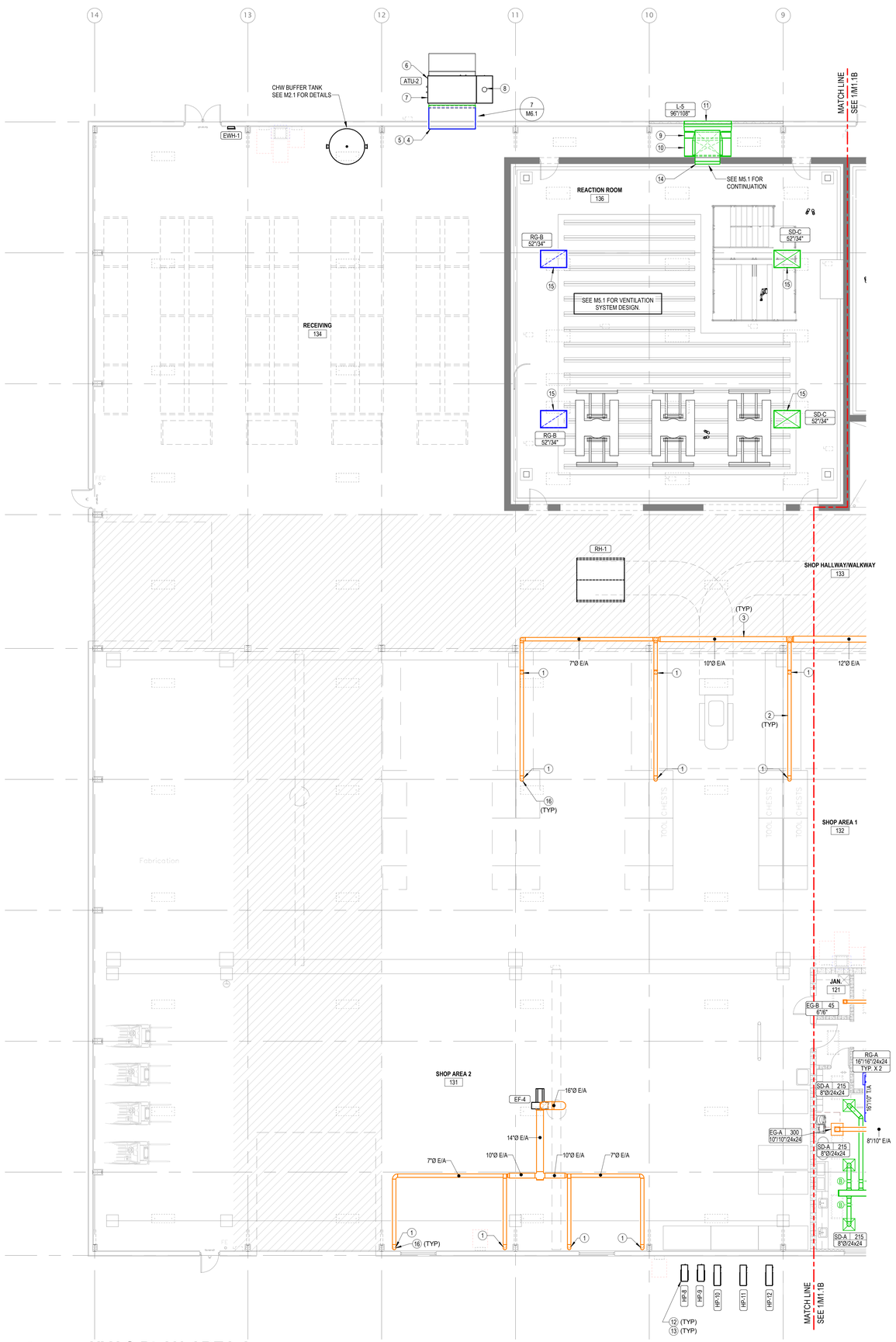
CRAIG TREAT 13396 05/01/2026 KANSAS PROFESSIONAL ENGINEER

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1 HVAC PLAN-AREA A

1/8" = 1'-0"

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Project 24056 — 05/01/2026

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	7"Ø DUCT DOWN TO 3' A.F.F. PROVIDE MODEL SDA-6 DOWN DROP ASSEMBLY WITH 6"Ø PLUG-IN HOSE COUPLER, BLAST GATE SHUT-OFF AND FLANGE SET.
2	ROUTE HORIZONTAL BRANCH DUCT BELOW CRANE AND SUPPORT FROM TECH BAY FLOOR MOUNTED SUPPORT FRAME. COORDINATE EXACT ROUTING WITH OWNER.
3	ROUTE MAIN EXHAUST DUCT ABOVE AND OUTSIDE CRANE. COORDINATE EXACT LOCATION WITH ALL BUILDING SYSTEMS.
4	ROUTE DUCTWORK FROM SUPPLY AND RETURN CONNETCIONS AT 'ARU' TO SUPPLY AND RETURN GRILLES PROVIDED BY EQUIPMENT MFGR. COORDINATE DUCTWORK AND GRILL LOCATIONS WITH STRUCTURE
5	COORDINATE DUCT PENETRATIONS THROUGH EXTERIOR WALL WITH STRUCTURE/GIRTS. FLASH AND SEAL WEATHER TIGHT.
6	MOUNT EQUIPMENT ON MIN. 6" THICK LEVEL CONCRETE PAD WITH #4 BARS AT 18" O.C. EACH WAY.
7	PROVIDE TRAPPED CONDENSATE DRAIN PIPED TO GRADE. PROVIDE SPLASH BLOCK AND FIELD COORDINATE EXACT LOCATION OF DISCHARGE WITH ARCHITECT.
8	PROVIDE 12"DIA FLUE WITH CAP IN ACORDANCE WITH MFGR'S INSTALLATION INSTRUCTIONS.
9	PROVIDE FILTER BANK FOR 4 WIDE x 4 HIGH 24"x24" FILTERS EQUAL TO CAMFIL FARR GLIDEPACK UNITRACK13.
10	PROVIDE PLENUM BOX WITH 24"W x 60"H ACCESS DOOR.
11	MOUNT BOTTOM OF LOUVER 10'-0" A.F.G.
12	MOUNT OUTDOOR HEAT PUMP ON 24" STAND EQUAL TO QUICKSLING ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE WITH G.C.
13	PROVIDE CONTROL CABLE FROM HEAT PUMP UNIT TO MATCHING INDOOR UNIT.
14	TRANSITION AND CONNECT TO DUCT SILENCER PROVIDED BY OTHERS. FIELD COORDINATE EXACT REQURIEMENTS WITH SIERRA.
15	COORDINATE SUPPLY GRILLE INSTALLATION WITH TEST CELL EQUIPMENT PROVIDER AND OTHER TRADES.
16	PROVIDE 6'Ø x 15' HT-1200/HTN COMBO HOSE ASSEMBLY WITH CTA-6 ADAPTER AND COUPLER AND PORTABLE STORAGE CART FOR EXHAUST HOSE ASSEMBLY. PROVIDE TOTAL QUANTITY OF 13. COORDINATE EXACT ACCESSORIES AND QUANTITIES WITH OWNER PRIOR TO ORDERING.

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS

CRAIG THOMAS
13396
05/01/2026
KANSAS
PROFESSIONAL ENGINEER

REVISIONS:

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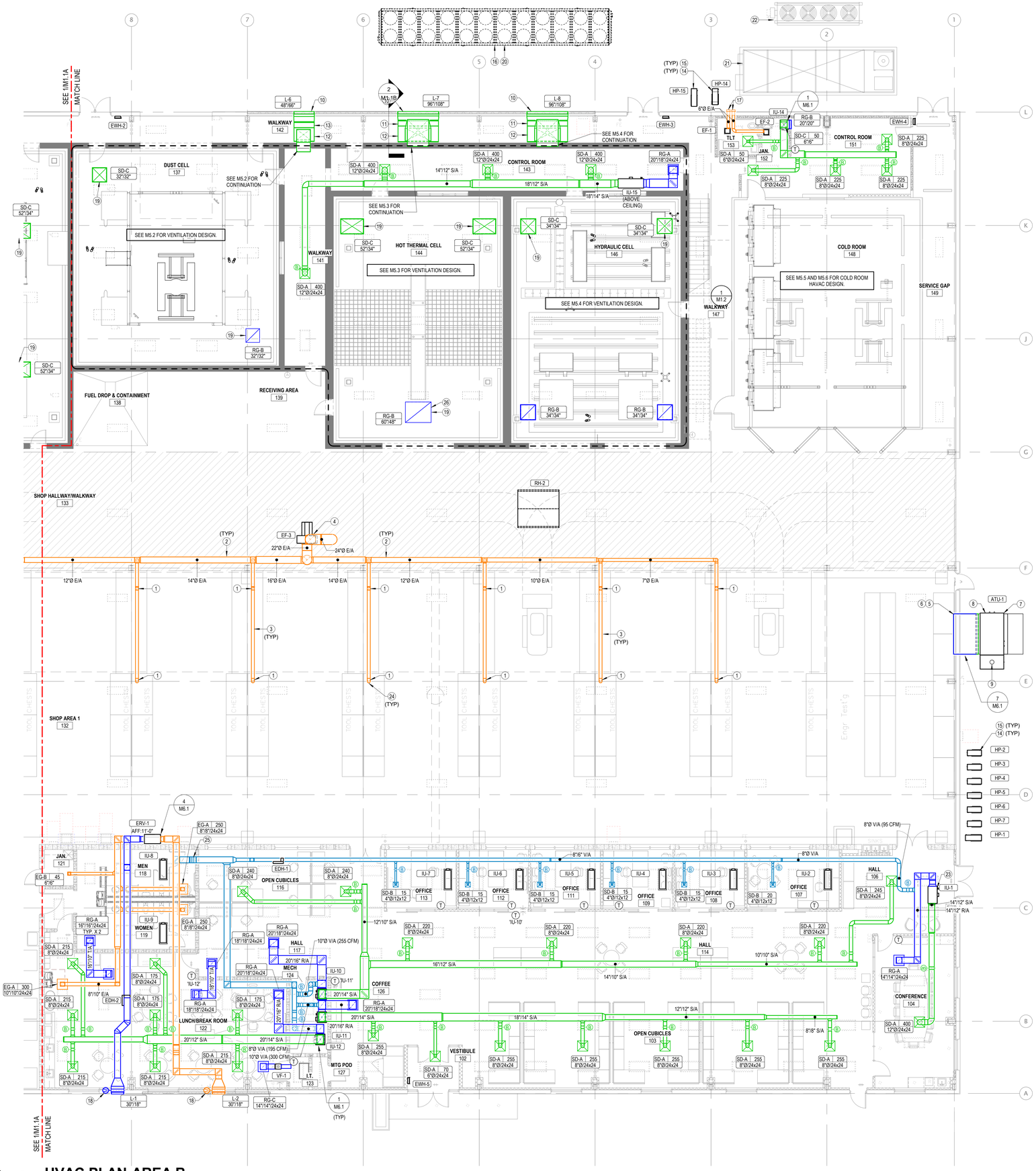
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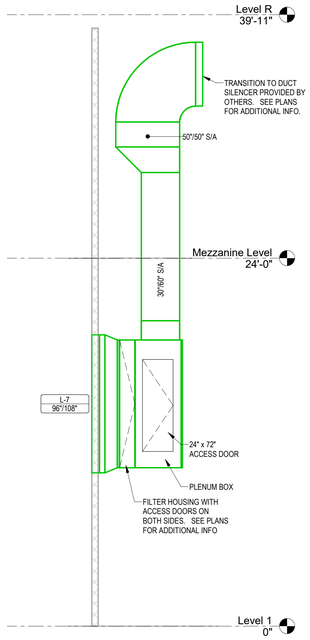
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1	7"Ø DUCT DOWN TO 3' A.F.F. PROVIDE MODEL SDA-6 DOWN DROP ASSEMBLY WITH 6"Ø PLUG-IN HOSE COUPLER, BLAST GATE SHUT-OFF AND FLANGE SET.
2	ROUTE MAIN EXHAUST DUCT ABOVE AND OUTSIDE CRANE. COORDINATE EXACT LOCATION WITH ALL BUILDING SYSTEMS.
3	ROUTE HORIZONTAL BRANCH DUCT BELOW CRANE AND SUPPORT FROM TECH BAY FLOOR MOUNTED SUPPORT FRAME. COORDINATE EXACT ROUTING WITH OWNER.
4	MOUNT EXHAUST FAN SUSPENDED FROM STRUCTURE. ROUTE EXHAUST DISCHARGE UP THROUGH ROOF AND TERMINATE WITH GOOSENECK. PROVIDE ROOF CURB AT ROOF PENETRATION PENETRATION. COORDINATE REQUIRMENTS WITH G.C.
5	ROUTE DUCTWORK FROM SUPPLY AND RETURN CONNETCIONS AT "ARU" TO SUPPLY AND RETURN GRILLES PROVIDED BY EQUIPMENT MFGR. COORDINATE DUCTWORK AND GRILL LOCATIONS WITH STRUCTURE
6	COORDINATE DUCT PENETRATIONS THROUGH EXTERIOR WALL WITH STRUCTURE/GIRTS. FLASH AND SEAL WEATHER TIGHT.
7	MOUNT EQUIPMENT ON MIN. 6" THICK LEVEL CONCRETE PAD WITH #4 BARS AT 18" O.C. EACH WAY.
8	PROVIDE TRAPPED CONDENSATE DRAIN PIPED TO GRADE. PROVIDE SPLASH BLOCK AND FIELD COORDINATE EXACT LOCATION OF DISCHARGE WITH ARCHITECT.
9	PROVIDE 12"DIA FLUE WITH CAP IN ACORDANCE WITH MFGR'S INSTALLATION INSTUCTIONS.
10	MOUNT BOTTOM OF LOUVER 10'-0" A.F.G.
11	PROVIDE FILTER BANK FOR 4 WIDE x 4 HIGH 24"x24" FILTERS EQUAL TO CAMFIL FARR GLIDEPACK UNITRACK13.
12	PROVIDE PLENUM BOX WITH 24"W x 60"H ACCESS DOOR.
13	PROVIDE FILTER BANK FOR 2 WIDE x 3 HIGH 24"x24" FILTERS EQUAL TO CAMFIL FARR GLIDEPACK UNITRACK13.
14	MOUNT OUTDOOR HEAT PUMP ON 24" STAND EQUAL TO QUICKSLING ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE WITH G.C.
15	PROVIDE CONTROL CABLE FROM HEAT PUMP UNIT TO MATCHING INDOOR UNIT.
16	PROVIDE TRANE MODEL RTAF-410 CHILLER.
17	PROVIDE 6" DIAMETER WALL CAP WITH BACKDRAFT DAMPER AND BIRDS SCREEN
18	PROVIDE 120V MOTORIZED LOW LEAKAGE DAMPER AT LOUVER. COORDINATE INSTALLATION WITH E.C. AND CONTROLS CONTRACTOR.
19	COORDINATE SUPPLY GRILLE INSTALLATION WITH TEST CELL EQUIPMENT PROVIDER AND OTHER TRADES.
20	SEE STRUCTURAL DRAWINGS FOR EQUIPMENT PAD DETAILS.
21	COLD ROOM COMPRESSOR RACK PROVIDED AND INSTALLED BY TRANE-FARRAR.
22	COLD ROOM COOLER PROVIDED AND INSTALLED BY TRANE-FARRAR.
23	LOCATE INDOOR UNIT "IU" ABOVE CEILING. SEE E-M6.1.
24	PROVIDE 6"Ø x 15' HT-1200/HTN COMBO HOSE ASSEMBLY WITH CTA-6 ADAPTER AND COUPLER AND PORTABLE STORAGE CART FOR EXHAUST HOSE ASSEMBLY. PROVIDE TOTAL QUANTITY OF 13. COORDINATE EXACT ACCESSORIES AND QUANTITIES WITH OWNER PRIOR TO ORDERING.
25	TRANSITION DUCTWORK UP WITH 45 DEGREE ELBOWS.
26	TRANSITION FROM FULL SIZED DUCT CONNECTION AT GRILLE TO 52"x34" MEZZANINE OPENING SIZE. COORDINATE WITH STRUCTURAL ENGINEER.



1 HVAC PLAN-AREA B
1/8" = 1'-0"



2 HVAC DUCT SECTION
1/4" = 1'-0"

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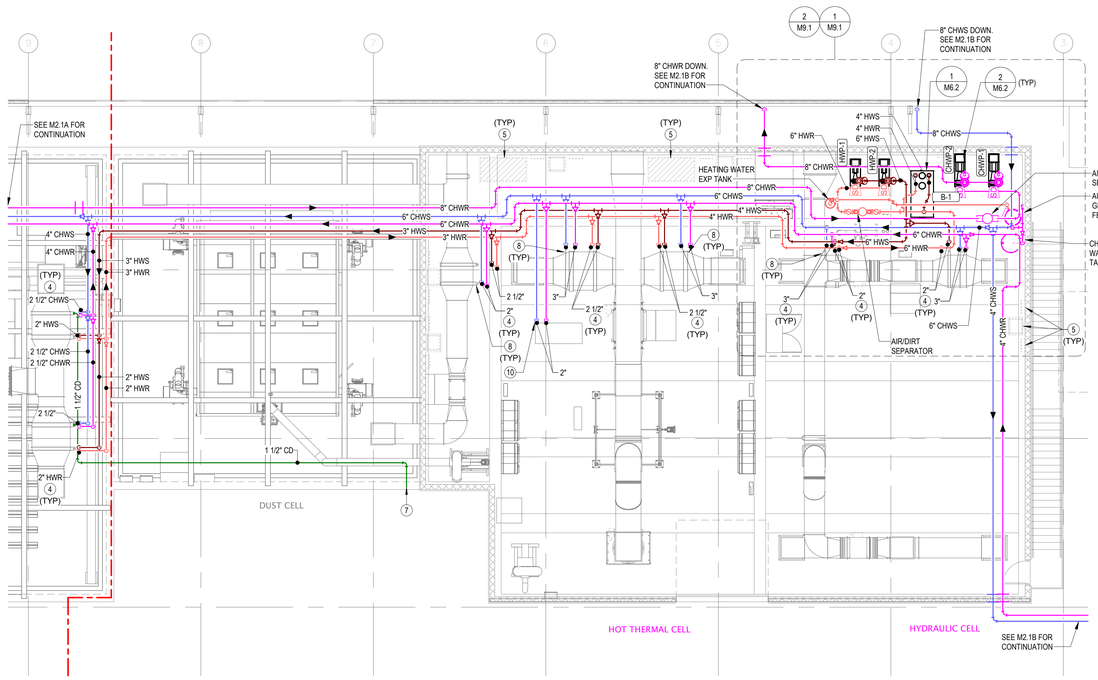
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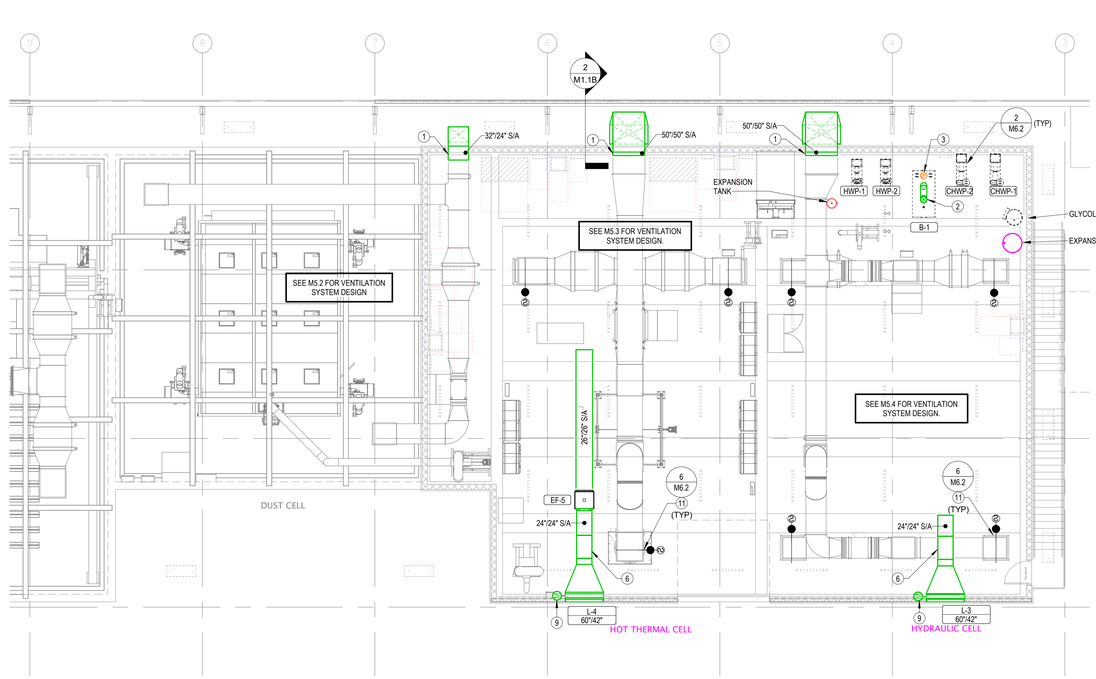
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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	TRANSITION AND CONNECT TO DUCT SILENCER PROVIDED BY OTHERS. FIELD COORDINATE EXACT REQUIREMENTS WITH SIERRA.
2	PROVIDE 8" PVC COMBUSTION AIR INTAKE DUCT FROM BOILER UP TO ROOF TERMINATION. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND PROVIDE MANUFACTURER'S RECOMMENDED ROOF CAP. COORDINATE ROOF PENETRATION REQUIREMENTS WITH G.C.
3	PROVIDE 8" POLYPROPYLENE FLUE UP TO ROOF TERMINATION. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND PROVIDE MANUFACTURER'S RECOMMENDED ROOF CAP. COORDINATE ROOF PENETRATION REQUIREMENTS WITH G.C.
4	INSTALL HW/CHW COIL PROVIDED BY OTHERS. INSTALL VALVES AND TEMPERATURE SENSORS PROVIDED BY SIERRA. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIER. SEE M5.1, M5.2, M5.3, AND M5.4 FOR ADDITIONAL INFO.
5	DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. FIELD COORDINATE ROUTING WITH OTHER TRADES.
6	24"x24" DUCT SILENCER EQUAL TO PRICE MODEL RM36/6B, 5770 cfm, 0.13" P.D.
7	ROUTE CONDENSATE DOWN TO INDIRECT CONNECTION AT HUB DRAIN. SEE WASTE AND VENT PLANS FOR ADDITIONAL INFO.
8	ROUTE CONDENSATE PIPING FROM EACH CHILLED WATER COIL TO NEAREST FLOOR SINK AT MEZZANINE. SEE MEZZANINE WASTE AND VENT PLANS FOR ADDITIONAL INFO. COORDINATE EXACT ROUTING WITH OTHER TRADES.
9	PROVIDE 120V MOTORIZED LOW LEAKAGE DAMPER AT LOUVER. COORDINATE INSTALLATION WITH E.C. AND CONTROLS CONTRACTOR.
10	CONNECT CHWS AND CHWR PIPING TO 'CAHU' PROVIDED BY OTHERS. INSTALL VALVES AND TEMPERATURE SENSORS PROVIDED BY SIERRA. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIER.
11	PROVIDE FIRE SMOKE DAMPER AT EACH PENETRATION OF MEZZANINE FLOOR. COORDINATE EXACT LOCATIONS WITH VENTILATION DESIGN BY SIERRA.



2 MECHANICAL PIPING PLAN - MEZZANINE
1/8" = 1'-0"



1 HVAC PLAN - MEZZANINE
1/8" = 1'-0"

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA
KANSAS

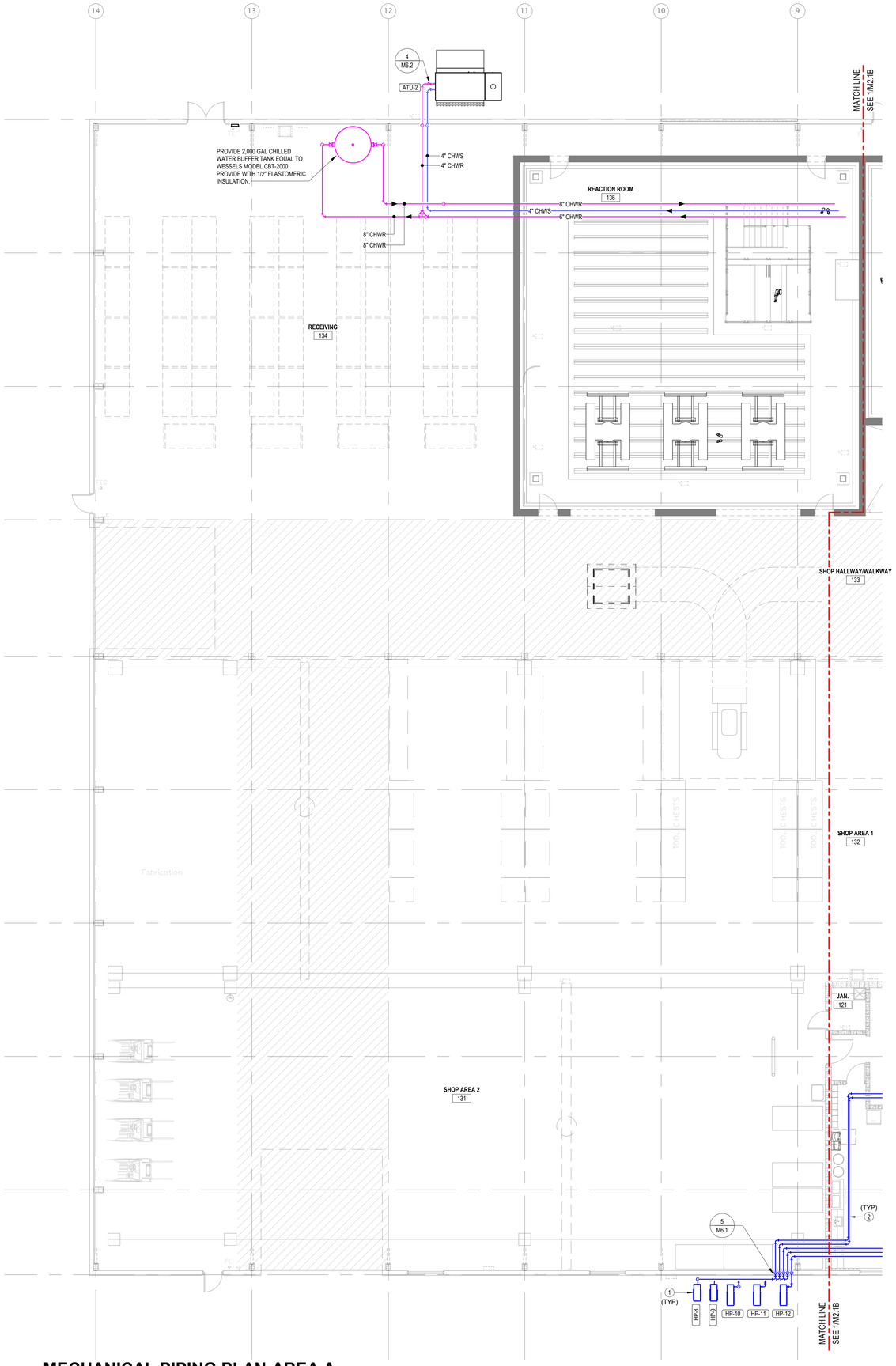
TIMOTHY CRAIG TREMBLAY
13396
05/01/2026
KANSAS
PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

M1.2

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1 MECHANICAL PIPING PLAN-AREA A

1/8" = 1'-0"

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Project 24056 — 05/01/2026

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	MOUNT OUTDOOR HEAT PUMP ON 24" STAND EQUAL TO QUICKSLING ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE WITH G.C.
2	ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO MATCHING INDOOR UNIT CONCEALED IN WALLS AND ABOVE CEILINGS.

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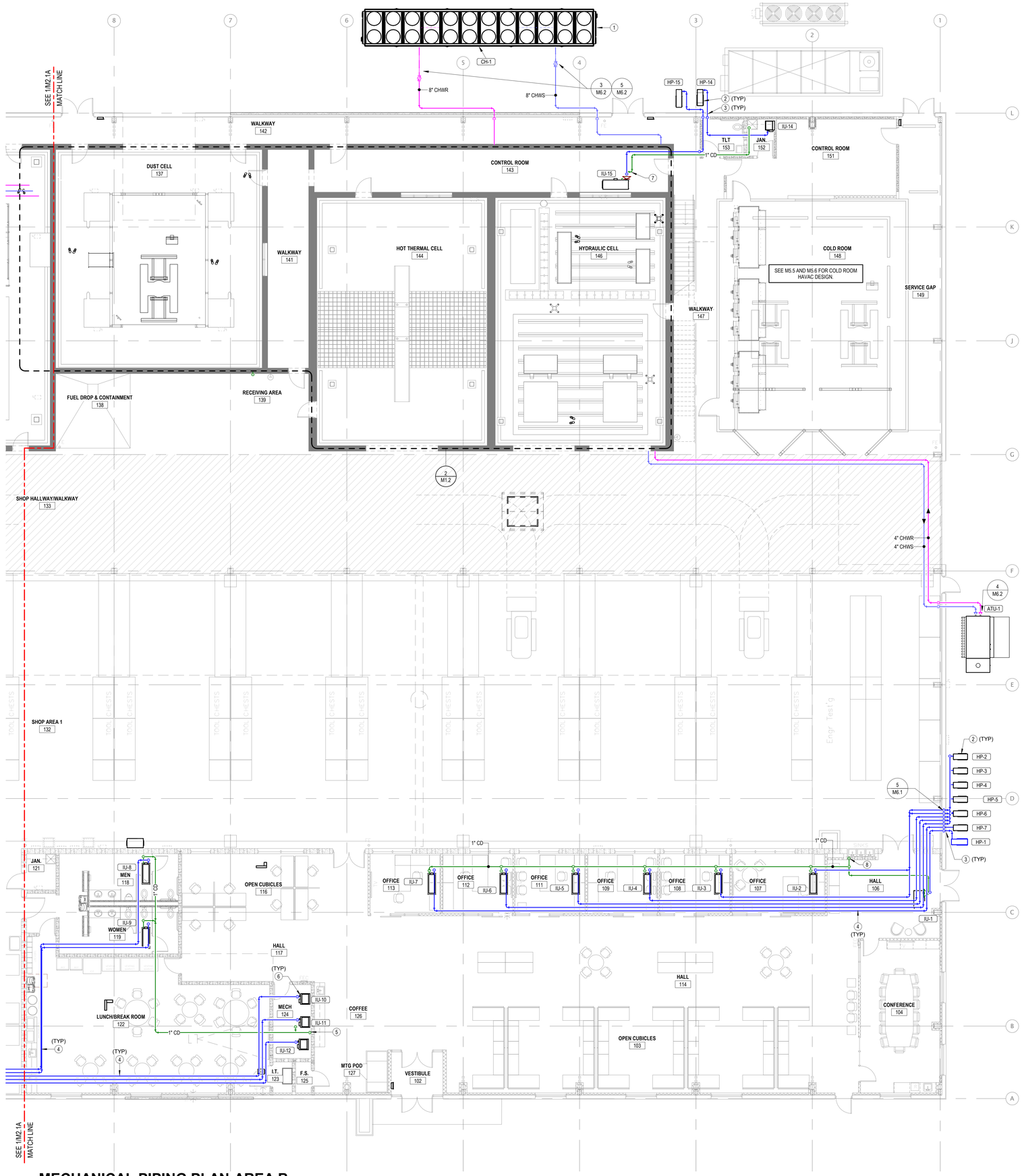
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KANSAS
PROFESSIONAL ENGINEER

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SHEET NO.:

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1 MECHANICAL PIPING PLAN-AREA B

1/8" = 1'-0"

NOTES BY SYMBOL

Key Value	Keynote Text
1	PROVIDE TRANE MODEL RTAF-410 CHILLER.
2	MOUNT OUTDOOR HEAT PUMP ON 24" STAND EQUAL TO QUICKSLING ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE WITH G.C.
3	ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO MATCHING INDOOR UNIT. PENETRATE EXTERIOR WALL AT 18" A.F.G. PROVIDE PIPE PENETRATION SEAL EQUAL TO AIREX TITAN.
4	ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO MATCHING INDOOR UNIT CONCEALED IN WALLS AND ABOVE CEILINGS.
5	ROUTE CONDENSATE PIPING DOWN ALONG WALL TO ABOVE FLOOR DRAIN IN MECH ROOM.
6	ROUTE CONDENSATE PIPING FROM EACH BLOWER COIL TO ABOVE FLOOR DRAIN IN MECH ROOM.
7	ROUTE CONDENSATE DRAIN FROM BLOWER COIL TO ABOVE SERVICE SINK. FIELD COORDINATE EXACT ROUTING WITH OTHER TRADES.
8	ROUTE CONDENSATE TO INDIRECT CONNECTION AT DRAIN BOX IN WALL.

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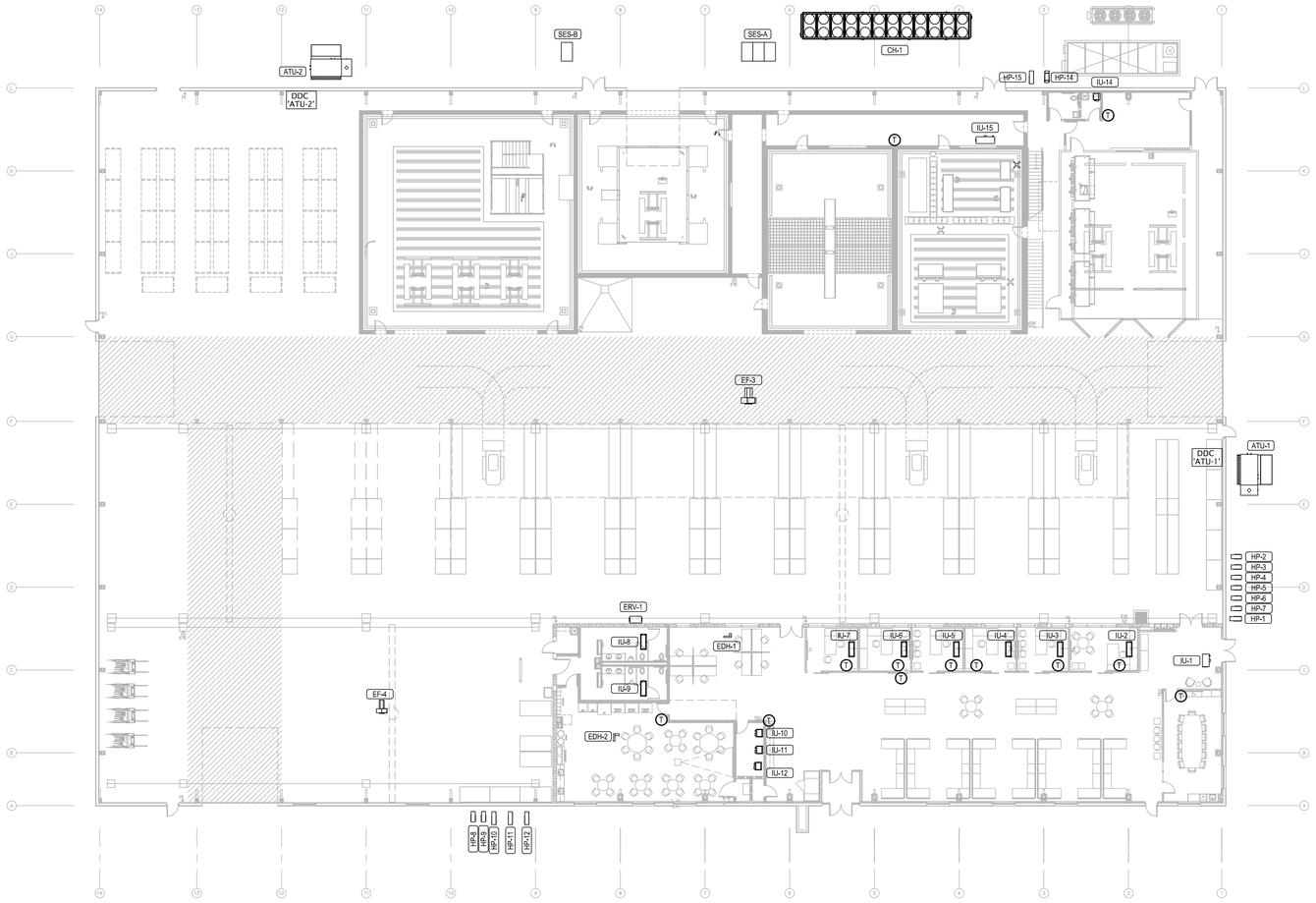
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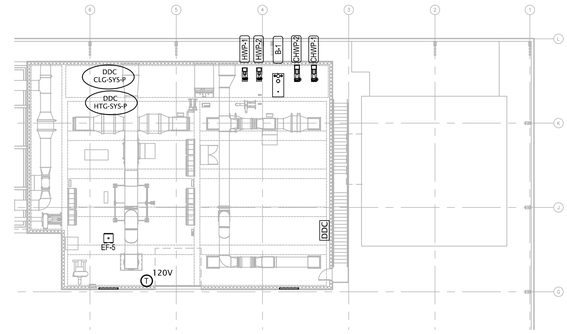
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Project



1 **ENERGY MANAGEMENT AND CONTROL 'EMCS' FLOOR PLAN**
1/16" = 1'-0"



1 **ENERGY MANAGEMENT AND CONTROL 'EMCS' MEZZANINE PLAN**
1/16" = 1'-0"

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13396
5/01/26
KANSAS
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Project 24056 **05/01/2026**

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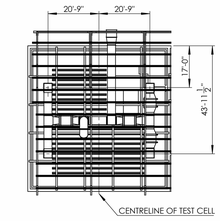
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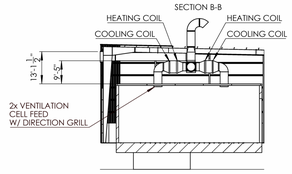
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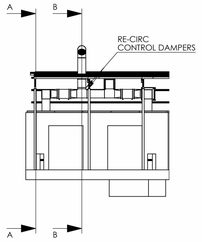
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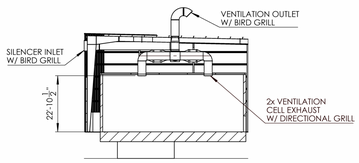
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D		For Issue	TL	16/12/25

CAD Files available on request. PDF takes precedent over all other formats.
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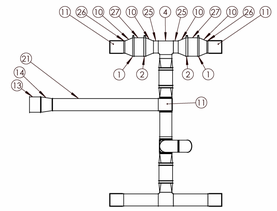
NOTE
SHEET 1 SHOWS CELL AND PLANT LAYOUT.
SHEET 2 SHOWS BOM.
SHEET 3 SHOWS DUCTING DIMENSIONS.
ALL DUCTING DESIGNED TO MISS
PURLINS AND REAR STEELWORK.

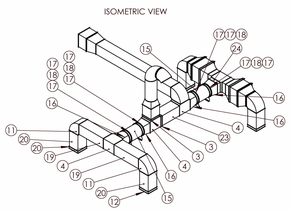
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - CAD MODEL FILE NAME - 4353-002-000	
		RESPONSIBLE DEPT.	DRAWN / DM
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DRAWN TO BS 8888:2020	SURF FIN 3.2um	A3 1 OF 3	MATERIAL: / FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm	SCALE 1:300 / PROJ.	DRAWING TITLE: REACTION ROOM VENTILATION
		PART NUMBER: 4353-400-000	REV: D / MASS (kg):

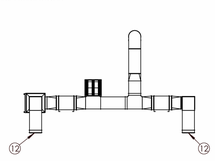
ITEM	PartNo	DESCRIPTION	SUPPLY	MASS (LB)	QTY.
1	UX4353001	HEATER COIL	SIERRA	136	2
2	UX4353002	CHILLER COIL	SIERRA	281	2
3	--	CONTROL DAMPER	SIERRA	200	2
4	--	TEE PIECE	KUBOTA	100	4
5	--	FAN TRANSITION	KUBOTA	92	1
6	--	STRAIGHT DUCT	KUBOTA	110	1
7	--	90 DEG ELBOW	KUBOTA	155	1
8	--	45 DEG ELBOW	KUBOTA	75	1
9	--	BIRD MESH	KUBOTA	10	1
10	--	DUCT REDUCER	KUBOTA	70	4
11	--	90 DEG ELBOW	KUBOTA	80	5
12	--	DIRECTIONAL GRILL	KUBOTA	130	4
13	AM4326001	VENT SILENCER 50"x50"x36"	SIERRA	259	1
14	--	TAPER DUCT	KUBOTA	96	1
15	MF4353001	12m3-s 626.5pa AXIAL FAN	SIERRA	1200	2
16	--	FAN TRANSITION	KUBOTA	70	4
17	--	FAN ADAPTER	KUBOTA	35	8
18	--	FLEXIBLE COUPLER	KUBOTA	2	4
19	--	STRAIGHT DUCT	KUBOTA	210	2
20	--	STRAIGHT DUCT	KUBOTA	125	4
21	--	STRAIGHT DUCT	KUBOTA	620	1
22	--	STRAIGHT DUCT	KUBOTA	85	1
23	--	STRAIGHT DUCT	KUBOTA	155	1
24	--	STRAIGHT DUCT	KUBOTA	35	1
25	--	STRAIGHT DUCT	KUBOTA	40	2
26	--	STRAIGHT DUCT	KUBOTA	20	2
27	--	STRAIGHT DUCT	KUBOTA	100	2

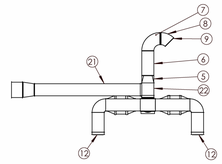
NOTE: ALL MASS FIGURES ARE ESTIMATIONS

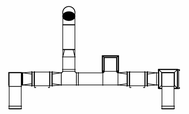
NOTE
DRAWING DUCT LENGTH AND SIZE DIMENSIONS FOR GUIDANCE ONLY. DUCT SUPPLIER TO VISIT SITE AND MEASURE SPACE AVAILABILITY AND DESIGN DUCTING TO SUIT.
ALL SQUARE DUCTING ABOVE 20" IN LENGTH TO BE CROSS BRACED.
MAIN DUCTING BASED ON ~39" SQUARE.







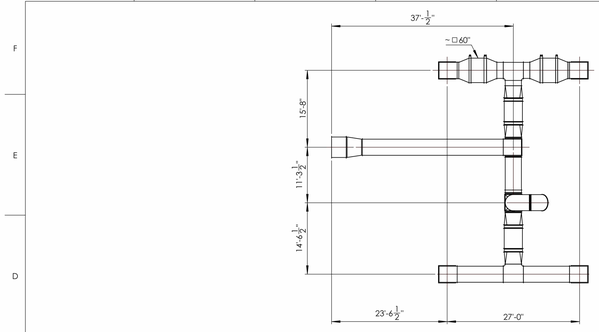


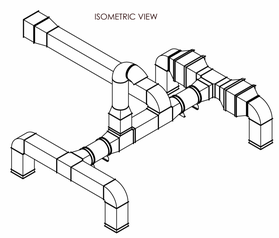


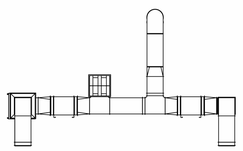
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4353-400-000	
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DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm	SCALE 1:200 / PROJ.	DRAWING TITLE: REACTION ROOM VENTILATION
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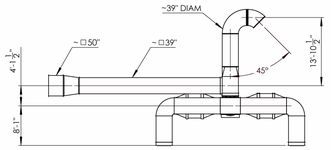
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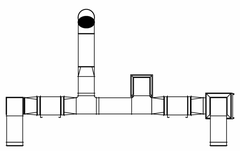
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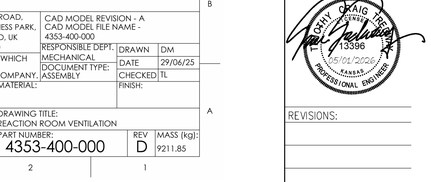






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DRAWN TO BS 8888:2020	SURF FIN 3.2um	A3 3 OF 3	MATERIAL: / FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm	SCALE 1:150 / PROJ.	DRAWING TITLE: REACTION ROOM VENTILATION
		PART NUMBER: 4353-400-000	REV: D / MASS (kg): 9211.85

1 **REACTION ROOM VENTILATION SYSTEM DETAILS**
NO SCALE



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SHEET NO.:

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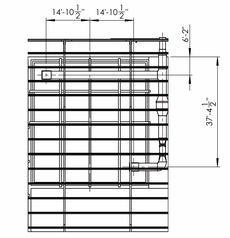
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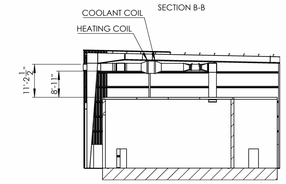
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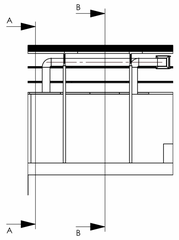
Project 24056 **05/01/2026**

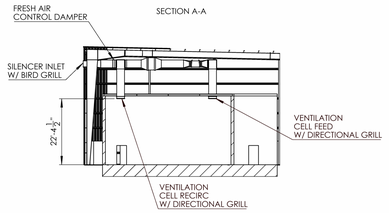
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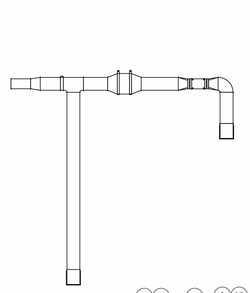
NOTE
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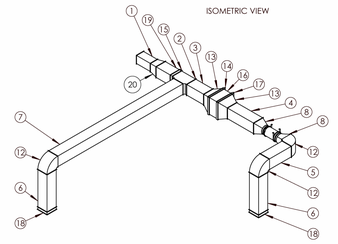
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - CAD MODEL FILE NAME - 4349-002-000	
		RESPONSIBLE DEPT.	DRAWN RB
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		DOCUMENT TYPE: ASSEMBLY	CHECKED TL
DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 1 OF 3	MATERIAL:	FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:250	DRAWING TITLE: DUST ROOM VENTILATION	
	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4349-400-000	REV A / MASS (kg): 4753121.31

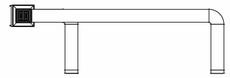
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1	AM4349001	VENT SILENCER 24"x24"x48"	SIERRA	90	1
2	--	TEE PIECE	KUBOTA	150	1
3	--	STRAIGHT DUCT	KUBOTA	175	1
4	--	STRAIGHT DUCT	KUBOTA	265	1
5	--	STRAIGHT DUCT	KUBOTA	225	1
6	--	STRAIGHT DUCT	KUBOTA	325	2
7	--	STRAIGHT DUCT	KUBOTA	1235	1
8	--	FAN TRANSITION	KUBOTA	52	2
9	--	FLEXIBLE COUPLER	KUBOTA	2	2
10	--	FAN ADAPTER	KUBOTA	12	2
11	MF4349001	5.6kW AXIAL FAN 4M^3/S	SIERRA	330	1
12	--	90 DEG ELBOW	KUBOTA	90	3
13	--	DUCT REDUCER	KUBOTA	95	2
14	UX4349001	HEATER COIL	SIERRA	120 (WET)	1
15	--	CONTROL DAMPER	SIERRA	200	1
16	--	STRAIGHT DUCT	KUBOTA	125	1
17	UX4349002	CHILLER COIL	SIERRA	222 (WET)	1
18	--	DIRECTIONAL GRILL	KUBOTA	100	2
19	--	STRAIGHT DUCT	KUBOTA	150	1
20	--	DUCT REDUCER	KUBOTA	70	1

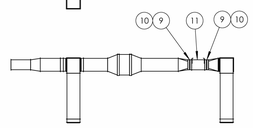
NOTE: ALL MASS FIGURES ARE ESTIMATIONS

NOTE
DRAWING DUCT LENGTH AND SIZE DIMENSIONS FOR GUIDANCE ONLY.
DUCT SUPPLIER TO VISIT SITE AND MEASURE SPACE AVAILABILITY AND DESIGN DUCTING TO SUIT.
ALL SQUARE DUCTING ABOVE 20" LENGTH TO BE CROSS BRACED.
MAIN DUCTING BASED ON 32" SQUARE.
(THIS COULD POTENTIALLY BE REDUCED TO 24".)







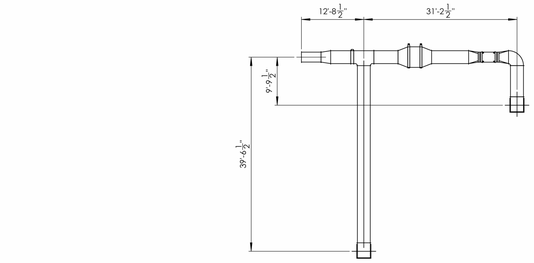


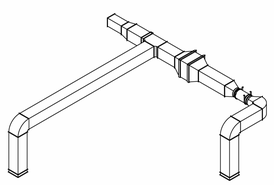


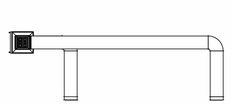
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - CAD MODEL FILE NAME - 4349-400-000-1	
		RESPONSIBLE DEPT.	DRAWN RB
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		DOCUMENT TYPE:	CHECKED TL
DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 2 OF 3	MATERIAL:	FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:150	DRAWING TITLE: DUST ROOM VENTILATION	
	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4349-400-000	REV A / MASS (kg): 6840.99

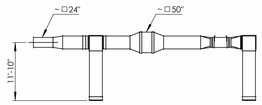
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A		FOR ISSUE		18/12/25

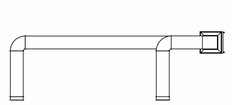
CAD Files available on request. PDF takes precedent over all other formats.
All components must be inspected as per PDF drawing.











SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - CAD MODEL FILE NAME - 4349-400-000-1	
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		DOCUMENT TYPE:	CHECKED TL
DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 3 OF 3	MATERIAL:	FINISH:
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	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4349-400-000	REV A / MASS (kg): 6840.99

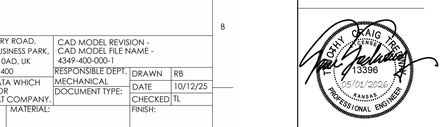
1 **DUST ROOM VENTILATION SYSTEM DETAILS**
NO SCALE

JonesGillamRenz
1881 Main Street, Suite 301
Kansas City, MO 64108
730 N. Ninth
Salina, KS 67401
785.827.0386
jgr@jgrarchitects.com

GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS



REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

M5.2

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Wichita, KS 67202
316.265.0696
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Project 24056 **05/01/2026**

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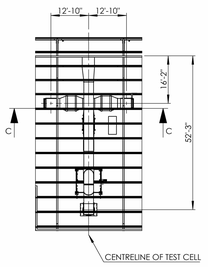
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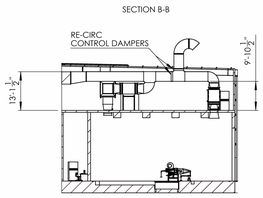
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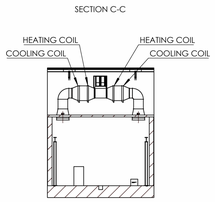
SALINA KANSAS

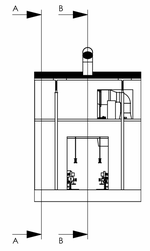
REV	ZONE	DESCRIPTION	SIGN	DATE
D		Fire Damper Modification	TL	20/01/26

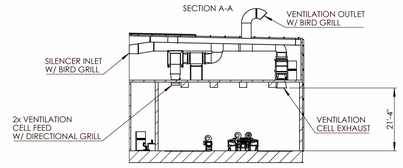
CAD Files available on request. PDF takes precedent over all other formats.
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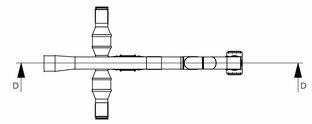
NOTE
SHEET 1 SHOWS CELL AND PLANT LAYOUT.
SHEET 2 SHOWS DUCTING BOM.
SHEET 3 SHOWS DIMENSIONS.
ALL DUCTING DESIGNED TO MISS PURLINS AND REAR STEELWORK.
3 OFF TEST CELL ROOF PENETRATIONS HAVE FIRE DAMPERS.

SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - CAD MODEL FILE NAME - 4326-002-000
		RESPONSIBLE DEPT. DRAWN DM
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		DOCUMENT TYPE: CHECKED TL
DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 1 OF 3	MATERIAL: FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:250	DRAWING TITLE: HOT CELL VENTILATION
	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4326-400-000 REV D MASS (kg):

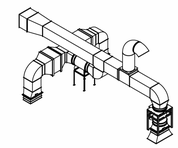
ITEM	PartNo	DESCRIPTION	SUPPLY	MASS (LB)	QTY.
1	AM4326001	VENT SILENCER 50"x50"x36"	SIERRA	259	1
2	--	OFFSET TAPER DUCT	KUBOTA	220	1
3	--	STRAIGHT DUCT	KUBOTA	250	1
4	--	STRAIGHT DUCT	KUBOTA	350	1
5	--	STRAIGHT DUCT	KUBOTA	1100	1
6	--	TEE PIECE	KUBOTA	100	3
7	--	CONTROL DAMPER	SIERRA	200	2
8	--	STRAIGHT DUCT	KUBOTA	130	1
9	--	90 DEG ELBOW	KUBOTA	150	1
10	--	45 DEG ELBOW	KUBOTA	70	1
11	--	BIRD MESH	KUBOTA	10	1
12	--	90 DEG ELBOW	KUBOTA	80	4
13	--	FAN TRANSITION	KUBOTA	60	1
14	--	FLEXIBLE COUPLER	KUBOTA	2	4
15	--	FAN ADAPTER	KUBOTA	35	8
16	--	FAN TRANSITION	KUBOTA	70	2
17	MF4353001	12m3-s 626.5pa AXIAL FAN	SIERRA	1200	2
18	--	FAN SUPPORT FRAME	KUBOTA	100	1
19	--	DUCT REDUCER	KUBOTA	70	4
20	UX4353001	HEATER COIL	SIERRA	217 (WET)	2
21	--	STRAIGHT DUCT	KUBOTA	50	2
22	--	STRAIGHT DUCT	KUBOTA	275	2
23	--	FIRE DAMPER	SIERRA	200	3
24	--	STRAIGHT DUCT	KUBOTA	40	3
25	--	DIRECTIONAL GRILL	KUBOTA	130	2
26	--	FAN SUPPORT FRAME	KUBOTA	600	1
27	--	DUCT REDUCER	KUBOTA	55	1
28	--	SQUARE TO ROUND PLATE	KUBOTA	30	1
29	UX4353002	CHILLER COIL	SIERRA	354 (WET)	2
30	--	STRAIGHT DUCT	KUBOTA	30	2
31	--	FAN TRANSITION	KUBOTA	50	1
32	--	DUCT REDUCER	KUBOTA	50	2

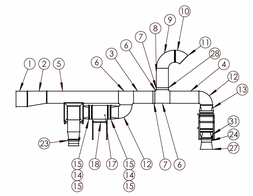
NOTE: ALL MASS FIGURES ARE ESTIMATIONS

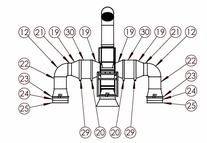
NOTE
DRAWING DUCT LENGTH AND SIZE DIMENSIONS FOR GUIDANCE ONLY. DUCT SUPPLIER TO VISIT SITE AND MEASURE SPACE AVAILABILITY AND DESIGN DUCTING TO SUIT.
ALL SQUARE DUCTING ABOVE 20" IN LENGTH TO BE CROSS BRACED.
MAIN DUCTING BASED ON ~39" SQUARE



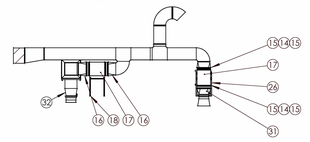
ISOMETRIC VIEW





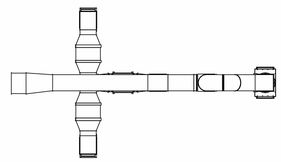


SECTION D-D

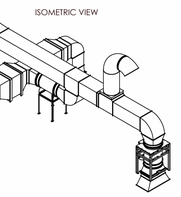


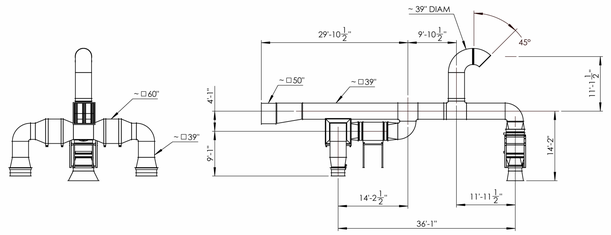
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4326-400-000
		RESPONSIBLE DEPT. DRAWN DM
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	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4326-400-000 REV D MASS (kg):

CAD Files available on request. PDF takes precedent over all other formats.
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ISOMETRIC VIEW





SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4326-400-000
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DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 3 OF 3	MATERIAL: FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:150	DRAWING TITLE: HOT CELL VENTILATION
	X ± 2mm X.X ± 1mm X.XX ± 0.25mm / PROJ.	PART NUMBER: 4326-400-000 REV D MASS (kg): 9301.97

1 **THERMAL ROOM VENTILATION SYSTEM DETAILS**
NO SCALE

CRAIG JESSEE SWIFT 13396 05/01/2026 KANSAS PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

M5.3

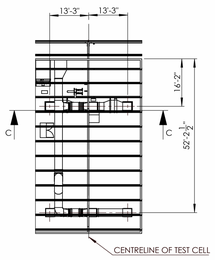
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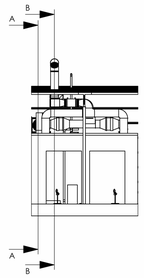
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4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, KS 67202
316.265.0696
www.LSTengineers.com
mail@LSTengineers.com

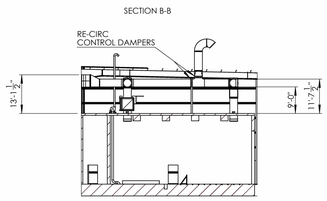
Project 24056 **05/01/2026**

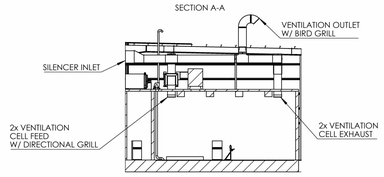
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D		Ventilation Mirrored	TL	15/01/26

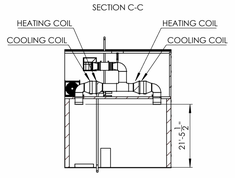
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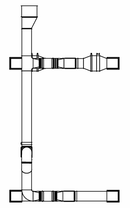


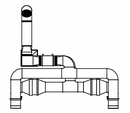
NOTE
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SHEET 2 SHOWS BOM.
SHEET 3 SHOWS DUCTING DIMENSIONS.
ALL DUCTING DESIGNED TO MISS
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4 OFF TEST CELL ROOF PENETRATIONS HAVE
FIRE DAMPERS.

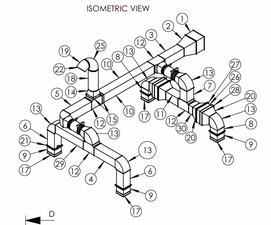
SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4354-002-000	
		RESPONSIBLE DEPT.	DRAWN / DM
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			CHECKED TL
DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 1 OF 3	MATERIAL:	FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:250	DRAWING TITLE: HYDRAULIC VENTILATION	
	X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm / PROJ.	PART NUMBER: 4354-400-000	REV D / MASS (kg):

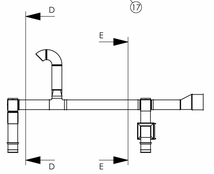
ITEM	PartNo	DESCRIPTION	SUPPLY	MASS (LB)	QTY.
1	AM4326001	VENT SILENCER 50"x50"x36"	SIERRA	259	1
2	--	OFFSET TAPER DUCT	KUBOTA	90	1
3	--	STRAIGHT DUCT	KUBOTA	260	1
4	--	STRAIGHT DUCT	KUBOTA	300	1
5	--	STRAIGHT DUCT	KUBOTA	290	1
6	--	STRAIGHT DUCT	KUBOTA	185	2
7	--	STRAIGHT DUCT	KUBOTA	135	1
8	--	STRAIGHT DUCT	KUBOTA	60	2
9	--	STRAIGHT DUCT	KUBOTA	60	4
10	--	STRAIGHT DUCT	KUBOTA	700	1
11	--	STRAIGHT DUCT	KUBOTA	170	1
12	--	TEE PIECE DUCT	KUBOTA	145	4
13	--	90 DEG ELBOW DUCT	KUBOTA	90	7
14	--	FAN TRANSITION	KUBOTA	50	5
15	--	CONTROL DAMPER	SIERRA	200	2
16	--	FAN ADAPTER	KUBOTA	15	4
17	--	DIRECTIONAL GRILL	KUBOTA	130	4
18	--	STRAIGHT DUCT	KUBOTA	95	1
19	--	45 DEG ELBOW	KUBOTA	50	1
20	--	DUCT REDUCER	KUBOTA	55	4
21	--	FIRE DAMPER	SIERRA	200	4
22	--	BIRD MESH	KUBOTA	10	1
23	MF4353002	6m3-s 626.5pa AXIAL FAN	SIERRA	670	2
24	--	FLEXIBLE COUPLER	KUBOTA	2	4
25	--	90 DEG ELBOW	KUBOTA	110	1
26	--	STRAIGHT DUCT	KUBOTA	80	2
27	UX4354001	HEATING COIL	SIERRA	100 (WET)	2
28	UX4354002	CHILLER COIL	SIERRA	375 (WET)	2
29	--	STRAIGHT DUCT	KUBOTA	380	1
30	--	STRAIGHT DUCT	KUBOTA	60	1

NOTE
DRAWING DUCT LENGTH AND SIZE DIMENSIONS FOR GUIDENCE ONLY. DUCT SUPPLIER TO VISIT SITE AND MEASURE SPACE AVAILABILITY AND DESIGN DUCTING TO SUIT.
ALL SQUARE DUCTING ABOUT 20" IN LENGTH TO BE CROSS BRACED.
MAIN DUCTING BASED ON ~32" SQUARE

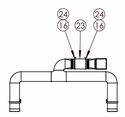


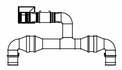






NOTE: ALL MASS FIGURES ARE ESTIMATIONS

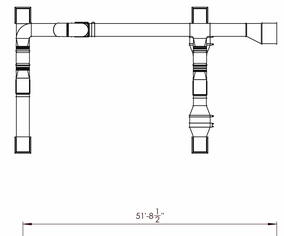


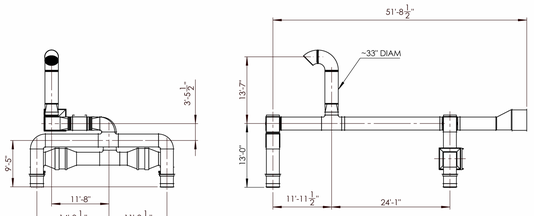


SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4354-400-000	
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DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 2 OF 3	MATERIAL:	FINISH:
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	X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm / PROJ.	PART NUMBER: 4354-400-000	REV D / MASS (kg):

REV	ZONE	DESCRIPTION	SIGN	DATE
D		Ventilation Mirrored	TL	15/01/26

CAD Files available on request. PDF takes precedent over all other formats.
All components must be inspected as per PDF drawing.





SIERRA CP ENGINEERING	UNIT 2a CONEYBURY ROAD, WORCESTER SIX BUSINESS PARK, WORCESTER, WR4 0AD, UK T: +44 (0)1684 770 400	CAD MODEL REVISION - A CAD MODEL FILE NAME - 4354-400-000	
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DRAWN TO BS 8888:2020	SURF FIN 3.2um / A3 3 OF 3	MATERIAL:	FINISH:
DIMENSIONS IN mm. DO NOT SCALE. IF IN DOUBT, ASK. REMOVE ALL BURRS AND SHARP EDGES. UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.	ANG TOL ±1.0° / SCALE 1:150	DRAWING TITLE: HYDRAULIC VENTILATION	
	X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm / PROJ.	PART NUMBER: 4354-400-000	REV D / MASS (kg):

1 **HYDRAULIC ROOM VENTILATION SYSTEM DETAILS**
NO SCALE

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA KANSAS

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

M5.4

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Project 24056 **05/01/2026**

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS

Drawing Contents
1- R1.1 Title & Overall Plan
2- R3.1 Thermal Walls & Doors
3- R3.2 Under Floor Warming
4- R3.3 Refrigeration Equipment
5- R3.4 Refrigeration Water & Drains
6- R3.5 Refrigeration Piping
7- R3.6 Refrigeration Ducting

Kubota CE R&D

Existing Facility/Site - Selina, Kansas (KS)
New Building - New Rooms/Equipment

FARRAR

Site Plan

Room View (viewer west, looking east)

Scope of Work Area

Overall Building

Refrigeration Electrical Power & Controls Plan

Re1.1

Thermal Walls and Doors

Thermal Walls and Doors

Thermal Walls and Doors (elev cut for 'low' under floor warming)

Thermal Thermal Under Floor (elev cut for 'high' under floor warming)

Thermal Walls and Doors

Thermal Walls and Doors

Thermal Walls and Doors

Initial Coordination1

Kubota CE R&D
300 E Water Well Rd
Salina, Kansas (KS) 67401

Thermal Walls and Doors

Re3.1

Refrigeration Equipment

Refrigeration Equipment

Refrigeration Equipment (west looking east)

Refrigeration Equipment (south looking north)

Refrigeration Equipment

Re3.3

Under Floor Warming

Under Floor Warming

Under Floor Warming (for 'high' or shallow area)

Under Floor Warming

Under Floor Warming

Under Floor Warming

Thermal/Refrigeration Under Floor Warming

Re3.2

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

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Project: 24058 05/01/2026

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS

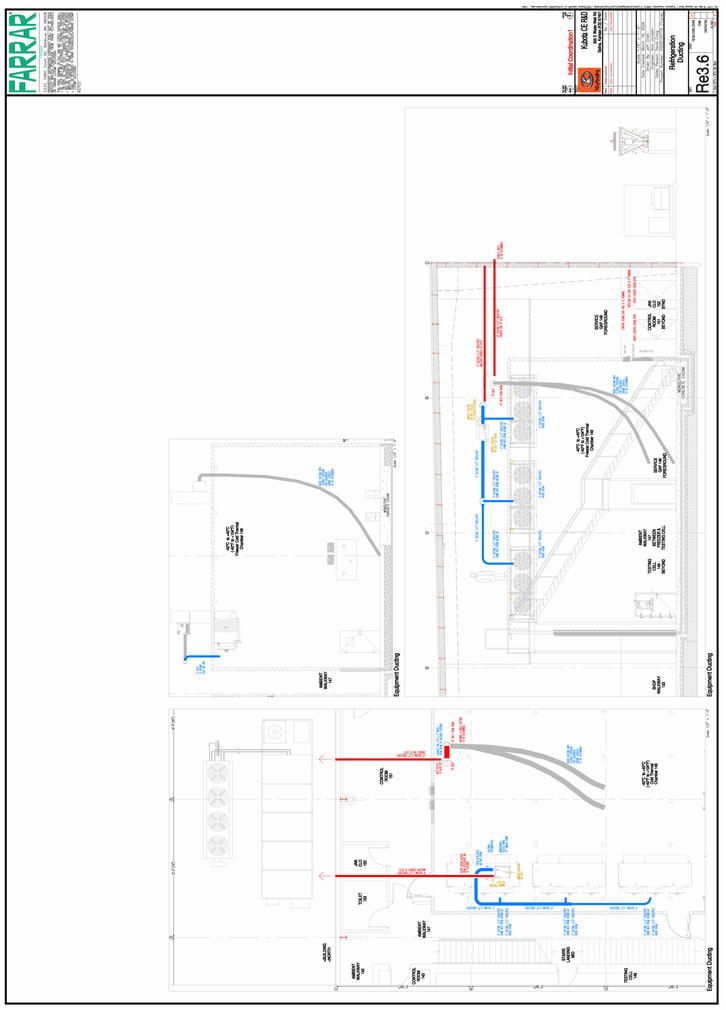


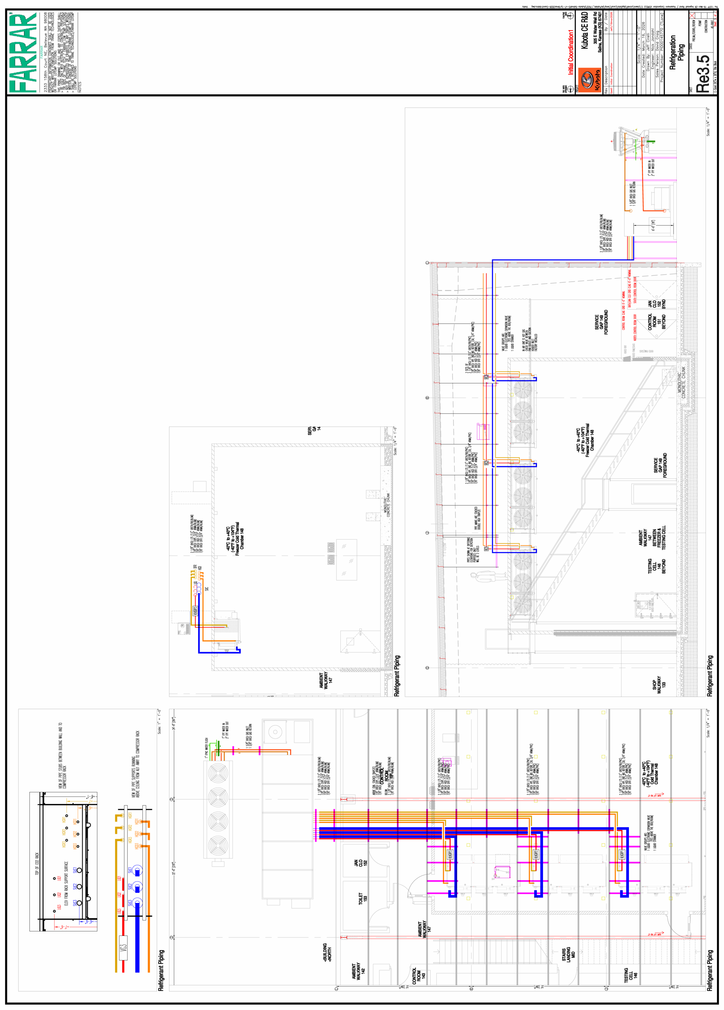
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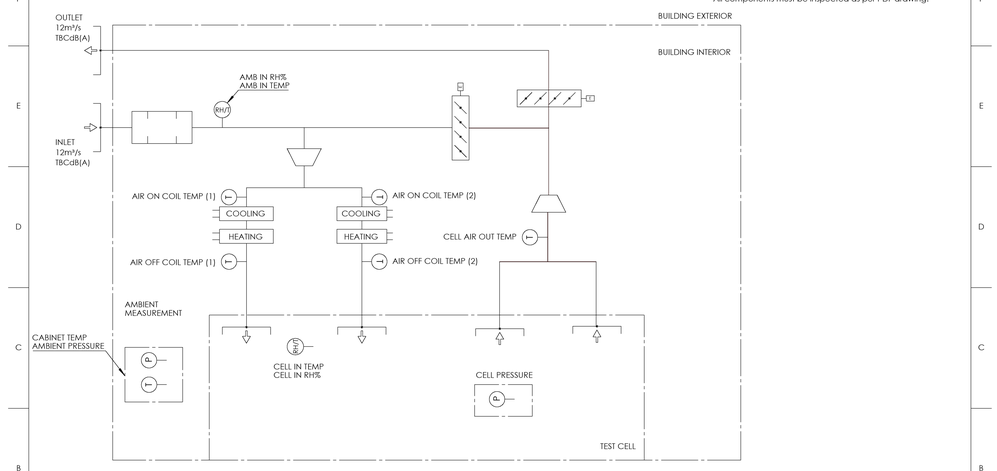


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Project 24056 **05/01/2026**

REV	ZONE	DESCRIPTION	SIGN	DATE
A		Initial Release		31/03/26

CAD Files available on request. PDF takes precedent over all other formats.
All components must be inspected as per PDF drawing.



SYMBOL KEY

- INLET
- OUTLET
- FIRE DAMPER ELECTRONICALY ACTUATED
- AXIAL FAN
- ATTENUATOR
- TEMPERATURE SENSOR
- PRESSURE SENSOR
- RELATIVE HUMIDITY / TEMPERATURE SENSOR
- ELECTRIC HEATER ELEMENT PACK
- COOLING — COOLING COIL
- HEATING — HEATING COIL

LINE KEY

- BOUNDARY
- PROCESS WATER PIPEWORK
- CHILLED WATER PIPEWORK
- PNEUMATIC PIPEWORK

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CAD MODEL REVISION -
CAD MODEL FILE NAME -

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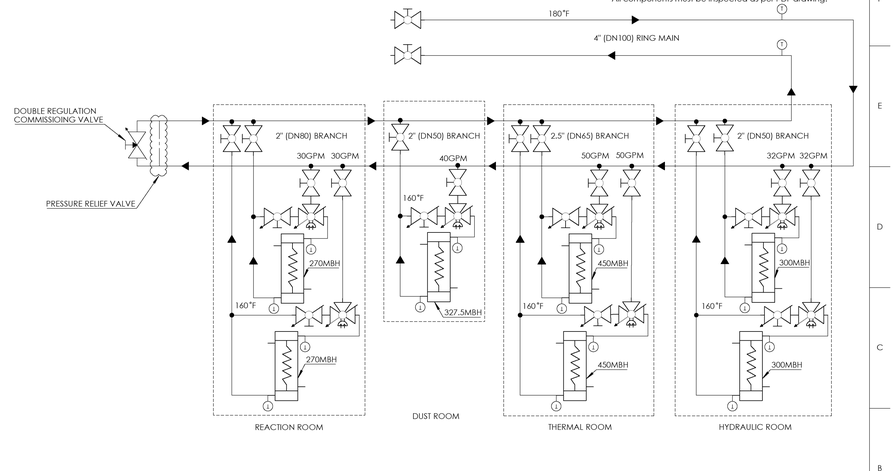
DRAWN TO BS 8888:2020
DIMENSIONS IN mm.
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SURF FIN 3.2um — A3 1 OF 1 — MATERIAL: — FINISH:
ANG TOL ±1.0° — SCALE 1:1 — DRAWING TITLE: VENT SENSOR SCHEMATIC
X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm — PROJ. — PART NUMBER: 4353-004-101 — REV A — MASS (kg):

3 **TYPICAL VENTILATION SYSTEM SENSOR SCHEMATIC**
NO SCALE

REV	ZONE	DESCRIPTION	SIGN	DATE
A		Initial Release		03/02/26

CAD Files available on request. PDF takes precedent over all other formats.
All components must be inspected as per PDF drawing.



KEY

- CONTROL VALVE
- ISOLATION VALVE
- COOLING COIL (SCP FREE ISSUE)
- ELECTRONIC / PNEUMATIC ISOLATION VALVE
- THREE WAY CONTROL VALVE
- TEMPERATURE SENSOR

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CAD MODEL REVISION -
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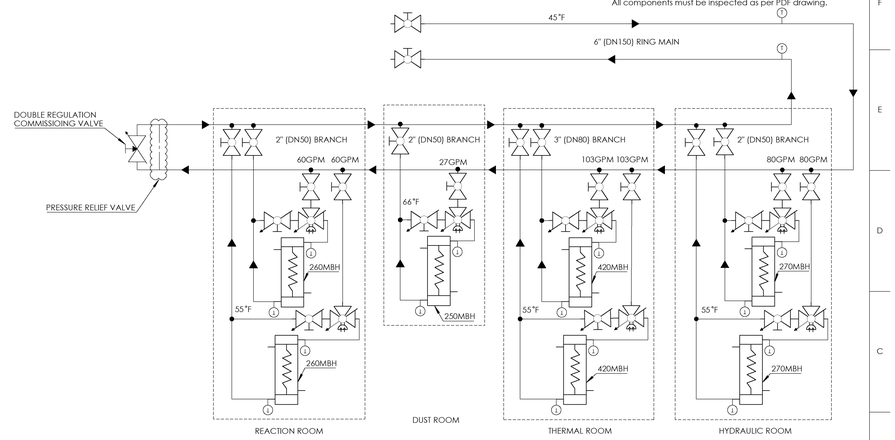
DRAWN TO BS 8888:2020
DIMENSIONS IN mm.
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UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.

SURF FIN 3.2um — A3 1 OF 1 — MATERIAL: — FINISH:
ANG TOL ±1.0° — SCALE 1:1 — DRAWING TITLE: HW SCHEMATIC
X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm — PROJ. — PART NUMBER: 4262-004-006 — REV A — MASS (kg):

2 **TEST CELL HOT WATER SCHEMATIC**
NO SCALE

REV	ZONE	DESCRIPTION	SIGN	DATE
A		Initial Release		03/02/26

CAD Files available on request. PDF takes precedent over all other formats.
All components must be inspected as per PDF drawing.



KEY

- CONTROL VALVE
- ISOLATION VALVE
- COOLING COIL (SCP FREE ISSUE)
- ELECTRONIC / PNEUMATIC ISOLATION VALVE
- THREE WAY CONTROL VALVE
- TEMPERATURE SENSOR

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CAD MODEL REVISION -
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DRAWN TO BS 8888:2020
DIMENSIONS IN mm.
DO NOT SCALE, IF IN DOUBT, ASK.
REMOVE ALL BURRS AND SHARP EDGES.
UNLESS OTHERWISE SPECIFIED, THE FOLLOWING NOTES APPLY.

SURF FIN 3.2um — A3 1 OF 1 — MATERIAL: — FINISH:
ANG TOL ±1.0° — SCALE 1:1 — DRAWING TITLE: CHW SCHEMATIC
X ± 2mm, X.X ± 1mm, X.XX ± 0.25mm — PROJ. — PART NUMBER: 4262-004-005 — REV A — MASS (kg):

1 **TEST CELL CHILLED WATER SCHEMATIC**
NO SCALE

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS

CRAIG TECHNICK — 13396 — 05/01/2026 — KANSAS — PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

M5.7

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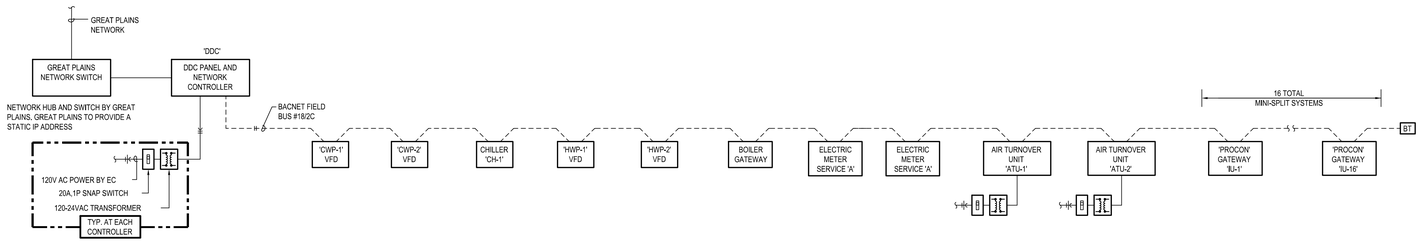
CONTROL SYMBOLS

(NOT ALL SYMBOLS MAY BE USED)

- 3-WAY CONTROL VALVE
- 2-WAY CONTROL VALVE
- FIELD DEVICE: (SEE TABLE BELOW) — TOP INDICATES DEVICE DESCRIPTION; BOTTOM INDICATES DEVICE NUMBER (XXX / XX)
- DDC I/O POINT: BOTTOM INDICATES DEVICE DESCRIPTOR (DDC / XXXX-XX)
- AVERAGING TYPE SENSING ELEMENT
- POINT TYPE SENSING ELEMENT
- MOTORIZED ACTUATOR
- ELECTRIC TO PNEUMATIC TRANSDUCER
- ANALOG PNEUMATIC SIGNAL
- BINARY PNEUMATIC SIGNAL
- BINARY ELECTRIC SIGNAL
- ANALOG ELECTRIC SIGNAL
- SOFTWARE OR DATA LINK
- CONTROL TRANSFORMER - VOLTAGES NOTED
- FUSE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- MOTOR OVERLOAD DEVICE
- MOTOR STARTER (M) OR RELAY (R) COIL
- TWO-POSITION SWITCH
- THREE-POSITION SWITCH
- NORMALLY OPEN PUSH BUTTON
- NORMALLY CLOSED PUSH BUTTON
- NORMALLY OPEN LIMIT SWITCH
- NORMALLY CLOSED LIMIT SWITCH
- FLOW SWITCH, CLOSES ON INCREASE
- FLOW SWITCH, OPENS ON INCREASE
- TEMPERATURE SWITCH, CLOSES ON INCREASE
- TEMPERATURE SWITCH, OPENS ON INCREASE
- LEVEL SWITCH, CLOSES ON INCREASE
- LEVEL SWITCH, OPENS ON INCREASE
- PILOT LIGHT (COLOR INDICATED)
- PUSH-TO-TEST PILOT LIGHT (COLOR INDICATED)

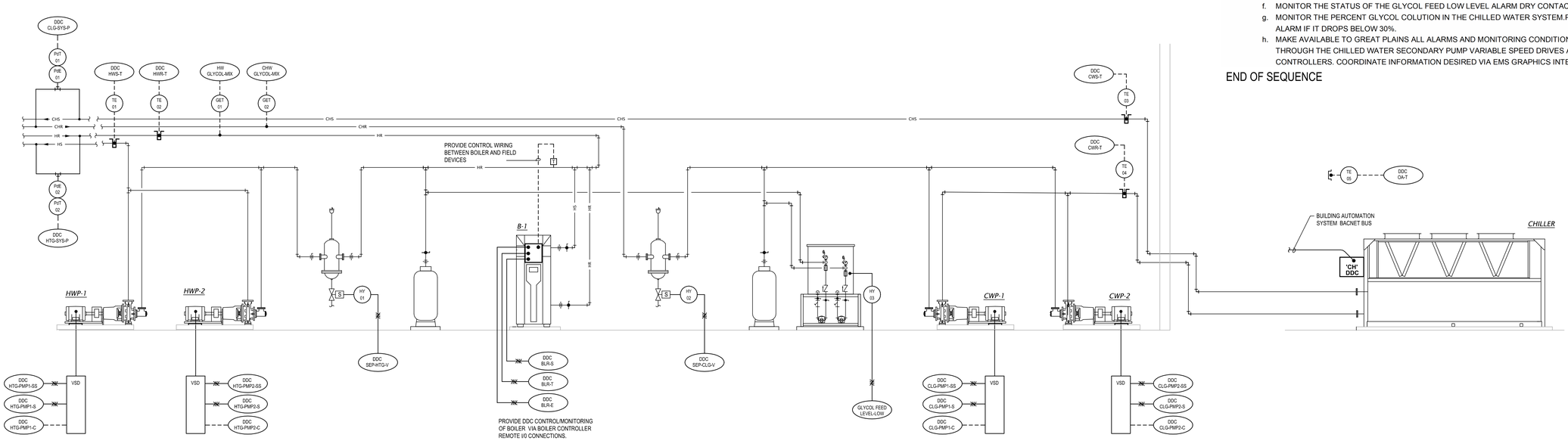
DDC SYSTEM FIELD DEVICE IDENTIFICATION LETTERS

	FIRST-LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE (UPPER CASE LETTER)	MODIFIER (LOWER CASE LETTER)	READOUT OR PASSIVE FUNCTION (UPPER CASE LETTER)	OUTPUT FUNCTION (UPPER CASE LETTER)	MODIFIER (UPPER CASE LETTER)
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	
D	USER'S CHOICE	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	GLYCOL		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE	MOMENTARY			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		
P	PRESSURE/ VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	SMOKE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	



1 ENERGY MANAGEMENT AND CONTROL 'EMCS' NETWORK DIAGRAM

NO SCALE



2 CENTRAL HEATING AND COOLING PLAN CONTROL DIAGRAM

NO SCALE

CENTRAL PLANT SEQUENCE OF OPERATION

A. SYSTEM DESCRIPTION: THE CENTRAL HEATING AND COOLING PLANT CONSISTS OF AN AIR-COOLED CHILLER, TWO VARIBALE SPEED CHILLED WATER CIRCULATION PUMPS, NATURAL GAS FIRED BOILER AND TWO VARIABLE SPEED HOT WATER CIRCULATION PUMPS. THE CHILLER SHALL BE PROVIDED WITH A BACNET COMPATIBLE, FACTORY INSTALLED CONTROLLER. THE BOILER WILL BE PROVIDED WITH FACTORY INSTALLED, STAND-ALONE CONTROLLER WITH A BACNET GATEWAY.

B. CONTROL SEQUENCE:
   a. CHILLED WATER PUMPS (CWP-1 & CWP-2):
      i. START/STOP: PUMPS CWP-1 AND CWP-2 SHALL OPERATE ON A LEAD-LAG BASIS. A CALL FOR COOLING (OPENING OF ANY CHILLED WATER VALVE) SHALL ENERGIZE THE LEAD PUMP. IF THE LEAD PUMP FAILS TO ENERGIZE (AFTER A 10S TIME DELAY) THE LAG PUMP SHALL ENERGIZE. THE LEAD AND LAG PUMPS SHALL ROTATE ON A WEEKLY BASIS. THE CHILLED WATER PUMP SHALL "STOP" ON NO CALL FOR COOLING (ALL CHILLED WATER CONTROL VALVES ARE CLOSED (AFTER A 15 MINUTE TIME DELAY)
      ii. PUMP SPEED: PUMP SPEED SHALL MODULATE TO MAINTAIN MINIMUM DIFFERENTIAL PRESSURE SETPOINT. THE LEAD PUMP SPEED SHALL MODULATE TO MAINTAIN LOOP DIFFERENTIAL PRESSURE SETPOINT. THE SETPOINT SHALL BE FULLY ADJUSTABLE AND FIELD DETERMINED DURING TEST & BALANCE. PUMP SPEED SHALL NOT VARY MORE THAN 10% OVER A ONE MINUTE PERIOD. MINIMUM CHILLED WATER FLOW RATE (AS SET BY THE DEIFFERENTIAL PRESSURE SET POINT) SHALL BE FIELD DETERMINED AND COORDINATED WITH THE CHILLER MANUFACTURER'S RECOMMENDED MINIMUM FLOW FRATE.
   b. HOT WATER PUMPS (HWP-1 & HWP-2):
      i. START/STOP: PUMPS HWP-1 AND HWP-2 SHALL OPERATE ON A LEAD-LAG BASIS. A CALL FOR HEATING (OPENING OF ANY HOT WATER VALVE) SHALL ENERGIZE THE LEAD PUMP. IF THE LEAD PUMP FAILS TO ENERGIZE (AFTER A 10S TIME DELAY) THE LAG PUMP SHALL ENERGIZE. THE LEAD AND LAG PUMPS SHALL ROTATE ON A WEEKLY BASIS. THE HOT WATER PUMP SHALL "STOP" ON NO CALL FOR HEATING (ALL HOT WATER CONTROL VALVES ARE CLOSED (AFTER A 15 MINUTE TIME DELAY)
      ii. PUMP SPEED: PUMP SPEED SHALL MODULATE TO MAINTAIN MINIMUM DIFFERENTIAL PRESSURE SETPOINT. THE LEAD PUMP SPEED SHALL MODULATE TO MAINTAIN LOOP DIFFERENTIAL PRESSURE SETPOINT. THE SETPOINT SHALL BE FULLY ADJUSTABLE AND FIELD DETERMINED DURING TEST & BALANCE. PUMP SPEED SHALL NOT VARY MORE THAN 10% OVER A ONE MINUTE PERIOD
   c. CHILLER:
      i. THE CHILLER SHALL BE "ENABLED" WHEN PROOF OF CHILLED WATER PUMP OPERATION IS DETECTED. THE CHILLER SHALL OPERATE UNDER FACTORY CONTROLS TO MAINTAIN 42°F (ADJ.) CHILLED WATER SUPPLY TEMPERATURE.
      ii. CHILLER WILL BE PROVIDED WITH FACTORY BACNET COMPATIBLE CONTROLLER. MAKE AVAILABLE TO FT JOHNSON DPW ALL INFORMATION AVAILABLE THROUGH FACTORY CONTROLLER. COORDINATE WITH DPW ALL INFORMATION DESIRED VIA GRAPHICS INTERFACE
   d. BOILER:
      THE BOILER SHALL BE "ENABLED" WHEN PROOF OF HOT WATER PUMP OPERATION IS DETECTED. THE BOILER SHALL OPERATE UNDER FACTORY CONTROLS TO MAINTAIN 160°F (ADJ.) HOT WATER SUPPLY TEMPERATURE. THE SUPPLY WATER TEMPERATURE SETPOINT SHALL RESET 160°F TO 120°F BASED ON AN OUTDOOR AIR TEMPERATURE OF 20°F TO 60°F. THE RESET SCHEDULE SHALL BE FULLY ADJUSTABLE.
   e. MAINTENANCE CONTROLS:
      SEPARATOR BLOW DOWN: THE CHILLED WATER AND HOT WATER LOOP SEPARATOR BLOW DOWN VALVES SHALL OPEN FOR 15S (ADJ) ON A MONTHLY (ADJ.) BASIS TO RID THE SYSTEM OF DEBRIS.

A. ALARMS AND SAFETIES:
   a. CHILLER FREEZE PROTECTION: WHEN THE OUTDOOR AIR TEMPERATURE DROPS BELOW 25°F (ADJ.), THE FOLLOWING SHALL OCCUR FOR FIVE (5) MINUTES EVERY HOUR. THE TIME SCHEDULE SHALL BE FULLY ADJUSTABLE):
      i. ALL CHILLED WATER VALVES FOR THE AIR TURN-OVER UNITS SHALL STROKE TO FULL COIL FLOW.
      ii. THE LEAD CHILLED WATER PUMP SHALL ENERGIZE AT 100% SPEED (ADJ.)
      iii. ALL AIR TURNOVER UNITS WITH HEAT SHALL BE FORCED TO 100% HEAT MODE.
   b. A PUMP FAILURE ALARM SHALL BE INITIATED IF ANY PUMP IS COMMANDED "ON" AND NO PROOF IS DETECTED AFTER A 10S (ADJ.) TIME DELAY.
   c. THE DDC SYSTEM SHALL MONITOR THE STATUS OF THE BOILER AND CHILLER TROUBLE AND STATUS CONTACTS.
   d. ALL ANALOG AND DIGITAL HARD-WIRED INPUT POINTS SHALL HAVE GRAPHIC INTERFACE FOR ADJUSTING AND ENABLING "HIGH/LOW" ALARMS.
   e. MAKE AVAILABLE TO OWNER ALL CONTROL SETPOINTS/VALUES ACCESSIBLE THROUGH THE CHILLER BACNET CONTROLLER. COORDINATE OWNER DPW ALL INFORMATION DESIRED VIA GRAPHICS INTERFACE.
   f. MONITOR THE STATUS OF THE GLYCOL FEED LOW LEVEL ALARM DRY CONTACT.
   g. MONITOR THE PERCENT GLYCOL COLUTION IN THE CHILLED WATER SYSTEM.PROIDE AN ALARM IF IT DROPS BELOW 30%.
   h. MAKE AVAILABLE TO GREAT PLAINS ALL ALARMS AND MONITORING CONDITIONS AVALABLE THROUGH THE CHILLED WATER SECONDARY PUMP VARIABLE SPEED DRIVES AND CHILLER CONTROLLERS. COORDINATE INFORMATION DESIRED VIA EMS GRAPHICS INTERFACE.

END OF SEQUENCE

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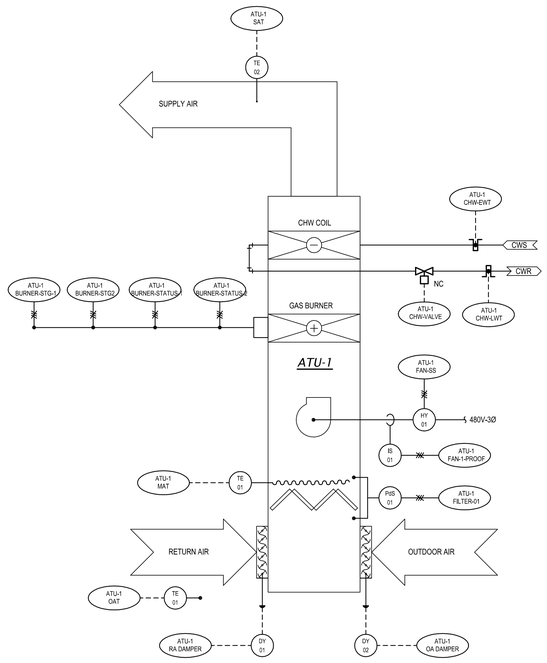
GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA KANSAS

CRAIG TRENT SCHMIDT — 13396 — 05/01/26 — PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.: M5.8

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1 AIR ROTATION UNIT 'ARU' CONTROL DIAGRAM

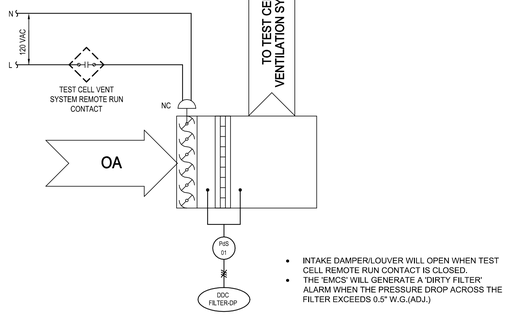
NO SCALE

AIR ROTATION UNIT 'ARU' SEQUENCE OF OPERATION (ARU-1 thru 15)

A. SYSTEM DESCRIPTION: THE AIR ROTATION SYSTEM IS COMPRISED OF A VERTICAL, OUTDOOR/INDOOR HEATING AND COOLING UNIT WITH SUPPLY FANS. HEAT IS PROVIDED BY A GAS-FIRED HEAT EXCHANGER. COOLING IS ACCOMPLISHED USING A CHILLED WATER COIL. THE AIR ROTATION UNITA ARE PROVIDED WITH ECONOMIZER DAMPERS.
NOT ALL ARUs ARE PROVIDED WITH HEATING COILS AND ECONOMIZER DAMPERS. SEE SCHEDULE.

B. CONTROL SEQUENCE:
   a. OCCUPIED/UNOCCUPIED: THE OCCUPIED/UNOCCUPIED MODE SHALL BE DETERMINED BASED ON A TIME OF DAY SCHEDULE THAT RESIDES IN THE DDC CONTROLLER. THE SCHEDULE SHALL BE FULLY ADJUSTABLE BY THE USER.
   b. HEATING/COOLING MODE: THE HEATING AND COOLING MODE SHALL BE DETERMINED BASED ON THE OUTDOOR AIR TEMPERATURE.
      i. WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 60°F (ADJ.) THE 'ARU' WILL OPERATE IN THE HEATING MODE.
      ii. WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 80° AND THE 'ARU' WILL OPERATE IN THE COOLING MODE
   c. OCCUPIED MODE:
      i. SUPPLY FANS SHALL BE "ON"
      ii. HEATING MODE: THE GAS FIRED HEATER WILL SEQUENCE TO MAINTAIN 65°F (ADJ.) RETURN AIR TEMPERATURE.
      iii. COOLING MODE: THE DIRECT EXPANSION COOLING COIL/CONDENSING UNIT SHALL SEQUENCE TO MAINTAIN RETURN AIR TEMPERATURE:
         1. WHEN THE OUTDOOR AIR TEMPERATURE IS 95°F (ADJ.) OR LESS: SETPOINT = 80°F (ADJ.)
         2. WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 95°: SETPOINT = OUTDOOR AIR TEMPERATURE MINUS 15°F (ADJ.)
      iv. MIXED AIR DAMPERS: THE RETURN AIR AND OUTDOOR AIR DAMPERS SHALL BE FIELD ADJUSTED TO PROVIDE A MINIMUM OUTDOOR AIR VOLUME EQUAL TO THE ARU SUPPLY AIR FLOWx10%.
      v. ECONOMIZER MODE: WHEN THE OUTDOOR AIR TEMPERATURE IS LESS THAN 80°F (ADJ.) AND THE RETURN AIR TEMPERATURE IS ABOVE 70°F (ADJ.) THE 'ARU' SHALL OPERATE IN ECONOMIZER MODE. THE OUTDOOR AIR AND RETURN AIR DAMPERS SHALL MODULATE TO MAINTAIN 74°F (ADJ.) RETURN AIR TEMPERATURE. THE ECONOMIZER MODE SHALL OVER-RIDE THE MIXED AIR DAMPER CONTROL.
   d. UNOCCUPIED MODE: THE 'ARU' WILL CYCLE "ON/OFF" AT FULL HEAT TO MAINTAIN A REDUCED RETURN AIR TEMPERATURE SET POINT, 60°F (ADJ.). THE OUTDOOR AIR DAMPER SHALL BE FULLY CLOSED AND THE RETUARN AIR DAMPER SHALL BE FULLY OPEN.

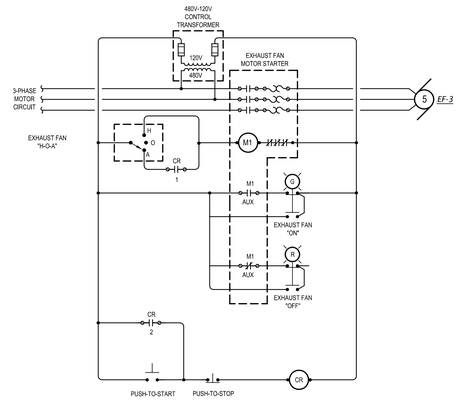
C. MONITORING AND ALARMS:
   a. MONITOR STATUS AND ALARM CONDITIONS AS DEPICTED ON THE 'ARU' CONTROL DIAGRAM.



- INTAKE DAMPER/LOUVER WILL OPEN WHEN TEST CELL REMOTE RUN CONTACT IS CLOSED.
- THE 'EMCS' WILL GENERATE A 'DIRTY FILTER' ALARM WHEN THE PRESSURE DROP ACROSS THE FILTER EXCEEDS 0.5" W.G.(ADJ.)

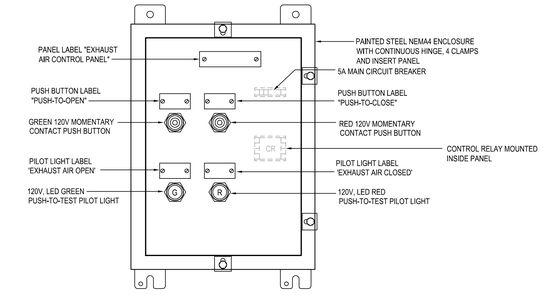
2 TEST CELL INLET AIR DIAGRAM

NO SCALE

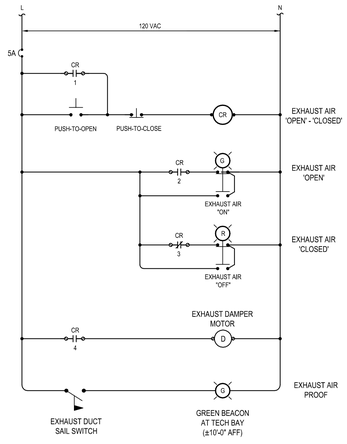


3 EXHAUST FAN 'EF-3' START/STOP DIAGRAM

NO SCALE ('EF-4' SIMILAR)



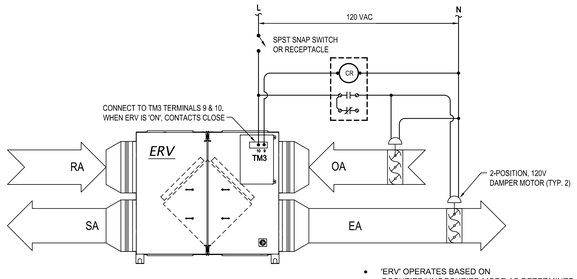
CONTROL PANEL



LADDER DIAGRAM

6 EXHAUST DROP CONTROL DETAILS

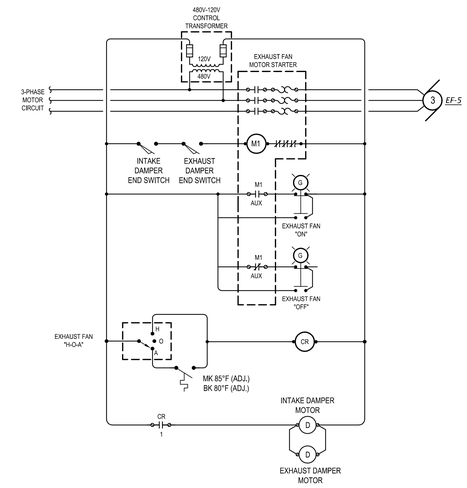
NO SCALE



- 'ERV' OPERATES BASED ON OCCUPIED/UNOCCUPIED MODE AS DETERMINED BY THE VENTILATION CONTROLLER (NOT SHOWN)
- MOTORIZED INTAKE DAMPERS OPEN 100% WHEN THE 'ERV' IS 'ON', AND CLOSED WHEN 'ERV' IS 'CLOSED'.

5 'ERV' CONTROL DIAGRAM

NO SCALE



4 EXHAUST FAN 'EF-5' WIRING DIAGRAM

NO SCALE

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GREAT PLAINS MANUFACTURING
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DATE: 05/01/2026
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ROOF HOOD SCHEDULE

NOTES:
1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER
2. PROVIDE WITH BIRDSCREEN.
3. PROVIDE WITH ROOF CURB COMPATIBLE WITH ROOF TYPE AND SLOPE. COORDINATE REQUIREMENTS WITH G.C.

MARK	MANUFACTURER	MODEL	APPLICATION	DESCRIPTION	VOLUME (CFM)	PRESSURE DROP (IN-WG)	THROAT SIZE (IN)	THROAT AREA (SQ FT)	THROAT VELOCITY (FPM)	HEIGHT	HOOD LENGTH	HOOD WIDTH	UNIT WEIGHT (LBS)
RH-1	GREENHECK	FGR	RELIEF	ROOF MOUNTED FABRA-HOOD GRAVITY VENTILATOR.	24000.00	0.18	64 x 66	29.33	818.00	2'-7"	8'-0"	7'-4"	315.00
RH-2	GREENHECK	FGR	RELIEF	ROOF MOUNTED FABRA-HOOD GRAVITY VENTILATOR.	24000.00	0.18	64 x 66	29.33	818.00	2'-7"	8'-0"	7'-4"	315.00

ENERGY RECOVERY VENTILATOR SCHEDULE

NOTES: 1. PROVIDE WITH SINGLE POINT ELECTRICAL CONNECTION WITH DISCONNECT SWITCH.
2. PROVIDE WITH EC MOTORS.
3. PROVIDE WITH MERV 8 SA AND EA FILTERS.
4. PROVIDE WITH INTERGRAL MOTORIZED DAMPERS.
5. PERFORMANCE BASED ON SUMMER OUTDOOR AIR TEMP = 101 F DB/ 73.8 F WB, SUMMER INDOOR RETURN AIR TEMP = 75 F DB/ 62.3 F WB, WINTER OUTDOOR AIR TEMP = 3.4 F DB/ 1.9 F WB, WINTE...

MARK	MANUFACTURER	MODEL	SUPPLY AIRFLOW	SUPPLY ESP	EXHAUST AIRFLOW	EXHAUST ESP	SUMMER SA		WINTER SA		ELECTRICAL				WEIGHT
							DB	WB	DB	WB	VOLTAGE	PHASE	MCA	MOCP	
ERV-1	RENEWAIRE	HE10	940 CFM	0.50 in-wg	845 CFM	0.50 in-wg	84 °F	69 °F	46 °F	36 °F	120 V	1	14.6 A	20.0 A	245 lb

ELECTRIC DUCT HEATER SCHEDULE

NOTES: 1. PROVIDE WITH CONTROL PANEL WITH INTEGRAL DISCONNECT SWITCH, THERMAL CUTOUTS, AIRFLOW SWITCH, AND CONTROL TRANSFORMER.
2. PROVIDE WITH SCR CONTROL.
3. PROVIDE WITH DUCT MOUNTED THERMOSTAT . SET TO DELIVER 70°F (ADJ.) AIR.

MARK	MANUFACTURER	MODEL	ELECTRIC HEAT	AIRFLOW	DUCT SIZE		System Voltage	PHASE	DESCRIPTION	NOTES
					HEIGHT	WIDTH				
EDH-1	INDEECO	QUZ	1.5 kW	0 CFM	8"	8"	480 V	3	Electric Duct Coil	
EDH-2	INDEECO	QUZ	6.0 kW	0 CFM	12"	14"	480 V	3	Electric Duct Coil	

LOUVER SCHEDULE

GENERAL NOTES: COORDINATE FRAME TYPE AND MOUTING REQUIREMENTS WITH ARCH. AND G.C.

MARK	MANUFACTURER	MODEL	DESCRIPTION	FINISH	APPLICATION	DEPTH	WIDTH	HEIGTH	FREE AREA	DAMPER
L-1	GREENHECK	ESD-435	EXTRUDED ALUMINUM DRAINABLE BLADE LOUVER	KYNAR	INTAKE AIR	4"	2'-6"	1'-6"	1.58 SF	120V
L-2	GREENHECK	ESD-435	EXTRUDED ALUMINUM DRAINABLE BLADE LOUVER	KYNAR	EXHAUST AIR	4"	2'-6"	1'-6"	1.58 SF	120V
L-3	GREENHECK	ESJ-401	EXTRUDED ALUMINUM LOUVER	KYNAR	INTAKE AIR	4"	5'-0"	3'-6"	9.27 SF	120V
L-4	GREENHECK	ESJ-401	EXTRUDED ALUMINUM LOUVER	KYNAR	EXHAUST AIR	4"	5'-0"	3'-6"	9.27 SF	120V
L-5	GREENHECK	EAC-601	EXTRUDED ALUMINUM DRAINABLE BLADE COMBINATION LOUVER/ DAMPER	KYNAR	INTAKE AIR	6"	8'-0"	9'-0"	32.90 SF	120V
L-6	GREENHECK	EAC-601	EXTRUDED ALUMINUM DRAINABLE BLADE COMBINATION LOUVER/ DAMPER	KYNAR	INTAKE AIR	6"	4'-0"	5'-6"	10.26 SF	120V
L-7	GREENHECK	EAC-601	EXTRUDED ALUMINUM DRAINABLE BLADE COMBINATION LOUVER/ DAMPER	KYNAR	INTAKE AIR	6"	8'-0"	9'-0"	32.90 SF	120V
L-8	GREENHECK	EAC-601	EXTRUDED ALUMINUM DRAINABLE BLADE COMBINATION LOUVER/ DAMPER	KYNAR	INTAKE AIR	6"	8'-0"	9'-0"	32.90 SF	120V

EXHAUST FAN SCHEDULE

NOTES:
1. PROVIDE INTEGRAL DISCONNECT.
2. PROVIDE WITH SPEED CONTROLLER MOUNTED TO MOTOR.
3. PROVIDE INTEGRAL BACKDRAFT DAMPER.
4. PROVIDE WITH MANUFACTURER'S SUSPENSION PLATFORM WITH VIBRATION ISOLATION RAILS.
5. PROVIDE WITH INLET FLEX CONNECTION.
6. PROVIDE WITH SPRING HANGING VIBRATION ISOLATORS.

MARK	MANUFACTURER	MODEL	DESCRIPTION	CFM	ESP	MOTOR HP	ELECTRICAL		NOTES
							VOLTAGE	PHASE	
EF-1	GREENHECK	SP-110-VG	Ceiling Fan	50 CFM	0.25 in-wg	0.10 hp	120 V	1	1,2,3
EF-2	GREENHECK	SP-110-VG	Ceiling Fan	50 CFM	0.25 in-wg	0.10 hp	120 V	1	1,2,3
EF-3	CAR-MON	CMB-35	Utility Fan	6,480 CFM	4.50 in-wg	7.50 hp	480 V	3	4,5
EF-4	CAR-MON	CMB-25	Utility Fan	2,880 CFM	4.50 in-wg	5.00 hp	480 V	3	4,5
EF-5	GREENHECK	SQ-18	Inline Ehaust Fan	5,770 CFM	1.55 in-wg	3.00 hp	480 V	3	1,6
VF-1	GREENHECK	CSP-A110	Inline Fan	50 CFM	0.30 in-wg	0.10 hp	120 V	1	1,2,3

HOT WATER BOILER SCHEDULE

NOTES:
1. PROVIDE WITH 6 INDEPENDENT THERMAL MODULES
2. PROVIDE 75 PSI ASME RATED RELIEF VALVE.
3. PROVIDE CONDENSATE NEUTRALIZATION KIT
4. PROVIDE FOR DIRECT VENT OPERATION WITH POLYPROPYLENE VENT.
5. PROVIDE WITH BACNET COMPATIBLE CONTROLLER.

Mark	Manufacturer	Model	Gas Burner		Electrical			
			Input Rating	Output Rating	Voltage	Phase	MCA	MOCP
B-1	RIELLO	AR 3000	3,000,000 Btu/h	2,883,000 Btu/h	208 V	3	15.5 A	20.0 A

ELECTRIC WALL HEATER SCHEDULE

Notes:
1. PROVIDE WITH HIGH TEMP. THERMAL CUTOUT AND FAN DELAY.
2. WITH INTEGRAL THERMOSTAT AND UNIT MOUNTED DISCONNECT SWITCH.
3. PROVIDE WITH SURFACE MOUNT OR RECESSED FRAME AS REQUIRED. FIELD COORDINATE EXACT...

MARK	MANUFACTURER	MODEL	WATTS	VOLTAGE	PHASE	DESCRIPTION	NOTES
EWH-1	TRANE	UHWA	5.0 kW	208 V	1	ARCHITECTURAL FAN FORCED WALL HEATER	
EWH-2	TRANE	UHWA	5.0 kW	208 V	1	ARCHITECTURAL FAN FORCED WALL HEATER	
EWH-3	TRANE	UHWA	5.0 kW	208 V	1	ARCHITECTURAL FAN FORCED WALL HEATER	
EWH-4	TRANE	UHWA	5.0 kW	208 V	1	ARCHITECTURAL FAN FORCED WALL HEATER	
EWH-5	TRANE	UHWA	1.5 kW	208 V	1	ARCHITECTURAL FAN FORCED WALL HEATER	

PUMP SCHEDULE

NOTES: 1. PROVIDE PUMPS WITH VFD.

MARK	MANUFACTURER	MODEL	DESIGN FLOW	DESIGN HEAD	MAX RPM	MOTOR POWER	VOLTAGE	PHASE
CHWP-1	BELL & GOSSETT	E-1510 5EB	871.0 GPM	90.0 FT	1770	30.00 hp	480 V	3
CHWP-2	BELL & GOSSETT	E-1510 5EB	871.0 GPM	90.0 FT	1770	30.00 hp	480 V	3
HWP-1	BELL & GOSSETT	E-1510 3EB	262.0 GPM	41.0 FT	1770	5.00 hp	480 V	3
HWP-2	BELL & GOSSETT	E-1510 3EB	262.0 GPM	410.0 FT	1770	5.00 hp	480 V	3

MINI-SPLIT HEAT PUMP OUTDOOR UNIT SCHEDULE

NOTES:
1. PROVIDE REFRIGERANT PIPING SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR ACTUAL FIELD INSTALLED...
2. INSTALL REFRIGERANT PIPING IN ACCORDANCE TO ASHRAE STANDARD 15.
3. PROVIDE WITH R454B REFRIGERANT.
4. PROVIDE WITH HAIL GUARDS.

MARK	MANUFACTURER	MODEL	NOMINAL CAPACITY	V/Ph	MCA	MOCP
HP-1	MITSUBISHI	NTXSKH24	2.00 ton	208 V/1	17.0 A	27.0 A
HP-2	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-3	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-4	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-5	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-6	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-7	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-8	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-9	MITSUBISHI	NTXSKH09	0.75 ton	208 V/1	14.0 A	24.0 A
HP-10	MITSUBISHI	NTXMSH48	4.00 ton	208 V/1	45.0 A	80.0 A
HP-11	MITSUBISHI	NTXMSH48	4.00 ton	208 V/1	45.0 A	80.0 A
HP-12	MITSUBISHI	NTXMSH48	4.00 ton	208 V/1	45.0 A	80.0 A
HP-14	MITSUBISHI	NTXSKH30A	2.50 ton	208 V/1	24.0 A	40.0 A
HP-15	MITSUBISHI	PUZ-AK48NLHZ	4.00 ton	208 V/1	35.0 A	60.0 A

MINI-SPLIT HEAT PUMP INDOOR UNIT SCHEDULE

NOTES:
1. INDOOR UINTS ARE POWERED FROM OUTDOOR UNIT. PROVIDE ALL REQUIRED INTERCONNECTED CABLING PER MANUFACTURER'S INSTRUCTIONS.
2. WHERE POSSIBLE, CONCEAL REFRIGERANT PIPINNG, CONDENSATE PIPING AND ELECTRICAL IN WALLS AND ABOVE CEILINGS. WHEN NOT POSSIBLE, UTILIZE LINE-HIDE KIT TO CONCEAL REFRIGERANT PIPING AND CONDENSATE PIPING BELOW CEILING.
3. PROVIDE INDOOR UNITS WITH PROCON MELCO-BEMS MINI BMS INTERFACE BACNET COMPATIBLE CONTROLLER.

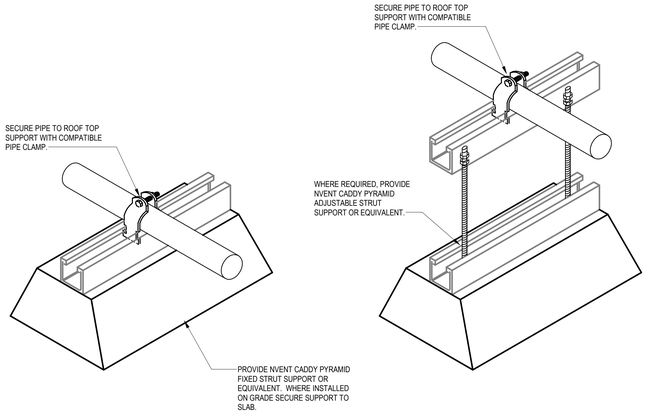
MARK	MANUFACTURER	MODEL	TYPE	Sens. Cooling	Heating Cap.
IU-1	MITSUBISHI	NTXAMT24	BLOWER COIL	18,425 Btu/h	21,414 Btu/h
IU-2	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-3	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-4	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-5	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-6	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-7	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-8	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-9	MITSUBISHI	NTXCKS09A112A	CEILING CASSETTE	7,114 Btu/h	8,081 Btu/h
IU-10	MITSUBISHI	TPVFYP048	BLOWER COIL	36,048 Btu/h	42,000 Btu/h
IU-11	MITSUBISHI	TPVFYP048	BLOWER COIL	36,048 Btu/h	42,000 Btu/h
IU-12	MITSUBISHI	TPVFYP048	BLOWER COIL	36,048 Btu/h	42,000 Btu/h
IU-14	MITSUBISHI	NTXAMT30A112AA	BLOWER COIL	23,419 Btu/h	25,697 Btu/h
IU-15	MITSUBISHI	TPVFYP048	BLOWER COIL	36,048 Btu/h	42,000 Btu/h

GRILLES, REGISTERS, & DIFFUSERS SCHEDULE

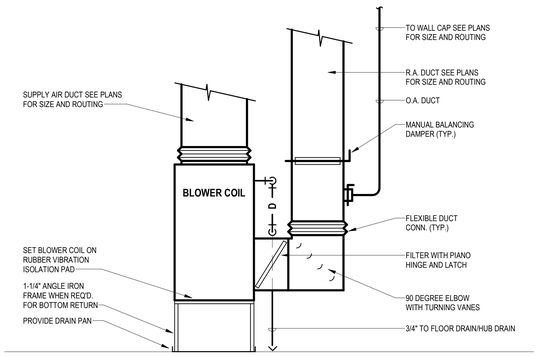
GENERAL NOTES: 1. PROVIDE MOUNTING FRAME AS REQUIRED FOR CEILING TYPE.
2. MAXIMUM NC SHALL BE 25.
3. RUNOUTS TO DIFFUSERS SHALL BE SAME SIZE AS NECK, U.N.O.
4. PAINT OBJECTS VISIBLE THROUGH GRILLES WITH FLAT BLACK PAINT.
5. COORDINATE LOCATIONS OF ALL WALL DEVICES WITH ARCHITECT.

NOTES:
1. PROVIDE WITH MERV 8 FILTER

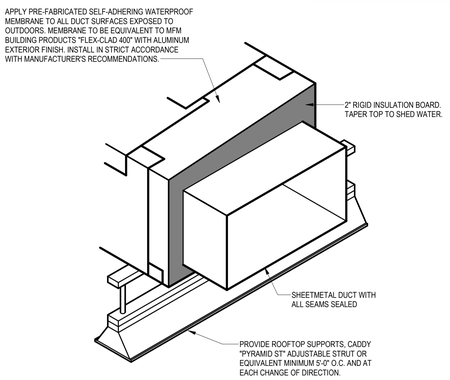
MARK	MANUFACTURER	MODEL	APPLICATION				MOUNTING	DAMPER	DESCRIPTION	NOTES
			SUPPLY	RETURN	EXAUST	TRANSFER				
EG-A	PRICE	80		■			Lay-In Panel Frame	No	EGG CRATE RETURN GRILLE, SIZE AS INDICATED ON DRAWINGS.	
EG-B	PRICE	80		■			Surface Mount	No	EGG CRATE RETURN GRILLE, SIZE AS INDICATED ON DRAWINGS.	
RG-A	PRICE	80		■			Lay-In Panel Frame	No	EGG CRATE RETURN GRILLE, SIZE AS INDICATED ON DRAWINGS.	
RG-B	PRICE	80		■			Surface Mount	No	EGG CRATE RETURN GRILLE, SIZE AS INDICATED ON DRAWINGS.	
RG-C	PRICE	80		■			Lay-In Panel Frame	No	EGG CRATE FILTER RETURN GRILLE, SIZE AS INDICATED ON DRAWINGS.	1
SD-A	PRICE	SCD	■				Lay-In Full Face	No	STEEL SQUARE LOUVERED DIFFUSER, SIZE AS INDICATED ON DRAWINGS.	
SD-B	PRICE	SCD	■				Lay-In Full Face	No	STEEL SQUARE LOUVERED DIFFUSER, SIZE AS INDICATED ON DRAWINGS.	
SD-C	PRICE	530	■				Surface Mount	No	STEEL LOUVERED DOUBLE DEFLECTION SUPPLY GRILLE, SEE PLANS FOR SIZE	



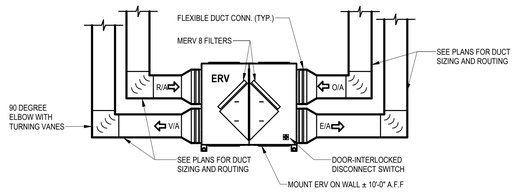
2 EXTERIOR PIPING SUPPORT DETAIL
NO SCALE



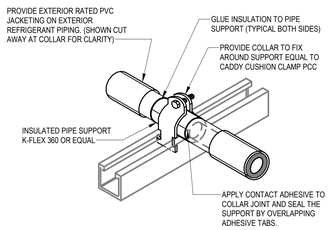
1 BLOWER COIL DETAIL
NO SCALE



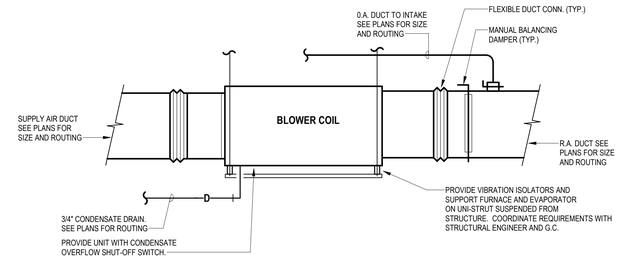
7 EXTERIOR DUCT DETAIL
12" = 1'-0"



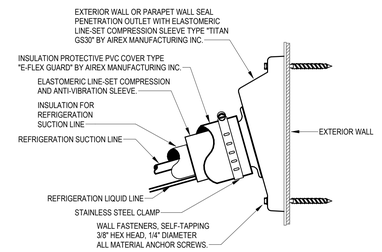
4 ERV CONNECTION DETAIL
NO SCALE



3 EXTERIOR REFRIGRANT PIPING INSULATION DETAIL
NO SCALE



6 HORIZONTAL BLOWER COIL DETAIL
NO SCALE



5 HVAC PIPING WALL PENETRATION SEAL
NO SCALE

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AIR COOLED CHILLER SCHEDULE

MARK	MANUFACTURER	MODEL	TONS	Design IPLV	EER	ELECTRICAL					EVAPORATOR				NOTES
						INPUT (W)	VOLTAGE	PH	MCA (A)	MOCP (A)	EWT (°F)	LWT (°F)	WPD (FT WG)	DESIGN AMB. (°F)	
CH-1	TRANE	RTFA-410	356.2	16.38	9.158	468200 W	480 V	3	778.0 A	800.0 A	54 °F	44 °F	21.0 FT	100 °F	

AIR TURNOVER UNIT SCHEDULE

NOTES:
1. CHILLED WATER TO BE 35% PROPYLENE GLYCOL SOLUTION.
2. PROVIDE WITH WEATHERPROOF OUTDOOR CASING WITH ECONOMIZER AND OUTDOOR AIR INTAKE HOOD.
3. PROVIDE WITH MANUFACTURER'S SUPPY AND RETURN GRILLES FOR FIELD INSTALLATION.
4. PROVIDE WITH NATURAL GAS BURNER WITH 3:1 TURNDOWN AND STAINLESS STEEL HEAT EXCHANGER.

MARK	MANUFACTURER	MODEL	O.A.	AIRFLOW	ESP	SUPPLY FAN MOTOR QTY	SUPPLY FAN MOTOR SIZE	HEATING		COOLING								ELECTRICAL			
								INPUT	OUTPUT	CHILLED WATER FLOW RATE	COOLING COIL WPD	COOLING COIL MAX APD	SENSIBLE	TOTAL	EDB	EWB	LDB	LWB	VOLTAGE	PHASE	MCA	MOCP
ATU-1	POWERMATIC	TE-31HC	2,400 CFM	24,000 CFM	0.25 in-wg	2	5.00 hp	1,250,000 Btu/h	1,000,000 Btu/h	154.7 GPM	25.0 FT	0.46 in-wg	601,710 Btu/h	727,551 Btu/h	85 °F	68 °F	61 °F	58 °F	480 V	3	22.0 A	30.0 A
ATU-2	POWERMATIC	TE-31HC	2,400 CFM	24,000 CFM	0.25 in-wg	2	5.00 hp	1,250,000 Btu/h	1,000,000 Btu/h	154.7 GPM	25.0 FT	0.46 in-wg	601,710 Btu/h	727,551 Btu/h	85 °F	68 °F	61 °F	58 °F	480 V	3	22.0 A	30.0 A

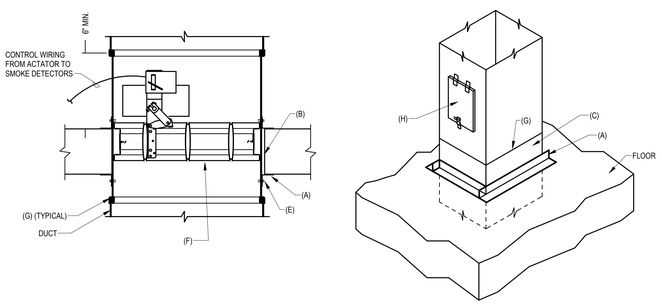
TYPICAL INSTALLATION DETAILS:
A. RETAINING ANGLES: MINIMUM 1-1/2"x1-1/2"x0.054 (16 GA.).
B. CLEARANCE: 1/8" PER LINEAR FOOT BOTH DIMENSIONS.
C. STEEL SLEEVE PER SMACNA
D. APPROVED FIRE/SMOKE DAMPER
E. SECURE RETAINING ANGLES TO SLEEVE ONLY, ON 8" CENTER WITH:
E.1. 1/2" LONG WELDS, OR
E.2. 1/4" BOLTS & NUTS, OR
E.3. #10 STEEL SCREWS, OR
E.4. MIN. 3/16" STEEL RIVETS
F. SECURE DAMPER TO SLEEVE ON 8" CENTER WITH:
F.1. 1/2" LONG WELDS, OR
F.2. 1/4" BOLTS & NUTS IN HOLES PROVIDED, OR
F.3. #10 STEEL SCREWS, OR
F.4. MIN. 3/16" STEEL RIVETS
G. CONNECT DUCT TO SLEEVE WITH BREAK-AWAY JOINT AS PER SMACNA
H. INSTALL ACCESS DOOR OR PANEL

MANUFACTURER'S INSTALLATION DETAILS

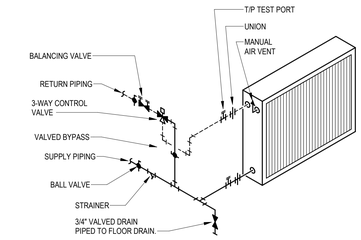
THE FIRE DAMPER MANUFACTURERS' INSTALLATION DETAILS AND INSTRUCTIONA AS TESTED AND APPROVED BY U.L. MUST BE USED IN LIEU OF TE ABOVE DETAILS WHERE APPLICABLE.

VERTICAL POSITION IS SHOWN, HORIZONTAL INSTALLATION IS SHOWN.

FOLLOW INSTALLATION INSTRUCTIONS FOR ACTUATOR.

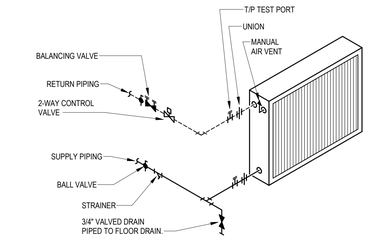


6 FIRE SMOKE DAMPER INSTALLATION DETAIL
NO SCALE



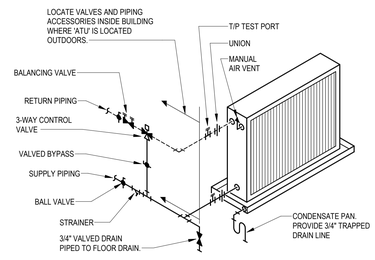
WITH 3-WAY VALVE

NOTE: SEE PLANS OR SCHEDULE FOR PIPE SIZES



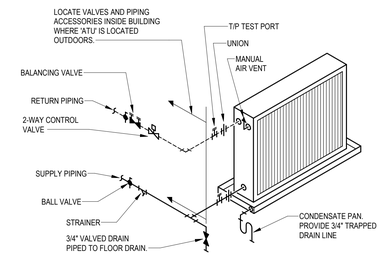
WITH 2-WAY VALVE

7 HW COIL CONNECTION DETAIL
NO SCALE

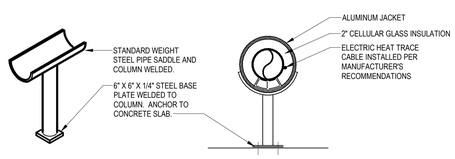


WITH 3-WAY VALVE

NOTE: SEE PLANS OR SCHEDULE FOR PIPE SIZES

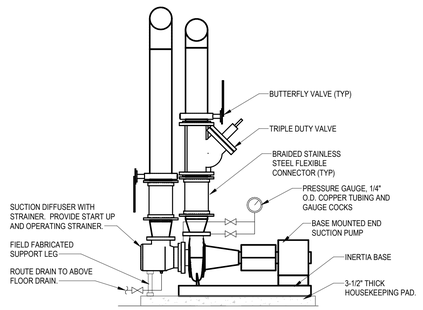


WITH 2-WAY VALVE

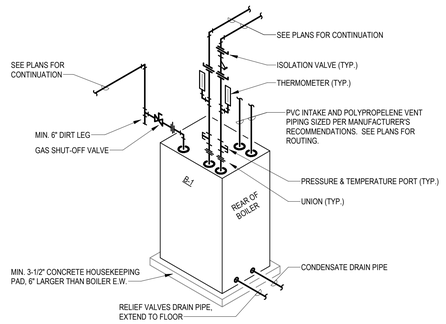


5 EXTERIOR CHILLED WATER PIPING DETAIL
NO SCALE

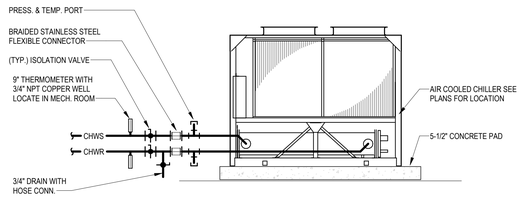
4 CW COIL CONNECTION DETAIL
NO SCALE



2 PUMP CONNECTION DETAIL
NO SCALE



1 BOILER CONNECTION DETAIL
NO SCALE



3 AIR COOLED CHILLER DETAIL
NO SCALE

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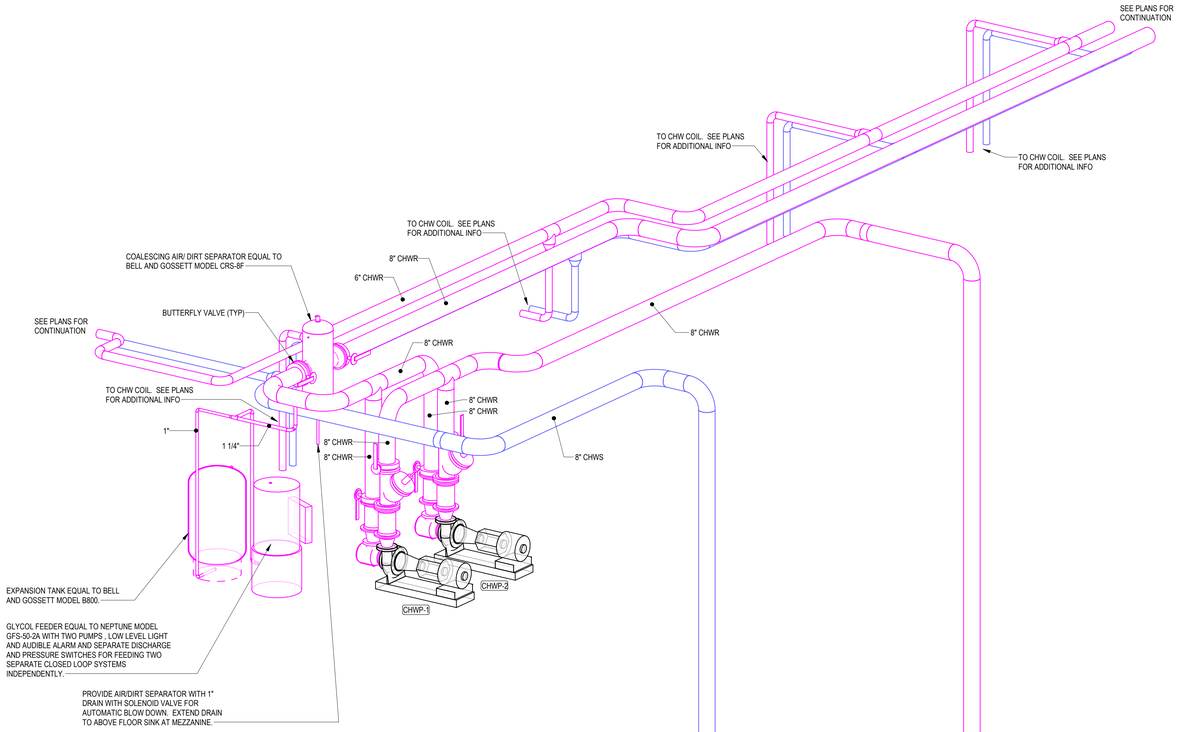
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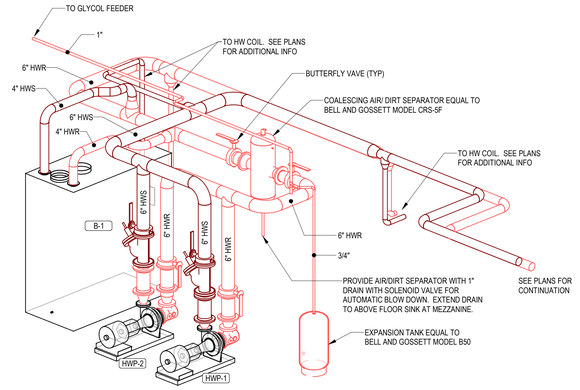
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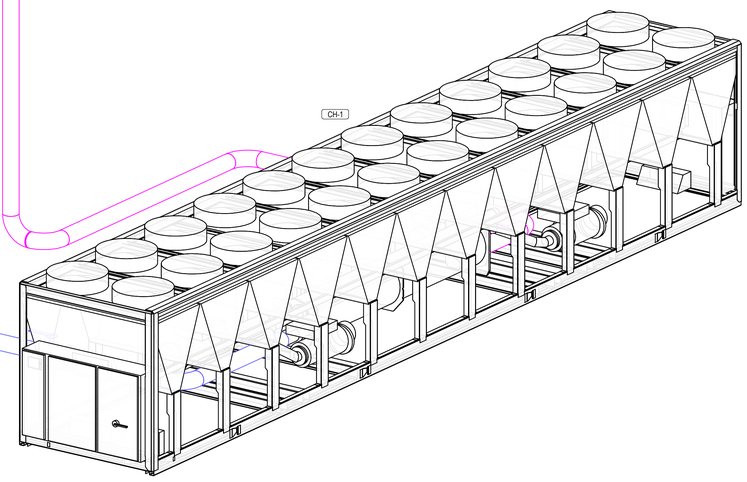
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1 CHILLED WATER PLANT ISOMETRIC DIAGRAM



2 HEATING WATER PLANT ISOMETRIC DIAGRAM



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Electrical Abbreviations

1P	1 Pole (2P, 3P, 4P, ETC.)
A, Amp	Ampere
AC	Above Counter
ACLG	Above Ceiling
ADO	Automatic Door Opener
AF	Amp Frame
AFF	Above Finished Floor
AFG	Above Finished Grade
AFI	Arc Fault Circuit Interrupter
AHU	Air Handling Unit
AL	Aluminum
ALT	Alternate
AMP	Ampere
AMPL	Amplifier
ANNUN	Annunciator
APPROX	Approximately
AQ-STAT	Aquastat
ARCH	Architect, Architectural
AS	Amp Switch
AT	Amp Trip
ATS	Automatic Transfer Switch
AUTO	Automatic
AUX	Auxiliary
AV	Audio Visual
AWG	American Wire Gauge
BATT	Battery
BD	Board
BLDG	Building
BMS	Building Management System
C	Conduit
CAB	Cabinet
CAT	Catalog
CATV	Cable Television
CB	Circuit Breaker
CCTV	Closed Circuit Television
CKT	Circuit
CLG	Ceiling
COMB	Combination
CMPR	Compressor
CONN	Connection
CONST	Construction
CONT	Continuation Or Continuous
CONTR	Contractor
CONV	Convector
CP	Circulating Pump
CRT	Cathode-Ray Tube
CT	Current Transformer
CTR	Center
CU	Copper
DCP	Domestic Water Circulating Pump
DEPT	Department
DET	Detail
DIA	Diameter
DISC	Disconnect
DIST	Distribution
DN	Down
DPR	Damper
DS	Safety Disconnect Switch
DT	Double Throw
DWG	Drawing
EC	Electrical Contractor
ELEC	Electric, Electrical
ELEV	Elevator
ELU	Emergency Lighting Unit
EM	Emergency
EMS	Energy Management System
EMT	Electrical Metallic Tubing
EP	Electric Pneumatic
EQUIP	Equipment
EWC	Electric Water Cooler
EXIST	Existing
EXH	Exhaust
EXP	Explosion Proof
FA	Fire Alarm
FABP	Fire Alarm Booster Power Supply Panel
FACP	Fire Alarm Control Panel
FCU	Fan Coil Unit
FIXT	Fixture
FLR	Floor
FLUOR	Fluorescent
FU	Fuse
FUDS	Fused Safety Disconnect Switch
GA	Gauge
GAL	Gallon
GALV	Galvanized
GC	General Contractor
GEN	Generator
GFI	Ground Fault Circuit Interrupter
GFP	Ground Fault Protector
GND	Ground
GRS	Galvanized Rigid Steel (Conduit)
GYP BD	Gypsum Board
HOA	Hands-Off-Automatic Switch
HORIZ	Horizontal
HP	Horsepower
HPF	High Power Factor
HT	Height
HTG	Heating
HTR	Heater
HV	High Voltage
HVAC	Heating, Ventilating And Air Conditioning
IC	Interrupting Capacity
IG	Isolated Ground
IMC	Intermediate Metal Conduit
INCAND	Incandescent
IR	Infrared
IW	Interlock With
J-BOX	Junction Box
KV	Kilovolt
KVA	Kilovolt-Ampere
KVAR	Kilovolt-Ampere Reactive
KW	Kilowatt
KWH	Kilowatt Hour
LOC	Locate Or Location
LT	Light
LTG	Lighting
LTNG	Lightning
LV	Low Voltage
MAX	Maximum
MAG.S	Magnetic Starter
M/C	Momentary Contact
MC	Mechanical Contractor
MCB	Main Circuit Breaker
MCC	Motor Control Center
MDC	Main Distribution Center
MDP	Main Distribution Panel
MFR	Manufacturer
MFS	Main Fused Disconnect Switch
MH	Manhole
MIC	Microphone
MIN	Minimum
MISC	Miscellaneous
MLO	Main Lugs Only
MMS	Manual Motor Starter
MOA	Multioutlet Assembly
MSP	Motor Starter Panelboard
MSBD	Main Switchboard
MSS	Motor Starter Switch
MT	Mount
MT.C	Empty Conduit
MTS	Manual Transfer Switch
MTR	Motor, Motorized
N.C.	Normally Closed
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFDS	Non-Fused Safety Disconnect Switch
NIC	Not In Contract
NL	Night Light
N.O.	Normally Open
NPF	Normal Power Factor
NTS	Not To Scale
OC	On Center
OH	Overhead
OL	Overloads
PA	Public Address
PB	Pull Box Or Pushbutton
PE	Pneumatic Electric
PED	Pedestal
PF	Power Factor
PH	Phase
PIV	Post Indicating Valve
PNL	Panel
PP	Power Pole
PR	Pair
PRI	Primary
PROJ	Projection
PRV	Power Roof Ventilator
PT	Potential Transformer
PVC	Polyvinyl Chloride (Conduit)
PWR	Power
QUAN	Quantity
RCPT	Receptacle
REQD	Required
RM	Room
RSC	Rigid Steel Conduit
RTU	Roof Top Unit
SC	Surface Conduit
SEC	Secondary
SHT	Sheet
SIM	Similar
SLD	Single-Line Diagram
S/N	Solid Neutral
SPEC	Specification
SPKR	Speaker
SP	Spare
SPP	Single-Point Power
SR	Surface Raceway
SS	Stainless Steel
SSW	Selector Switch
S/S	StopStart Pushbuttons
STA	Station
STD	Standard
SURF	Surface Mounted
SW	Switch
SWBD	Switchboard
SYM	Symmetrical
SYS	System
TEL	Telephone
TERM	Terminal
TL	Twist Lock
TR	Tamper Resistant
T-STAT	Thermostat
TTC	Telephone Terminal Cabinet
TV	Television
TVTC	Television Terminal Cabinet
TYP	Typical
UC	Under Counter
UE	Underground Electrical
UG	Underground
UH	Unit Heater
UT	Underground Telephone
UTIL	Utility
UV	Ultraviolet
V	Volt
VA	Volt-Amperes
VDT	Video Display Terminal
VERT	Vertical
VFD	Variable Frequency Drive
VOL	Volume
W	Watt
W/	With
WG	Wire Guard
WH	Water Heater
W/O	Without
WP	Weatherproof
XFMR	Transformer
XFR	Transfer

∠	Angle
@	At
▲	Delta
'	Feet
"	Inches
#	Number
Ø	Phase
C	Center Line
P	Plate

Electrical Symbol Legend

Lighting Symbols

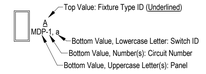
- Lighting Fixtures, Typical, Rectangular (Various Symbols)
- Lighting Fixtures, Typical, Round (Various Symbols). Center dot indicates pendant. Chevron indicates wall wash.
- Wall-mounted fixtures, Typical (Various Symbols)
- Strip Fixture
- Directional Light, Track Light, Flood Light
- Linear Light, Tape Light
- Emergency Lighting Unit, Ceiling-Mounted, Integral Battery
- Emergency Lighting Unit, Ceiling-Mounted, Remote Battery
- Emergency Lighting Unit, Wall-Mounted, Integral Battery
- Emergency Lighting Unit, Wall-Mounted, Remote Battery
- Exit Light, Ceiling-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit Light, Wall-Mounted. Shading and arrows indicate faces and directional chevrons.
- Exit/ELU Combo
- Pole/Area Lights
- Post-Top Area Light
- Bollard Light
- Hatch indicates light on an emergency or life safety circuit.
- Single-Pole Switch
- Two-Pole Switch
- Three-Pole Switch

Switch Modifiers:

3: 3-Way	OS: Occupancy Sensor
4: 4-Way	VS: Vacancy Sensor
K: Keyed	CT: Above-Counter
D: Dimming	PL: Pilot Light
T: Timer	M: Motor-Rated

- Lighting Contactor
- LC Lighting Control Panel
- OS Occupancy Sensor
- DL Daylight Harvesting Sensor

Lighting Tags



Absence of a switch designation on a lighting fixture indicates fixture is controlled by the only switch in the space. An "x" in place of the switch designation indicates unswitched.

- S^a Switch ID indicated by a lowercase letter. Switch IDs are unique per space. A switch with an ID "a" controls all devices within the space in which it is located tagged with "a". A switch without a tagged ID controls all lighting fixtures within a space. ID tags may be used on control devices other than switches, such as occupancy sensors or contactors.

Miscellaneous

- Area Not in Contract
- # Note by Symbol
- Callout: Top Value: Detail Number on Sheet; Bottom Value: Sheet Number of Detail
- Room / 1 Room Name and Number

Power Symbols

- Simplex Receptacle
- Duplex Receptacle
- Quadruplex Receptacle
- 6-50 Special Receptacle, Type as Indicated

Receptacle Modifiers:
- ##: Height AFF(to center)
- CT: Device Mounted Above Counter Top
- IG: Isolated Ground
- H: Device Mounted Horizontally
- WP: Weatherproof In-Use Cover

- Half shading indicates split (typically switched)
- Outside shading indicates tamperproof device
- Center shading indicates GFI type
- Full shading indicates tamperproof GFI type
- Multioutlet Assembly. Filled squares indicate 120V outlet. Open squares indicate with USB
- Cord Reel, Device Varies
- Drop Cord, Device Varies
- Junction Box
- F1 Floor Box, see schedule for type
- Emergency Power Off
- Door Opener Push Plate
- M Power Meter
- Safety Switch, Fused
- Safety Switch, Unfused
- Motor Starter
- Combination Starter/Disconnect
- Contactor

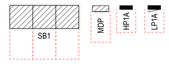
Power Device and Equipment Tags

- LP1A:1 Electrical DeviceTags: Uppercase letter(s) indicates Panel ID and circuit number. Lowercase letter indicates designation of controlling switch (where applicable).
- XX-1 Equipment Tags: Equipment ID is indicated by an underlined tag adjacent to the equipment. See the equipment connection schedule for description, electrical requirements, and panel and circuit number. Symbols/graphic appearance of equipment varies.

Wiring

- Solid, arced lines connecting equipment, devices, or fixtures indicate unswitched power circuiting. Wires are only intended to indicate to what circuit devices are connected. Actual connections, circuit routing, installtion, junction boxes, etc. shall be field-determined by the contractor.
- Dashed, arced lines connecting equipment, devices, or fixtures indicate switched power.
- Home run to branch circuit panelboard. The equipment name and circuit number(s) are indicated, separated by a hyphen. Homeruns are only intended to indicate panel and circuit number. Actual homerun location shall be field-determined by the contractor.

Power Distribution Equipment



Hatched fill indicates distribution panel or switchboard. Solid fill indicates branch panel or load center. Dashed box indicates code-required clearance (width and depth). Door indicates front of recessed panel.

Devices and fixtures are tagged with Panel and circuit number. For example, a device tagged with "A:1" indicates the device is circuited to panel designated "A," circuit number 1.

- T1 Transformer: Typically transformer names begin with or contain the letter "T". See Single-Line Diagram for description and requirements.

Telecom Symbols

- Data Outlet
- Telephone Outlet
- Data/Telephone Outlet

Outlet Modifiers:
- ##": Height AFF (to center)
- CT: Mounted Above Counter Top

- Wireless Access Point
- TV Outlet

GENERAL ELECTRICAL NOTES

A. COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING AND MECHANICAL INSTALLATION. CONDUITS SHALL BE ROUTED THROUGH JOIST WEBS WHERE POSSIBLE.
B. VERIFY EXACT PLACEMENT OF ALL LUMINAIRES, DEVICES, AND EQUIPMENT SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.
C. ELECTRICAL EQUIPMENT AND DEVICES SHALL BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75°C CONDUCTOR TERMINATION.
D. DEFINITION OF TERMS
   - "SHALL": ACTION THAT IS REQUIRED WITHOUT OPTION OR QUALIFICATION.
   - "FURNISH": CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING.
   - "INSTALL": CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE AND TEST EQUIPMENT FURNISHED BY HIM OR OTHERS.
   - "PROVIDE": CONTRACTOR SHALL FURNISH AND INSTALL.

MOUNTING HEIGHT REQUIREMENTS:
UNLESS SPECIFICALLY INDICATED OTHERWISE, THE FOLLOWING MOUNTING HEIGHTS SHALL APPLY:

• RECEPTACLES	16" TO BOTTOM
• TELECOMMUNICATIONS OUTLETS	16" TO BOTTOM
• LIGHT SWITCHES	48" TO TOP
• THERMOSTATS	48" TO TOP
• HUMIDISTATS	48" TO TOP
• FIRE ALARM PULL STATIONS	48" TO TOP
• FIRE ALARM NOTIFICATION DEVICES	LOWER OF: 88" TO BOTTOM OR TOP AT 6" BELOW CEILING

GENERAL LIGHTING NOTES

A. THE CIRCUITING OF ALL LUMINAIRES HAS BEEN SHOWN ON THE PLANS, AND THE CONTRACTOR SHALL FOLLOW THIS CIRCUITING LAYOUT.
B. CIRCUIT ALL EMERGENCY LIGHTS, NIGHT LIGHTS AND EXIT LIGHTS TO AN UNSWITCHED HOT CONDUCTOR, UPSTREAM OF ALL CONTROLS.
C. DIRECT CURRENT POWER WIRING FROM EXIT SIGNS TO REMOTE EXTERIOR EMERGENCY LIGHTING HEADS SHALL BE (2) #10 IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
D. IN AREAS WHERE CEILING MOUNTED OCCUPANCY SENSORS ARE USED FOR LIGHTING CONTROL IN CONJUNCTION WITH WALL SWITCHES, OCCUPANCY SENSOR/POWER PACK SHALL SWITCH LEG SHALL BE WIRED IN SERIES WITH WALL SWITCHES TO PROVIDE OVERRIDE "OFF" CONTROL FOR LIGHTS.
E. CONTROL WIRING FOR 0-10 V-dc DIMMING SIGNAL CIRCUITS SHALL BE NEC CLASS 1, ROUTED IN SAME RACEWAY/CABLE WITH LIGHTING CIRCUIT POWER CONDUCTORS. WIRING SHALL CONSIST OF (2) #16 SOLID CU THHN OR TFN CONDUCTORS. CONDUCTOR INSULATION COLOR SHALL BE VIOLET (+ V-dc) AND PINK (- V-dc). WHERE MC-CABLE IS USED FOR FINAL 6' POWER CONNECTION WHIP TO LUMINAIRE, UTILIZE "LUMINARY" TYPE MC-CABLE WITH INTEGRAL CLASS 1 CONTROL WIRING.

GENERAL POWER NOTES

A. THE CIRCUITING OF ALL DEVICES HAS BEEN SHOWN ON THE PLANS, AND THE CONTRACTOR SHALL FOLLOW THIS CIRCUITING LAYOUT.
B. VERIFY EXACT LOCATIONS OF HVAC AND PLUMBING EQUIPMENT WITH THE GENERAL CONTRACTOR AND ASSOCIATED SUBCONTRACTORS. COORDINATE CONDUIT STUB-UP AND POWER CONNECTIONS PRIOR TO COMMENCING ROUGH-IN WORK. ELECTRICAL DEVICES (DISCONNECTS, RECEPTACLES, ETC.) INSTALLED ON EQUIPMENT SHALL BE MOUNTED ON A NON-REMOVABLE PANEL OF THE EQUIPMENT. FIELD COORDINATE EXACT DEVICE MOUNTING LOCATIONS PRIOR TO INSTALLATION.
C. WALL MOUNTED HVAC CONTROL DEVICES (THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, CO_2 SENSORS, ETC) SHALL BE PROVIDED BY MECHANICAL CONTRACTOR. UNLESS NOTED OTHERWISE, ELECTRICAL CONTRACTOR SHALL PROVIDE SINGLE GANG WALL BOX WITH 1/2" CONDUIT STUBBED OUT TO ABOVE ACCESSIBLE CEILING WITH NYLON BUSHINGS AND PULLSTRING IN RACEWAY. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF DEVICES.

GENERAL TELECOMMUNICATIONS NOTES

A. PROVIDE THE FOLLOWING RACEWAY ROUGH-IN FOR TELECOMMUNICATIONS OUTLET TYPES INDICATED:
   - WALL PHONE OUTLET: 2"x4"x2-1/8" DEEP DEVICE BOX WITH (1) 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING.
   - PHONE/DATA OUTLET: 4-11/16" SQUARE x 3-1/4" DEEP BOX (RACO #260 OR EQUAL) WITH 1-GANG DEVICE RING AND 1-1/4" CONDUIT TO ABOVE ACCESSIBLE CEILING.
   - TV OUTLET: 4-11/16" SQUARE x 3-1/4" DEEP BOX (RACO #260 OR EQUAL) WITH 2-GANG DEVICE RING AND (1) 2" CONDUIT TO ABOVE ACCESSIBLE CEILING.
B. PROVIDE NYLON BUSHINGS FOR ALL CONDUIT ENDS NOT CONNECTED TO A BOX OR FITTING TO PROTECT CABLING FROM DAMAGE.
C. CONDUITS FROM EACH OUTLET SHALL BE STUBBED 2" ABOVE THE FINISHED CEILINGS IN AREAS WITH ACCESSIBLE TILES. IN AREAS WITH OPEN CEILINGS, STUB CONDUIT INTO STRUCTURAL JOIST SPACE.
D. PROVIDE BLANK, STAINLESS STEEL COVER PLATES FOR ALL OUTLETS NOT ACTIVATED BY OWNER.
E. PROVIDE SUITABLE PULL STRING IN ALL CONDUITS.
F. ALL TELECOMMUNICATIONS AND A/V CABLING, JACKS, CONNECTORS, TERMINATIONS, EQUIPMENT AND TESTING SHALL BE PROVIDED BY OWNER.

GENERAL FIRE ALARM NOTES

A. FIRE ALARM CABLING SHALL BE INSTALLED IN CONDUIT WHERE EXPOSED, INACCESSIBLE, AND WHERE SUBJECT TO PHYSICAL DAMAGE.
B. DUCT TYPE SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY FIRE ALARM CONTRACTOR, INSTALLED IN DUCT BY MECHANICAL CONTRACTOR.
C. FIRE ALARM SYSTEM HVAC SHUT DOWN RELAYS SHALL BE PROVIDED AND WIRED TO FIRE ALARM CONTROL PANEL BY FIRE ALARM CONTRACTOR. LOCATE RELAYS WITHIN 5' OF HVAC EQUIPMENT AND PROVIDE CONDUIT WITH PULL STRING FROM RELAY TO EQUIPMENT. UNIT SHUT DOWN CONTROL WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
D. AT LOCATION OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS, PROVIDE DUCT OR AREA SMOKE DETECTOR (AS SHOWN ON PLANS) WITHIN 5' OF DAMPER AND WIRE TO FIRE ALARM CONTROL PANEL. PROVIDE FIRE ALARM RELAY FOR CONTROL OF 120V POWER TO DAMPER ACTUATOR. DAMPER SHALL CLOSE UPON DETECTION OF SMOKE.
E. IN ADDITION TO VALVES INSTALLED ON FIRE SPRINKER SYSTEM RISER, ALL VALVES INSTALLED OUTSIDE THE BUILDING (POST INDICATOR VALVE, TAPPING SLEEVE VALVE, ETC.) SHALL BE SUPERVISED BY THE FIRE ALARM SYSTEM. PROVIDE ADDRESSABLE MONITORING MODULE AND SURGE PROTECTION DEVICE (DITEK #DTK-2MHL948B) FOR EACH MONITORED VALVE. COORDINATE WITH GC AND SITE WORK CONTACTOR FOR ALL VALVES INSTALLED. MONITORING IS NOT REQUIRED FOR VALVES INSTALLED IN ROADWAY BOXES BY THE MUNICIPALITY/PUBLIC UTILITY.

ELECTRICAL SHEET INDEX

E0.1	ELECTRICAL TITLE SHEET
E1.0	ELECTRICAL SITE PLAN
E1.1A	LIGHTING PLAN - AREA A
E1.1B	LIGHTING PLAN - AREA B
E1.2	LIGHTING PLAN - MEZZANINE LEVEL
E2.1A	POWER PLAN - AREA A
E2.1B	POWER PLAN - AREA B
E3.1A	MECHANICAL POWER PLAN - AREA A
E3.1B	MECHANICAL POWER PLAN - AREA B
E3.2	MECHANICAL POWER PLAN - MEZZANINE LEVEL
E4.1A	SPECIAL SYSTEMS PLAN - AREA A
E4.2B	SPECIAL SYSTEMS PLAN - AREA B
E5.1	ELECTRICAL RISER DIAGRAM
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E6.1	ELECTRICAL SCHEDULES
E6.2	ELECTRICAL SCHEDULES
E6.3	ELECTRICAL SCHEDULES

GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
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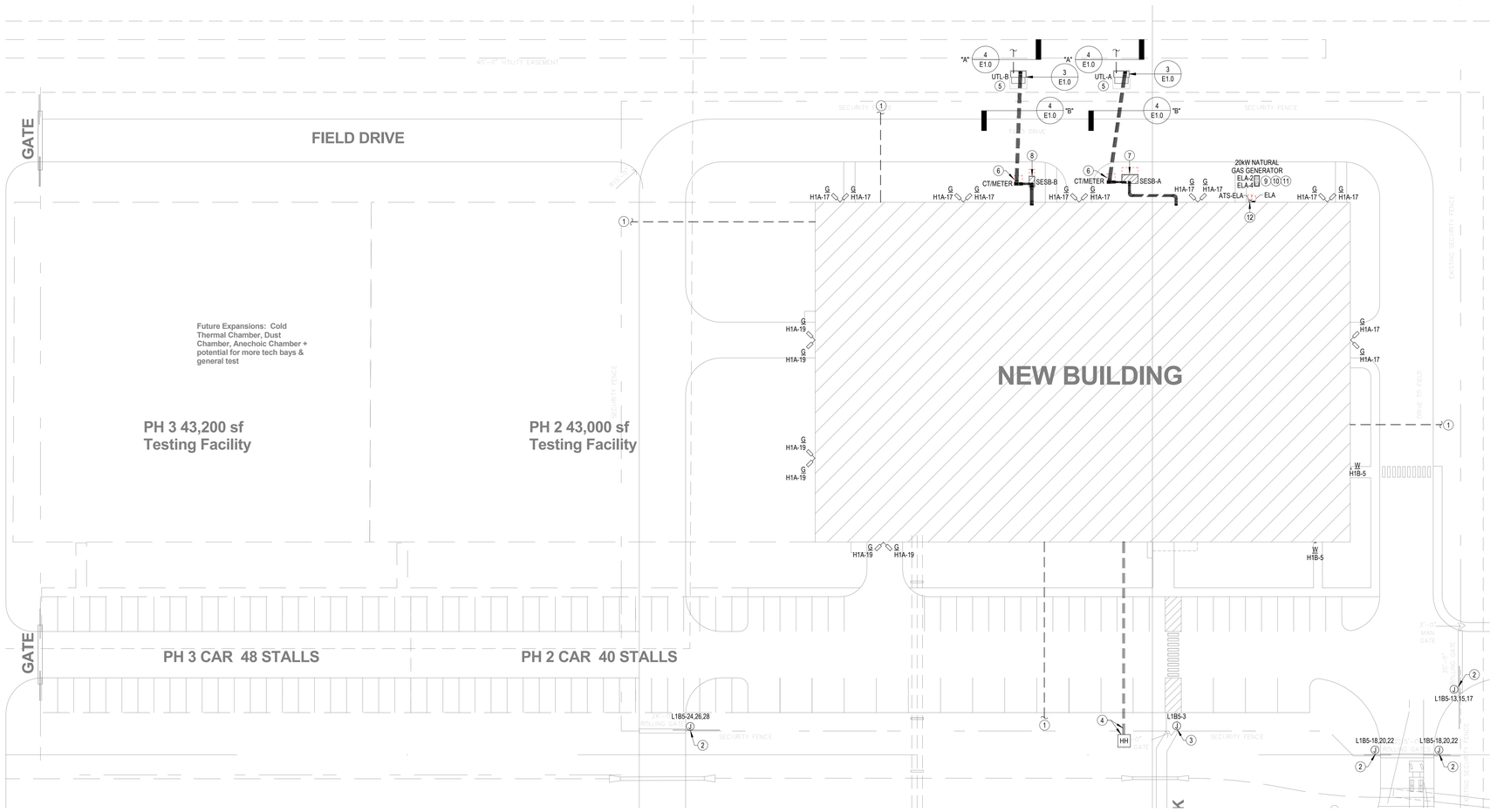
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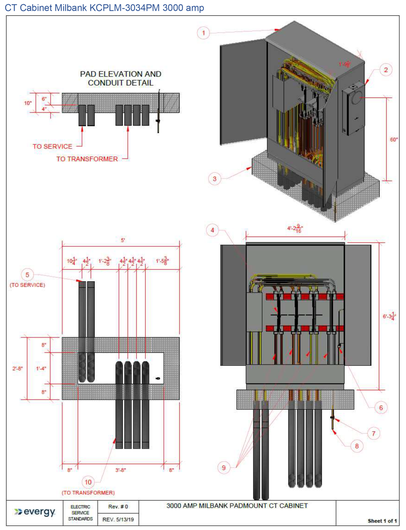


1 ELECTRICAL SITE PLAN

1" = 30'-0"

10.40 – C.T. Cabinet Examples

CT Cabinet Milbank KCPLM-3034PM 3000 amp

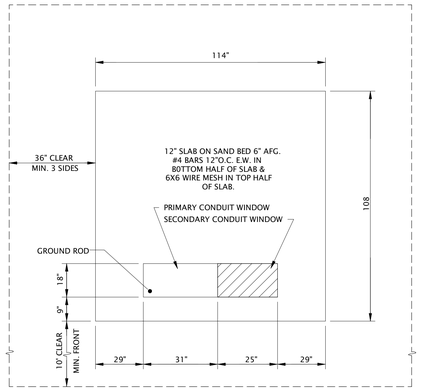


	3000 Amp C.T. Service Padmount	
ID	Name	Requirements
1	CT Cabinet Milbank KCPLM-3034PM 3000 Amp	
2	CT Rated Meter Socket	Meter enclosure is attached and electrically bonded to the CT Cabinet. Meter socket to be installed between 66" and 42" in height.
3	Concrete pad mount	Pour in place or pre-cast concrete pad.
4	Instrument C.T.	Installed by the customer, and wired by company. Install the C.T.'s primary polarity mark facing towards the utility transformer. Install within 66" to 42" in height
5	Service Conduit	Eight 4" gray schedule 40 PVC with 36" radius bends. Stack conduit as shown. Provide extensions so that conduit is 4 inches above ground inside the pad. Line and Load shall be marked.
6	Grounding Electrode Conductor	Minimum of 6 awg solid bare copper ground wire. Preferred to be installed in the C.T. cabinet enclosure. Alternatively, the grounding electrode conductor can be connected to the meter enclosure and externally grounded.
7	Grounding Electrode clamp	Attach clamp near the surface. This may need to be inspected. Contact the local AHJ for requirements.
8	Grounding Electrode	All C.T. meter installations require a 5/8" x 8' copper clad steel ground rod as near as possible to the location of the meter socket. The upper end of the rod shall be flush with or just below grade.
9	Service Conductor	Maximum size of 500 MCM copper or aluminum; or 750 compact aluminum. Aluminum must be AA-8000 series electrical grade aluminum alloy. Line and load side shall be marked.
10	Transformer Conduit	Eight 4" gray schedule 40 PVC with 36" radius bends. Stack conduit as shown. Provide extensions so that conduit is 4 inches above ground inside the pad

	3000 Amp C.T. Service Padmount			
ID	Name	Provided By	Installed By	Maintained By
1	CT Cabinet Milbank KCPLM-3034PM 3000 amp	Customer	Customer	Customer
2	CT Rated Meter Socket	Evergy	Customer	Evergy
3	Concrete Pad Mount	Customer	Customer	Customer
4	Instrument C.T.	EVERGY	Customer*	EVERGY
4	Instrument C.T. Wiring	EVERGY	EVERGY	EVERGY
5	Service Conduit	Customer	Customer	Customer
6	Grounding Electrode Conductor	Customer	Customer	Customer
7	Grounding Electrode clamp	Customer	Customer	Customer
8	Grounding Electrode	Customer	Customer	Customer
9	Service Conductor	Customer	Customer	Customer
10	Transformer Conduit	Customer	Customer	Customer

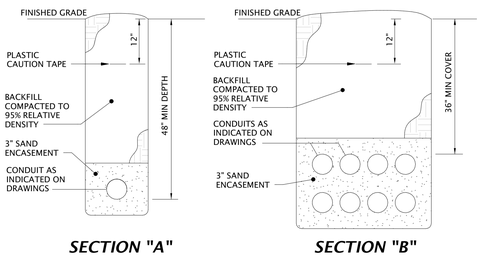
*Evergy installs instrument C.T. in EKC.

TRANSFORMER PAD NOTES:
1. THE PAD LOCATION SHALL BE APPROVED BY THE UTILITY COMPANY.
2. IF THE TRANSFORMER PAD IS INSTALLED IN AN AREA SUBJECT TO VEHICULAR TRAFFIC. THE INSTALLATION SHALL BE PROTECTED WITH PIPE BOLLARDS.
3. CONTRACTOR SHALL EXTEND FORMS DOWN TO AT LEAST 3" BELOW AVERAGE GROUND LINE.
4. THE CONCRETE SHALL BE A MINIMUM OF 3,000 LB. MIX.
5. THE TOP OF THE TRANSFORMER PAD SHALL RECEIVE A SMOOTH TROWEL FINISH. THE CORNERS AND EDGES SHALL BE ROUNDED OR BEVELED.
6. THE CONDUIT OPENING SHALL BE FREE AND CLEAR OF CONCRETE.
7. THE TOPS OF THE CONDUITS SHALL BE FLUSH WITH THE TOP OF THE CONCRETE PAD
8. CONTRACTOR TO VERIFY ALL PAD DIMENSIONS WITH UTILITY.
9. PILLARS, IF REQUIRED, ARE FORMED BY AUGERING AN 8' DIAMETER HOLE TO A DEPTH OF UNDISTURBED EARTH. A SEPARATOR, SUCH AS TAR PAPER, SHOULD BE PLACED BETWEEN THE PILLAR AND THE PAD SO THAT THE PAD CAN BE LEVELED AT A LATER TIME IF NECESSARY.



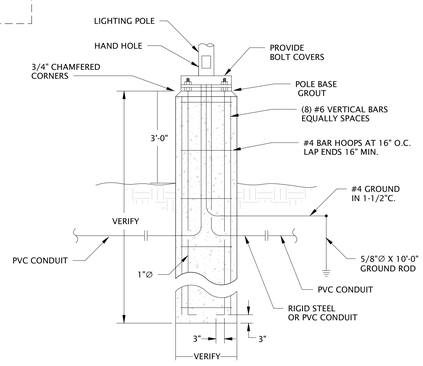
3 1500-2500kVA TRANSFORMER PAD DETAIL

NO SCALE



4 CONDUIT TRENCH DETAILS

NO SCALE



2 LIGHT POLE BASE DETAIL

NO SCALE

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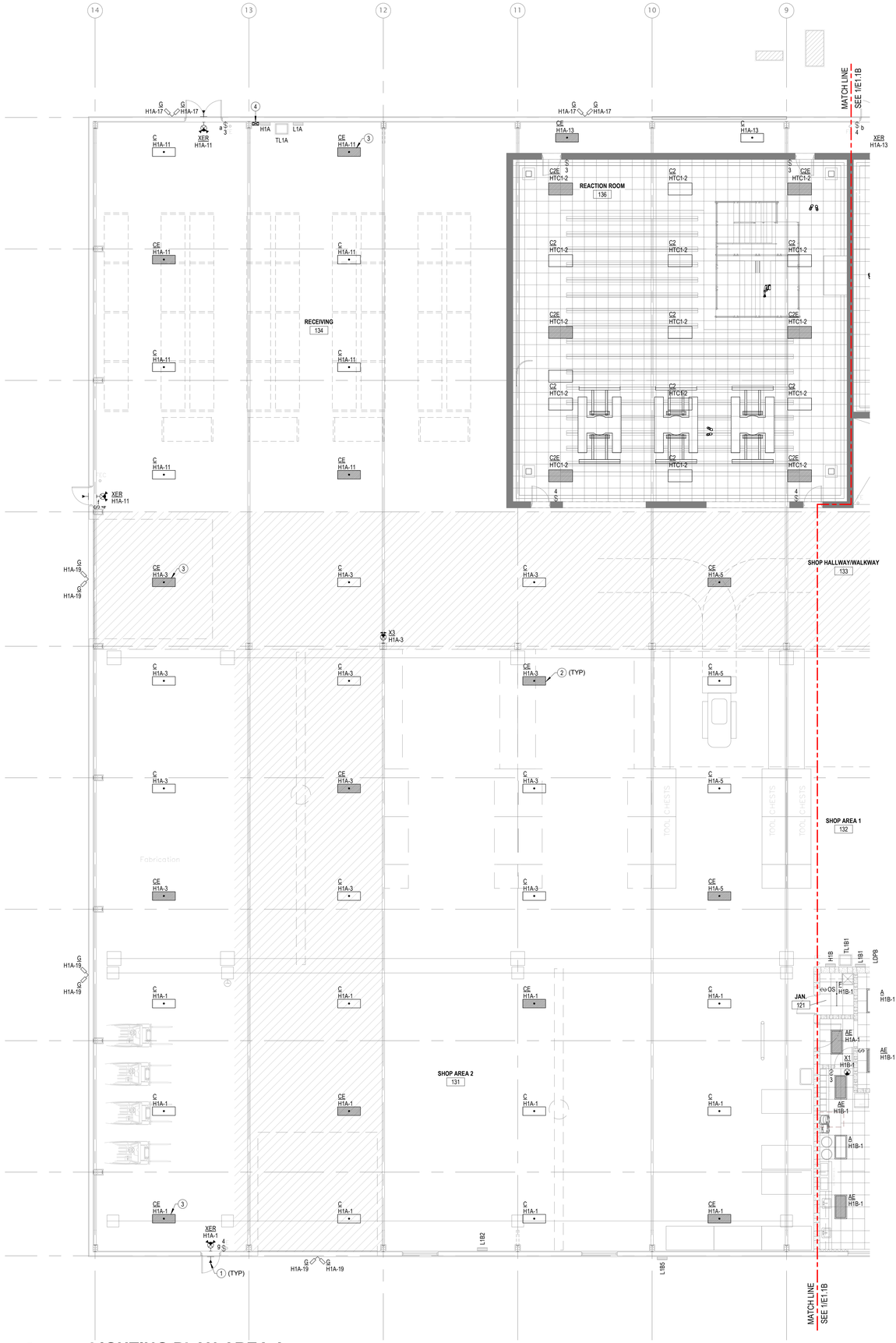
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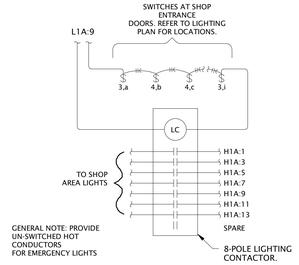
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1 LIGHTING PLAN-AREA A

1/8" = 1'-0"



2 SHOP LIGHTING CONTACTOR DETAIL

NO SCALE

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05/01/2026

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	PROVIDE AND INSTALL REMOTE HEAD FOR EMERGENCY EGRESS LIGHTING. REMOTE HEAD TO BE POWERED BY EXIT SIGN BATTERY PACK. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E6.1 FOR ADDITIONAL INFORMATION.
2	HATCHING INDICATES LIGHT FIXTURE DESIGNATED FOR EMERGENCY EGRESS LIGHTING. PROVIDE FIXTURE WITH 90-MINUTE EMERGENCY BATTERY PACK. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E6.1 FOR ADDITIONAL INFORMATION.
3	PROVIDE LIGHT FIXTURE WITH HOT CONDUCTOR FOR 24/7 OPERATION.
4	PROVIDE AND INSTALL 8-POLE CONTACTOR FOR ON/OFF CONTROLL OF SHOP AREA LIGHTIING. REFER TO DETAIL 2 ON SHEET E1.1A FOR ADDITIONAL INFORMATION.

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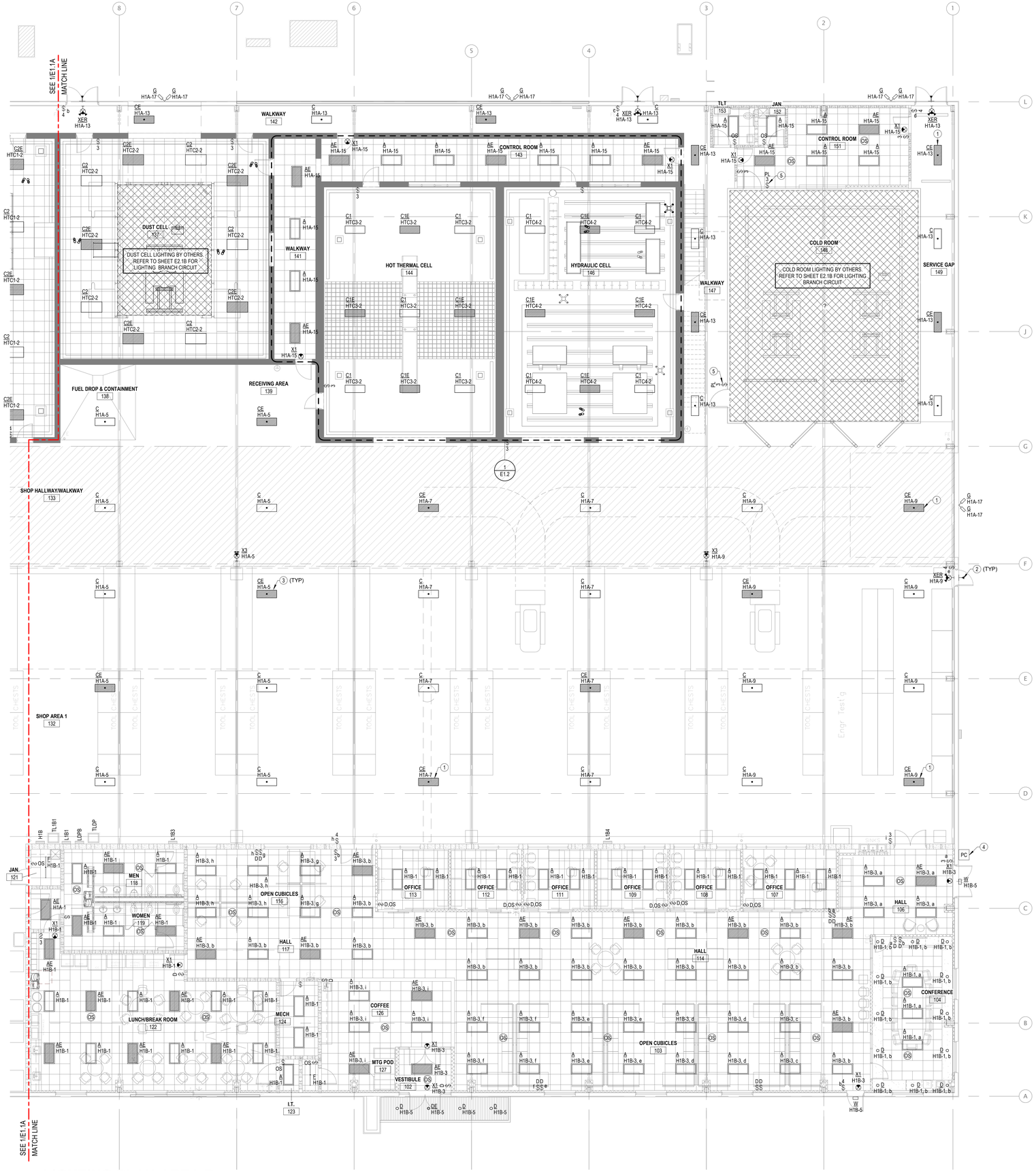
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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	PROVIDE LIGHT FIXTURE WITH HOT CONDUCTOR FOR 24/7 OPERATION.
2	PROVIDE AND INSTALL REMOTE HEAD FOR EMERGENCY EGRESS LIGHTING. REMOTE HEAD TO BE POWERED BY EXIT SIGN BATTERY PACK. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E6.1 FOR ADDITIONAL INFORMATION.
3	HATCHING INDICATES LIGHT FIXTURE DESIGNATED FOR EMERGENCY EGRESS LIGHTING. PROVIDE FIXTURE WITH 90-MINUTE EMERGENCY BATTERY PACK. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E6.1 FOR ADDITIONAL INFORMATION.
4	PROVIDE AND INSTALL PHOTOCELL FOR AUTOMATIC ON/OFF CONTROL OF OFFICE EXTERIOR LIGHTING CIRCUIT H1B-5.
5	PROVIDE AND INSTALL PILOT LIGHT 3-WAY SWITCH FOR COLD ROOM LIGHTING ON/OFF CONTROL. REFER TO OTHER CONSULTANT DRAWINGS FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS.

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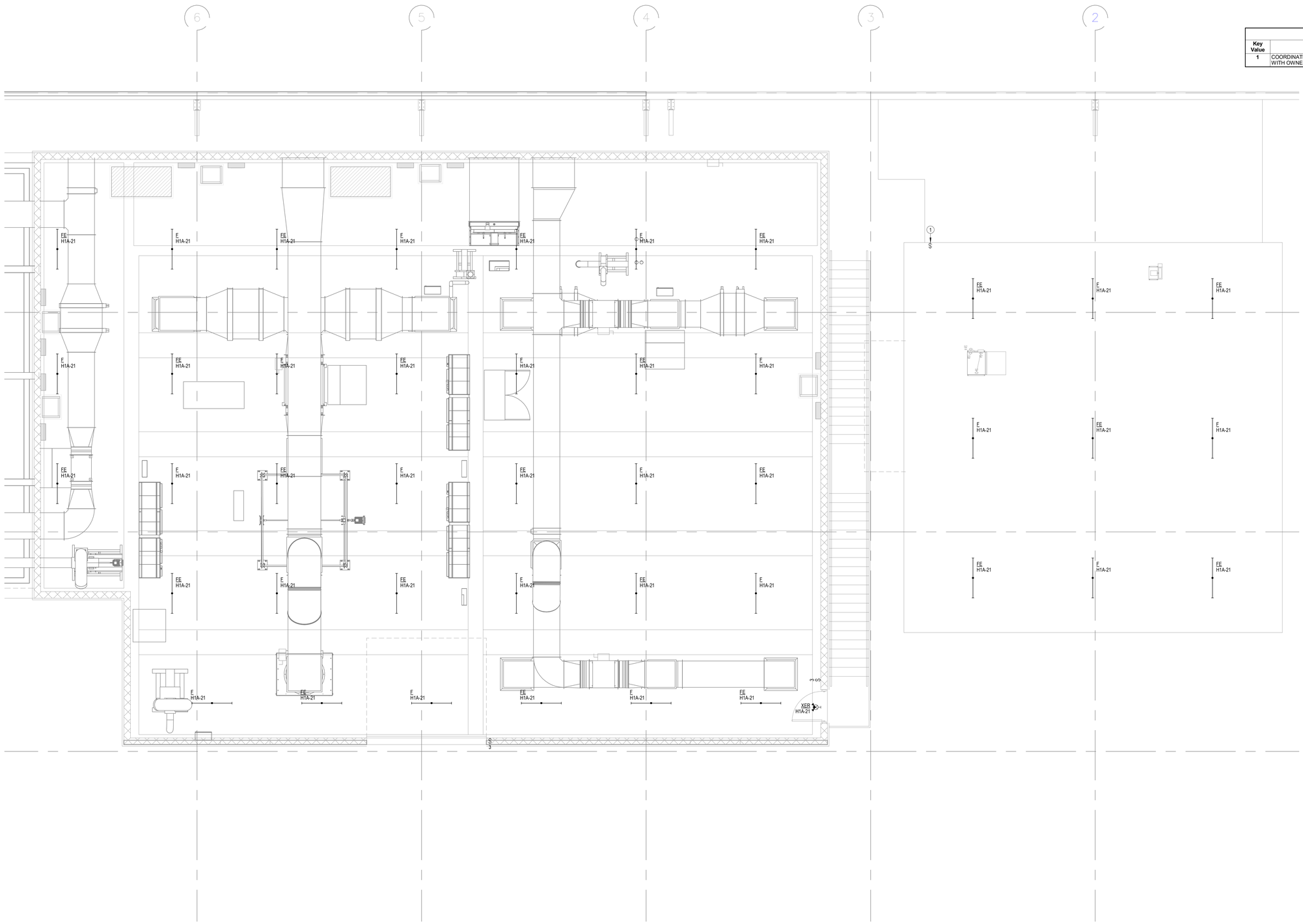
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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	COORDINATE LOCATION OF COLD CELL MEZZANINE LIGHT SWITCH WITH OWNER PRIOR TO ROUGH-IN.



1 LIGHTING PLAN - MEZZANINE
1/4" = 1'-0"

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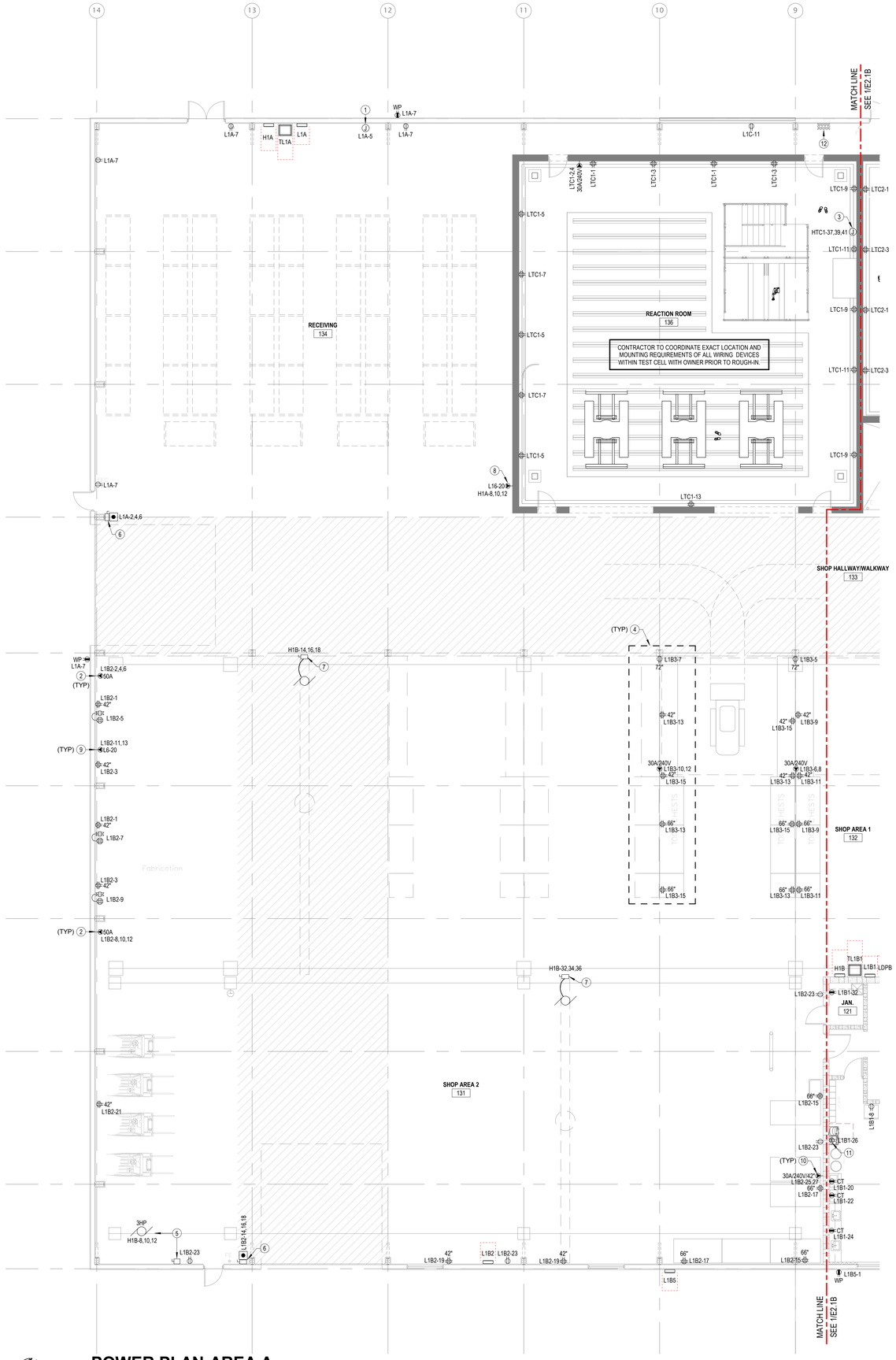
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E1.2

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North

1 POWER PLAN-AREA A

1/8" = 1'-0"

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO RAYMOND LINE DRIVER SYSTEM. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
2	PROVIDE AND INSTALL HUBBELL CS8369 OR APPROVED EQUAL 50A, 208V 3-PHASE LOCKING WELDING RECEPTACLE. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
3	PROVIDE AND INSTALL J-BOX FOR 20A, 480V POWER TO REACTION ROOM HYDRAULIC PACK. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
4	CONTRACTOR TO INSTALL ALL TECH BAY WIRING DEVICES ON TUBULAR STEEL SUPPORT FRAME PROVIDED BY OWNER. COORDINATE EXACT LOCATION OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN.
5	PROVIDE 30A, 480V-3PH POWER CONNECTION FOR SPRAY BOOTH. COORDINATE EXACT ROUGH-IN LOCATION WITH OWNER.
6	PROVIDE 15A, 208V-3PH POWER CONNECTION TO OVERHEAD DOORS. INSTALL SAFETY DEVICES PROVIDED WITH DOOR. COORDINATE EXACT REQUIREMENTS WITH DOOR SUPPLIER.
7	PROVIDE 30A, 480V-3PH POWER CONNECTION TO OVERHEAD CRANE. COORDINATE EXACT ROUGH-IN LOCATION WITH G.C.
8	PROVIDE AND INSTALL NEMA L16-20R 20A, 480V-3PH RECEPTACLE FOR POWER TO FORKLIFT CHARGER. CONTRACTR TO CONFIRM PLUG CONFIGURATION AND FINAL LOCATION WITH OWNER.
9	PROVIDE AND INSTALL NEMA L6-20R 20A, 208V-1PH RECEPTACLE. CONTRACTOR TO CONFIRM PLUG CONFIRGURATION WITH OWNER.
10	PROVIDE AND INSTALL NEMA L6-30R 30A, 208V-1PH RECEPTACLE. CONTRACTOR TO CONFIRM PLUG CONFIRGURATION WITH OWNER.
11	DRINKING FOUNTAIN RECEPTACLE TO BE FED BY GFCI CIRCUIT BREAKER PER NEC. REFER TO PANEL SCHEDULE.
12	UNDERGROUND DUCTBANK ENTRANCE FOR SWITCHBOARD "MSB-B" FEEDER. CONTRACTOR TO TRANSISTION FROM PVC TO RIGID METAL CONDUIT, AND ROUTE OVERHEAD TO MEZZANINE. COORDINATE EXACT ROUTE WITH ALL OTHER TRADES IN THIS AREA PRIOR TO ROUGH-IN. REFER TO RISER DIAGRAM FOR FEEDER SIZE.

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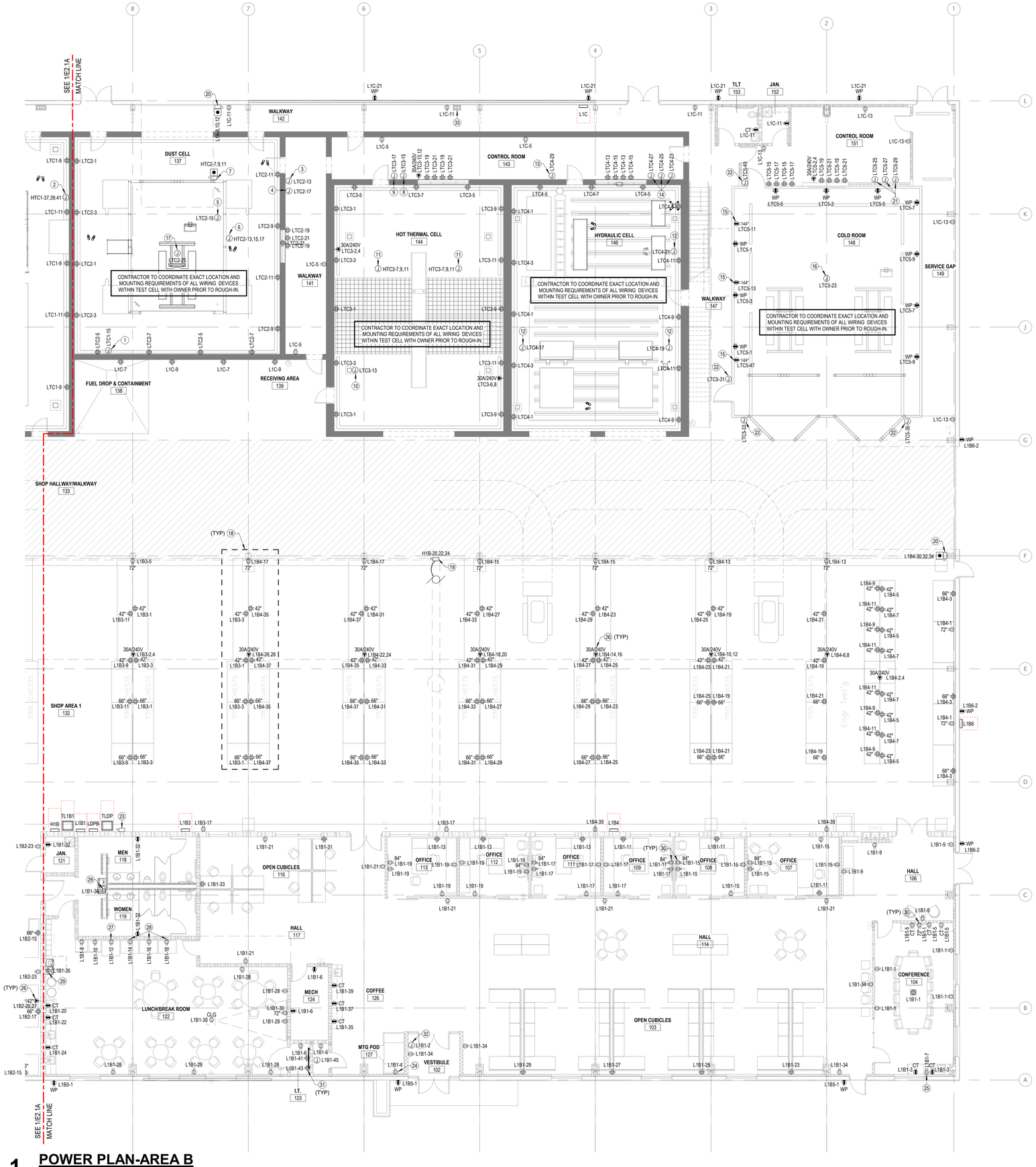


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1 POWER PLAN-AREA B

1/8" = 1'-0"

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO REACTION ROOM SAFETY PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
2	PROVIDE AND INSTALL J-BOX FOR 20A, 480V POWER TO REACTION ROOM HYDRAULIC PACK. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
3	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO DUST CELL SAFETY PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
4	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO DUST CELL CADET CABINET. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
5	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO DUST CELL TRANSDUCER POST. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
6	PROVIDE AND INSTALL J-BOX FOR 20A, 480V POWER TO DUST BLOWER CONTROL BOX. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
7	PROVIDE 30A/3P/NF DISCONNECT SWITCH FOR POWER TO DUST ROOM DOOR MOTOR. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
8	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO THERMAL CELL CADET CABINET. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
9	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO THERMAL CELL SAFETY PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
10	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO THERMAL CELL TRANSDUCER POST. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
11	PROVIDE 20A, 480V 3PH CIRCUIT FOR POWER TO THERMAL ROOM SPOT FAN POWER. CONTRACTOR TO COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
12	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO HYDRAULIC CELL TRANSDUCER POST. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
13	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO HYDRAULIC CELL SAFETY PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
14	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO HYDRAULIC CELL CADET CABINET. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
15	PROVIDE DEDICATED RECEPAITCLE FOR POWER TO EVAPORATOR DRAIN LINE HEAT TRACING. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
16	PROVIDE 20A, 120V CIRCUIT FOR COLD ROOM LIGHTING. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
17	PROVIDE 20A, 120V CIRCUIT FOR DUST CELL LIGHTING. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
18	CONTRACTOR TO INSTALL ALL TECH BAY WIRING DEVICES ON TUBULAR STEEL SUPPORT FRAME PROVIDED BY OWNER. COORDINATE EXACT LOCATION OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN.
19	PROVIDE 30A, 480V-3PH POWER CONNECTION TO OVERHEAD CRANE. COORDINATE EXACT ROUGH-IN LOCATION WITH G.C.
20	PROVIDE 15A, 208V-3PH POWER CONNECTION TO OVERHEAD DOORS. INSTALL SAFETY DEVICES PROVIDED WITH DOOR. COORDINATE EXACT REQUIREMENTS WITH DOOR SUPPLIER.
21	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER FOR COLD CELL CONTROL PANEL. COORDINATE ROUGH-IN LOCATION AND REQUIREMENTS WITH COLD CELL CONTRACTOR.
22	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER FOR DOOR/THRESHOLD HEAT. COORDINATE ROUGH-IN LOCATION AND REQUIREMENTS WITH COLD CELL CONTRACTOR.
23	PROVIDE AND INSTALL 200A/3P/NF DISCONNECT SWITCH FOR TRANSFORMER "TLDP".
24	DEDICATED OUTLET FOR MEETING POD POWER. COORDINATE EXACT LOCATION WITH OWNER.
25	CONTRACTOR TO LOCATE OUTLET IN BASE CABINET FOR UNDER CABINET REFRIGERATOR. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
26	PROVIDE AND INSTALL NEMA L6-30R 30A, 208V-1PH RECEPTACLE. CONTRACTOR TO CONFIRM PLUG CONFIRGURATION WITH OWNER.
27	ICEMAKER RECEPTACLE TO BE FED BY GFCI CIRCUIT BREAKER PER NEC. REFER TO PANEL SCHEDULE.
28	VENDING MACHINE RECEPTACLE TO BE FED BY GFCI CIRCUIT BREAKER PER NEC. REFER TO PANEL SCHEDULE.
29	DRINKING FOUNTAIN RECEPTACLE TO BE FED BY GFCI CIRCUIT BREAKER PER NEC. REFER TO PANEL SCHEDULE.
30	PROVIDE AND INSTALL HUBBELL NSAV62M OR APPROVED EQUAL 2-GANG IN-WALL ENCLOSURE FOR RECESSED TV POWER. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT.
31	COORDINATE LOCATION OF QUAD OUTLET IN IT ROOM WITH OWNER PRIOR TO ROUGH-IN.
32	PROVIDE DEDICATED 20A, 120V POWER FOR FIRE ALARM CONTROL PANEL. PROVIDE LOCKABLE CIRCUIT BREAKER FOR BRANCH CIRCUIT AS INDICATED IN PANEL SCHEDULE.
33	UNDERGROUND DUCTBANK ENTRANCE FOR SWITCHBOARD "MSB-A" FEEDER. CONTRACTOR TO TRANSISTION FROM PVC TO RIGID METAL CONDUIT, AND ROUTE OVERHEAD TO MEZZANINE. COORDINATE EXACT ROUTE WITH ALL OTHER TRADES IN THIS AREA PRIOR TO ROUGH-IN. REFER TO RISER DIAGRAM FOR FEEDER SIZE.

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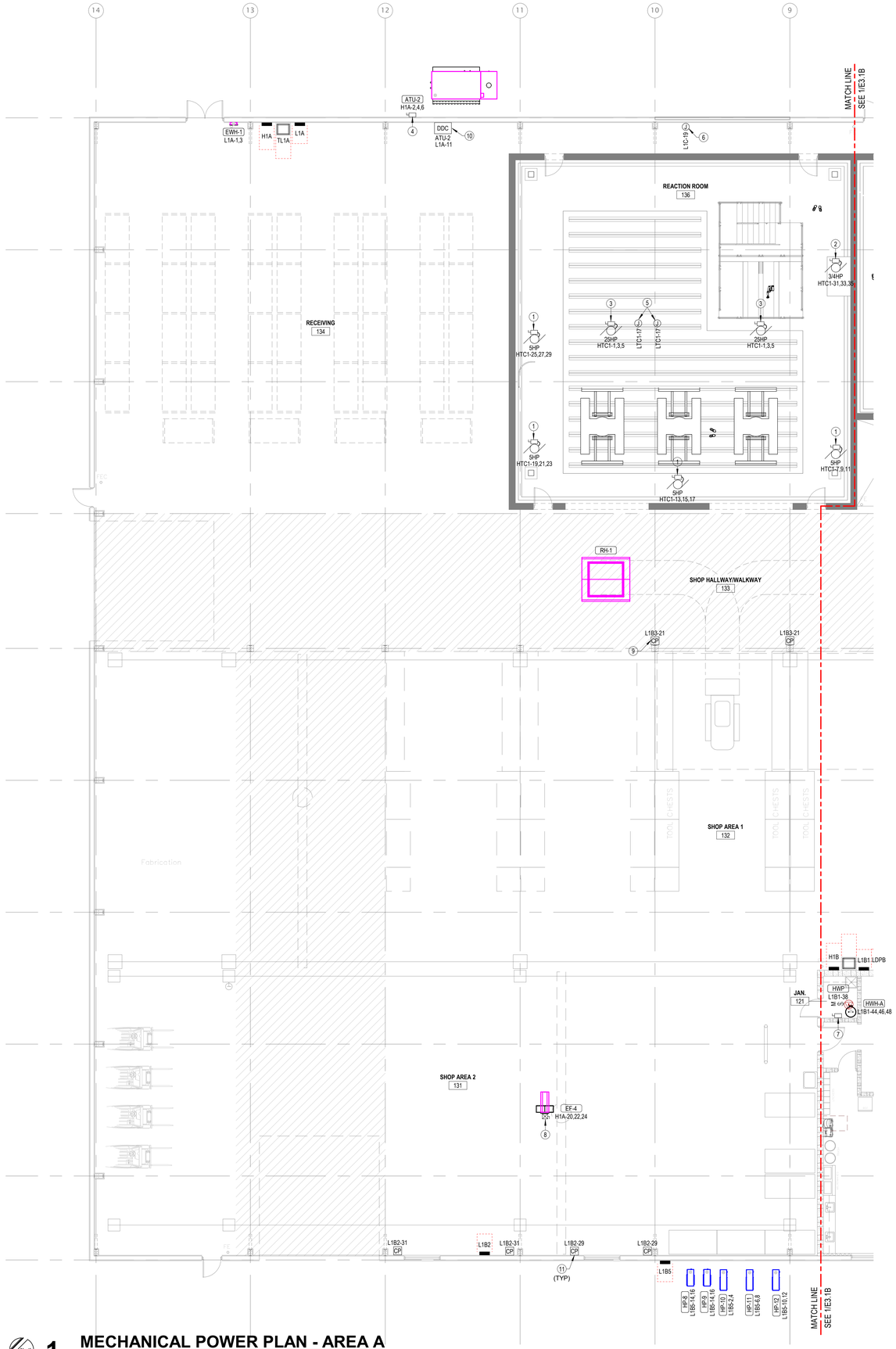
GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA KANSAS

REVISIONS:

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1 MECHANICAL POWER PLAN - AREA A

1/8" = 1'-0"

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Project 24056 **05/01/2026**

NOTES BY SYMBOL

Key Value	Keynote Text
1	PROVIDE 30A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO EXHAUST FAN. CONTRACTOR TO ROUTE POWER THROUGH EXHAUST CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
2	PROVIDE 30A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO PURGE FAN. CONTRACTOR TO ROUTE POWER THROUGH PURGE FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
3	PROVIDE 60A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO VENTILATION FAN. CONTRACTOR TO ROUTE POWER THROUGH VENTILATION CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
4	PROVIDE AND INSTALL 60A/3P/NF/NEMA 3R DISCONNECT SWITCH FOR POWER TO AIR ROTATION UNIT. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
5	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR REACTION ROOM VENTILATION SYSTEM DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
6	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO MOTORIZED INTAKE DAMPER/LOUVER. ROUTE CIRCUIT THROUGH VENTILATION CONTROL PANEL REMOTE RUN DRY CONTACTS.
7	PROVIDE 30A/3P/NF DISCONNECT SWITCH FOR POWER TO HOT WATER HEATER. COORDIANTE EXACT LOCATION WITH PLUMBING PRIOR TO ROUGH-IN.
8	PROVIDE AND INSTALL 30A/3P/NF COMBINATION MOTOR STATER DISCONNECT SWITCH FOR POWER TO EXHAUST FAN. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
9	PROVIDE 20A, 120V CIRCUIT FOR POWER TO TECH BAY EXHAUST DROP CONTROL PANEL. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO CONTROL DIAGRAM #5 ON SHEET M5.9 FOR ADDITIONAL INFORMATION.
10	PROVIDE 20A, 120V CIRCUIT FOR POWER TO AIR TURNOVER UNIT DDC CONTROL PANEL. REFER TO MECHANICAL FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
11	PROVIDE 20A, 120V CIRCUIT FOR POWER TO SHOP AREA EXHAUST DROP CONTROL PANEL. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO CONTROL DIAGRAM #5 ON SHEET M5.9 FOR ADDITIONAL INFORMATION.

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NEW CE TESTING FACILITY

SALINA KANSAS

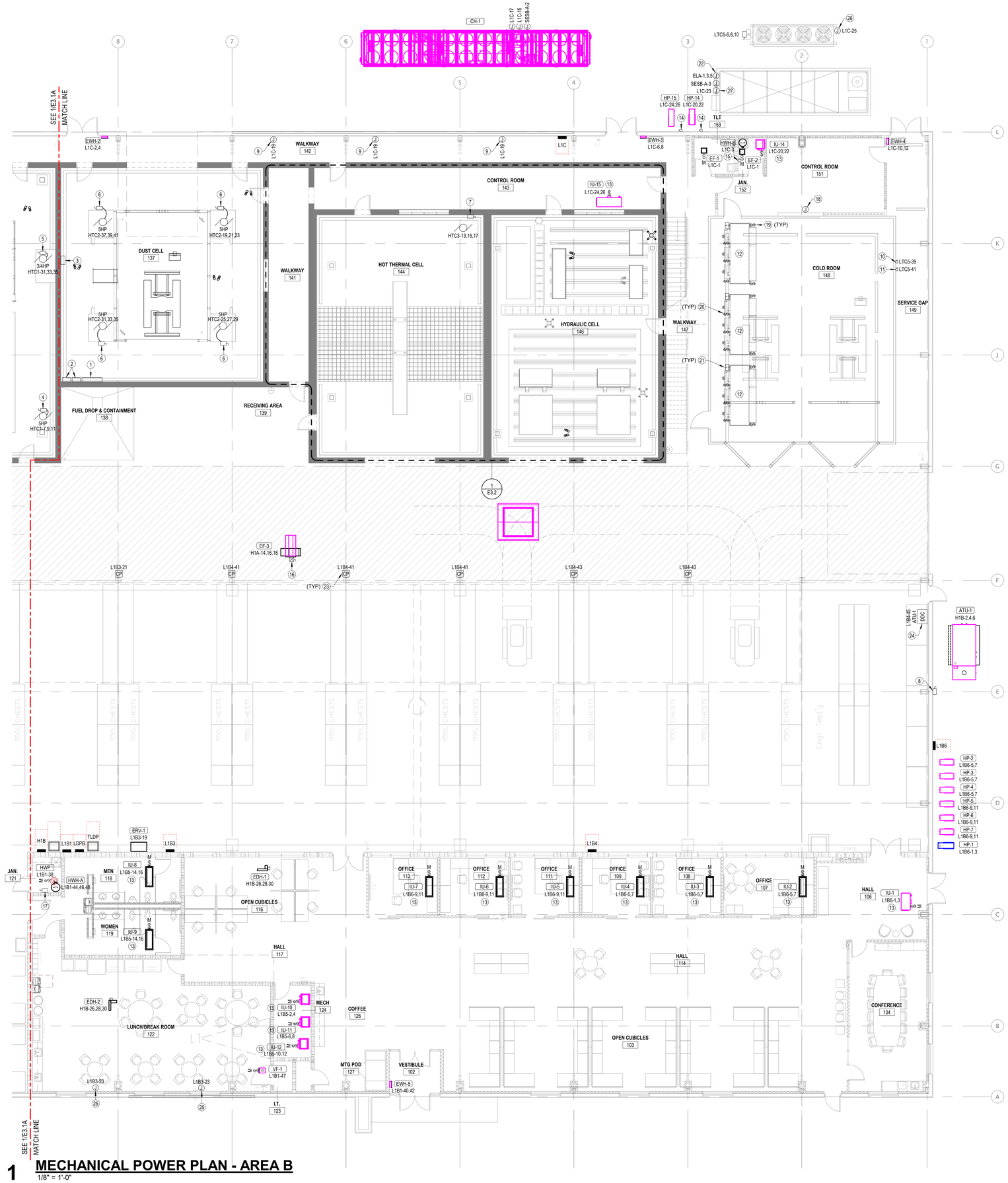
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PROFESSIONAL ENGINEER

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1 MECHANICAL POWER PLAN - AREA B

1/8" = 1'-0"

NOTES BY SYMBOL

Key Value	Keynote Text
1	REACTION ROOM VENTILATION CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
2	REACTION ROOM EXHAUST FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
3	REACTION ROOM PURGE FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
4	PROVIDE 30A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO EXHAUST FAN. CONTRACTOR TO ROUTE POWER THROUGH EXHAUST CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
5	PROVIDE 30A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO PURGE FAN. CONTRACTOR TO ROUTE POWER THROUGH PURGE FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
6	PROVIDE 30A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO DUST FAN. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
7	PROVIDE 30A/3P/NF DISCONNECT SWITCH FOR POWER TO THERMAL ROOM PIT JACK. REFER TO SIERRA DRAWINGS. FOR ADDITIONAL INFORMATION.
8	PROVIDE AND INSTALL 60A/3P/NF/NEMA 3R DISCONNECT SWITCH FOR POWER TO AIR ROTATION UNIT. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
9	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO MOTORIZED INTAKE DAMPER/LOUVER. ROUTE CIRCUIT THROUGH VENTILATION CONTROL PANEL REMOTE RUN DRY CONTACTS.
10	PROVIDE AND INSTALL 20A, 120V POWER CONNECTION FOR UNDER FLOOR HOT WATER HEATER. WATER HEATER BY COLD CELL CONTRACTOR. COORDIANTE EXACT LOCATION WITH COLD CELL CONTRACTOR.
11	PROIVDE AND INSTALL 20A, 120V POWER CONNECTION FOR UNDERFLOOR HEATING SYSTEM PUMPM. PUMP BY COLD CELL CONTRACTOR. COORDINATE EXACT LOCATION WITH COLD CELL CONTRACTOR.
12	COOLER EVATPORATOR IS POWERED VIA DRY COOLER "RDP". COORDINATE EXACT LOCATION AND POWER REQUIREMENTS FOR COOLER EVAPORATOR WITH COLD CELL CONTRACTOR PRIOR TO ROUGH-IN.
13	INDOOR UNIT POWER DERIVED FROM MATCHING OUTDOOR HEAT PUMP.
14	PROVIDE 60A/2P/NF/NEMA 3R DISCONNECT SWITCH FOR POWER TO HEAT PUMP. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
15	PROVIDE 30A/1P/NF DISCONNECT SWITCH FOR POWER TO HOT WATER HEATER. COORDIANTE EXACT LOCATION WITH PLUMBING PRIOR TO ROUGH-IN.
16	PROIVDE AND INSTALL 30A/3P/NF COMBINATION MOTOR STATER DISCONNECT SWITCH FOR POWER TO EXHAUST FAN. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
17	PROVIDE 30A/3P/NF DISCONNECT SWITCH FOR POWER TO HOT WATER HEATER. COORDIANTE EXACT LOCATION WITH PLUMBING PRIOR TO ROUGH-IN.
18	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER FOR COLD CELL AIR VENTS. COORDINATE ROUGH-IN LOCATION AND REQUIREMENTS WITH COLD CELL CONTRACTOR.
19	PROVIDE AND INSTALL MOTOR RATED SNAP SWITCH FOR DISCONNECTING MEANS TO EVAPORATOR DAMPER HEATER. COORDIANTE EXACT SIZE AND INSTALLATION REQUIREMENTS WITH COLD CELL CONTRACTOR PRIOR TO ROUGH-IN.
20	PROVIDE AND INSTALL MOTOR RATED SNAP SWITCH FOR DISCONNECTING MEANS TO EVAPORATOR FAN HEATER. COORDIANTE EXACT SIZE AND INSTALLATION REQUIREMENTS WITH COLD CELL CONTRACTOR PRIOR TO ROUGH-IN.
21	PROVIDE AND INSTALL 30A/3P/NF DISCONNECT SWITCH FOR DISCONNECTING MEANS TO EVAPORATOR FANS. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH COLD CELL CONTRACTOR PRIOR TO ROUGH-IN.
22	PROVIDE AND INSTALL J-BOX FOR 30A, 208V-3PH POWER TO DRYER COOLER C02 CHARGE SAVER. COORDINATE ROUGH-IN LOCATION AND REQUIREMENTS WITH COLD CELL CONTRACTOR PRIOR TO ROUGH-IN.
23	PROVIDE 20A, 120V CIRCUIT FOR POWER TO TECH BAY EXHAUST DROP CONTROL PANEL. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO CONTROL DIAGRAM #5 ON SHEET M5.9 FOR ADDITIONAL INFORMATION.
24	PROVIDE 20A, 120V CIRCUIT FOR POWER TO AIR TURNOVER UNIT DDC CONTROL PANEL. REFER TO MECHANICAL FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
25	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO MOTORIZED DAMPER/LOUVER. REFER TO MECHANICAL FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
26	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR DRYER COOLER DOMESTIC WATER HEAT TRACE. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH COLD ROOM CONTRACTOR PRIOR TO ROUGH-IN.
27	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR DYER COOLER CONTROL POWER. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH COLD ROOM CONTRACTOR PRIOR TO ROUGH-IN.

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NEW CE TESTING FACILITY
SALINA
KANSAS

CRAIG THOMAS SCHMIDT 13396 05/01/2026 PROFESSIONAL ENGINEER

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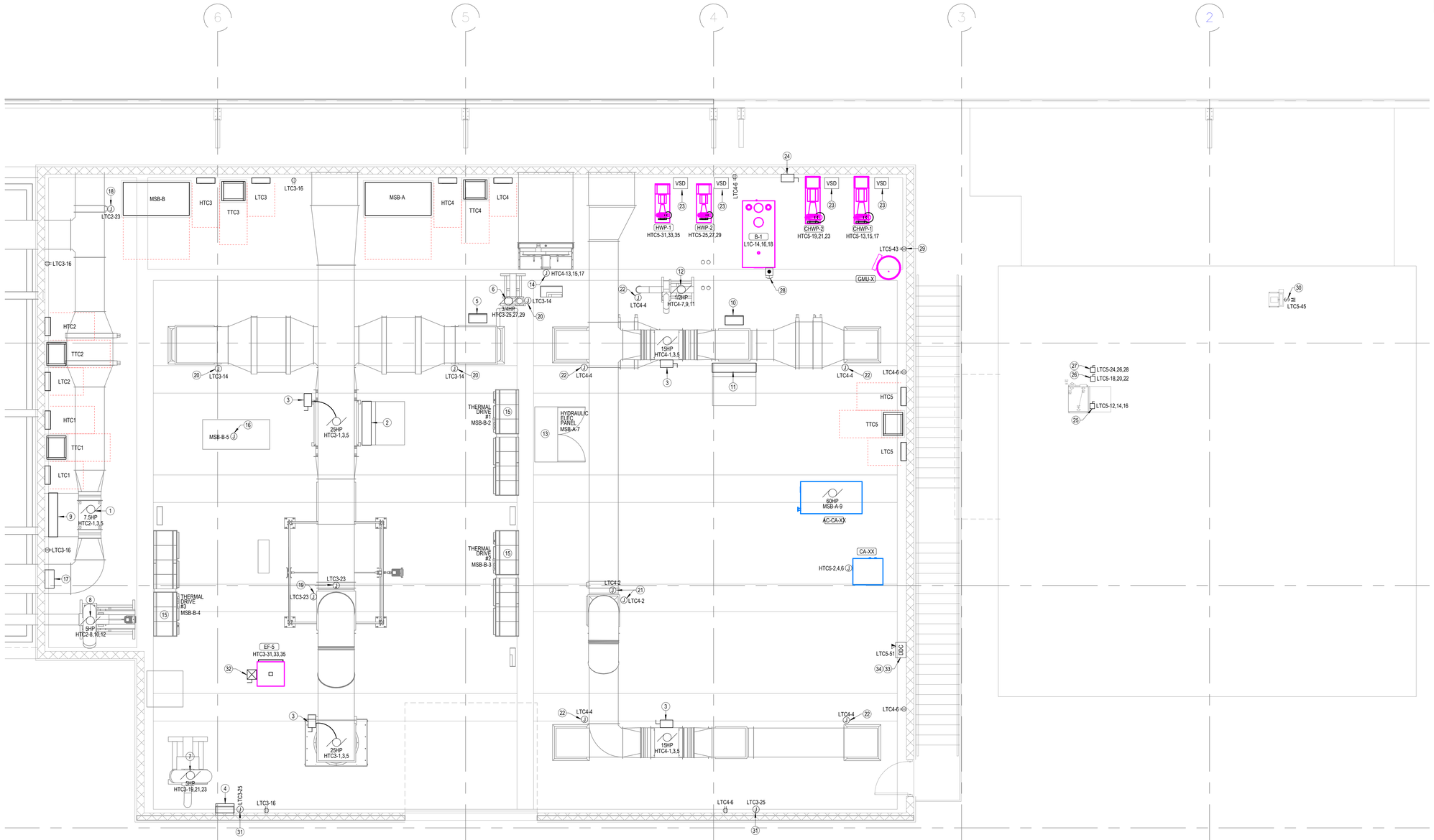
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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA KANSAS



1 MECHANICAL POWER PLAN - MEZZANINE LEVEL

1/4" = 1'-0"

NOTES BY SYMBOL	
Key Value	Keynote Text
1	PROVIDE 25A, 480V 3PH CIRCUIT FOR POWER TO DUST CELL VENTILATION FAN. CONTRACTOR TO ROUTE POWER THROUGH VENTILATION CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
2	THERMAL ROOM VENTILATION CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
3	PROVIDE 60A/3P/NF DISCONNECT SWITCH MOUNTED TO EQUIPMENT UNISTRUT SUPPORT FOR POWER TO VENTILATION FAN. CONTRACTOR TO ROUTE POWER THROUGH VENTILATION CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
4	THERMAL ROOM EXHAUST FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
5	THERMAL ROOM PURGE FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
6	PROVIDE 25A, 480V POWER TO THERMAL ROOM PURGE FAN. CONTRACTOR TO ROUTE POWER THROUGH PURGE FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
7	PROVIDE 25A, 480V POWER TO THERMAL ROOM EXHAUST FAN. CONTRACTOR TO ROUTE POWER THROUGH EXHAUST FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
8	PROVIDE 25A, 480V POWER TO DUST ROOM EXHAUST FAN. CONTRACTOR TO ROUTE POWER THROUGH EXHAUST FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL	
Key Value	Keynote Text
9	DUST ROOM VENTILATION CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
10	HYDRAULIC ROOM PURGE FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
11	HYDRAULIC ROOM VENTILATION CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
12	PROVIDE 25A, 480V POWER TO HYDRAULIC ROOM PURGE FAN. CONTRACTOR TO ROUTE POWER THROUGH PURGE FAN CONTROL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
13	225A 480/277V 3PH, 4W HYDRAULIC ELECTRICAL PANEL. REFER TO SIERRA DRAWINGS FOR ADDITIONAL INFORMATION.
14	PROVIDE 20A, 480V 3PH CIRCUIT FOR POWER TO HYDRAULIC ROOM HEAT EXCHANGER POWER. CONTRACTOR TO COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
15	THERMAL CELL 480V DRIVE PANEL. CONTRACTOR TO COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.
16	PROVIDE 125A, 480V 3PH POWER TO CAHU TRANSFORMER. CONTRACTOR TO COODINANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIEERA DRAWINGS.
17	DUST ROOM EXHAUST FAN CONTROL PANEL. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS.

NOTES BY SYMBOL	
Key Value	Keynote Text
18	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR DUST ROOM VENTILATION SYSTEM DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
19	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR THERMAL ROOM VENTILATION SYSTEM DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
20	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR THERMAL ROOM FIRE SMOKE DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
21	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR HYDRAULIC ROOM VENTILATION SYSTEM DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
22	PROVIDE AND INSTALL 20A, 120V CIRCUIT FOR HYDRAULIC ROOM FIRE SMOKE DAMPER POWER. COORDIANTE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
23	INSTALL VARIABLE SPPED DRIVE PROVIDED BY MECHANICAL CONTRACTOR.
24	PROVIDE 30A/3P/NF DISCONNECT SWITCH FOR POWER TO BOILER. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH PLUMBING PRIOR TO ROUGH-IN.

NOTES BY SYMBOL	
Key Value	Keynote Text
25	PROVIDE 30A, 240V, 3P NEMA 3R DISCONNECT SWITCH AND 30A, 3#10,#10G POWER CONNECTION TO COLD CELL MAKE-UP AIR UNIT DEHUMIDIFIER. COORDINATE ROUGH-IN LOCATION AND REQUIREMENTS WITH COLD CELL CONTRACTOR.
26	PROVIDE 30A, 240V,3P NEMA 3R DISCONNECT SWITCH AND 20A, 3#12,#12G POWER CONNECTION TO COLD CELL MAKE-UP AIR UNIT COOLER. COORDINATE ROUGH-IN LOCATION AND REQUIREMTNS WITH COLD CELL CONTRACTOR.
27	PROVIDE 30A, 240V,3P NEMA 3R DISCONNECT SWITCH AND 20A, 3#12,#12G POWER CONNECTION TO COLD CELL MAKE-UP AIR UNIT FAN. COORDINATE ROUGH-IN LOCATION AND REQUIREMTNS WITH COLD CELL CONTRACTOR.
28	PROVIDE AND INSTALL EMERGENCY POWER OFF BUTTON FOR BOILER SHUT DOWN. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH EQUIPMENT SUPLIER PRIOR TO ROUGH-IN.
29	PROVIDE AND INSTALL DEDICATED 20A, 120V RECEPTACLE FOR POWER TO GLYCOL FEEDER SYSTEM. COORDINATE EXACT LOCATION WITH MECHANICAL PRIOR TO ROUGH-IN.
30	PROVIDE AND INSTALL MOTOR RATED SWITCH FOR DISCONNECTING MEANS TO COLD ROOM EXHAUST FAN. COORDINATE EXACT LOCATION WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
31	PROVIDE AND INSTALL J-BOX FOR 20A, 120V POWER TO MOTORIZED DAMPER/LOUVER. REFER TO DETAIL #4 ON SHEET M5.9 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL	
Key Value	Keynote Text
32	PROIVDE AND INSTALL 30A/3P/NF COMBINATION MOTOR STATER DISCONNECT SWITCH FOR POWER TO EXHAUST FAN. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL PRIOR TO ROUGH-IN.
33	PROVIDE 20A, 120V CIRCUIT FOR POWER TO MAIN DDC CONTROL PANEL AND NETWORK CONTROLLER. REFER TO MECHANICAL FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
34	PROVIDE NETWORK CONNECTION TO MAIN DDC CONTROL PANEL AND NETWORK CONTROLLER. REFER TO MECHANICAL FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.

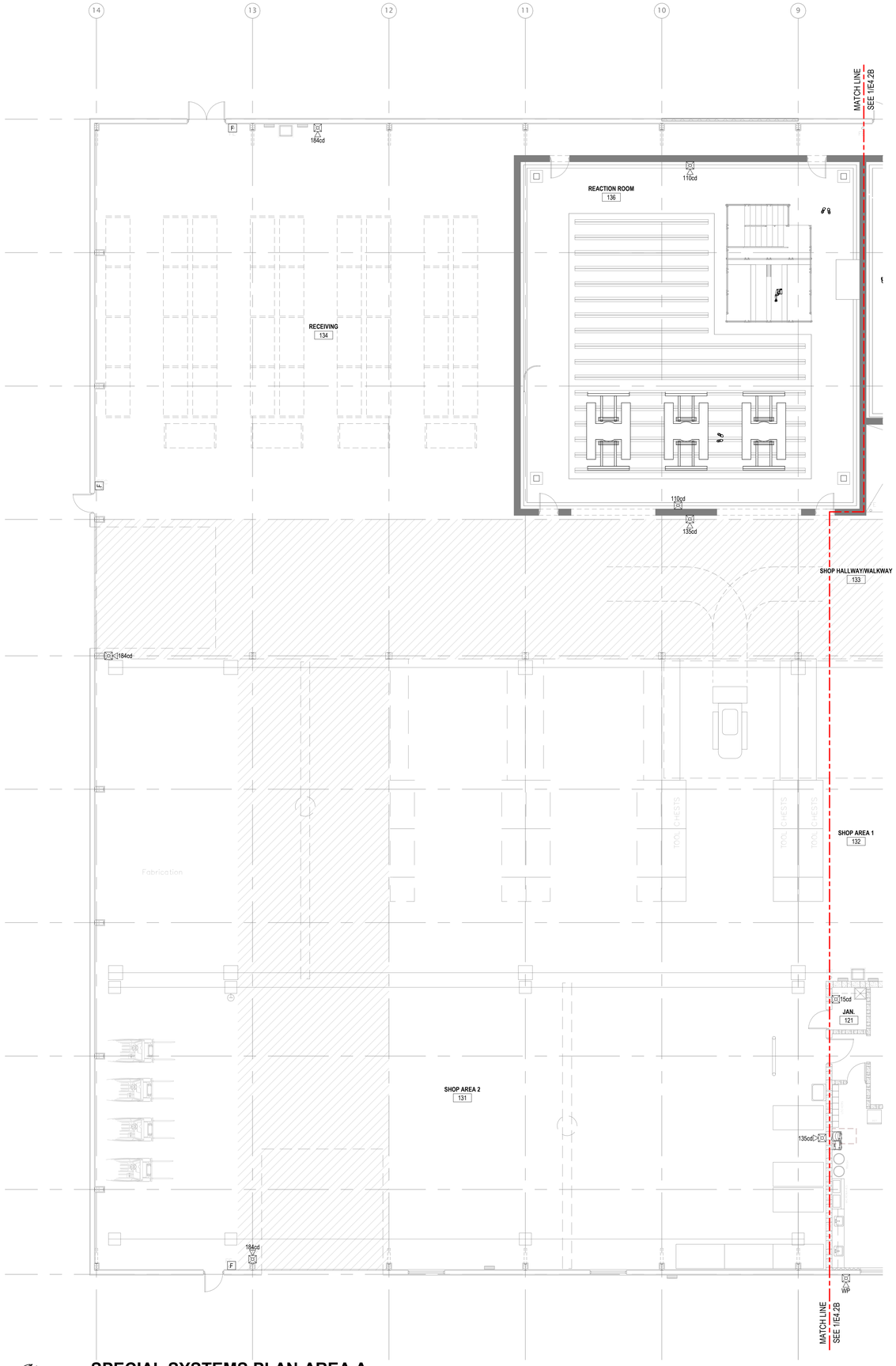
TIMOTHY CRAIG PARKINSON 13396 05/01/2026 KANSAS PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

E3.2

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1 SPECIAL SYSTEMS PLAN-AREA A

1/8" = 1'-0"

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Project 24056 **05/01/2026**

NOTES BY SYMBOL	
Key Value	Keynote Text

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GREAT PLAINS MANUFACTURING

NEW CE TESTING FACILITY

SALINA

KANSAS

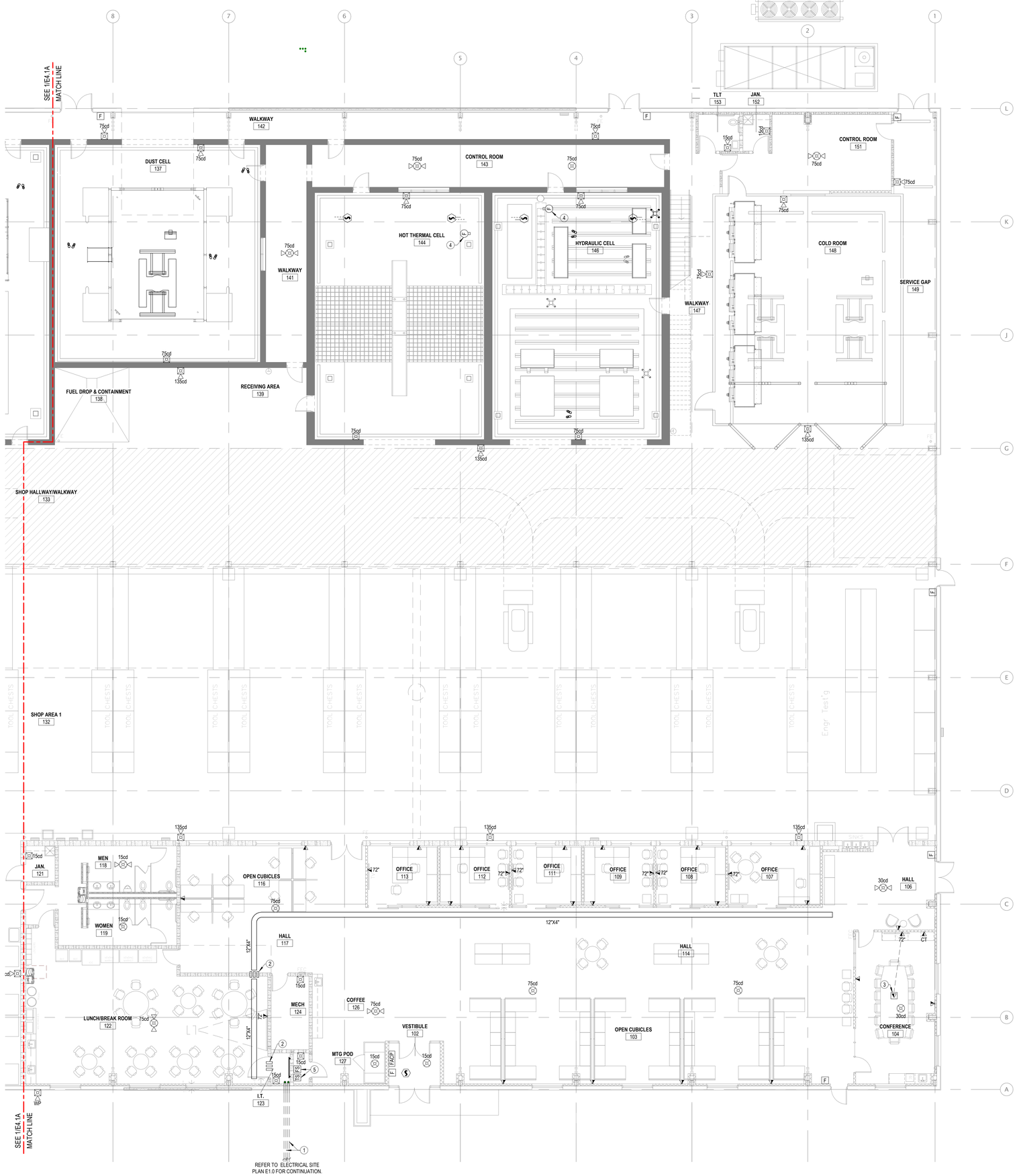
CRAIG TRUSHEIM
13396
05/01/2026
KANSAS
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REVISIONS:

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1 SPECIAL SYSTEMS PLAN-AREA B

1/8" = 1'-0"

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Project 24056 — 05/01/2026

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	CONTRACTOR TO PROVIDE AND INSTALL (2)4"PVC CONDUITS WITH PULL STRING FROM WEST EDGE OF CONSTRUCTION LIMITS TO IT ROOM. PROVIDE 24"X24"X24"D HAND HOLE.
2	PROVIDE AND INSTALL (3)4" EMT CONDUIT SLEEVES FOR DATA CABLING.
3	PROVIDE AND INSTALL (1)1-1/2" CONDUIT WITH PULLSTRING BELOW SLAB FROM FLOOR BOX TO RECESSED TV BOX IN WALL. CONTRACTOR TO COORDINATE EXACT DATA/AV REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
4	PROVIDE AND INSTALL FLAME SENSOR FOR AUTOMATIC SHUT DOWN OF EXHAUST FAN AND CORRESPONDING DAMPER. CONFIRM EXACT LOCATION WITH SIERRA DRAWINGS PRIOR TO ROUGH-IN.
5	PROVIDE AND INSTALL TAMPER SWITCH AND FLOW SWITCH FOR FIRE SUPPRESSION SYSTEM. COORDINATE EXACT LOCATION WITH FIRE SUPPRESSION CONTRACTOR PRIOR TO ROUGH-IN.

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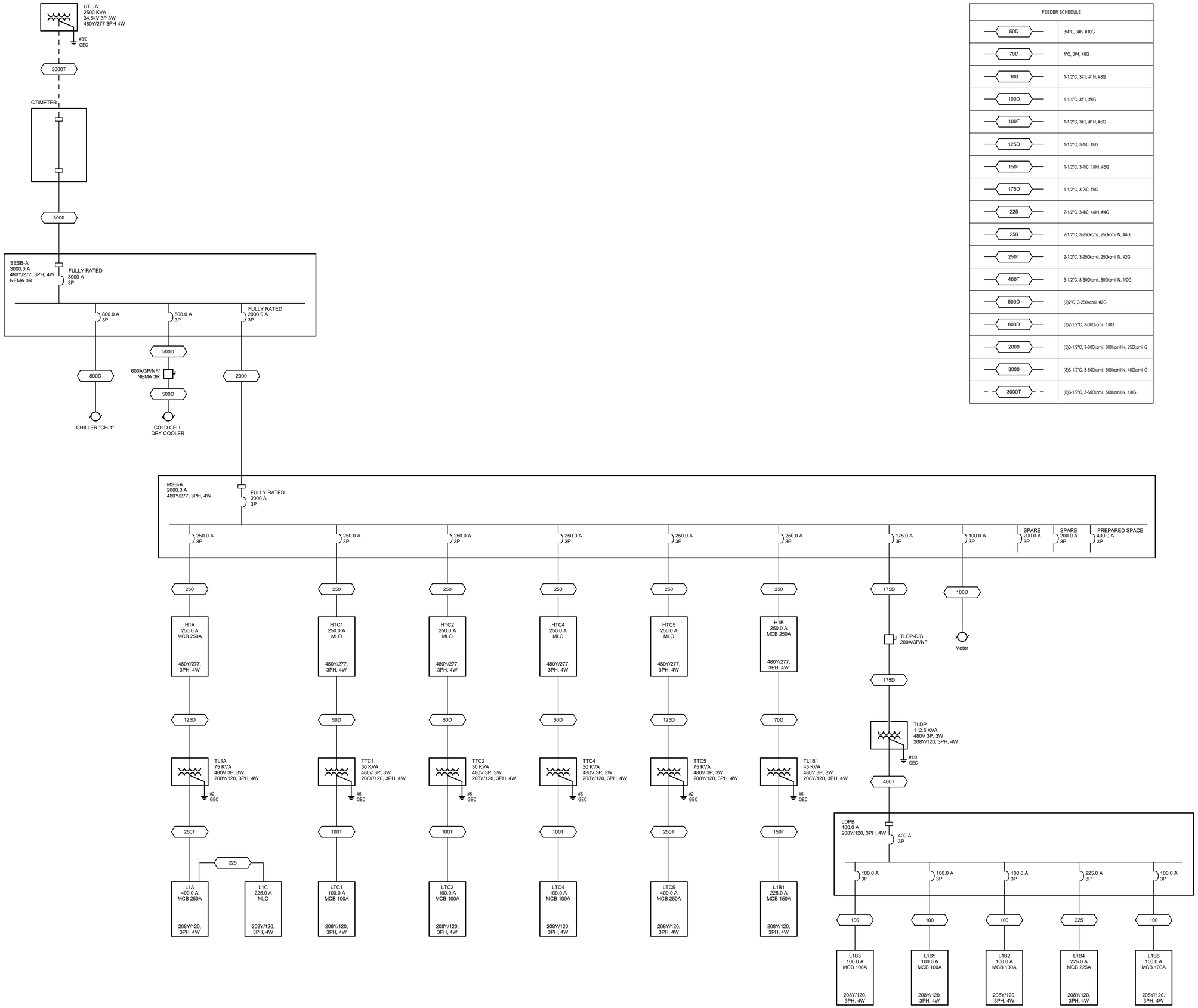
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FEEDER SCHEDULE	
50D	3/4"C, 3#6, #10G
70D	1"C, 3#4, #8G
100	1-1/2"C, 3#1, #1N, #8G
100D	1-1/4"C, 3#1, #8G
100T	1-1/2"C, 3#1, #1N, #6G
125D	1-1/2"C, 3-1/0, #6G
150T	1-1/2"C, 3-1/0, 1/0N, #6G
175D	1-1/2"C, 3-2/0, #6G
225	2-1/2"C, 3-4/0, 4/0N, #4G
250	2-1/2"C, 3-250kcmil, 250kcmil N, #4G
250T	2-1/2"C, 3-250kcmil, 250kcmil N, #2G
400T	3-1/2"C, 3-600kcmil, 600kcmil N, 1/0G
500D	(2)2"C, 3-250kcmil, #2G
800D	(3)2-1/2"C, 3-300kcmil, 1/0G
2000	(5)3-1/2"C, 3-600kcmil, 600kcmil N, 250kcmil G
3000	(8)3-1/2"C, 3-500kcmil, 500kcmil N, 400kcmil G
3000T	(8)3-1/2"C, 3-500kcmil, 500kcmil N, 1/0G

1 ELECTRICAL RISER DIAGRAM - SERVICE A

1" = 1'-0"

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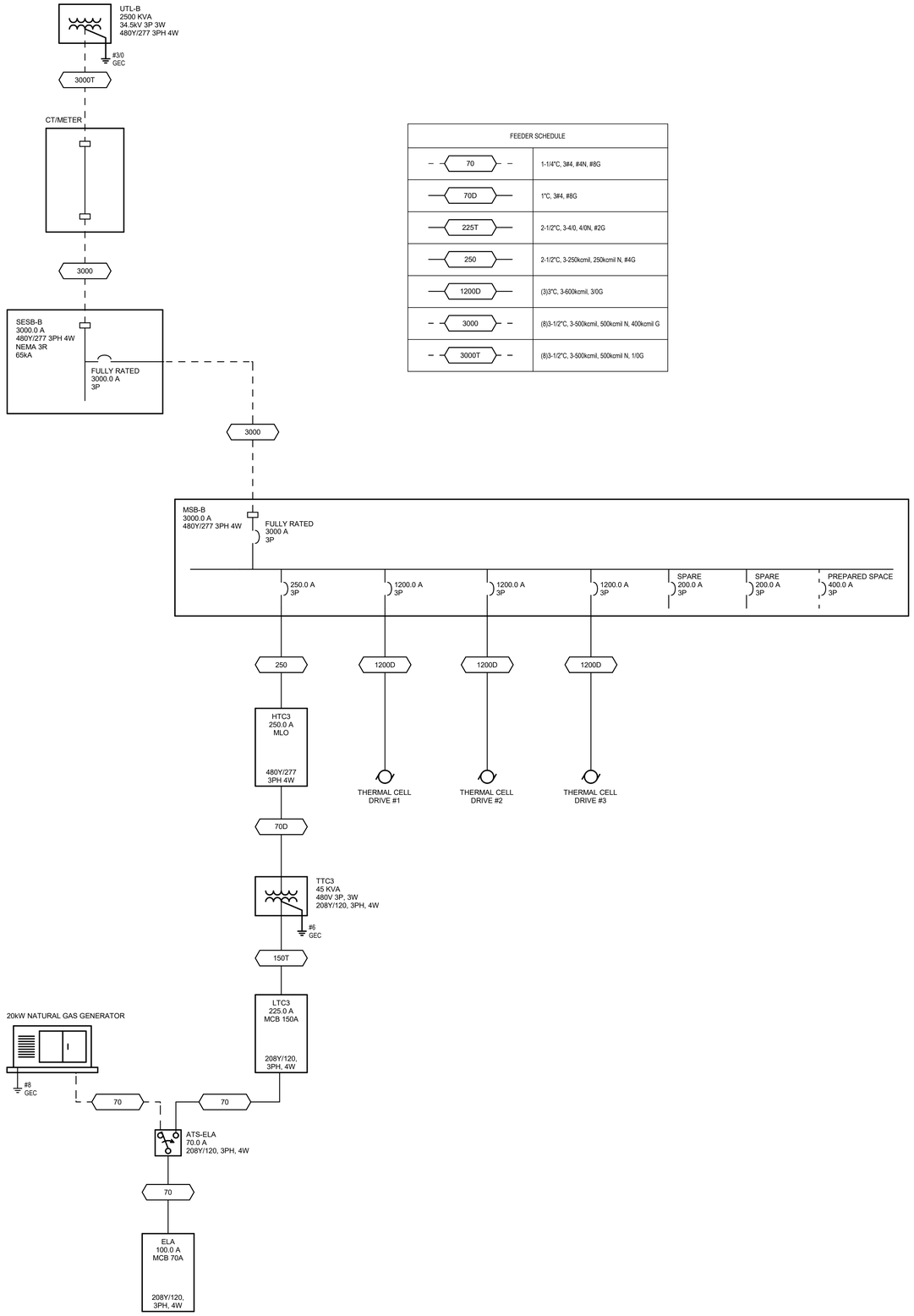
CRAIG TRENT
13386
05/01/2026
KANSAS
PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
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FEEDER SCHEDULE	
70	1-1/4"C, 3#4, #4N, #8G
70D	1"C, 3#4, #8G
225T	2-1/2"C, 3-4/0, 4/0N, #2G
250	2-1/2"C, 3-250kcmil, 250kcmil N, #4G
1200D	(3)3"C, 3-600kcmil, 3/0G
3000	(6)3-1/2"C, 3-500kcmil, 500kcmil N, 400kcmil G
3000T	(6)3-1/2"C, 3-500kcmil, 500kcmil N, 1/0G

Switchboard: MSB-B

Location:
Supply: SESB-B
Mounting: PAD
Enclosure: NEMA 1
Features & Modifications:

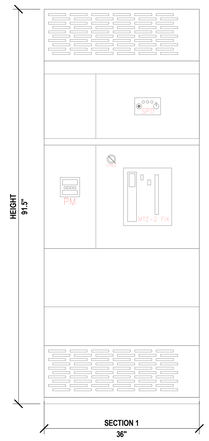
Voltage: 480 V, 3 Ø, 4 W
Bus Rating: 3000 A
Neutral: 100%
Mains Type: MCB
Mains Rating: 3000 A
Mains FN/Note: 100% RATED MCB
SCCR: 65 kA

Ckt	Description	Frame (A)	Trip (A)	Poles	FN/Note	Load
1	HTC3	400	250	3		124438
2	THERMAL CELL DRIVE #1	1200	1200	3		671759
3	THERMAL CELL DRIVE #2	1200	1200	3		671759
4	THERMAL CELL DRIVE #3	1200	1200	3		671759
5	THERMAL CELL CAHU TRANSFORMER	200	125	3		83138
6	200A SPARE BREAKER	200	200	3		0
7	200A SPARE BREAKER	200	200	3		0
8	400A PREPARED SPACE	--	--	3		--

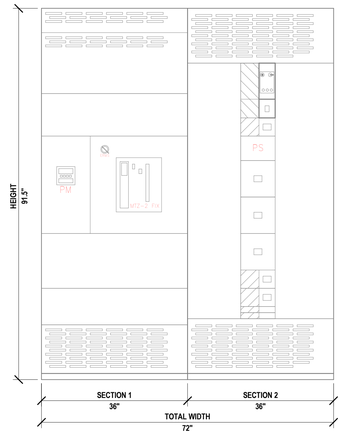
Load Summary

Load Classification	Connected	Factor	Demand	Panel Totals	
Motor	2099246 VA	108.00%	2267185 VA	Connected Load:	2223 kVA
Other	83138 VA	100.00%	83138 VA	Connected Current:	2674 A
Lighting - Interior	2440 VA	125.00%	3050 VA	Demand Load:	2386 kVA
Receptacle - General	21816 VA	72.92%	15908 VA	Demand Current:	2870 A
HVAC	7052 VA	100.00%	7052 VA		
Electric Heat	1000 VA	125.00%	1250 VA		
Power	8160 VA	100.00%	8160 VA		

Notes:



2 SWITCHBOARD SESB-B ELEVATION
NO SCALE



1 SWITCHBOARD MSB-B ELEVATION
NO SCALE

3 ELECTRICAL RISER DIAGRAM - SERVICE B
NO SCALE

NOTES BY SYMBOL	
Key Value	Keynote Text

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Project 24056 05/01/2026

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
KANSAS
SALINA



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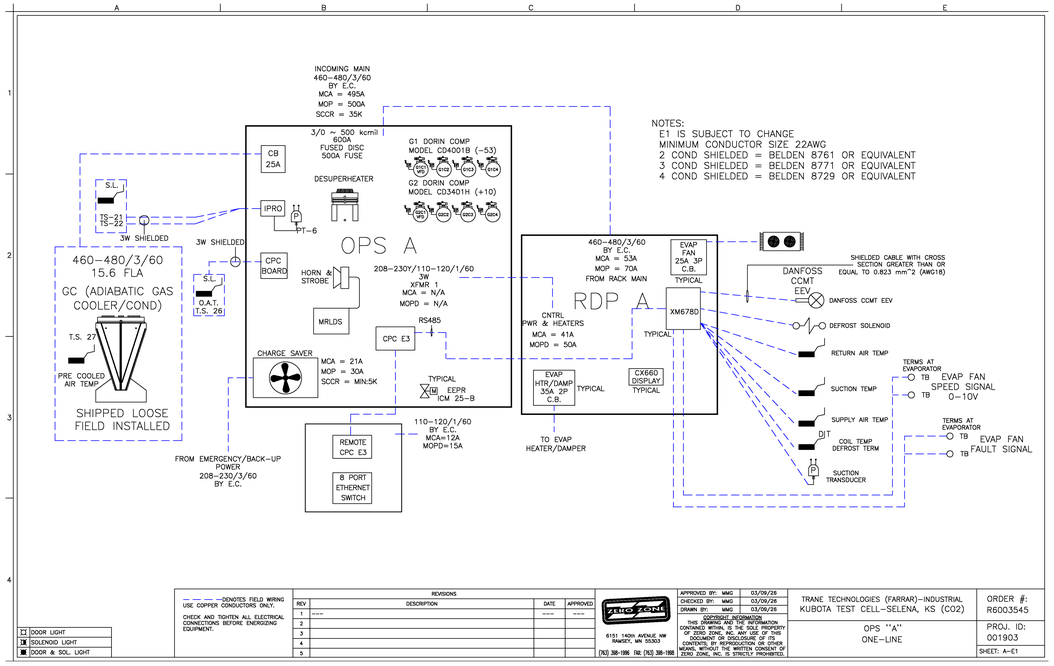
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Project 24056 **05/01/2026**



1 **COLD CELL - DYER COOLER ELECTRICAL SCHEMATIC**
NO SCALE

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GREAT PLAINS MANUFACTURING
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Project 24056 05/01/2026

GENERAL:
- ALL INTERIOR LED FIXTURES SHALL BE 4000°K CORRECTED COLOR TEMPERATURE, MIN. 80 CRI.
- ALL EXTERIOR LED FIXTURES SHALL BE 4000°K CORRECTED COLOR TEMPERATURE, MIN. 70 CRI.
- ALL LIGHT FIXTURES SHALL BE PROVIDED WITH INTEGRAL UNIVERSAL DRIVERS CAPABLE OF OPERATING AT 120V OR 277 UNO.
- ALL LED FIXTURES SHALL ADHERE TO LM79 AND LM80 STANDARDS.
- ALL FIXTURE POLE ASSEMBLIES SHALL BE RATED FOR 100 MPH WINDS.

NOTES:
1. FIXTURE SHALL BE CAPABLE OF WALL OR CEILING MOUNT APPLICATIONS AND SHALL HAVE SELF-DIAGNOSTIC/SELF-TESTING ELECTRONICS.
2. PROVIDE WITH EMERGENCY BATTERY INTEGRAL CHARGER.
3. INSTALL REMOTE HEAD ON EXTERIOR WALL ABOVE DOOR AND CONNECT TO UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. U.L. LISTED FOR 'WET LOCATION'.
5. PROVIDE LOOSE CHAIN TO SUSPEND FIXTURE ±1'-6" BELOW ROOF STRUCTURE.

LIGHT FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	WATTAGE	LUMEN OUTPUT	DRIVER	MOUNTING	FINISH	DESCRIPTION	NOTES
A	DAY-BRITE CFI	2SBP3550L8CS-4-UNV-DIM	47 W	5847 lm	0-10V DIMMING TO 5%	LAY-IN	WHITE	2X4 BACKLIT LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME AND FLAT OPAL DIFFUSER	--
AE	DAY-BRITE CFI	2SBP3550L8CS-4-UNV-DIM	47 W	5847 lm	0-10V DIMMING TO 5%	LAY-IN	WHITE	2X4 BACKLIT LED FLAT PANEL WITH EXTRUDED ALUMINUM FRAME AND FLAT OPAL DIFFUSER	2
C	ORION	HHSL2440LUNVFD840LAFG	244 W	38458 lm	0-10V DIMMING	18" CHAIN	WHITE	5000K, LED 2x4 HIGH BAY WITH ACRYLIC FROSTED LENS	5
C1	ORION	HHSL2440LUNVFD840LAFG	244 W	38458 lm	0-10V DIMMING	CEILING SURFACE	WHITE	5000K, LED 2x4 HIGH BAY WITH ACRYLIC FROSTED LENS	5
C1E	ORION	HHSL2440LUNVFD840LAFG	244 W	38458 lm	0-10V DIMMING	CEILING SURFACE	WHITE	5000K, LED 2x4 HIGH BAY WITH ACRYLIC FROSTED LENS	2,5
C2	KENALL	HBK24-SM-220L-50K9-DDC-DV-2H-O	245 W	32379 lm	0-10V DIMMING	LAY-IN	WHITE	5000K, LED 2x4 HIGH BAY TROFFER	--
C2E	KENALL	HBK24-SM-220L-50K9-DDC-DV-2H-O	245 W	32379 lm	0-10V DIMMING	LAY-IN	WHITE	5000K, LED 2x4 HIGH BAY TROFFER	2
CE	ORION	HHSL2440LUNVFD840LAFG	244 W	38458 lm	0-10V DIMMING	18" CHAIN	WHITE	5000K, LED 2x4 HIGH BAY WITH ACRYLIC FROSTED LENS	2,5
D	LIGHTOLIER	6RN - P6RDL20940/MCCPZ10U	16 W	2000 lm	0-10V DIMMING TO 1%	RECESSED	SEMI-SPECULAR	6" DIA. ROUND DOWNLIGHT WITH SEMI-SPECULAR, SELF FLANGED REFLECTOR, MEDIUM DISTRIBUTION	--
DE	LIGHTOLIER	6RN - P6RDL20940/MCCPZ10U	16 W	2000 lm	0-10V DIMMING TO 1%	RECESSED	SEMI-SPECULAR	6" DIA. ROUND DOWNLIGHT WITH SEMI-SPECULAR, SELF FLANGED REFLECTOR, MEDIUM DISTRIBUTION. PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK FOR EGRESS LIGHTING.	2
F	DAY-BRITE CFI	FSS440L840-UNV-DIM	30 W	4077 lm	0-10V DIMMING TO 10%	SUSPENDED	WHITE	4' STANDARD STRIP WITH CURVED FROSTED ACRYLIC LENS	5
FE	DAY-BRITE CFI	FSS440L840-UNV-DIM-EMLED	30 W	4077 lm	0-10V DIMMING TO 10%	SUSPENDED	WHITE	4' STANDARD STRIP WITH CURVED FROSTED ACRYLIC LENS. PROVIDE INTEGRAL 90-MINUTE EMERERGENCY BATTERY PACK.	2,5
G	KEYSTONE	FL-LED-RIA-35-8CSB-KY	35 W	5075 lm	0-10V DIMMING	WALL		4000K ADJUSTABLE GENERAL PURPOSE FLOODLIGHT WITH INTEGRAL PHOTOCELL	--
W	GARDCO	GWM-A08-840-T3M-UNV-EC-BK	31 W	5000 lm	0-10V DIMMING TO 10%	WALL	WHITE	LED WALL PACK WITH COLD WEATEHR RATED EMERGENCY BATTERY PACK.	2
X1	EMERGI-LITE	ELXN400-RN-AD	4 W	0 lm	--	CEILING	WHITE W/ RED LETTERS	UNIVERSAL SINGLE/DOUBLE FACE POLYCARBONATE EXIT SIGN	2
X3	EMERGI-LITE	ELXN400-RN-AD	4 W	0 lm	--	WALL	WHITE W/ RED LETTERS	UNIVERSAL SINGLE/DOUBLE FACE POLYCARBONATE EXIT SIGN	2
XER	EMERGI-LITE	ELXN40000R-2LED-R-AD + EF44D-LEDWP	4 W	0 lm	--	UNIVERSAL	WHITE W/ RED LETTERS	COMBO EXIT/EMERGENCY LIGHT WITH EMERGENCY BATTERY PACK AND OUTDOOR REMOTE EMERGENCY LIGHTING HEADS.	2

GENERAL:
- REFER TO ELECTRICAL RISER DIAGRAMS FOR PRIMARY AND SECONDARY FEEDER SIZES.
- MAXIMUM LENGTH OF SECONDARY CONDUCTORS SHALL NOT EXCEED 25'-0" PER NEC 240.21(C)(6).
- BOND GROUNDING ELECTRODE CONDUCTOR TO NEAREST AVAILABLE GROUNDING ELECTRODE PER NEC 250.30(A)(7).

DRY-TYPE TRANSFORMER SCHEDULE

TAG	KVA SIZE	EQUIPMENT SERVED	PRIMARY VOLTAGE	SECONDARY VOLTAGE	PHASE	GROUNDING ELECTRODE CONDUCTOR SIZE	REMARKS
TL1A	75	PANEL "L1A"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#2	
TL1B1	45	PANEL "L1B1"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#6	
TLDP	112.5	PANEL "LDPB"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#1/0	
TTC1	30	PANEL "LTC1"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#6	
TTC2	30	PANEL "LTC2"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#6	
TTC3	45	PANEL "LTC3"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#6	
TTC4	30	PANEL "LTC4"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#6	
TTC5	75	PANEL "LTC5"	480V 3P, 3W	208Y/120, 3PH, 4W	3	#2	

Switchboard: SESB-A

Location: EAST SITE
Supply: CT/METER
Mounting: PAD
Enclosure: NEMA 3R
Features & Modifications:

Voltage: 480 V, 3 Ø, 4 W
Bus Rating: 3000 A
Neutral: 100%
Mains Type: MCB
Mains Rating: 3000 A
Mains FN/Note: 100% RATED MCB
SCCR: 65 kA

Ckt	Description	Frame (A)	Trip (A)	Poles	FN/Note	Load
1	MAIN SWITCHBOARD "MSB-A"	2000	2000	3	100% RATED	1004072
2	CHILLER	800	800	3		517952
3	COLD CELL COMPRESSOR RACK	600	500	3		329228
4	225A PREPARED SPACE	--	--	3		--
5	400A PREPARED SPACE	--	--	3		--
6	SURGE PROTECTION	100	60	3		0

Load Summary

Load Classification	Connected	Factor	Demand	Panel Totals	
Motor	389704 VA	104.11%	405708 VA	Connected Load:	1851 kVA
Other	14594 VA	100.00%	14594 VA	Connected Current:	2227 A
Lighting - Interior	38412 VA	125.00%	48015 VA	Demand Load:	1811 kVA
Receptacle - General	164344 VA	53.04%	87172 VA	Demand Current:	2179 A
Electric Water Heating	9667 VA	125.00%	12083 VA		
HVAC	75657 VA	100.00%	75657 VA		
Electric Heat	37384 VA	125.00%	46730 VA		
Power	251207 VA	100.00%	251207 VA		
Lighting	2640 VA	100.00%	2640 VA		
Cooling	867643 VA	100.00%	867643 VA		

Notes:

Switchboard: MSB-A

Location: MEZZANINE
Supply: SESB-A
Mounting: PAD
Enclosure: NEMA 1
Features & Modifications:

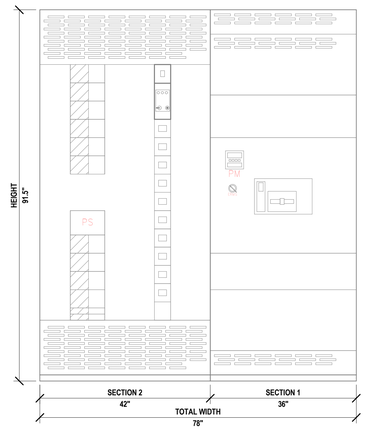
Voltage: 480 V, 3 Ø, 4 W
Bus Rating: 2000 A
Neutral: 100%
Mains Type: MCB
Mains Rating: 2000 A
Mains FN/Note: 100% RATED MCB
SCCR: 65 kA

Ckt	Description	Frame (A)	Trip (A)	Poles	FN/Note	Load
1	PANEL H1A	400	250	3		134075
2	PANEL H1B	400	250	3		115672
3	TLDP	200	175	3		133937
4	PANEL HTC1	400	250	3		113236
5	PANEL HTC2	400	250	3		75742
6	PANEL HTC4	400	250	3		73255
7	HYDRAULIC ELEC PANEL	400	250	3		149649
8	HTC5	400	250	3		144489
9	MEZZANINE AIR COMPREESSOR	200	100	3		64017
10	200A SPARE BREAKER	200	200	3		0
11	200A SPARE BREAKER	200	200	3		0
12	400A PREPARED SPACE	--	--	3		--

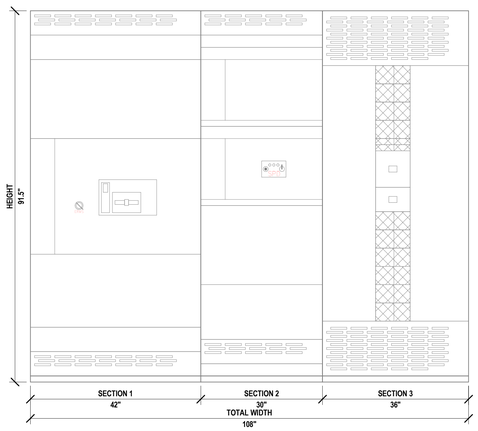
Load Summary

Load Classification	Connected	Factor	Demand	Panel Totals	
Motor	389704 VA	104.11%	405708 VA	Connected Load:	1004 kVA
Other	14594 VA	100.00%	14594 VA	Connected Current:	1208 A
Lighting - Interior	38412 VA	125.00%	48015 VA	Demand Load:	964 kVA
Receptacle - General	164344 VA	53.04%	87172 VA	Demand Current:	1160 A
Electric Water Heating	9667 VA	125.00%	12083 VA		
HVAC	75657 VA	100.00%	75657 VA		
Electric Heat	37384 VA	125.00%	46730 VA		
Power	251207 VA	100.00%	251207 VA		
Lighting	2640 VA	100.00%	2640 VA		
Cooling	20463 VA	100.00%	20463 VA		

Notes:



2 **SWITCHBOARD MSB-A ELEVATION**
NO SCALE



1 **SERVICE ENTRANCE SWITCHBOARD SESB-A ELEVATION**
NO SCALE

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA
KANSAS

CRAIG TREMBLAY
13396
05/01/2026
KANSAS
PROFESSIONAL ENGINEER

REVISIONS:

DATE: 05/01/2026
JOB: 23-3315
SHEET NO.:

E6.1

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Project 24056 05/01/2026

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GREAT PLAINS MANUFACTURING
NEW CE TESTING FACILITY
SALINA KANSAS

Designation: L1B4

Installed Location: D-4
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 225
MCB Amps: 225
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	ENGINEER TESTING TV RECEPT.	1/2"C,1#12,#12N,#12G	20		36...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	2
3	ENGINEER TESTING QUADS	1/2"C,1#12,#12N,#12G	20			10...	24...					4
5	ENGINEER TESTING QUADS	1/2"C,1#10,#10N,#10G	20				14...	24...	30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	6
7	ENGINEER TESTING QUADS	1/2"C,1#10,#10N,#10G	20		14...	24...						8
9	ENGINEER TESTING QUADS	1/2"C,1#10,#10N,#10G	20			14...	24...		30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	10
11	ENGINEER TESTING QUADS	1/2"C,1#10,#10N,#10G	20				14...	24...				12
13	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20		36...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	14
15	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20			36...	24...					16
17	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20				36...	24...	30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	18
19	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	24...						20
21	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20			14...	24...		30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	22
23	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	24...				24
25	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	26
27	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20			14...	24...					28
29	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	55...				30
31	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	55...			20	1/2"C,3#12,#12G	OVERHEAD DOOR OPERATOR	32
33	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	55...				34
35	WORKSHOP BENCH QUADS	1/2"C,1#10,#10N,#10G	20					14...	--	--	SPACE	36
37	WORKSHOP BENCH QUADS	1/2"C,1#10,#10N,#10G	20		14...	--			--	--	SPACE	38
39	GENERAL SHOP AREA RECEPTACLES	1/2"C,1#12,#12N,#12G	20			36...	--		--	--	SPACE	40
41	TECH BAY EXHAUST CONTROL PNL	1/2"C,1#12,#12N,#12G	20				60...	--	--	--	SPACE	42
43	TECH BAY EXHAUST CONTROL PNL	1/2"C,1#12,#12N,#12G	20		40...	--			--	--	SPACE	44
45	ATU-1 DDC CONTROL PNL	1/2"C,1#12,#12N,#12G	20			50...	--		--	--	SPACE	46
47	SPARE	--	20					0 VA	--	--	SPACE	48
49	SPARE	--	20		0 VA	--			--	--	SPACE	50
51	SPARE	--	20			0 VA	--		--	--	SPACE	52
53	SPARE	--	20				0 VA	--	--	--	SPACE	54
55	SPARE	--	20		0 VA	--			--	--	SPACE	56
57	SPARE	--	20			0 VA	--		--	--	SPACE	58
59	SPARE	--	20				0 VA	--	--	--	SPACE	60
		Connected Load:			21352 VA	21092 VA	18696 VA					
		Connected Amps:			181.0 A	178.8 A	158.8 A					

Designation: L1B5

Installed Location: W. EXTERIOR WALL
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 3R

Bus Amps: 100
MCB Amps: 100
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	EXTERIOR RECEPTACLES	1/2"C,1#12,#12N,#12G	20		54...	50...			20	1/2"C,2#12,#12G	IU-10/HP-10	2
3	SITE GATE ACCESS CONTROL POWER	1/2"C,1#12,#12N,#12G	20				25...	50...				4
5	SPARE	--	20						0 VA	50...	20	1/2"C,2#12,#12G	IU-11/HP-11	8
7	SPARE	--	20		0 VA	50...						8
9	SPARE	--	20				0 VA	50...	20	1/2"C,2#12,#12G	IU-12/HP-12	10
11	SPARE	--	20						0 VA	50...		12
13					55...	38...						14
15	SOUTH GATE OPERATOR	1/2"C,3#12,#12G	20				55...	38...	20	1/2"C,3#12,#12G	IU-8,9/HP-8,9	16
17								55...	11...			18
19	SPACE	--	--		--	11...			20	1/2"C,3#10,#10G	SW GATE OPERATORS	20
21	SPACE	--	--				--	11...				22
23	SPACE	--	--						--	55...		24
25	SPACE	--	--		--	55...			20	1/2"C,3#12,#12G	NW GATE OPERATOR	26
27	SPACE	--	--				--	55...				28
29	SPACE	--	--						--	--	SPACE	30
		Connected Load:			4150 VA	3860 VA	3222 VA					
		Connected Amps:			35.4 A	33.0 A	26.8 A					

Designation: L1B6

Installed Location: S. EXTERIOR WALL
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 3R

Bus Amps: 100
MCB Amps: 100
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	IU-1/HP1	1/2"C,2#12,#12G	20		50...	54...			20	1/2"C,1#12,#12N,#12G	EXTERIOR RECEPTACLES	2
3						50...	0 VA		20	--	SPARE	4
5	IU-2-4/HP2-4	1/2"C,2#12,#12G	20				58...	0 VA	20	--	SPARE	6
7					58...	0 VA			20	--	SPARE	8
9	IU-5-7/HP-5-7	1/2"C,2#12,#12G	20			58...	0 VA		20	--	SPARE	10
11							58...	0 VA	20	--	SPARE	12
13	SPACE	--	--		--	--			--	--	SPACE	14
15	SPACE	--	--				--	--	--	--	SPACE	16
17	SPACE	--	--					--	--	--	SPACE	18
19	SPACE	--	--		--	--			--	--	SPACE	20
21	SPACE	--	--				--	--	--	--	SPACE	22
23	SPACE	--	--					--	--	--	SPACE	24
25	SPACE	--	--		--	--			--	--	SPACE	26
27	SPACE	--	--				--	--	--	--	SPACE	28
29	SPACE	--	--					--	--	--	SPACE	30
		Connected Load:			1628 VA	1088 VA	1164 VA					
		Connected Amps:			13.7 A	9.1 A	9.8 A					

Breaker Function Schedule

#	For any number, see panel schedule footer note
A	Arc-Fault Interrupter (AFCI) Protection
AR	Arc Energy Reduction Maintenance Switch
D	Demolished Circuit (now Spare or Space) (former circuit in brackets)
E	Existing-to-remain circuit
EM	Provide identification per NEC 700.12(I)(2)(4)
G	Ground-Fault Circuit Interrupter (GFCI) Protection (5 mA)
GE	Ground-Fault Protection for Equipment (30 mA)
GF	Adjustable Ground-Fault Protection for Equipment
H	Breaker hasp to prevent unintentional opening
L	Lockable open according to NEC 110.25
LSI	Long-Time, Short-Time, Instantaneous Adjustment
LSIG	Long-Time, Short-Time, Instantaneous and Ground-Fault Adjustments
N	New Circuit (in existing panel, previously spare or space)
NB	New breaker to repace existing breaker or space (new trip rating shown)
NR	New circuit to replace existing circuit (former circuit in brackets)
R	Relocated circuit
S	Switch-rated per NEC 240.83(D)

Designation: L1B1

Installed Location: D-8
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 225
MCB Amps: 150
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	CONFERENCE RM RECEPTACLES	1/2"C,1#8,#8N,#8G	20		10...	50...			20	1/2"C,1#12,#12N,#12G	FIRE ALARM CONTROL PANEL	2
3	CONFERENCE RM CT RECEPTACLES	1/2"C,1#12,#12N,#12G	20				36...	50...	20	1/2"C,1#12,#12N,#12G	DED. MEETING POD RECEPTACLE	4
5	CONFERENCE RM CT RECEPTACLES	1/2"C,1#12,#12N,#12G	20					54...	72...	20	1/2"C,1#12,#12N,#12G	MECHANICAL RM RECEPTACLES	6
7	DED. UNDER COUNTER REFRIGERATOR	1/2"C,1#12,#12N,#12G	20		18...	80...				20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM REFRIGERATOR	8
9	LOBBY RECEPTACLES	1/2"C,1#10,#10N,#10G	20				72...	80...		20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM REFRIGERATOR	10
11	PRIVATE OFFICE PC QUADS	1/2"C,1#12,#12N,#12G	20						54...	10... G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM ICEMAKER	12
13	PRIVATE OFFICE PC QUADS	1/2"C,1#12,#12N,#12G	20		54...	50...				G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	14
15	PRIVATE OFFICE RECEPTACLES	1/2"C,1#8,#8N,#8G	20				14...	50...		G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	16
17	PRIVATE OFFICE RECEPTACLES	1/2"C,1#10,#10N,#10G	20						14...	50... G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	18
19	PRIVATE OFFICE RECEPTACLES	1/2"C,1#10,#10N,#10G	20		14...	12...					20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM MICROWAVE	20
21	OPEN OFFICE RECEPTACLES	1/2"C,1#12,#12N,#12G	20				10...	12...			20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM MICROWAVE	22
23	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20						12...	18...	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM CT RECEPTACLE	24
25	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20		12...	50...				G	20	1/2"C,1#12,#12N,#12G	DED. DRINKING FOUNTAIN	26
27	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20				12...	10...			20	1/2"C,1#12,#12N,#12G	BREAK ROOM RECEPTACLES	28
29	DED. OPEN OFFICE QUAD	1/2"C,1#10,#10N,#10G	20						12...	68...	20	1/2"C,1#12,#12N,#12G	DED. BREAK ROOM PROJECTOR	30
31	DED. OPEN OFFICE QUAD	1/2"C,1#12,#12N,#12G	20		36...	54...					20	1/2"C,1#12,#12N,#12G	RESTROOM RECEPTACLES	32
33	DED. OPEN OFFICE QUAD	1/2"C,1#12,#12N,#12G	20				36...	72...			20	1/2"C,1#10,#10N,#10G	OPEN OFFICE RECEPTACLES	34
35	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20						18...	10... G	20	1/2"C,1#12,#12N,#12G	DED. DRINKING FOUNTAIN	36
37	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20		18...	69...					20	1/2"C,1#12,#12N,#12G	HOT WATER RECIRCULATION PUMP	38
39	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20				18...	75...			20	1/2"C,2#12,#12G	EWH-5	40
41	DED. IT ROOM QUAD	1/2"C,1#12,#12N,#12G	20						50...	75...				42
43	DED. IT ROOM QUAD	1/2"C,1#12,#12N,#12G	20		50...	22...					30	1/2"C,3#10,#10G	HOT WATER HEATER HWH-A	44
45	FIRE SUPPRESSION 120V POWER	1/2"C,1#12,#12N,#12G	20				25...	22...						46
47	IT ROOM EXHAUST FAN VF-1	1/2"C,1#12,#12N,#12G	20						31...	22...				48
49	SPARE	--	20		0 VA	--			--	--	SPACE	50
51	SPARE	--	20			0 VA	--		--	--	SPACE	52
53	SPARE	--	20				0 VA	--	--	--	SPACE	54
55	SPARE	--	20		0 VA	0 VA						56
57	SPARE	--	20			0 VA	0 VA		30	--	SURGE PROTECTION	58
59	SPARE	--	20				0 VA	0 VA				60
		Connected Load:			12438 VA	13362 VA	12969 VA					
		Connected Amps:			103.7 A	112.0 A	108.8 A					

Designation: L1B3

Installed Location: D-7
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 100
MCB Amps: 100
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	2
3	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	24...				4
5	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20						36...	24...	30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	6
7	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20		18...	24...						8
9	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	10
11	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20						14...	24...				12
13	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	--			--	--	SPACE	14
15	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	--	--	--	SPACE	16
17	GENERAL SHOP AREA RECEPTACLES	1/2"C,1#12,#12N,#12G	20					36...	--	--	SPACE	18
19	ERV-1	1/2"C,1#12,#12N,#12G	20		15...	--			--	--	SPACE	20
21	TECH BAY EXHAUST CONTROL PNL	1/2"C,1#12,#12N,#12G	20				60...	--	--	--	SPACE	22
23	MOTORIZED DAMPER POWER	1/2"C,1#12,#12N,#12G	20					40...	--	--	SPACE	24
25	SPARE	--	20		0 VA	--			--	--	SPACE	26
27	SPARE	--	20			0 VA	--		--	--	SPACE	28
29	SPARE	--	20				0 VA	--	--	--	SPACE	30
31	SPARE	--	20		0 VA	--			--	--	SPACE	32
33	SPARE	--	20			0 VA	--		--	--	SPACE	34
35	SPARE	--	20				0 VA	--	--	--	SPACE	36
37	SPARE	--	20		0 VA	--			--	--	SPACE	38
39	SPARE	--	20			0 VA	--		--	--	SPACE	40
41	SPARE	--	20				0 VA	--	--	--	SPACE	42
		Connected Load:			9612 VA	9912 VA	7552 VA					
		Connected Amps:			82.7 A	85.2 A	62.9 A					

Designation: LDPB

Installed Location: D-8
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 400
MCB Amps: 400
Features & Modifications: I-Line Distribution Board

SCCR/AIC: 22.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1					41...	11...						2
3	L1B5	1-1/2"C,3#1,#1N,#8G	100			38...	98...		100	1-1/2"C,3#1,#1N,#8G	L1B2	4
5							32...	96...				6
7					16...	96...						8
9	L1B6	1-1/2"C,3#1,#1N,#8G	100			10...	99...		100	1-1/2"C,3#1,#1N,#8G	L1B3	10
11							11...	75...				12
13	SPACE	--	--		--	21...						14
15	SPACE	--	--			--	21...		225	2-1/2"C,3-4/0,4/0N,#4G	L1B4	16
17	SPACE	--	--				--	18...				18
19	SPACE	--	--		--	0 VA			30	--	SURGE PROTECTION	20
21	SPACE	--	--			--	0 VA					22
23	SPACE	--	--					--	0 VA			24
		Connected Load:			47857 VA	45831 VA	40249 VA					
		Connected Amps:			406.0 A	389.1 A	335.4 A					

Designation: L1B2

Installed Location: A-11
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 100
MCB Amps: 100
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	FABRICATION AREA QUADS	1/2"C,1#12,#12N,#12G	20		72...	28...			50	3/4"C,3#6,#10G	DED. WELDING/PLASMA CUTTER PLUG	2
3	FABRICATION AREA QUADS	1/2"C,1#12,#12N,#12G	20			72...	28...					4
5	DED. FABRICATION CORD REEL	1/2"C,1#12,#12N,#12G	20				36...	28...				6
7	DED. FABRICATION CORD REEL	1/2"C,1#12,#12N,#12G	20		36...	28...						8
9	DED. FABRICATION CORD REEL	1/2"C,1#12,#12N,#12G	20			36...	28...		50	3/4"C,3#6,#10G	DED. WELDING/PLASMA CUTTER PLUG	10
11	FABRICATION DRILL PRESS	1/2"C,2#10,#10G	20				11...	28...				12
13	NEMA 6-20R				11...	55...						14
15	SHOP AREA 2 QUADS	1/2"C,1#12,#12N,#12G	20			72...	55...		20	1/2"C,3#12,#12G	OVERHEAD DOOR OPERATOR	16
17	SHOP AREA 2 QUADS	1/2"C,1#12,#12N,#12G	20				72...	55...				18
19	SHOP AREA 2 QUADS	1/2"C,1#12,#12N,#12G	20		72...	--			--	--	SPACE	20
21	SHOP AREA 2 QUAD	1/2"C,1#12,#12N,#12G	20				36...	--	--	--	SPACE	22
23	SHOP AREA 2 GENERAL RECEPTACLES	1/2"C,1#12,#12N,#12G	20					72...	--	--	SPACE	24
25	SHOP AREA 2	1/2"C,2#12,#12G	20		15...	--			--	--	SPACE	26
27	30A, 208V PLUG					15...	--		--	--	SPACE	28
29	SHOP AREA 2 EXHAUST CONTROL PNL		20				40...	--	--	--	SPACE	30
31	SHOP AREA 2 EXHAUST CONTROL PNL		20		40...	--			--	--	SPACE	32
33	SPARE	--	20			0 VA	--		--	--	SPACE	34
35	SPARE	--	20				0 VA	--	--	--	SPACE	36
37	SPARE	--	20		0 VA	--			--	--	SPACE	38
39	SPARE	--	20			0 VA	--		--	--	SPACE	40
41	SPARE	--	20				0 VA	--	--	--	SPACE	42
		Connected Load:			11115 VA	9879 VA	9615 VA					
		Connected Amps:			93.0 A	82.7 A	80.1 A					

Designation: L1B1

Installed Location: D-8
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 225
MCB Amps: 150
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	CONFERENCE RM RECEPTACLES	1/2"C,1#8,#8N,#8G	20		10...	50...			20	1/2"C,1#12,#12N,#12G	FIRE ALARM CONTROL PANEL	2
3	CONFERENCE RM CT RECEPTACLES	1/2"C,1#12,#12N,#12G	20				36...	50...	20	1/2"C,1#12,#12N,#12G	DED. MEETING POD RECEPTACLE	4
5	CONFERENCE RM CT RECEPTACLES	1/2"C,1#12,#12N,#12G	20					54...	72...	20	1/2"C,1#12,#12N,#12G	MECHANICAL RM RECEPTACLES	6
7	DED. UNDER COUNTER REFRIGERATOR	1/2"C,1#12,#12N,#12G	20		18...	80...				20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM REFRIGERATOR	8
9	LOBBY RECEPTACLES	1/2"C,1#10,#10N,#10G	20				72...	80...		20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM REFRIGERATOR	10
11	PRIVATE OFFICE PC QUADS	1/2"C,1#12,#12N,#12G	20						54...	10... G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM ICEMAKER	12
13	PRIVATE OFFICE PC QUADS	1/2"C,1#12,#12N,#12G	20		54...	50...				G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	14
15	PRIVATE OFFICE RECEPTACLES	1/2"C,1#8,#8N,#8G	20				14...	50...		G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	16
17	PRIVATE OFFICE RECEPTACLES	1/2"C,1#10,#10N,#10G	20						14...	50... G	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM VENDING MACHINE	18
19	PRIVATE OFFICE RECEPTACLES	1/2"C,1#10,#10N,#10G	20		14...	12...					20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM MICROWAVE	20
21	OPEN OFFICE RECEPTACLES	1/2"C,1#12,#12N,#12G	20				10...	12...			20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM MICROWAVE	22
23	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20						12...	18...	20	1/2"C,1#12,#12N,#12G	DED. BREAKROOM CT RECEPTACLE	24
25	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20		12...	50...				G	20	1/2"C,1#12,#12N,#12G	DED. DRINKING FOUNTAIN	26
27	DED. OPEN OFFICE QUAD	1/2"C,1#8,#8N,#8G	20				12...	10...			20	1/2"C,1#12,#12N,#12G	BREAK ROOM RECEPTACLES	28
29	DED. OPEN OFFICE QUAD	1/2"C,1#10,#10N,#10G	20						12...	68...	20	1/2"C,1#12,#12N,#12G	DED. BREAK ROOM PROJECTOR	30
31	DED. OPEN OFFICE QUAD	1/2"C,1#12,#12N,#12G	20		36...	54...					20	1/2"C,1#12,#12N,#12G	RESTROOM RECEPTACLES	32
33	DED. OPEN OFFICE QUAD	1/2"C,1#12,#12N,#12G	20				36...	72...			20	1/2"C,1#10,#10N,#10G	OPEN OFFICE RECEPTACLES	34
35	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20						18...	10... G	20	1/2"C,1#12,#12N,#12G	DED. DRINKING FOUNTAIN	36
37	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20		18...	69...					20	1/2"C,1#12,#12N,#12G	HOT WATER RECIRCULATION PUMP	38
39	DED. OPEN OFFICE CT RECEPTACLE	1/2"C,1#12,#12N,#12G	20				18...	75...			20	1/2"C,2#12,#12G	EWH-5	40
41	DED. IT ROOM QUAD	1/2"C,1#12,#12N,#12G	20						50...	75...				42
43	DED. IT ROOM QUAD	1/2"C,1#12,#12N,#12G	20		50...	22...					30	1/2"C,3#10,#10G	HOT WATER HEATER HWH-A	44
45	FIRE SUPPRESSION 120V POWER	1/2"C,1#12,#12N,#12G	20				25...	22...						46
47	IT ROOM EXHAUST FAN VF-1	1/2"C,1#12,#12N,#12G	20						31...	22...				48
49	SPARE	--	20		0 VA	--			--	--	SPACE	50
51	SPARE	--	20			0 VA	--		--	--	SPACE	52
53	SPARE	--	20				0 VA	--	--	--	SPACE	54
55	SPARE	--	20		0 VA	0 VA						56
57	SPARE	--	20			0 VA	0 VA		30	--	SURGE PROTECTION	58
59	SPARE	--	20				0 VA	0 VA				60
		Connected Load:			12438 VA	13362 VA	12969 VA					
		Connected Amps:			103.7 A	112.0 A	108.8 A					

Designation: L1B3

Installed Location: D-7
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1

Bus Amps: 100
MCB Amps: 100
Features & Modifications: -

SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	2
3	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	24...				4
5	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20						36...	24...	30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	6
7	WORKSHOP AREA TV RECEPTACLES	1/2"C,1#12,#12N,#12G	20		18...	24...						8
9	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20				14...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V WORKSHOOP BENCH	10
11	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20						14...	24...				12
13	WORKSHOP BENCH QUADS	1/2"C,1#12,#12N,#12G	20		14...	--			--	--	SPACE	14
15	WORKS

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GREAT PLAINS MANUFACTURING
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Designation: HTC5

Installed Location: MEZZANINE
Voltage: 480Y/277, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 250
MCB Amps: MLO
Features & Modifications: -
SCCR/AIC: 42.0 kA
Mains FN/Note: -

COLD ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1					0 VA	21...						2
3	COLD ROOM AIR COOLER #1 FAN CIRCUIT	1/2"C,3#12,#12G	20			0 VA	21...		20	1/2"C,3#12,#12G	MEZZANINE AIR DRYER	4
5							0 VA	21...				6
7	COLD ROOM AIR COOLER #2 FAN CIRCUIT	1/2"C,3#12,#12G	20		0 VA	0 VA			20	--	SPARE	8
9						0 VA	0 VA		20	--	SPARE	10
11							0 VA	0 VA	20	--	SPARE	12
13	CHILLED WATER PUMP "CHWP-1"	3/4"C,3#6,#10G	50		11...	0 VA			20	--	SPARE	14
15						11...	0 VA		20	--	SPARE	16
17							11...	0 VA	20	--	SPARE	18
19	CHILLED WATER PUMP "CHWP-2"	3/4"C,3#6,#10G	50		11...	--			--	--	SPACE	20
21						11...	--		--	--	SPACE	22
23							11...	--	--	--	SPACE	24
25	HOT WATER PUMP "HWP-2"	1/2"C,3#12,#12G	20		21...	--			--	--	SPACE	26
27						21...	--		--	--	SPACE	28
29							21...	--	--	--	SPACE	30
31	HOT WATER PUMP "HWP-1"	1/2"C,3#12,#12G	20		21...	--			--	--	SPACE	32
33						21...	--		--	--	SPACE	34
35							21...	--	--	--	SPACE	36
37	SPACE	--	--		--	20...			125	1-1/2"C,3-1/0,#6G	TRANSFORMER "TTC5"	38
39	SPACE	--	--				--	19...				40
41	SPACE	--	--					--				42
			Connected Load:		49366 VA	47854 VA	47270 VA					
			Connected Amps:		178.5 A	173.1 A	170.6 A					

Designation: LTC5

Installed Location: MEZZANINE
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 400
MCB Amps: 250
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

COLD ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	COLD ROOM NORTH WALL QUADS	1/2"C,1#12,#12N,#12G	20		72...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V COLD ROOM	2
3	COLD ROOM NORTH WALL QUADS	1/2"C,1#12,#12N,#12G	20			72...	24...					4
5	COLD ROOM EAST WALL QUADS	1/2"C,1#12,#12N,#12G	20				72...	20...				6
7	COLD ROOM SOUTH WALL QUADS	1/2"C,1#12,#12N,#12G	20		72...	20...			30	1/2"C,3#10,#10G	ADIABATIC COOLER	8
9	COLD ROOM SOUTH WALL QUADS	1/2"C,1#12,#12N,#12G	20			72...	20...					10
11	COLD ROOM HEAT TRACE RECEPT.	1/2"C,1#12,#12N,#12G	20				19...	28...				12
13	COLD ROOM HEAT TRACE RECEPT.	1/2"C,1#12,#12N,#12G	20		19...	28...			30	1/2"C,3#10,#10G	COLD ROOM MAKE-UP AIR UNIT DEHUMIDIFIER	14
15	COLD ROOM CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20			72...	28...					16
17	COLD ROOM CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20				72...	19...				18
19	COLD ROOM CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20		72...	19...			20	1/2"C,3#12,#12G	COLD ROOM MAKE-UP AIR UNIT COOLER	20
21	COLD ROOM CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20			72...	19...					22
23	COLD ROOM LIGHTING CIRCUIT	1/2"C,1#12,#12N,#12G	20				12...	82...				24
25	COLD ROOM CONTROL PANEL POWER	1/2"C,1#10,#10N,#10G	20		19...	82...			20	1/2"C,3#12,#12G	COLD ROOM MAKE-UP AIR UNIT FAN	26
27	COLD ROOM CONTROL PANEL POWER	1/2"C,1#10,#10N,#10G	20			19...	82...					28
29	COLD ROOM CONTROL PANEL POWER	1/2"C,1#10,#10N,#10G	20				19...	--	--	--	SPACE	30
31	COLD ROOM DOOR HEATER	1/2"C,1#12,#12N,#12G	20		15...	--			--	--	SPACE	32
33	COLD ROOM DOOR HEATER	1/2"C,1#12,#12N,#12G	20			15...	--		--	--	SPACE	34
35	COLD ROOM DOOR HEATER	1/2"C,1#10,#10N,#10G	20				15...	--	--	--	SPACE	36
37	COLD ROOM AIR VENT POWER	1/2"C,1#12,#12N,#12G	20		50...	--			--	--	SPACE	38
39	UNDERFLOOR WATER HEATER	1/2"C,1#10,#10N,#10G	20			15...	--		--	--	SPACE	40
41	UNDERFLOOR HOT WATER PUMP	1/2"C,1#12,#12N,#12G	20				11...	--	--	--	SPACE	42
43	GLYCOL FEED UNIT POWER	1/2"C,1#12,#12N,#12G	20		11...	--			--	--	SPACE	44
45	COLD ROOM EXHAUST FAN	1/2"C,1#12,#12N,#12G	20			86...	--		--	--	SPACE	46
47	COLD ROOM HEAT TRACE RECEPT.	1/2"C,1#12,#12N,#12G	20				19...	--	--	--	SPACE	48
49	COLD ROOM DOOR HEATER	1/2"C,1#12,#12N,#12G	20		15...	--			--	--	SPACE	50
51	MAIN DDC CONTROL PANEL	1/2"C,1#12,#12N,#12G	20			50...	--		--	--	SPACE	52
53	SPARE	--	20				0 VA	--	--	--	SPACE	54
55	SPARE	--	20		0 VA	0 VA						56
57	SPARE	--	20			0 VA	0 VA		30	--	SURGE PROTECTION	58
59	SPARE	--	20					0 VA	0 VA			60
			Connected Load:		20821 VA	19309 VA	18725 VA					
			Connected Amps:		174.3 A	161.7 A	156.0 A					

Designation: ELA

Installed Location: E. EXTERIOR WALL
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 3R
Bus Amps: 100
MCB Amps: 70
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	COLD CELL DRY COOLER CO2 CHARGE SAVER	1/2"C,3#10,#10G	30		20...	14...			20	1/2"C,1#12,#12N,#12G	GENERATOR BATTERY CHARGER/HEATER	2
3						20...	10...		20	1/2"C,1#12,#12N,#12G	GENERATOR COOLANT HEATER	4
5								20...	0 VA	--	SPARE	6
7	SPACE	--	--		--	0 VA			20	--	SPARE	8
9	SPACE	--	--				--	0 VA				10
11	SPACE	--	--					--	0 VA	20	--	SPARE	12
13	SPACE	--	--		--	--			--	--	SPACE	14
15	SPACE	--	--				--	--	--	--	SPACE	16
17	SPACE	--	--					--	--	--	SPACE	18
19	SURGE PROTECTION	--	30		0 VA	--			--	--	SPACE	20
21						0 VA	--		--	--	SPACE	22
23								0 VA	--	--	SPACE	24
			Connected Load:		3417 VA	3017 VA	2017 VA					
			Connected Amps:		29.8 A	26.4 A	16.8 A					

Designation: HTC3

Installed Location: MEZZANINE
Voltage: 480Y/277, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 250
MCB Amps: MLO
Features & Modifications: -
SCCR/AIC: 42.0 kA
Mains FN/Note: -

THERMAL ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	THERMAL ROOM VENTILATION FANS + CONTROL CABINET	1-1/2"C,3-1/0,#3G	125		18...	24...			20	1/2"C,1#12,#12N,#12G	THERMAL TEST CELL LIGHTING	2
3						18...	0 VA		20	--	SPARE	4
5							18...	0 VA	20	--	SPACE	6
7	THERMAL CELL SPOT FAN POWER	1/2"C,3#12,#12G	20		83...	--			--	--	SPACE	8
9						83...	--		--	--	SPACE	10
11							83...	--	--	--	SPACE	12
13	THERMAL CELL PIT JACK	1/2"C,3#12,#12G	20		44...	--			--	--	SPACE	14
15						44...	--		--	--	SPACE	16
17							44...	--	--	--	SPACE	18
19	THERMAL CELL 5HP EXHAUST FAN	1/2"C,3#10,#10G	25		21...	--			--	--	SPACE	20
21						21...	--		--	--	SPACE	22
23							21...	--	--	--	SPACE	24
25	THERMAL CELL 3/4HP PURGE FAN	1/2"C,3#10,#10G	25		44...	--			--	--	SPACE	26
27						44...	--		--	--	SPACE	28
29							44...	--	--	--	SPACE	30
31	EXHAUST FAN "EF-5"		20		13...	--			--	--	SPACE	32
33						13...	--		--	--	SPACE	34
35							13...	--	--	--	SPACE	36
37	SPACE	--	--		--	13...			70	1"C,3#4,#8G	TRANSFORMER "TTC3"	38
39	SPACE	--	--				--	12...				40
41	SPACE	--	--					--	12...			42
			Connected Load:		44119 VA	40159 VA	40159 VA					
			Connected Amps:		159.3 A	145.0 A	145.0 A					

Designation: LTC3

Installed Location: MEZZANINE
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 225
MCB Amps: 150
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

THERMAL ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	NORTH WALL THERMAL CELL QUADS	1/2"C,1#12,#12N,#12G	20		10...	24...			30	1/2"C,2#10,#10G	DED. 30A 208V THERMAL CELL	2
3	NORTH WALL THERMAL CELL QUADS	1/2"C,1#12,#12N,#12G	20			72...	24...					4
5	EAST WALL THERMAL CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	24...	30	1/2"C,2#10,#10G	DED. 30A 208V THERMAL CELL	6
7	EAST WALL THERMAL CELL QUAD	1/2"C,1#12,#12N,#12G	20		36...	24...						8
9	SOUTH WALL THERMAL CELL QUADS	1/2"C,1#12,#12N,#12G	20			10...	24...					10
11	SOUTH WALL THERMAL CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	24...				12
13	THERMAL CELL TRANSDUCER POST	1/2"C,1#10,#10N,#10G	20		19...	60...			20	1/2"C,1#12,#12N,#12G	THERMAL CELL FIRE SMOKE DAMPERS	14
15	THERMAL CELL CADET CABINET	1/2"C,1#12,#12N,#12G	20			19...	72...		20	1/2"C,1#12,#12N,#12G	MEZZANINE RECEPTACLES	16
17	THERMAL CELL ROOM SAFETY PANEL	1/2"C,1#12,#12N,#12G	20				19...	34...				18
19	THERMAL CELL CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20		72...	30...			70	1-1/4"C,3#4,#4N,#8G	AUTOMATIC TRANSFER SWITCH ATS-C02	20
21	THERMAL CELL CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20			72...	20...					22
23	THERMAL CELL VENTILATION DAMPERS	1/2"C,1#12,#12N,#12G	20				40...	--	--	--	SPACE	24
25	MEZZANINE DAMPER POWER	1/2"C,1#12,#12N,#12G	20		10...	0 VA						26
27	SPARE	--	20			0 VA	0 VA		30	--	SURGE PROTECTION	28
29	SPARE	--	20					0 VA	0 VA			30
			Connected Load:		13689 VA	12169 VA	12169 VA					
			Connected Amps:		114.1 A	101.4 A	101.4 A					

Designation: HTC4

Installed Location: MEZZANINE
Voltage: 480Y/277, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 250
MCB Amps: MLO
Features & Modifications: -
SCCR/AIC: 42.0 kA
Mains FN/Note: -

HYDRAULIC ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	HYDRAULIC ROOM VENTILATION FANS + CONTROL CABINET	1-1/2"C,3-1/0,#6G	125		11...	24...			20	1/2"C,1#12,#12N,#12G	TESTING CELL LIGHTING	2
3						11...	0 VA		20	--	SPARE	4
5							11...	0 VA	20	--	SPARE	6
7	HYDRAULIC ROOM 1/2HP PURGE FAN	1/2"C,3#10,#10G	25		30...	--			--	--	SPACE	8
9						30...	--		--	--	SPACE	10
11							30...	--	--	--	SPACE	12
13	HYDRAULIC ROOM HEAT EXCHANGER	1/2"C,3#12,#12G	20		44...	--			--	--	SPACE	14
15						44...	--		--	--	SPACE	16
17							44...	--	--	--	SPACE	18
19	SPACE	--	--		--	--			--	--	SPACE	20
21	SPACE	--	--				--	--	--	--	SPACE	22
23	SPACE	--	--					--	--	--	SPACE	24
25	SPACE	--	--		--	--			--	--	SPACE	26
27	SPACE	--	--				--	--	--	--	SPACE	28
29	SPACE	--	--					--	--	--	SPACE	30
31	SPACE	--	--		--	--			--	--	SPACE	32
33	SPACE	--	--				--	--	--	--	SPACE	34
35	SPACE	--	--					--	--	--	SPACE	36
37	SPACE	--	--		--	64...			--	--	SPACE	38
39	SPACE	--	--				--	73...				40
41	SPACE	--	--					--	79			42
			Connected Load:		25218 VA	23738 VA	24298 VA					
			Connected Amps:		91.4 A	85.7 A	88.0 A					

Designation: LTC4

Installed Location: MEZZANINE
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 100
MCB Amps: 100
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

HYDRAULIC ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	NORTH WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20		10...	40...			20	1/2"C,1#12,#12N,#12G	HYDRAULIC ROOM VENTILATION DAMPERS	2
3	NORTH WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20			72...	10...		20	1/2"C,1#12,#12N,#12G	HYDRAULIC ROOM FIRE SMOKE DAMPERS	4
5	EAST WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	72...	20	1/2"C,1#12,#12N,#12G	MEZZANINE RECEPTACLES	6
7	EAST WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20		36...	0 VA			20	--	SPARE	8
9	SOUTH WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20			10...	0 VA		20	--	SPACE	10
11	SOUTH WALL HYDRAULIC CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	0 VA	20	--	SPARE	12
13	CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20		72...	--			--	--	SPACE	14
15	CONTROL ROOM QUADS	1/2"C,1#12,#12N,#12G	20			72...	--		--	--	SPACE	16
17	HYDRAULIC CELL TRANSDUCER POST	1/2"C,1#10,#10N,#10G	20				19...	--	--	--	SPACE	18
19	HYDRAULIC CELL TRANSDUCER POST	1/2"C,1#10,#10N,#10G	20		19...	--			--	--	SPACE	20
21	HYDRAULIC CELL TRANSDUCER POST	1/2"C,1#10,#10N,#10G	20			19...	--		--	--	SPACE	22
23	HYDRAULIC CELL CADET CABINET	1/2"C,1#10,#10N,#10G	20				19...	--	--	--	SPACE	24
25	HYDRAULIC CELL CADET CABINET	1/2"C,1#10,#10N,#10G	20		19...	0 VA						26
27	HYDRAULIC CELL CADET CABINET	1/2"C,1#12,#12N,#12G	20			19...	0 VA		30	--	SURGE PROTECTION	28
29	HYDRAULIC CELL ROOM SAFETY CABINET	1/2"C,1#12,#12N,#12G	20				19...	0 VA				30
			Connected Load:		6400 VA	7360 VA	7920 VA					
			Connected Amps:		53.3 A	62.6 A	67.2 A					

Designation: HTC1

Installed Location: MEZZANINE
Voltage: 480Y/277, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 250
MCB Amps: MLO
Features & Modifications: -
SCCR/AIC: 42.0 kA
Mains FN/Note: -

REACTION ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	REACTION ROOM VENTILATION FANS + CONTROL CABINET	1-1/2"C,3-1/0,#3G	125		18...	40...			20	1/2"C,1#12,#12N,#12G	REACTION TEST CELL LIGHTING	2
3							18...	0 VA	20	--	SPARE	4
5								18...	0 VA	20	--	SPACE	6
7	REACTION ROOM 5HP EXHAUST FAN #1	1/2"C,3#10,#10G	25		21...	--			--	--	SPACE	8
9						21...	--		--	--	SPACE	10
11							21...	--	--	--	SPACE	12
13	REACTION ROOM 5HP EXHAUST FAN #2	1/2"C,3#10,#10G	25		21...	--			--	--	SPACE	14
15						21...	--		--	--	SPACE	16
17							21...	--	--	--	SPACE	18
19	REACTION ROOM 5HP EXHAUST FAN #3	1/2"C,3#10,#10G	25		21...	--			--	--	SPACE	20
21						21...	--		--	--	SPACE	22
23							21...	--	--	--	SPACE	24
25	REACTION ROOM 5HP EXHAUST FAN #4	1/2"C,3#10,#10G	25		21...	--			--	--	SPACE	26
27						21...	--		--	--	SPACE	28
29							21...	--	--	--	SPACE	30
31	REACTION ROOM 3/4HP PURGE FAN	1/2"C,3#10,#10G	25		44...	--			--	--	SPACE	32
33						44...	--		--	--	SPACE	34
35							44...	--	--	--	SPACE	36
37	REACTION ROOM HYDRAULIC PACK	1/2"C,3#12,#12G	20		44...	42...			50	3/4"C,3#6,#10G	TRANSFORMER "TTC1"	38
39							44...	62...				40
41								44...	22...			42
			Connected Load:		40526 VA	38363 VA	34347 VA					
			Connected Amps:		148.5 A	140.7 A	124.0 A					

Designation: LTC1

Installed Location: MEZZANINE
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 100
MCB Amps: 100
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

REACTION ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	EAST WALL REACTION ROOM QUADS	1/2"C,1#12,#12N,#12G	20		72...	24...			30	1/2"C,2#8,#8G	DED. 30A 208V REACTION ROOM	2
3	EAST WALL REACTION ROOM QUADS	1/2"C,1#12,#12N,#12G	20			72...	24...					4
5	NORTH WALL REACTION ROOM QUADS	1/2"C,1#10,#10N,#10G	20					10...	--	--	SPACE	6
7	NORTH WALL REACTION ROOM QUADS	1/2"C,1#12,#12N,#12G	20		72...	--			--	--	SPACE	8
9	SOUTH WALL REACTION ROOM QUADS	1/2"C,1#12,#12N,#12G	20			10...	--		--	--	SPACE	10
11	SOUTH WALL REACTION ROOM QUADS	1/2"C,1#12,#12N,#12G	20				72...	--	--	--	SPACE	12
13	WEST WALL REACTION ROOM QUAD	1/2"C,1#12,#12N,#12G	20		36...	--			--	--	SPACE	14
15	REACTION ROOM SAFETY PANEL	1/2"C,1#10,#10N,#10G	20				19...	--	--	--	SPACE	16
17	VENTILATION DAMPER POWER	1/2"C,1#12,#12N,#12G	20					40...	--	--	SPACE	18
19	SPARE	--	20		0 VA	--			--	--	SPACE	20
21	SPARE	--	20			0 VA	0 VA					22
23	SPARE	--	20					0 VA	--	--	SPACE	24
25	SPARE	--	20		0 VA	0 VA						26
27	SPARE	--	20			0 VA	0 VA		30	--	SURGE PROTECTION	28
29	SPARE	--	20					0 VA	0 VA			30
			Connected Load:		4296 VA	6216 VA	2200 VA					
			Connected Amps:		38.5 A	54.5 A	18.3 A					

Designation: HTC2

Installed Location: MEZZANINE
Voltage: 480Y/277, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 250
MCB Amps: MLO
Features & Modifications: -
SCCR/AIC: 42.0 kA
Mains FN/Note: -

DUST ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	DUST CELL 7.5HP VENTILATION FAN	1/2"C,3#10,#10G	25		30...	27...			20	1/2"C,1#12,#12N,#12G	DUST TEST CELL LIGHTING	2
3						30...	0 VA		20	--	SPARE	4
5							30...	0 VA	20	--	SPARE	6
7	DUST CELL DOOR MOTOR	1/2"C,3#12,#12G	20		19...	21...						8
9						19...	21...		25	1/2"C,3#10,#10G	DUST CELL 5HP EXHAUST FAN	10
11							19...	21...				12
13	DUST CELL DUST BLOWER CONTROL BOX	1/2"C,3#12,#12G	20		44...	--			--	--	SPACE	14
15						44...	--		--	--	SPACE	16
17							44...	--	--	--	SPACE	18
19	DUST CELL 5HP DUST FAN #1	1/2"C,3#12,#12G	20		21...	--			--	--	SPACE	20
21						21...	--		--	--	SPACE	22
23							21...	--	--	--	SPACE	24
25	DUST CELL 5HP DUST FAN #2	1/2"C,3#12,#12G	20		21...	--			--	--	SPACE	26
27						21...	--		--	--	SPACE	28
29							21...	--	--	--	SPACE	30
31	DUST CELL 5HP DUST FAN #3	1/2"C,3#12,#12G	20		21...	--			--	--	SPACE	32
33						21...	--		--	--	SPACE	34
35							21...	--	--	--	SPACE	36
37	DUST CELL 5HP DUST FAN #4	1/2"C,3#12,#12G	20		21...	55...						38
39						21...	40...		50	3/4"C,3#6,#10G	TRANSFROMER "TTC2"	40
41							21...	35...				42
			Connected Load:		28195 VA	24033 VA	23513 VA					
			Connected Amps:		102.1 A	87.1 A	84.9 A					

Designation: LTC2

Installed Location: MEZZANINE
Voltage: 208Y/120, 3PH, 4W
Mounting: Surface
Enclosure: NEMA 1
Bus Amps: 100
MCB Amps: 100
Features & Modifications: -
SCCR/AIC: 10.0 kA
Mains FN/Note: -

DUST ROOM PANELBOARD

Ckt	Description	Circuitry	Trip (A)	FN	A	B	C	FN	Trip (A)	Circuitry	Description	Ckt
1	NORTH WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20		72...	0 VA			20	--	SPARE	2
3	NORTH WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20			72...	0 VA		20	--	SPARE	4
5	WEST WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	0 VA	20	--	SPARE	6
7	WEST WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20		72...	--			--	--	SPACE	8
9	SOUTH WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20			72...	--		--	--	SPACE	10
11	SOUTH WALL DUST CELL QUADS	1/2"C,1#12,#12N,#12G	20				72...	--	--	--	SPACE	12
13	DUST CELL ROOM SAFETY PANEL	1/2"C,1#12,#12N,#12G	20		19...	--			--	--	SPACE	14
15	DUST CELL TRANSDUCER POST	1/2"C,1#12,#12N,#12G	20			19...	--		--	--	SPACE	16
17	DUST CELL CADET CABINET	1/2"C,1#12,#12N,#12G	20				19...	--	--	--	SPACE	18
19	DUST CELL CONTROL RM QUADS	1/2"C,1#12,#12N,#12G	20		72...	--			--	--	SPACE	20
21	DUST CELL CONTROL RM QUADS	1/2"C,1#12,#12N,#12G	20			72...	--		--	--	SPACE	22
23	DUST CELL DAMPER POWER	1/2"C,1#12,#12N,#12G	20				20...	--	--	--	SPACE	24
25	DUST CELL LIGHTING	1/2"C,1#12,#12N,#12G	20		14...	0 VA						26
27	SPARE	--	20				0 VA	0 VA	30	--	SURGE PROTECTION	28
29	SPARE	--	20					0 VA	0 VA			30
			Connected Load:		5520 VA	4080 VA	3560 VA					
			Connected Amps:		46.7 A	34.7 A	29.7 A					

Breaker Function Schedule

#	For any number, see panel schedule footer note
A	Arc-Fault Interrupter (AFCI) Protection
AR	Arc Energy Reduction Maintenance Switch
D	Demolished Circuit (now Spare or Space) {former circuit in brackets}
E	Existing-to-remain circuit
EM	Provide identification per NEC 700.12(I)(2)(4)
G	Ground-Fault Circuit Interrupter (GF

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Project 24056 — 05/01/2026

General Plan Symbols

- Plan Revision Number
- Detail Number on Sheet / Sheet Number Where Detail is Placed
- Keynote Symbol
- Continuation Symbol
- Point Where New Connects To Existing
- Room Name / Number (Room 1)
- Area Being Demolished
- Area Not In Contract
- Electrical Equipment. Do not route HVAC installation above or below equipment. Maintain working clearance as indicated by dashed line.

Abbreviations

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	MIA	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FD	FLOOR DRAIN	REC	RECESSED
FDC	FIRE DEPARTMENT CONNECTION	RED	REDUCER
FFCO	FINISHED FLOOR CLEAN OUT	RH	RELATIVE HUMIDITY
FGCO	FINISHED GRADE CLEAN OUT	RL/A	RELIEF AIR
FL	FLOOR	RM	ROOM
FO	FUEL OIL	RPM	REVOLUTIONS PER MINUTE
FOV	FUEL OIL VENT	RW	RAIN WATER
FOR	FUEL OIL RETURN	SF	SQUARE FOOT
FOS	FUEL OIL SUPPLY	S/A	SUPPLY AIR
FPM	FEET PER MINUTE	SAN	SANITARY
FS	FLOOR SINK	SF	SQUARE FOOT
FT	FOOT/FEET	SD	SMOKE DAMPER
FTR	FIN TUBE RADIATION	SM	SURFACE MOUNT
GAL	GALLON	SP	STANDPIPE
GF	GAS-FIRED	SP	STATIC PRESSURE
GC	GENERAL CONTRACTOR	STM	STEAM
GPM	GALLONS PER MINUTE	T	THERMOSTAT
GW	GREASE WASTE	TD	TEMPERATURE DROP
HB	HOSE BIB	TDR	TRENCH DRAIN
HP	HORSE POWER	TEMP	TEMPERATURE
HTG	HEATING	TYP	TYPICAL
HTR	HEATER	UG	UNDERGROUND
HW	HOT WATER	VAC	VACUUM
HYD	HYDRANT	V	VENT
ID	INDIRECT	VAV	VARIABLE AIR VOLUME
IN	INCH	VENT	VENTILATION
INV	INVERT	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

Equipment Abbreviations

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

Plumbing Symbols

- 2" — Nominal Pipe Size
- Above Ground Piping
- Below Ground Piping
- 1/8" / 12" SLOPE — Pipe Slope (When Applicable)
- (E) — Existing Pipe To Remain
- Pipe To Be Demolished
- CW — Domestic Cold-Water
- NPW — Non-Potable Water
- S-CW — Soft Cold-Water
- F-CW — Filtered Cold-Water
- RO — Reverse Osmosis Water
- HW — Domestic Hot-Water
- HW 140° — Domestic Hot-Water 140°
- HW-R — Hot-Water Recirculation
- HW-R 140° — Hot-Water Recirculation 140°
- SS — Sanitary Drain
- V — Sanitary Vent
- WV — Sanitary Wet Vent
- CWV — Combination DWV
- CD — Condensate Drain
- ID — Indirect Drain
- GW — Grease Waste
- GV — Grease Vent
- PD — Pump Discharge
- SD — Storm Drain
- OSD — Storm Overflow
- CA — Compressed Air
- G — Natural Gas
- LP — Liquid Propane
- Pipe Rise / Drop

Pipe Accessory Notes

- 4" FFCO — Cleanout
- 2" CHECK — Check Valve
- 2" BALANCE — Balancing Valve
- 2" CIRC — Circuit Setter
- 2" GATE — Gate Valve
- 2" S/O — Ball Valve
- 2" STRAIN — Fluid Strainer
- (S) 1" GAS-CNTRL — Emergency Gas Shutoff
- 1" PLUG — Plug Valve
- 1" GAS COCK — Gas Shutoff Cock
- 1" REG — Gas Regulator
- T/P 1" T/V — Thermostatic Valve
- T/P TMV-XT/P — Mixing Valve
- EM TMVEM — Emergency Mixer
- 2" PRV — Pressure Reducing Valve
- 2" METER — Water Meter
- Double Check Valve
- Reduced Pressure Zone

Plumbing Fixture Notes

- Floor Drain — 6" FD (Design Size / Identity Type) — 2 DFU (Drainage Fixture Units)
- 2" FD-3 — Floor Drain w/ Deep Seal Trap
- 2" FD-3P — Floor Drain w/ Trap Primer ("P" Indicates Primer Connection)
- 2" FD-7 — Floor Drain w/ Integral Cleanout
- 5" AD-1 — Area Drain (No Trap)
- 8" DD-1 — Deck Drain
- 8" HD-1 — Hub Drain (Funnel Type)
- 3" FS — Floor Sink
- 8" SD-12 — Roof Drain
- 6" SD-1 — 2000 SF — Combination Drain / Rainfall Surface Area

PLUMBING SHEET INDEX

P0.1	PLUMBING TITLE SHEET
P1.0A	UNDER FLOOR PLUMBING PLAN - AREA A
P1.0B	UNDER FLOOR PLUMBING PLAN - AREA B
P1.1A	DWV PLAN - AREA A
P1.1B	DWV PLAN - AREA B
P2.1A	NATURAL GAS AND DOMESTIC WATER PLAN - AREA A
P2.1B	NATURAL GAS AND DOMESTIC WATER PLAN - AREA B
P3.1A	COMPRESSED AIR PLAN - AREA A
P3.1B	COMPRESSED AIR PLAN - AREA B
P6.1	PLUMBING SCHEDULES
P9.1	PLUMBING RISERS

GENERAL PLUMBING NOTES

A. FIELD VERIFY ALL NEW WATER, WASTE, AND VENT PIPING CONNECTIONS AND PROVIDE NEW CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS.
B. PITCH UNDERFLOOR SANITARY WASTE PIPING OVER 2" AT 1/8" PER FOOT, 2" AND SMALLER AT 1/4" PER FOOT.
C. FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
D. ROUTE DOMESTIC WATER, AND SANITARY SEWER SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
E. WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR SHALL BE 2" MINIMUM.
F. LOCATIONS OF PIPING AND EQUIPMENT AS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
G. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL (OR UNIFORM, DEPENDING ON JURISDICTION) PLUMBING CODE AND INTERNATIONAL MECHANICAL CODE.
H. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
I. LOCATE PIPING AND EQUIPMENT OUTSIDE OF THE NEC REQUIRED CLEAR SPACE ABOVE AND AROUND ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR.
J. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE U.L. LISTED. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED ASSEMBLIES.
K. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
L. MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE, VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.
M. TRANSITION FROM PIPING SIZES SHOWN TO PROPERLY CONNECT TO EQUIPMENT.
N. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
O. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
P. INSTALL EXPOSED PIPING AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
Q. PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL PLUMBING EQUIPMENT AND MATERIALS. SUBSTITUTE EQUIPMENT AND MATERIALS INSTALLED WITHOUT PRIOR APPROVAL SHALL BE SUBJECT TO REPLACEMENT AT CONTRACTOR'S EXPENSE.
R. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.
S. PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.

GENERAL PLUMBING DEMOLITION NOTES

A. ALL PIPING TAKEN OUT OF SERVICE SHALL BE REMOVED. WHERE PIPING TO BE REMOVED IS CONNECTED TO EXISTING PIPING TO REMAIN, PIPING SHALL BE REMOVED BACK TO MAIN AND CAPPED, UNLESS INDICATED OTHERWISE. CONTRACTOR SHALL DISPOSE OF PIPING OR DELIVER TO OWNER, AS DIRECTED BY OWNER.
B. WHERE PIPING TAKEN OUT OF SERVICE IS LOCATED BELOW SLAB AND IS UNABLE TO BE REMOVED, CAP BELOW SLAB.
C. COORDINATE CUTTING, PATCHING OF EXISTING WALLS, CEILINGS, ROOF AND FLOORS AFFECTED BY MECHANICAL DEMOLITION WITH G.C.
D. ALL EQUIPMENT TAKEN OUT OF SERVICE SHALL BE REMOVED. EQUIPMENT SHALL BE DELIVERED TO OWNER OR DISPOSED OF AS DIRECTED BY OWNER.
E. REMOVE ALL PLUMBING INSTALLATION FROM PROJECT AREA, UNLESS REQUIRED FOR NEW WORK OR EXISTING INSTALLATION NOT AFFECTED BY REMODEL. COORDINATE WITH OWNER AND G.C.
F. SERVICES TO ITEMS NOT REMOVED AS PART OF THIS WORK SHALL BE RESTORED UPON COMPLETION OF THIS WORK TO FULLY OPERATIONAL CONDITION.
G. NOT ALL ITEMS REQUIRED TO BE DEMOLISHED MAY BE INDICATED ON DRAWINGS. ALL DEMOLITION OF AFFECTED SPACE SHALL BE PERFORMED AS IF INDICATED.
H. FIELD VERIFY EXACT LOCATION OF ALL EXISTING PLUMBING INSTALLATION INDICATED ON DRAWINGS.
I. ALL ITEMS TO BE RE-USED OR RELOCATED SHALL BE CLEANED, REPAIRED, AND RESTORED TO LIKE NEW CONDITION PRIOR TO RE-USE.

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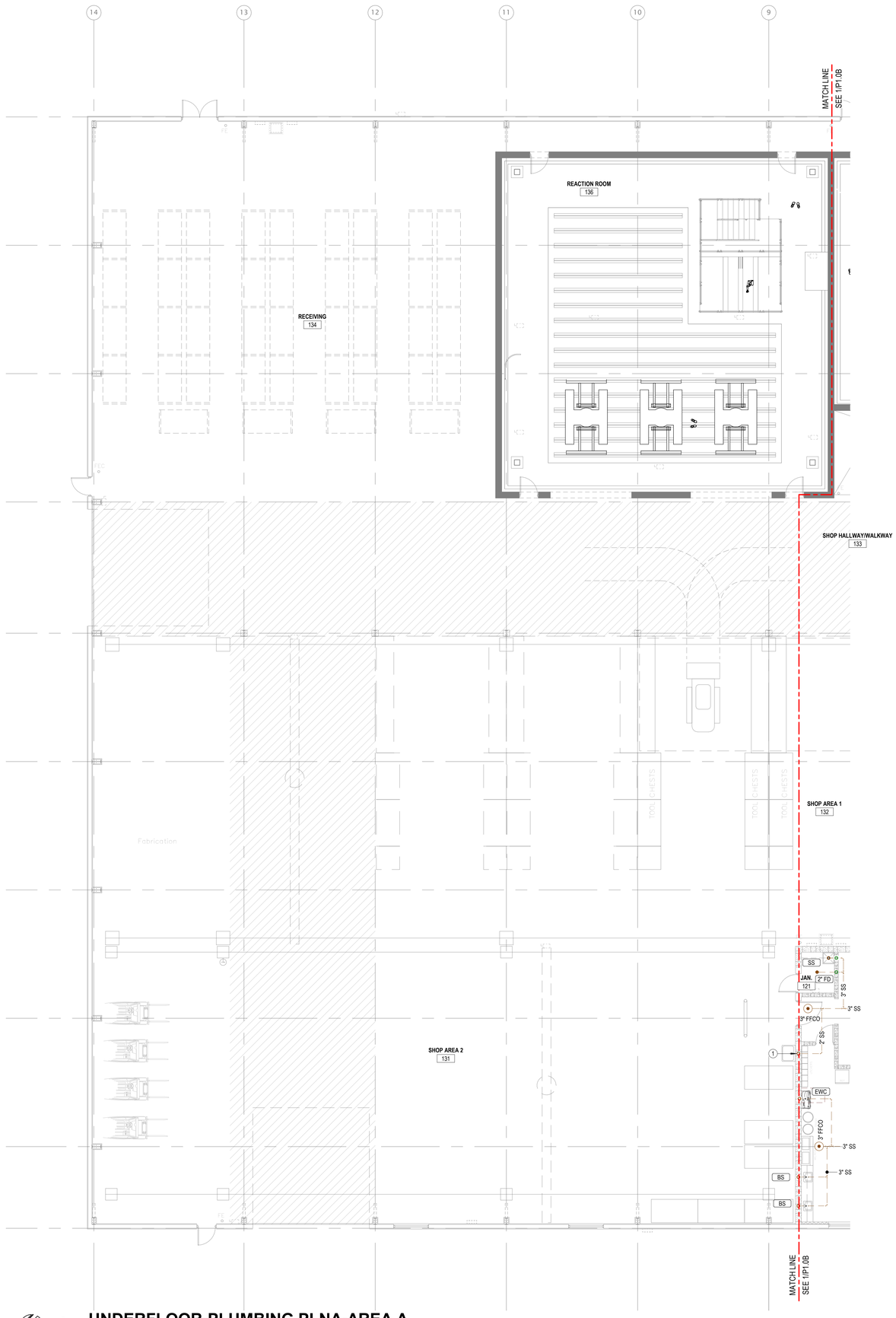


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1 **UNDERFLOOR-PLUMBING PLNA-AREA A**
1/8" = 1'-0"

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Project 24056 05/01/2026

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.

SPECIFIATIONS FOR UNDER-FLOOR WORK

DIVISION 15 - MECHANICAL SPECIFICATIONS

SECTION 15050 - BASIC MECHANICAL MATERIALS AND METHODS

15050.01 The drawings and general provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements apply to the work specified in DIVISION 15 - MECHANICAL.

15050.02 The Mechanical Contract includes all labor, materials and equipment required for the complete mechanical systems as shown and herein specified.

15050.03 The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding. Where the quality of required material is not specified, the Contractor shall furnish a first class standard item as approved by the Architect/Engineer.

15050.04 Manufacturer's names are intended to establish type and quality of items to be provided via the contract.The materials, products, and equipment described in the specifications or on the drawings establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution. Listing of these manufacturers shall in no way be construed as a device intended to limit the bidders to those specifically listed.

15050.05 The Drawings are schematic only and are not intended to show the exact routing of piping, ductwork, etc. Final determination of routing shall be made at the jobsite, in coordination with other trades.

15050.06 Install all equipment in strict accordance with the manufacturer's recommendations.

15050.07 All work under this contract shall conform to the requirements of all applicable local, state, and federal code requirements. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

15050.08 The Mechanical Contractor shall be responsible for locating and setting his own pipe sleeves, and be well aware of the job progress to avoid unnecessary delay for setting of same.

15050.09 The Mechanical Contractor shall do all excavating and backfilling necessary to complete work under this contract. Lines shall be used to lay out the trenches for underground work. Trenches shall be of sufficient width and shall be cribbed or braced to prevent cave in or settlement. Trenches close to walls and columns of the building shall not be excavated without the Architect's prior consent. The bottoms of trenches shall be tamped hard and graded to secure the required fall before laying pipe. Bell holes shall be excavated so the pipe will rest on solid ground for its entire length. Hand backfill and tamp backfill into place at sides of pipes, leaving tops and joints exposed until pipe runs have been tested and approved.

15050.10 Notify the Engineer of errors, discrepancies, or omissions in the drawings and specifications before construction or fabrication of affected work, or failing such notice, be responsible for correction of such work without cost to the Owner, Architect, or Engineer.

SECTION 15060 PIPE AND FITTINGS

15060.01 Below Grade Pipe and Fittings
A. Schedule 40 PVC drain waste and vent piping with solvent welded joints shall be used for all soil, waste and vent lines. All changes in directions shall be made by the use of 45 wyes, half wyes, long sweep 1/4 bends, 1/6, 1/8, or 1/16 bends. Sanitary tees may be used where the changes in direction of flow are from horizontal to vertical. Where space conditions necessitate the use of short radius fitting, approval shall be obtained before installation.

15060.02 Soil, Waste and Vent Piping
A. The arrangement of the systems must be as direct as possible avoiding all unnecessary offsets. All pipe shall run as indicated on the drawings, unless some condition should arise which would make it necessary or seem advisable to alter same; in which case, the Architect or his representative must be consulted before making any change. Horizontal lines shall be graded at 1/8" per foot, unless noted otherwise. Where necessary, lines may pitch at 1/10" per foot when approved or noted.
B. Every vent for traps shall be connected to the waste line by as short a connection as possible, but in no case shall such connections have a length greater than 2' in length, measuring horizontally from the center of the fixture to the vent. Horizontal vents shall connect into the main stack at least 18" above the highest fixture.
C. Each fixture and piece of equipment requiring connection to the sanitary drainage system shall be equipped with a trap. Each trap shall be placed as near the fixture as possible and no fixture shall be double trapped. Combination drain/vent piping is acceptable where indicated and allowed by building codes.
D. All under slab plastic piping shall be installed in strict compliance with building codes as well as all manufacturers' recommendations.

SECTION 15140 PIPING SUPPORTS, ANCHORS AND SEALS

15140.01 Pipe sleeves will be required in all pipe penetrations through exterior walls. Sleeves shall be Schedule 5 steel pipe, field fabricated from minimum 16 gauge steel with 2" overlap at the seam.

15140.02 Space between sleeves and pipes in outside walls shall be filled or tightly caulked with oakum, butyl rubber, link seals or other approved equally effective material to resist the penetration of water. Pipe sleeve shall be sufficient diameter to provide approximately 1/2" clearance around pipe, and in the case of insulated pipe, approximately 1/2" around insulation.

15140.03 Sleeves shall be set no closer than three pipe diameters center to center, be set 3/4" past all wall surfaces, and securely anchored to the wall.

SECTION 15430 PLUMBING SPECIALTIES

15430.01 Provide Zurn, Smith, Wade, Josam, or approved equal cleanouts where shown. Cleanouts shall be the same size pipe for pipe 4" and smaller, and 4" for lines 4" and larger.

15430.02 Floor and exterior cleanouts shall be Zurn ZN-1400. Set in 12" x 12" x 4" concrete pad for exterior use.

END OF DIVISION 15

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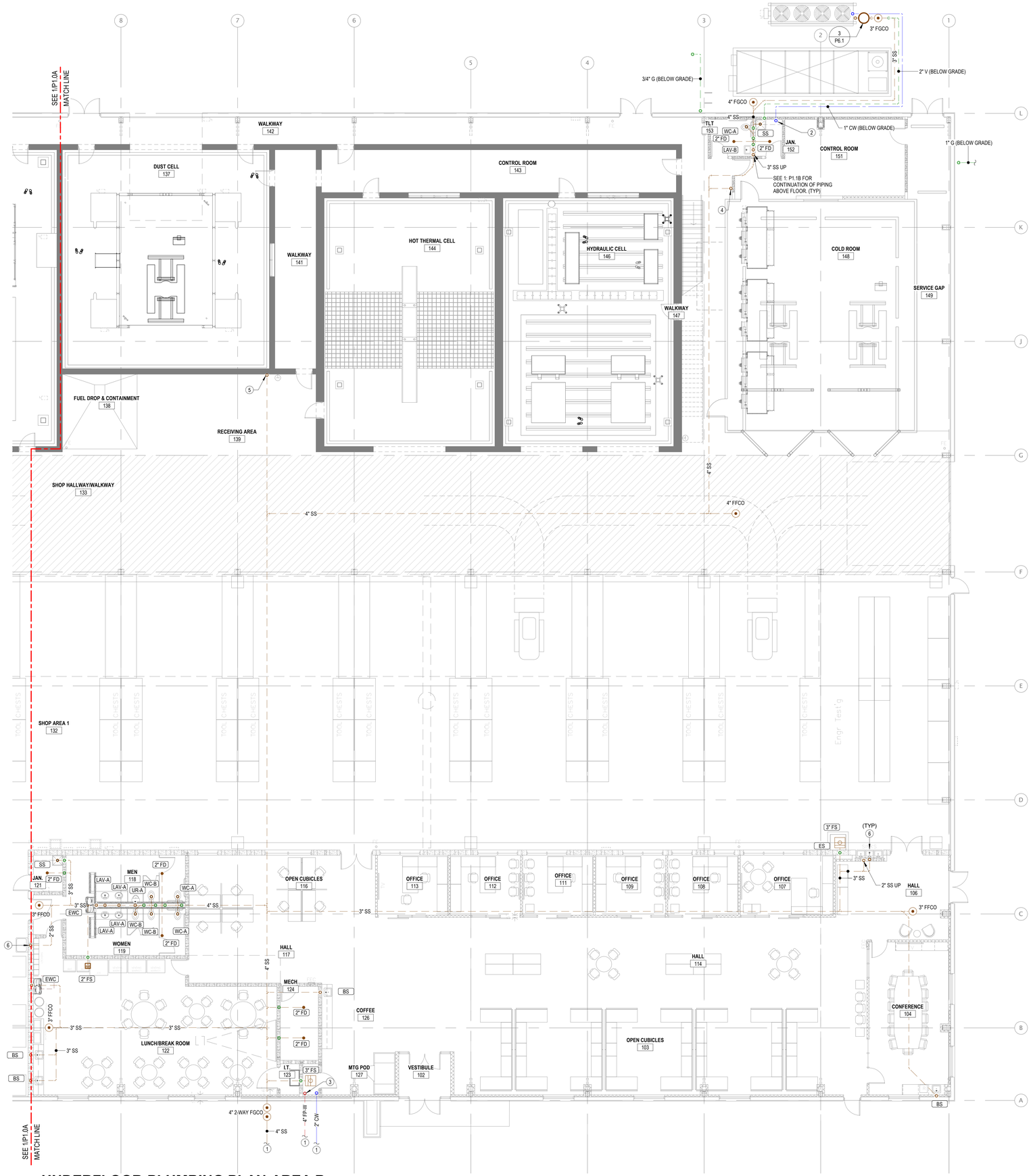
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NUMBER 13396
05/01/2026
KANSAS
PROFESSIONAL ENGINEER

REVISIONS:

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1 UNDERFLOOR-PLUMBING PLAN-AREA B

1/8" = 1'-0"

NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	SEE CIVIL DRAWINGS FOR CONTINUATION.
2	PROVIDE 1" DOMESTIC WATER LINE WITH BACKFLOW PREVENTOR AND ROUTE BELOW GRADE TO COLD CELL COOLER AND CONNECT EQUIPMENT PROVIDED BY OTHERS. PROVIDE HEAT TRACE FOR PIPING LOCATED ABOVE GRADE. COORDINATE WITH E.C. COORDINATE EXACT LOCATION AND CONNECTION REQUIREENTS WITH COLD CELL EQUIPMENT PROVIDER.
3	FIRE SPRINKLER SYSTEM RISER.
4	PROVIDE 4" WASTE STAND PIPE FOR COLD CELL EVAPORATOR DRAINS. COORDINATE EXACT LOCATION WITH COLD CELL CONTRATOR.
5	ROUTE 2" DRAIN UP TO OPEN HUB DRAIN FOR CONDENSATE DISPOSAL. SEE ABOVE FLOOR WASTE AND VENT PLAN FOR CONTINUATION.
6	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.

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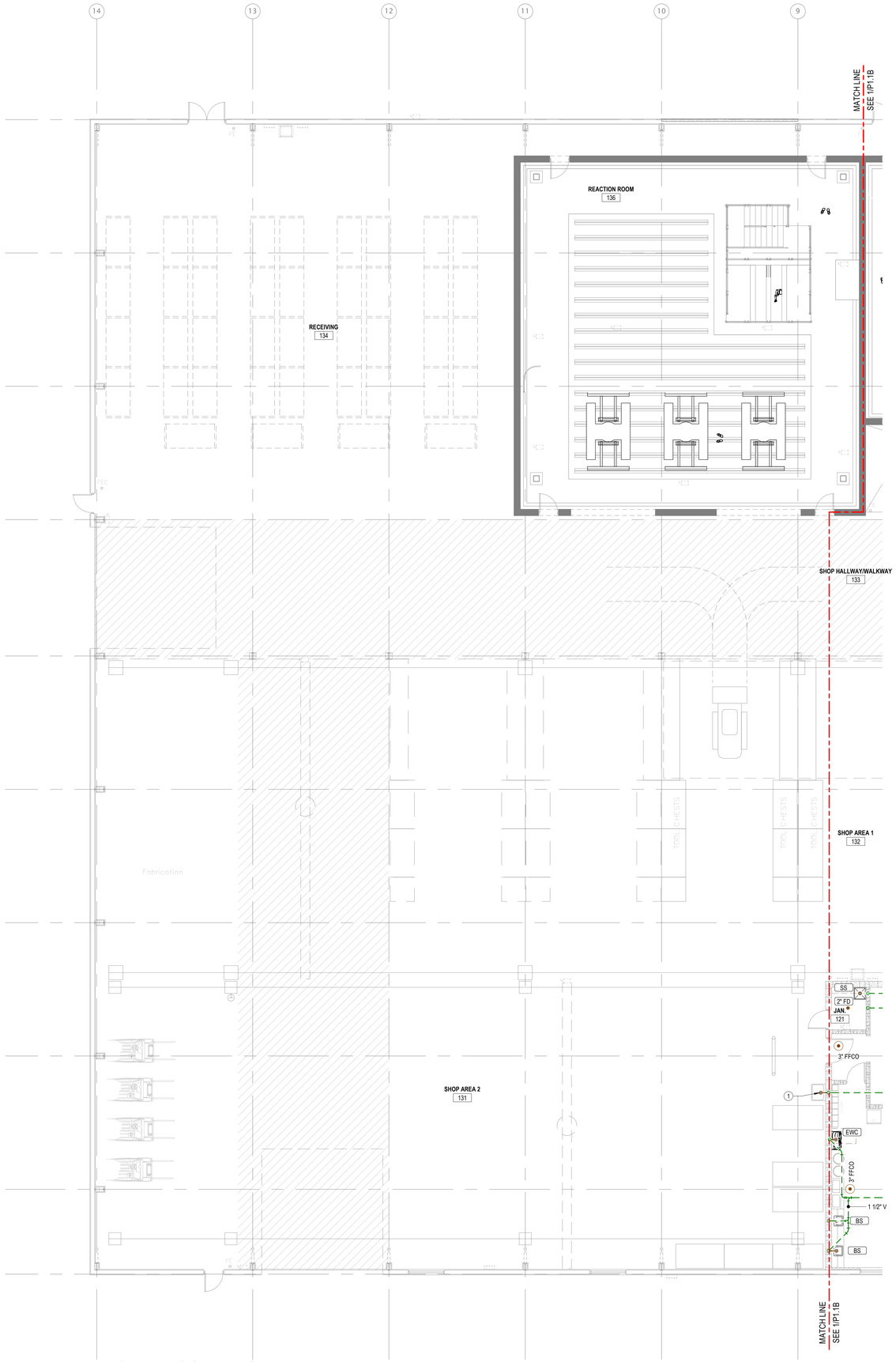
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1 ABOVE FLOOR-WASTE AND VENT PLAN-AREA A

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1	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.

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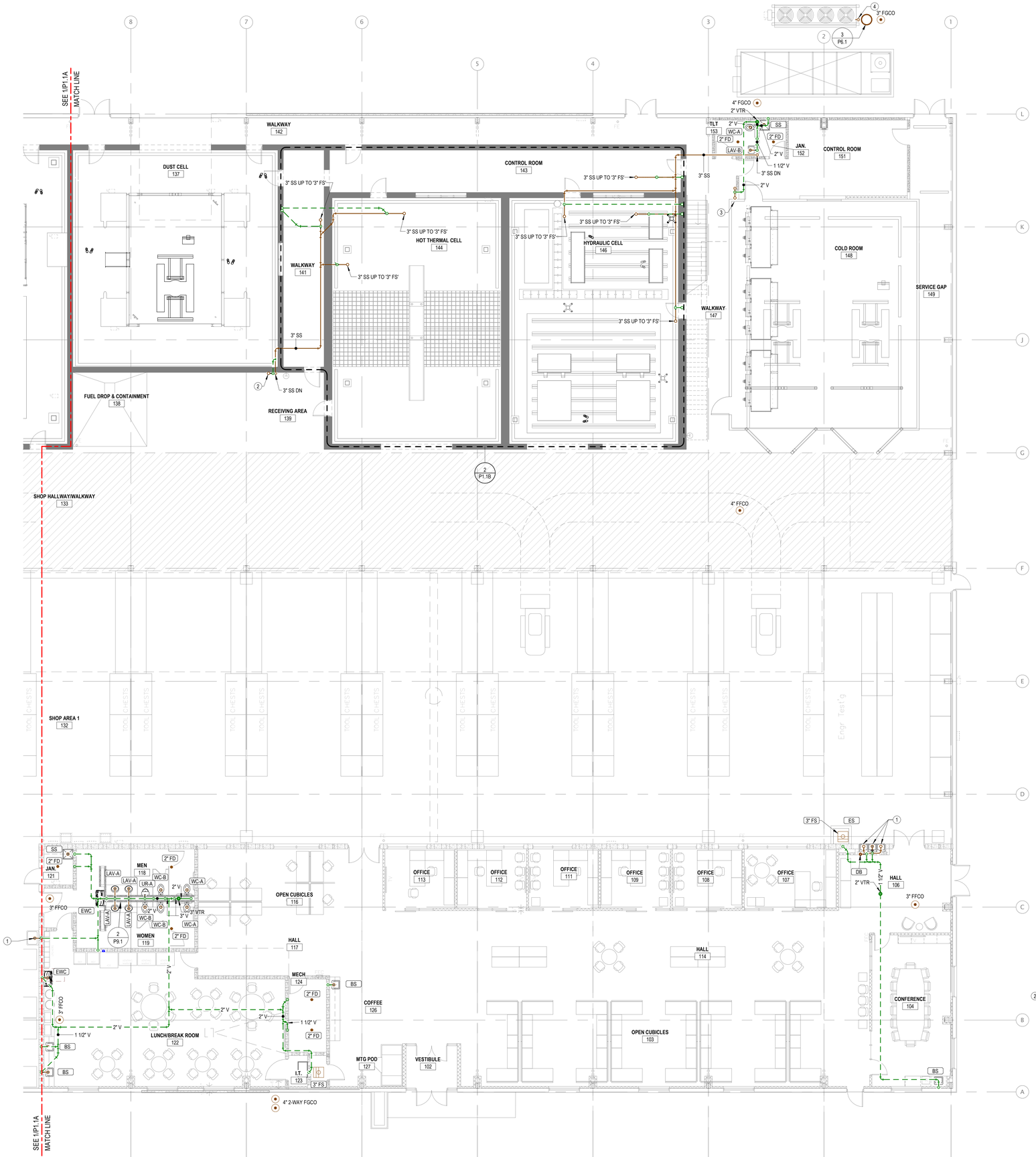
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PROFESSIONAL ENGINEER

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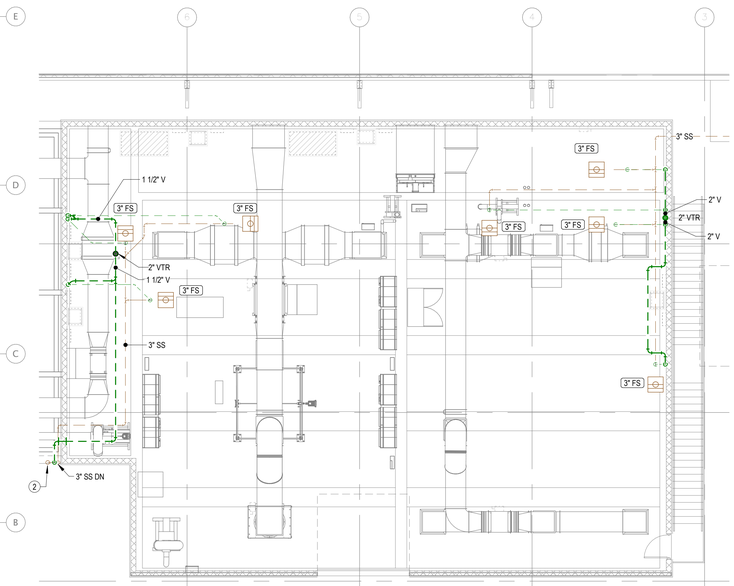
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1 **ABOVE FLOOR-WASTE AND VENT PLAN-AREA B**
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2 **WASTE AND VENT PLAN-MEZZANINE**
1/8" = 1'-0"

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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.
2	PROVIDE 2" OPEN HUB DRAIN WITH 1-1/2" VENT TERMINATED WITH 2" TO 4" REDUCER FOR INDIRECT CONNECTION OF CONDENSATE DRAIN. PROVIDE WITH TRAP PROTECTION DEVICE EQUAL TO PRO-SET TRAP GUARD. TERMINATE OPEN HUB DRAIN AT TOP OF WALL.
3	PROVIDE 4" WASTE STAND PIPE FOR COLD CELL EVAPORATOR DRAINS. COORDINATE EXACT LOCATION WITH COLD CELL CONTRATOR.
4	CONNECT TO DRAIN AT COLD CELL FLUID COOLER AND ROUTE TO INLET OF SOLIDS INTERCEPTOR.

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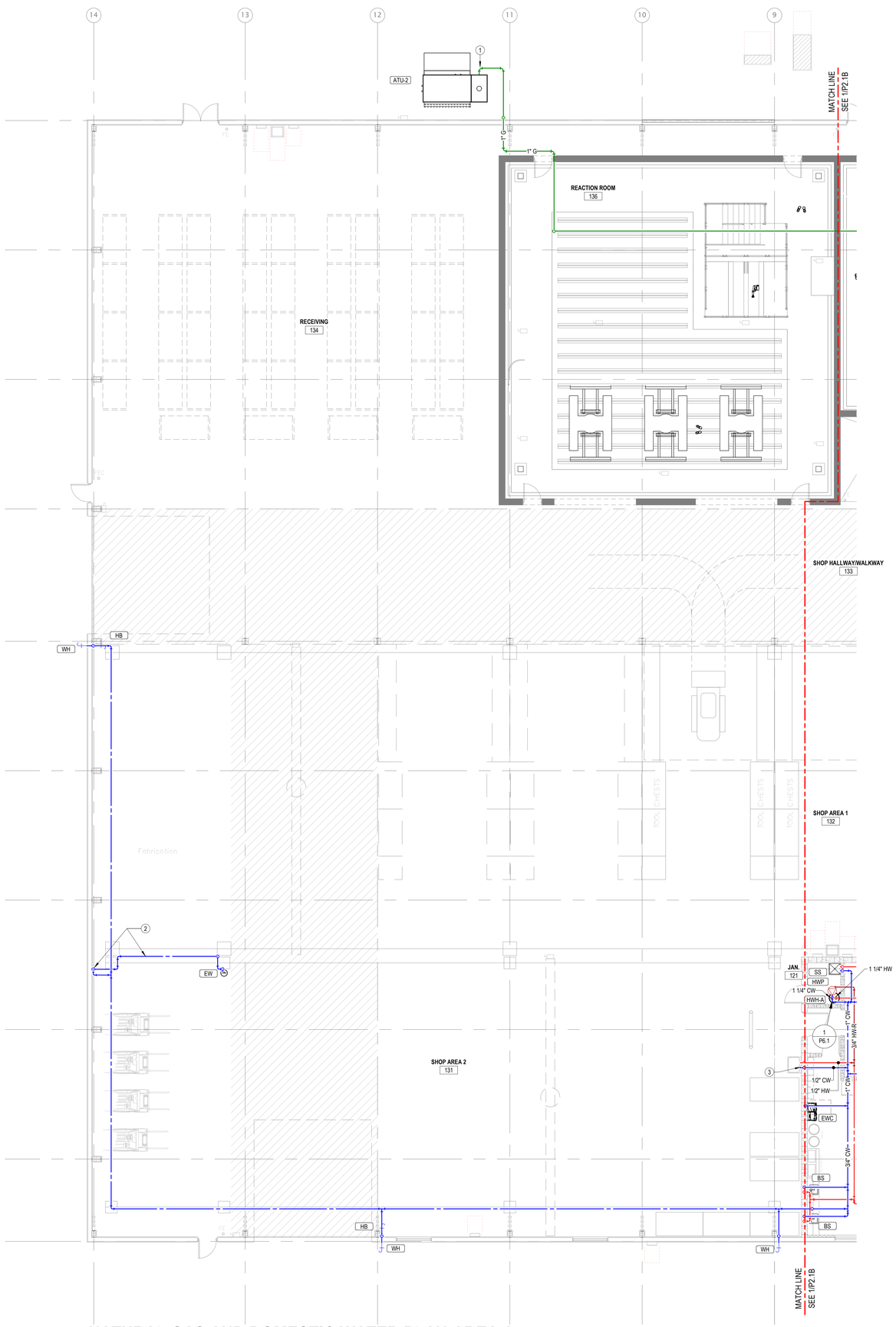
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF KANSAS. CRAIG THOMAS 13396 05/01/2026 KANSAS PROFESSIONAL ENGINEER

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1 NATURAL GAS AND DOMESTIC WATER PLAN-AREA A

1/8" = 1'-0"

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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	CONNECT GAS TO AIR TURNOVER UNIT. PROVIDE SHUT-OFF VALVE UNION, REGULATOR AND 6" DIRT LEG AT 'ARU'.
2	ROUTE PIPING DOWN ALONG WALL AND ALONG CRANE SUPPORT BEAM AND COLUMN TO EYE WASH. FIELD COORDINATE ROUTING WITH OWNER AND OTHER TRADES TO ENSURE TRAVEL OF CRANE IS NOT RESTRICTED.
3	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.

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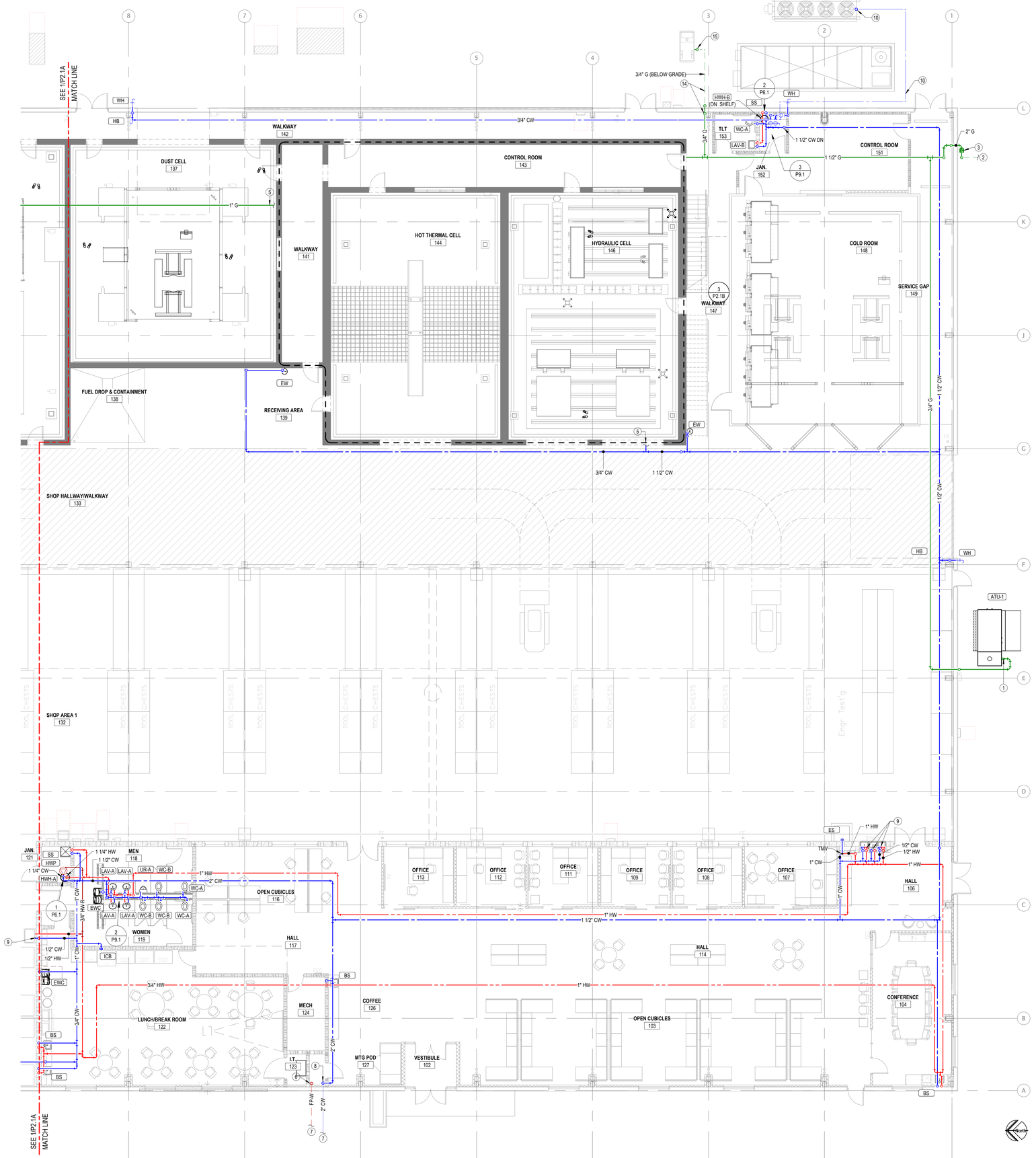
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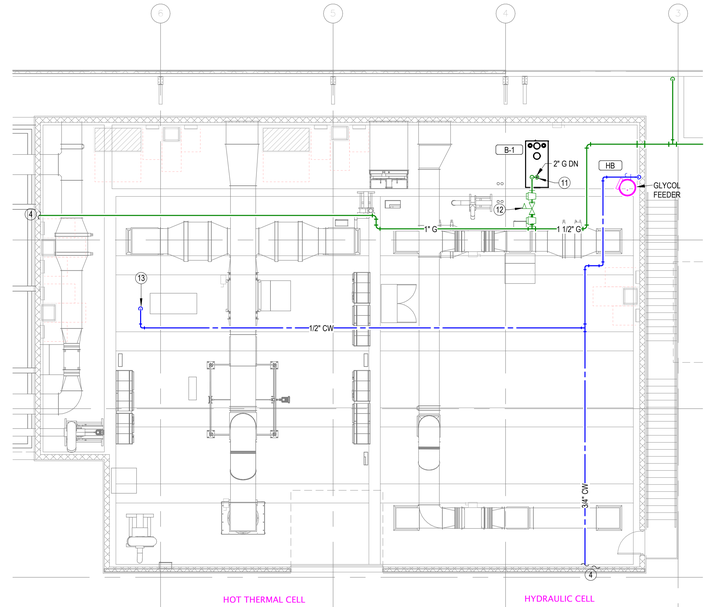
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1 NATURAL GAS AND DOMESTIC WATER PLAN-AREA B

1/8" = 1'-0"



3 NATURAL GAS AND DOMESTIC WATER PLAN-MEZZANINE

1/8" = 1'-0"

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NOTES BY SYMBOL

Key Value	Keynote Text
1	CONNECT GAS TO AIR TURNOVER UNIT. PROVIDE SHUT-OFF VALVE UNION, REGULATOR AND 6" DIRT LEG AT 'ARU'.
2	GAS SERVICE BY UTILITY. G.C. TO COORDINATE INSTALLATION.
3	CONNECT TO DISCHARGE OF GAS METER AND REGULATOR PROVIDED BY UTILITY COMPANY. TOTAL CONNECTED LOAD = 5,500 CFH @ 5 PSI. COORDINATE EXACT REQUIREMENTS WITH KANSAS GAS SERVICE AND PAY ALL ASSOCIATED FEES.
4	SEE OVERALL PLAN FOR CONTINUATION.
5	SEE MEZZANINE PLAN FOR CONTINUATION.
6	FIRE SPRINKLER SYSTEM RISER.
7	SEE CIVIL DRAWINGS FOR CONTINUATION.
8	PROVIDE SHUT-OFF VALVE IN DOMESTIC WATER SERVICE RISER AND PRESSURE REDUCING VALVE SET TO 80 PSI IF REQUIRED, COORDINATE REQUIREMENTS WITH CITY OF SALINA.
9	INSTALL SINK PROVIDED BY OWNER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE QUARTER TURN STOPS AND CAST BRASS P-TRAP.
10	PROVIDE 1" DOMESTIC WATER LINE WITH BACKFLOW PREVENTOR AND ROUTE BELOW GRADE TO COLD CELL COOLER AND CONNECT EQUIPMENT PROVIDED BY OTHERS. PROVIDE HEAT TRACE FOR PIPING LOCATED ABOVE GRADE. COORDINATE WITH E.C. COORDINATE EXACT LOCATION AND CONNECTION REQUIREENTS WITH COLD CELL EQUIPMENT PROVIDER.
11	CONNECT GAS TO BOILER. PROVIDE GAS COCK, UNION, AND DIRT LEG. COORDINATE EXACT CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED.
12	PROVIDE REGULATOR FOR 3000 CFH SET TO 11" W.C. DISCHARGE. VENT REGULATOR TO OUTDOORS.
13	PROVIDE 1/2" DOMESTIC CW AND CONNECT TO 'CAHU' PROVIDED BY OTHERS. FIELD COORDINATE EXACT PIPE ROUTING WITH OTHER TRADES AND EQUIPMENT PROVIDER AND FIELD COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT SUPPLIER.
14	ROUTE GAS PIPING DOWN AND PENETRATE EXTERIOR WALL 18" A.F.G. AND ROUTE PIPING BELOW GRADE TO NATURAL GAS GENERATOR. FIELD COORDINATE EXACT PIPE ROUTING WITH STRUCTURAL ENGINEER AND OTHER TRADES.
15	CONNECT GAS TO GENERATOR PROVIDED BY OTHERS. PROVIDE GAS COCK, UNION, DIRT LEG, AND REGULATOR FOR 5PSI INLET AND 11" W.C. OUTLET SIZED FOR 260 CFH. COORDINATE EXACT CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.

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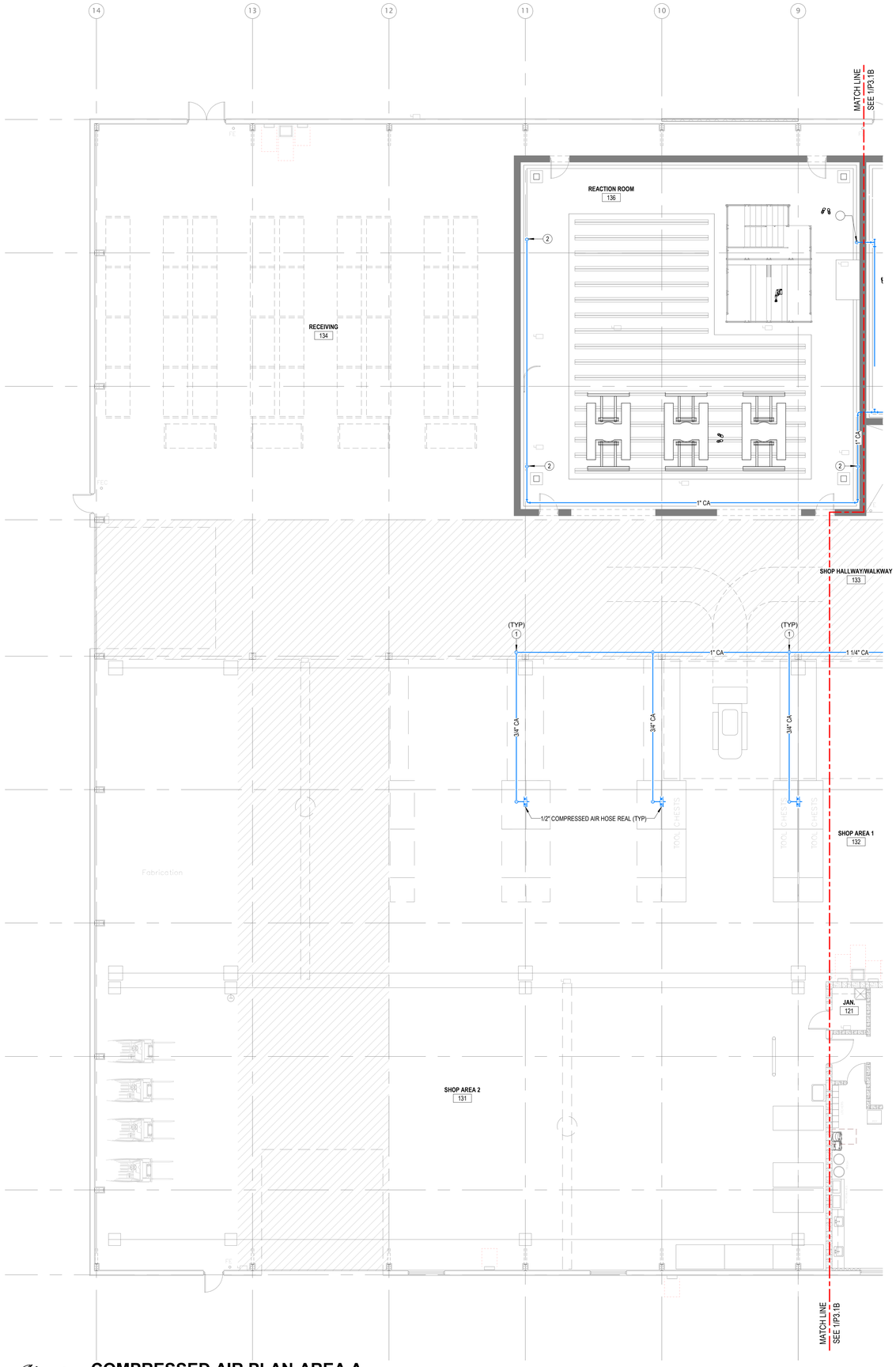
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1 **COMPRESSED AIR PLAN-AREA A**
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Project 24056 **05/01/2026**

NOTES BY SYMBOL	
Key Value	**Keynote Text**
	PROVIDE 1/2" COMPRESSED AIR DROP. FIELD COORDINATE COMPRESSED AIR DROP LOCATIONS AND EXACT COMPRESSED AIR DROP REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
1	ROUTE COMPRESSED AIR PIPE DROPE OUTSIDE CRANE TRAVEL AREA. ATTACH TO TUBULAR STEEL TECH BAY FLOOR MOUNTED FRAME AND ROUTE TO HOSE REEL.
2	PROVIDE 1/2" COMPRESSED AIR DROP. FIELD COORDINATE COMPRESSED AIR DROP LOCATIONS AND EXACT COMPRESSED AIR DROP REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.

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REVISIONS:

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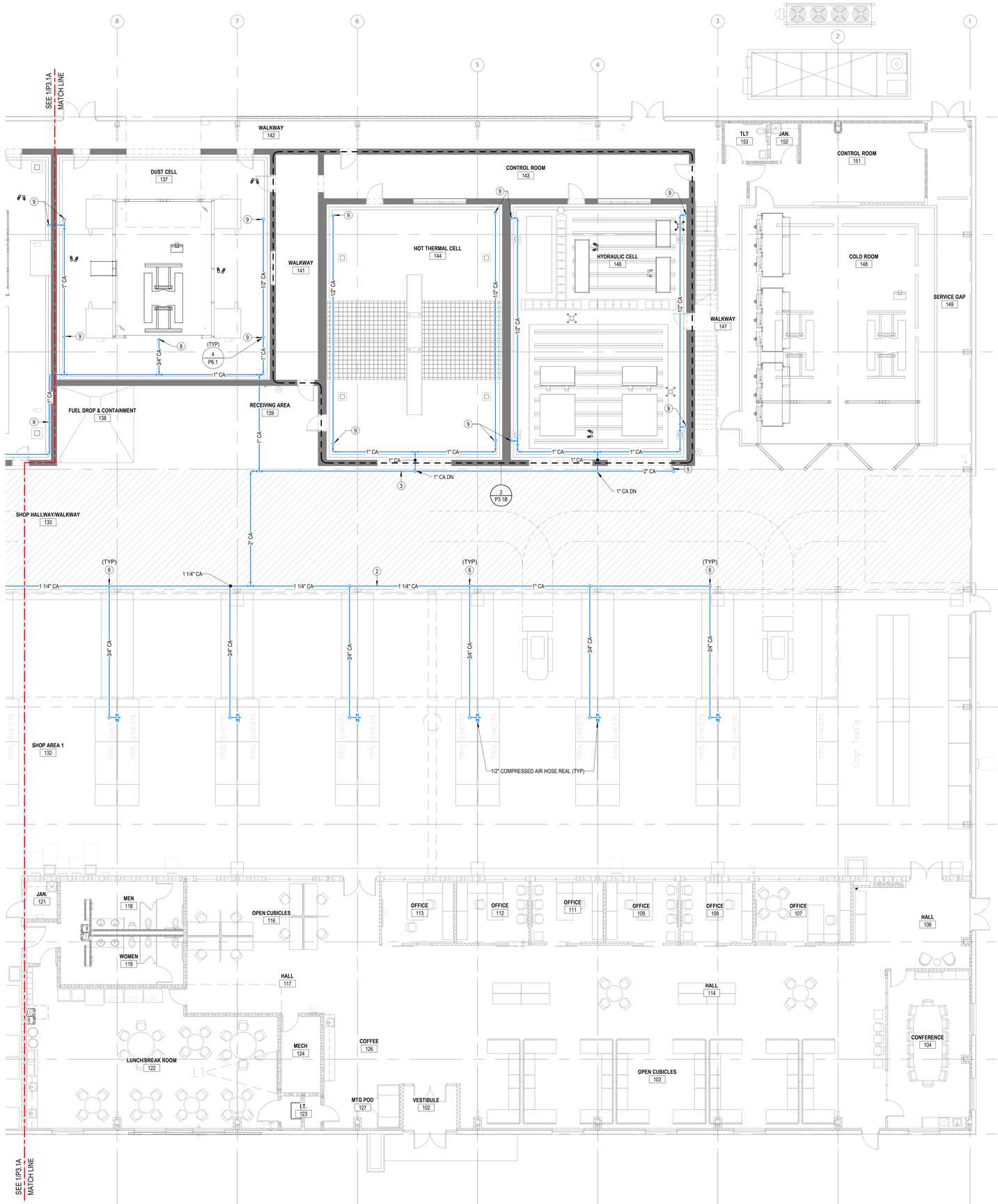
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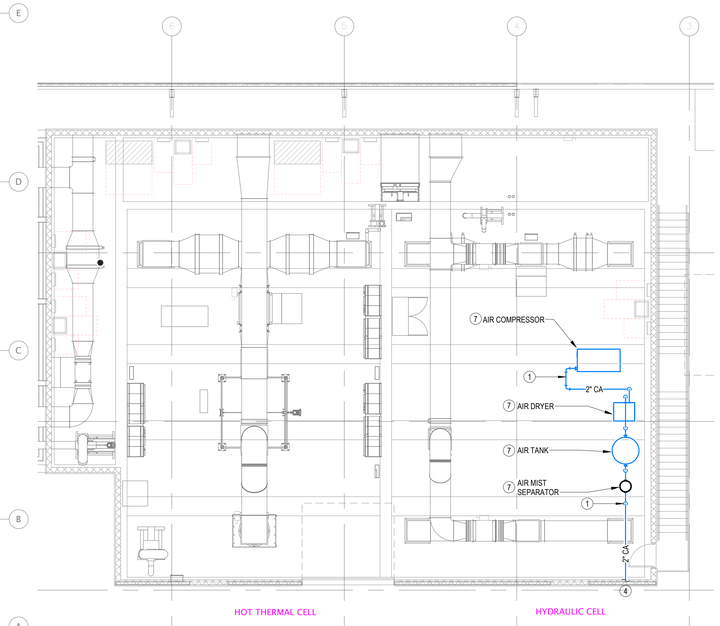
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NOTES BY SYMBOL	
Key Value	**Keynote Text**
1	CONNECT COMPRESSED AIR PIPING TO COMPRESSED AIR SYSTEM COMPONENTS PROVIDED BY OWNER. COORDINATE EXACT INSTALLATION REQUIREMENT WITH OWNER AND EQUIPMENT PROVIDED.
2	ROUTE COMPRESSED AIR PIPE MAIN OUTSIDE AND ABOVE CRANE TRAVEL AREA.
3	ROUTE PIPING ABOVE OVERHEAD DOOR AT MEZZANINE. FIELD COORDINATE EXACT ROUTING WITH ARCH. AND OTHER TRADES.
4	SEE OVERALL PLAN FOR CONTINUATION.
5	SEE MEZZANINE PLAN FOR CONTINUATION.
6	ROUTE COMPRESSED AIR PIPE DROPE OUTSIDE CRANE TRAVEL AREA. ATTACH TO TUBULAR STEEL TECH BAY FLOOR MOUNTED FRAME AND ROUTE TO HOSE REEL.
7	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH OWNER AND EQUIPMENT PROVIDED.
8	PROVIDE COMPRESSED AIR DROP FOR CONNECTION TO EQUIPMENT PROVIDED BY OTHERS. FIELD COORDINATE EXACT ROUGH-IN LOCATION AND REQUIREMENTS WITH EQUIPMENT SUPPLIER.
9	PROVIDE 1/2" COMPRESSED AIR DROP. FIELD COORDINATE COMPRESSED AIR DROP LOCATIONS AND EXACT COMPRESSED AIR DROP REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.



1 COMPRESSED AIR PLAN-AREA B
1/8" = 1'-0"



2 COMPRESSED AIR PLAN - MEZZANINE
1/8" = 1'-0"

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05/01/2026

DOMESTIC WATER EQUIPMENT SCHEDULE

GENERAL: • PROVIDE FIXTURES WITH ALL TRIM NECESSARY FOR COMPLETE INSTALLATION.

NOTES: 1. PROVIDE WALL HUNG PLATFORM FOR WATER HEATER EQUAL TO HOLDRITE #60SQHP-W. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT.
2. PUMP SHALL HAVE CONTROLS TO PREVENT STARTUP WITHIN 5 MINUTES FROM THE END OF PREVIOUS HEATING CYCLE.

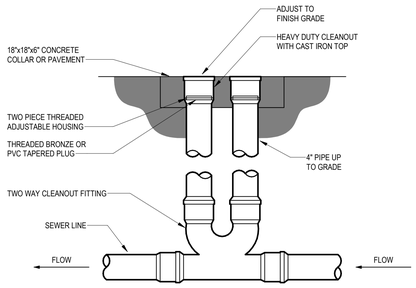
MARK	MANUFACTURER	MODEL	DESCRIPTION	NOTES
HWH-A	AO SMITH	DEN-52	55 GALLON ELECTRIC WATER HEATER, 0.92 UEF, 6,000 WATTS, 208V HEATING ELEMENTS (2), 24 GPHRECOVERY @ 100°F TEMP RISE. SUPPLIED WITH TEMPERATURE AND PRESSURE RELIEF VALVE AND BRASS DRAIN VALVE.	
HWH-B	AO SMITH	DEL-10	10 GALLON ELECTRIC WATER HEATER, 1,5000 WATTS, 120V HEATING ELEMENT, 6 GPH RECOVERY @ 100°F TEMP RISE. SUPPLIED WITH TEMPERATURE AND PRESSURE RELIEF VALVE AND BRASS DRAIN VALVE.	1
HWP	BELL AND GOSSETT	NBF-33	CIRCULATION PUMP, BRONZE BODY, 10 GPM @ 10' HEAD, 120VAC. PROVIDE CLAMP-ON AQUASTAT FOR PUMP CONTROL.	2

PLUMBING FIXTURE SCHEDULE

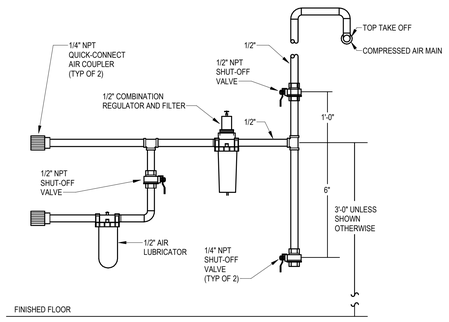
GENERAL:
- PROVIDE FIXTURES WITH ALL TRIM NECESSARY FOR OMPLETE INSTALLATION.
- VENT SIZES ARE APPLICABLE ONLY FOR INDIVIDUAL FIXTURE VENTS WHERE ALTERNATE VENTING METHOD HAS NOT BEEN INDICATED ON PLANS.
- PROVIDE 1/4 TURN STOP VALVES ON ALL HOT AND COLD WATER SUPPLY LINE CONNECTIONS FOR FIXTURES.
- PROVIDE FLOOR DRAINS AND FLOOR SINKS WITH TRAP PROTECTION DEVICE EQUAL TO PROVENT TRAP GUARD.

NOTES: 1. FIXTURE AND INSTALLATION TO MEET REQUIREMENTS OF AMERICANS WITH DISABILITIES ACT.
2. TRIM SHALL BE PROVIDED WITH POLISHED CHROME FINISH.
3. PROVIDE WITH 1/4 TURN STOP VALVES WITH ESCUTCHEON PLATE, CHROME PLATED COPPER RISER OR STAINLESS STEEL BRAIDED SUPPLY HOSES, AND 1-1/4" CAST BRASS P-TRAP WITH ESCUTCHEON.
4. INSULATE WATER AND WASTE PIPING BELOW LAVATORY. UTILIZE INSULATION KIT EQUIVALENT TO LAVGAURD BY TRUEBRO.
5. WATER ROUGH-IN SIZE INDICATED IS TO THERMOSTATIC MIXING VALVE. PROVIDE FULL SIZED TEMPERED WATER LINE TO FIXTURE.

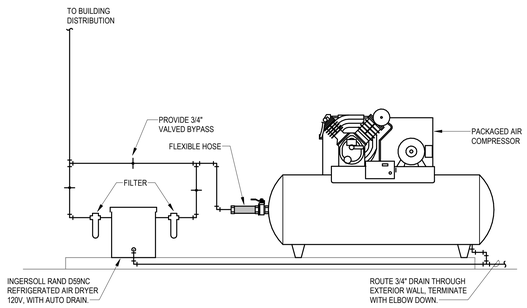
MARK	MANUFACTURER	MODEL	PRODUCT DESCRIPTION	TRIM		ROUGH-IN SIZES			COLD	HOT	ADA COMPLIANT	NOTES
				MANUFACTURER	DESCRIPTION	DRAIN	VENT	WATER				
BS	JUST	SLADA2019A40-J	SINGLE COMPARTMENT 18 GA. STAINLESS STEEL SINK, SELF RIMMING, 16"X13-1/2"X4"D BOWL, FAUCET HOLES AS REQUIRED.	KOHLER	MODEL K-30617 TWO HANDLE BAR SINK FAUCET, 6" GOOSENECK SPOUT, 1.5 GPM AERATOR, 4" HANDLES, CHROME FINISH. PROVIDE BASKET STRAINER.	2"	1 1/2"	1/2"	Yes	Yes	Yes	1,2,3,4
DB	SIOUX CHIEF	696-3	DRAINAGE BOX BOX WITH 2" DRAIN CONNECTION AND SOLID COVER.			2"	1 1/2"		No	No		
ES	HAWS	8300	COMBINATION EMERGENCY DRENCH SHOWER AND EYE/FACE WASH. PROVIDE THERMOSTATIC MIXING VALVE.			2"		1"	Yes	Yes	Yes	5
EW	HAWS	7261	EMERGENCY EYE/FACE WASH. PROVIDE THERMOSTATIC MIXING VALVE.			2"	1 1/2"	3/4"	Yes	No	Yes	
EWC	MURDOCK	A172100F-UG-BF12	ADA COMPLIANT DUAL HEIGHT, SELF-CONTAINED WATER COOLER WITH STAINLESS STEEL BASIN, FRONT PUSH BAR ACTUATOR, BOTTLER FILLER, LEAD-FREE COOLING SYSTEM CAPABLE OF COOLING 8.0 GPH, 120 VOLTS.			2"	1 1/2"	1/2"	Yes	No	Yes	
2" FD	WATTS	FD-100-A	FLOOR DRAIN WITH 6" SATIN NICKEL BRONZE STRAINER. PROVIDE TRAP PROTECTION DEVICE EQUAL TO PROSET TRAPGAURD.			2"	2"					
2" FS	WATTS	FS-740	12" SQUARE X 8" DEEP SANITARY FLOOR SINK WITH WHITE PORCELAIN ENAMEL COATED INTERIOR, LOOSE SET PORCELAIN ENAMEL COATED CAST IRON GRATE, ALUMINUM DOME BOTTOM STRAINER, AND NO HUB OUTLET.			2"	2"					
3" FS	WATTS	FS-740	12" SQUARE X 8" DEEP SANITARY FLOOR SINK WITH WHITE PORCELAIN ENAMEL COATED INTERIOR, LOOSE SET PORCELAIN ENAMEL COATED CAST IRON GRATE, ALUMINUM DOME BOTTOM STRAINER, AND NO HUB OUTLET.			3"	2"					
HB	WOODFORD	24	MILD CLIMANTE HOSE BIBB WITH ANTI-SIPHON VACUUM BREAKER, METAL HANDLE.					3/4"	Yes	No	No	
ICB	SIOUX CHIEF	696-G1010	ICE MAKER CONNECTION BOX WITH 1/4 TURN BALL VALVE AND INTEGRAL HAMMER ARRESTOR.					1/2"	Yes	No		
LAV-A	KOHLER	2196-4-0	SELF-RIMMING LAVATORY, WHITE VITREOUS CHINA, 20"W X 17", FAUCET HOLES ON 4" CENTERS.	KOHLER	MODEL 15198-4RA SINGLE HANDLE FAUCET. PROVIDE GRID DRAIN. PROBIDE POINT OF USE TEMERPING VALVE.	2"	1 1/2"	1/2"	Yes	Yes	Yes	1,2,3,4
LAV-B	KOHLER	2005-0	WALL HUNG LAVATORY, WHITE VITROUS CHINA, 18-1/4"X17-1/4", FRONT OVERFLOW, FAUCET HOLES ON 4" CENTERS.	KOHLER	MODEL 15198-4RA SINGLE HANDLE FAUCET. PROVIDE GRID DRAIN. PROBIDE POINT OF USE TEMERPING VALVE.	2"	1 1/2"	1/2"	Yes	Yes	Yes	1,2,3,4
SS	FIAT	MSB-2424	ONE PIECE MOLDED STONE MOP BASIN, 24" SQUARE, STAINLESS STEEL INTEGRAL DRAIN BODY WITH CAULK CONNECTION, STAINLESS STEEL WALL GUARDS.	CHICAGO FAUCETS	MODEL 897-CCP FAUCET WITH HOSE THREAD OUTLET, VACUUM BREAKER SPOUT, PAIL HOOK, WALL BRACE, INTEGRAL CHECK VALVES, METAL LEVER HANDLES.	3"	1 1/2"	3/4"	Yes	Yes	No	2
UR-A	KOHLER	K-4991-ET	WALL HUNG URINAL, WHITE VITREOUS CHINA, 3/4" TOP SPUD, ELONGATED FLUSHING RIM, WASHOUT FLUSHING ACTION, 0.5 GPF. MOUNT WITH RIM AT 24" AFF.	KOHLER	MODEL K-80UM00G20, PISTON TYPE MANUAL CHROME PLATED FLUSH VALVE, 0.5 GPF.	2"	2"	3/4"	Yes	No	Yes	1,2
WC-A	KOHLER	4405-0	FLOOR MOUNTED FLUSH VALVE WATER CLOSET, WHITE VITREOUS CHINA, TOP SPUD 1.28 GPF, 12" ROUGH-IN, ELONGATED 17-1/2" BOWL.	KOHLER	MODEL K-807M00N10, PISTON TYPE MANUAL CHROME PLATED FLUSH VALVE, 1.28 GPF. MODEL 4731-C-0 WHITE OPEN FRONT PLASTIC SEAT.	4"	2"	1"	Yes	No	Yes	1,2
WC-B	KOHLER	4406-0	FLOOR MOUNTED FLUSH VALVE WATER CLOSET, WHITE VITREOUS CHINA, TOP SPUD 1.28 GPF, 12" ROUGH-IN, ELONGATED 15" BOWL.	KOHLER	MODEL K-807M00N10, PISTON TYPE MANUAL CHROME PLATED FLUSH VALVE, 1.28 GPF. MODEL 4731-C-0 WHITE OPEN FRONT PLASTIC SEAT.	4"	2"	1"	Yes	No	No	2
WH	WOODFORD	25	FROST PROOF WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER, METAL HANDLE.					3/4"	Yes	No	No	



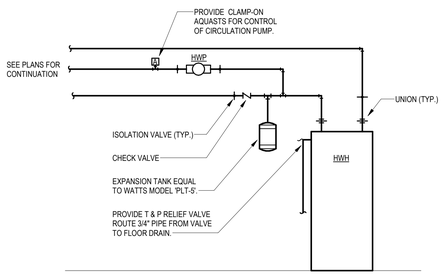
6 CLEANOUT DETAIL - TWO-WAY EXTERIOR
NO SCALE



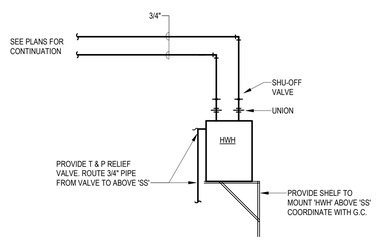
4 TYPICAL COMPRESSED AIR DROP DETAIL
NO SCALE



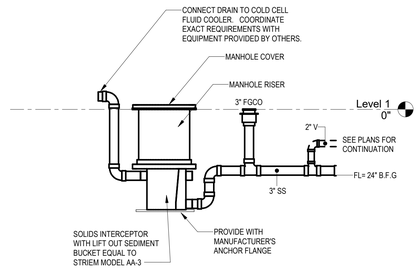
5 TYPICAL COMPRESSED AIR SYSTEM DETAIL
NO SCALE



1 WATER HEATER PIPING DIAGRAM
NO SCALE



2 WATER HEATER ON SHELF
12" = 1'-0"



3 SOLIDS INTERCEPTOR DETAIL
1/2" = 1'-0"

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GREAT PLAINS MANUFACTURING

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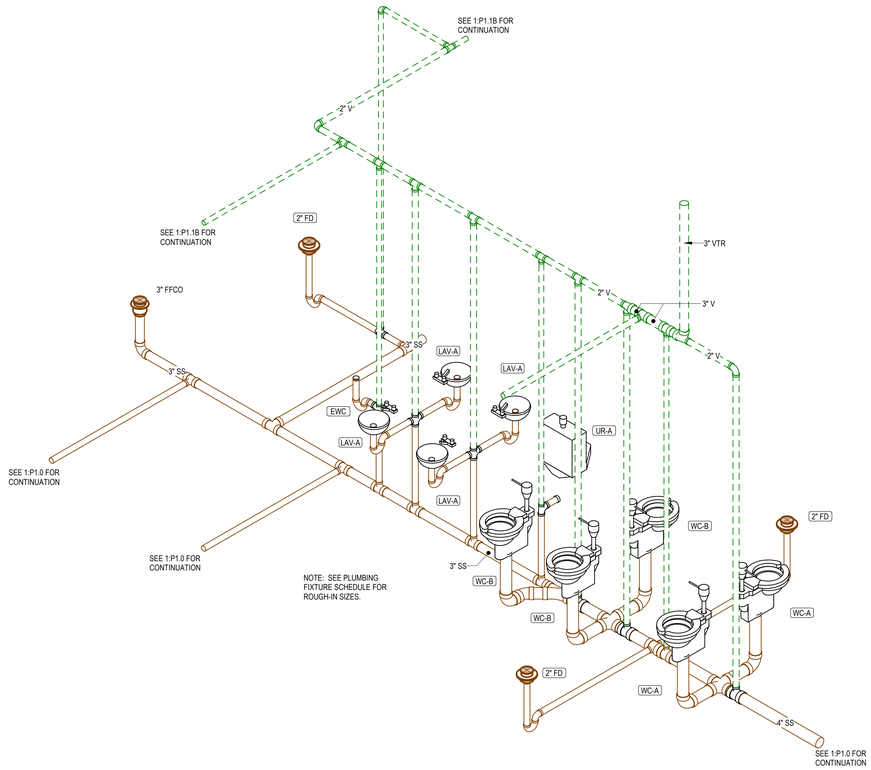
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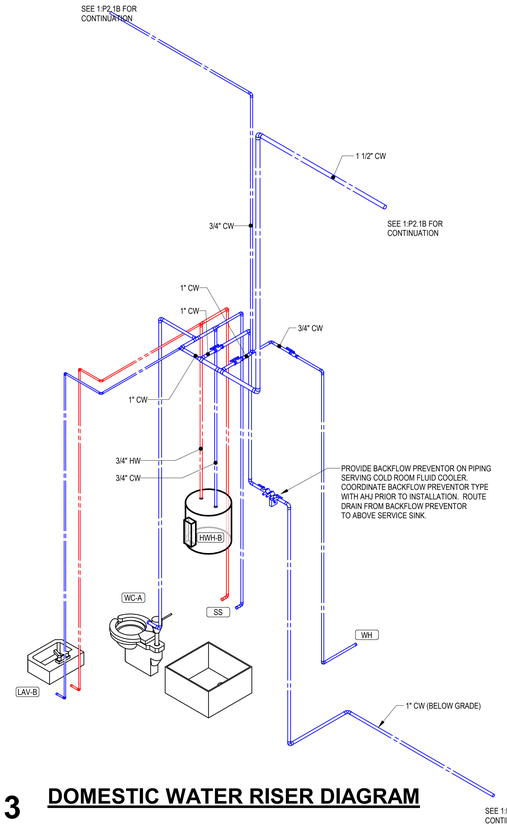
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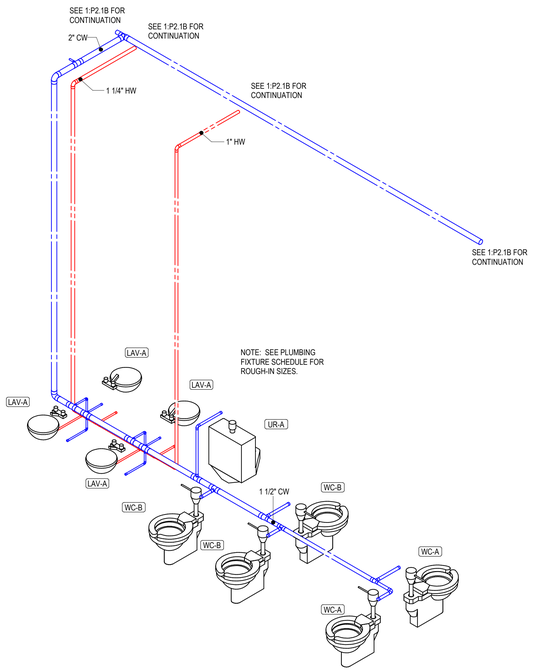
05/01/2026



1 RESTROOM-WASTE & VENT RISER DIAGRAM



3 DOMESTIC WATER RISER DIAGRAM



2 BATHROOM CHASE DOMESTIC WATER RISER DIAGRAM

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