



GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL

SALINE, MICHIGAN

CONSTRUCTION DOCUMENTS

11/05/21

**GYM & BOILER ROOM
REMODELING**
SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

DIRECTORY

OWNER:

SALINE AREA SCHOOLS
7265 SALINE - ANN ARBOR RD.
SALINE, MI 48176
TEL: (313) 967-2000

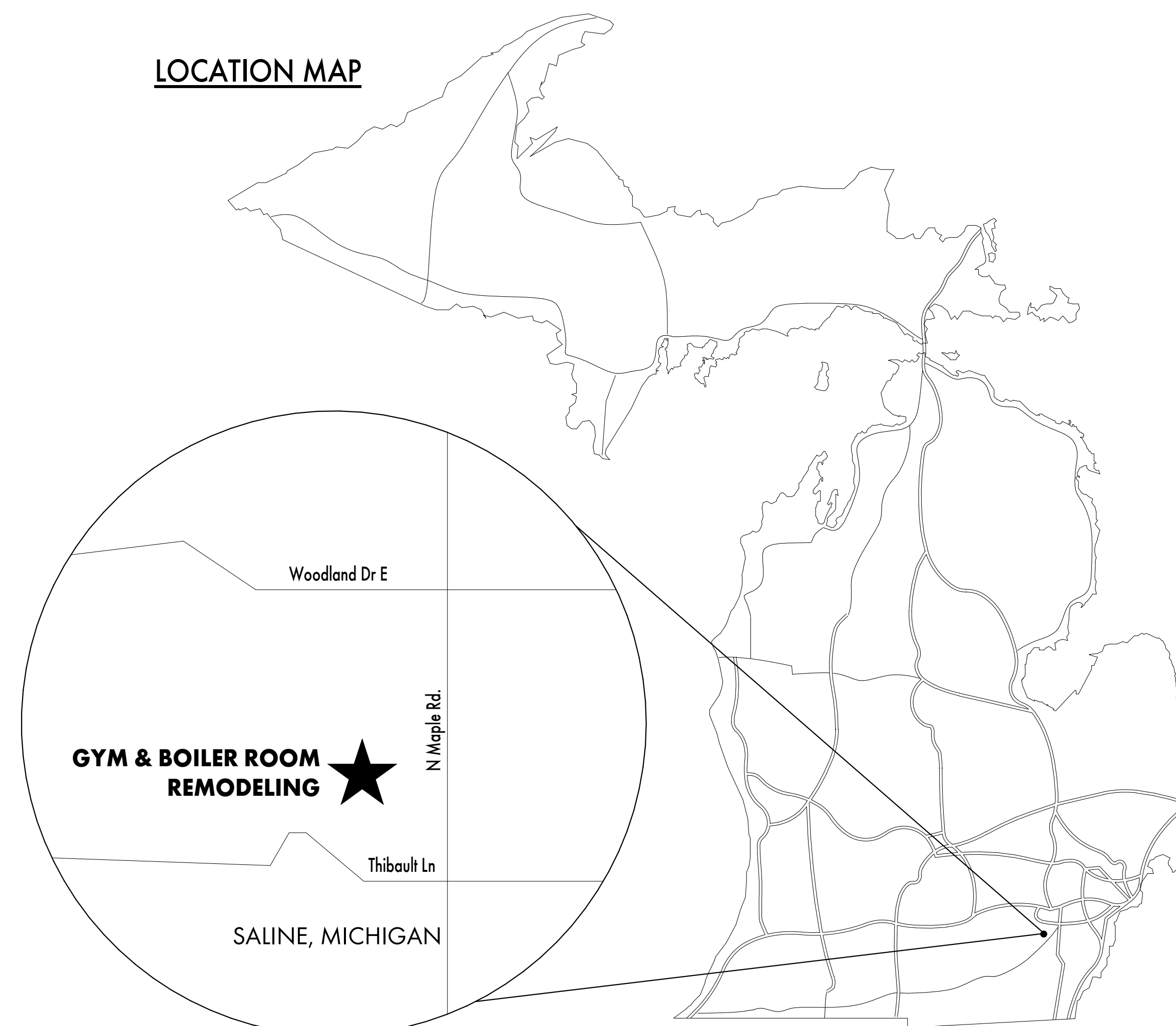
ARCHITECT & CIVIL ENGINEER:

KINGSCOTT ASSOCIATES INC.
259 E MICHIGAN AVE, SUITE 308
KALAMAZOO, MI 49007
TEL: (269) 381-4880

CONSTRUCTION MANAGER:

CLARK CONSTRUCTION
3535 MOORES RIVER DRIVE
LANSING, MI 48911
TEL: (313) 372-0940

LOCATION MAP



SHEET INDEX

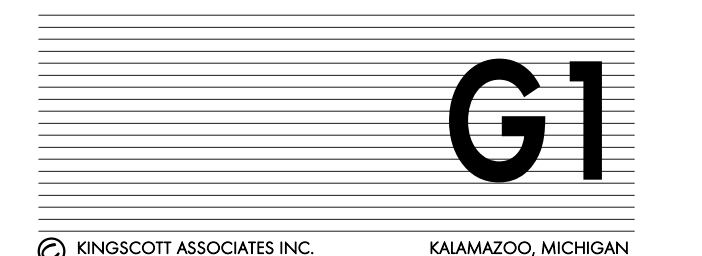
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ISSUANCES DATE
CONSTRUCTION DOCUMENTS 11/05/21

JOB NO. 02900.060

SHEET TITLE
TITLE SHEET

SHEET NO.





GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

A	APC	ACCOUSTICAL PANEL CEILING
A	ACST	ACCOUSTIC
A	ADD	ADDENDUM
A	ADJ	ADJACENT
A	ADJT	ADJUSTABLE
A	AFF	ABOVE FINISH FLOOR
A	AGS	AGGREGGATE
A	ALUM	ALUMINUM
A	ALT	ALTERNATE
A	APFD	APPROVED
A	APPROX	APPROXIMATE
A	AUTP	AUTOMATIC
A	AVG	AVERAGE
A	ASPH	ASPHALT
A	AB	ANCHOR BOLT
A	AG	ATHLETIC CARPET
A	AD	ACCESS DOOR
A	AF	ATHLETIC FLOORING
A	AFFF	AQUEOUS FILM FORMING FOAM
A	ALL	ACTIVE LEAF
A	AP	ACCESS PANEL OR ACCORDIAN PARTITION
A	A	COMPRESSED AIR
A	ARCH	ARCHITECTURAL OR ARCHITECT
A	AWP	ACCOUSTICAL WALL PANEL
C	CA	COMPRESSED AIR
A	A/C UNIT	AIR CONDITIONING UNIT
A	ACCU	AIR COOLED CONDENSING UNIT
A	AD	AREA DRAIN
A	AHU	AIR HANDLING UNIT
A	A.I.	AREA INLET
A	APD	AIR PRESSURE DROP
A	AV	ACID VENT
A	AW	ACID WASTE
A	AWT	AVERAGE WATER TEMPERATURE
A	AMP	AMPERE
A	AWG	AMPERE INTERRUPTING CAPACITY
A	ATS	AUTOMATIC TRANSFER SWITCH
A	AWG	AMERICAN WIRE GAUGE

B	B.O.D.	BOTTOM OF DECK
B	B.O.	BOTTOM OF
B	BF	BARRIER FREE
B	BFO	BELOW FINISH GRADE
B	BLA	BETWEEN JOIST ABOVE
B	BLDG	BUILDING
B	BOT	BOTTOM
B	BSMT	BASEMENT
B	BT	BITUMINOUS
B	BRDG	BRIDGING
B	BC	BASE CABINET
B	BD	BOARD
B	BL	BROOKDOWN LIGHT
B	BLK	BLOCK
B	BLK&	BLOCKING
B	BM	BEAM
B	BN	BULLNOSE
B	BRS	BEARING
B	BRK	BRICK
B	BS	BACKSTOP
B	BUR	BUILT-UP ROOFING
B	B	BOLLER
B	BT	BATH TUB
B	BW	BRITISH THERMAL UNIT
B	BLW	BTU PER HOUR
B	BLK #	GROUND FACE BLOCK SEE SPEC SECTION 04 20
B	BFST	BARRIER FREE STONE

C	CAP	CAPACITY
C	CEM	CEMENT
C	CI	CAST IRON
C	CIRC	CIRCULAR
C	CHK	CHECKED
C	CL	CENTER LINE
C	CLO	CLOSET
C	CLOS	CLOSURE
C	CLR	CLEAR
C	CLRM	GLASSROOM
C	COM	COMMON
C	COMB	COMBINATION
C	COMP	COMPOSITION
C	CONN	CONNECTION
C	CONST	CONSTRUCTION
C	CONT	CONTINUOUS
C	CONTR	CONTRACTOR
C	COR	CORRUGATED
C	CORR	CORRIDOR
C	CPT	CARPET TILE
C	CTR	CENTER
C	CUST	CUSTOMER
C	CU YD	CUBIC YARD
C	CYL	CYLINDER
C	CCB	CATCH BASIN
C	CI	CURB INLET
C	CMP	CORRUGATED METAL PIPE
C	CAB	CABINET
C	CB	CHALK BOARD
C	CCJ	CONTROL JOINT
C	CLS	CELLING
C	CMU	CONCRETE MASONRY UNIT
C	CNTR	COUNTER
C	COL	COLUMN
C	CONC	CONCRETE
C	CP	CENTER POINT
C	CPT	CARPET
C	CS	COUNTER SINK
C	CSMT	CASEMENT
C	CTF	CERAMIC TILE FLOOR
C	CTM	CERAMIC TILE WALL
C	G	CHILLER (MECH SHTS)
C	CNDS	CONDENSATE
C	CD	CONDENSATE DRAIN
C	CFM	CUBIC FEET PER MINUTE
C	CH	CABINET HEATER
C	CHR	CHILLED WATER RETURN
C	CHS	CHILLED WATER SUPPLY
C	CHU	COOLING AND HEATING UNIT
C	CO	CLEANOUT
C	CO2	CARBON DIOXIDE
C	HP	CIRCULATING PUMP
C	GR	CONDENSER WATER RETURN PIPE
C	CS	CONDENSER WATER SUPPLY PIPE
C	CSH	COLUMN SHOWER
C	CTP	COOLING TOWER PUMP
C	CU	CONDENSING UNIT
C	CN	COLD WATER
C	CON	CONDUIT
C	CBK	CIRCUIT BREAKER
C	CT	CABLE TRAY
C	CKT	CIRCUIT
C	COMB	COMBUSTION
C	CV	CONVECTOR

D	DBL	DOUBLE
D	DEPT	DEPARTMENT
D	DIA	DIAMETER
D	DIAG	DIAGONAL
D	DN	DIRECTION
D	DR	DIRECTORY
D	DN	DOWN
D	DS	DOWNSPOUT
D	DWS	DRAWING
D	DL	DEAD LOAD
D	DKLS	DOWNELLS
D	DA	DOUBLE ACTING
D	DH	DOUBLE HUNG
D	DMFR	DAMP PROOFING
D	DR	DOOR
D	DSP	DISPENSER
D	DB	DRY BULB
D	DES	DEGREE
D	DF	DRINKING FOUNTAIN
D	D.H.	DUCT HEATER
D	DLI	DUCT LINING INSULATION
D	DRM	DAMPNER
D	DRN	DRAIN
D	DC	DIRECT CURRENT
D	DBC	DISCONNECT
D	DST	DISTRIBUTION
D	DPT	DISTRIBUTION PANEL

E	EA	EACH
E	EMER	EMERGENCY
E	ENCL	ENCLOSURE
E	ENT	ENTRANCE
E	EQU	EQUAL
E	EQUIP	EQUIPMENT
E	EST	ESTIMATE
E	EA	EACH WAY
E	EX	EXISTING
E	EPA	ELECTRICAL PANEL
E	EDR	EQUIVALENT DIRECT RADIATION
E	EF	EXHAUST FAN
E	EG	EXHAUST GRILLE
E	ER	EXHAUST REGISTER
E	ES	EMERGENCY SHOWER
E	ET	EXPANSION TANK
E	EY	EYE WASH
E	EW	ELECTRIC WATER COOLER
E	EWT	ENTERING WATER TEMPERATURE
E	EC	ELECTICAL CONTRACTOR

I	ID	INSIDE DIAMETER
I	IN	INCH
I	INCL	INCLUDE
I	INFOR	INFORMATION
I	INS	INSULATION
I	INSUL	INSULATION
I	INT	INTERIORS
I	INT	INTERIORS
I	IF	INLINE FAN
I	IF	IRON PIPE
I	IL	INVERT
I	INCAND	INCANDESCENT
I	INV	INVERTER

J	JAN	JANITOR
J	JC	JANITOR CLOSET
J	JCT	JUNCTION
J	JBT	JOIST
J	JT	JOINT
J	JB	JUNCTION BOX

P	PERF	PERFORATED
P	PI	POINT OF INTERSECTION
P	PL	PLATE
P	POL	POLISH
P	P.F.M.	PARTS PER MILLION
P	PR	PAIR
P	PREFAB	PREFABRICATED
P	PREFIN	PREFINISHED
P	PROJ	PROJECT
P	PSF	POUNDS PER FOOT
P	PB	PLASTIC BENCH
P	PBI	POUNDS PER INCH
P	PVC	POLYVINYL CHLORIDE
P	PAL	PLASTIC HARDWARE LOCKER
P	PP	POWER POLE
P	PVMT	PAVEMENT
P	P	PAINT
P	PATT	PATTERN
P	PLAS	PLASTER
P	PLAT	PLATFORM
P	PLG	PLASTER, GYPSUM
P	PA	PUBLIC ACCESS
P	PLAM	PLASTIC LAMINATE
P	FLYYD	FLYWOOD
P	PPC	PLASTER, PORTLAND CEMENT
P	PPG	PLASTER, Gypsum GYPSUM
P	PSE	PROJECTION SCREEN / ELECTRICAL
P	PSM	PROJECTION SCREEN / MANUAL
P	PTN	PARTITION
P	P	PUMP
P	PCF	POUNDS PER CUBIC FOOT
P	PGR	PUMPED CONDENSATE RETURN
P	PD	PUMP DISCHARGE
P	P.I.V.	POST INDICATING VALVE
P	PLBS	PLUMBING
P	POD	PNEUMATIC OPERATED DAMPER
P	PRV	PRESSURE REGULATING VALVE
P	PBS	PUSH BUTTON STATION
P	PH	PHASE
P	PNL	PANEL

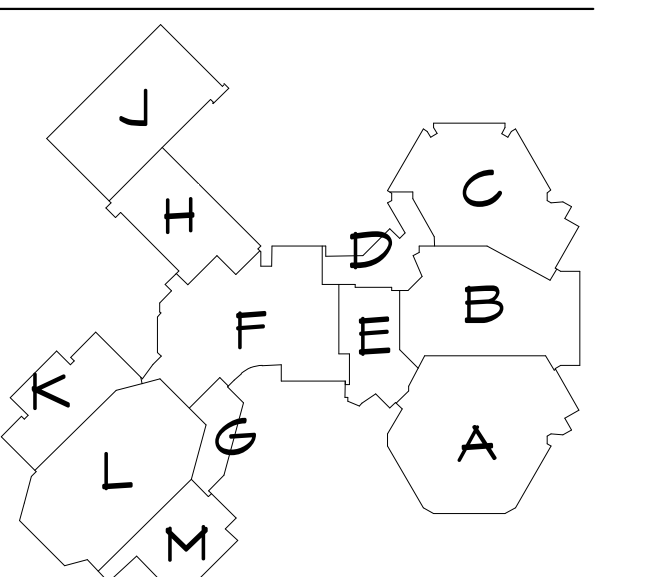
Q	1/4 RD	QUARTER ROUND
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R	R	RADIUS
R	R.D.	ROOF DRAIN
R	REC	RECESSED
R	RECT	RECTIFIER
R	REF	REFERENCE
R	REL	RELOCATE
R	REM	REMOVABLE
R	REQD	REQUIRED
R	REV	REVISIONS
R	RGH	ROUGH
R	RECVP	RECEPTACLE
R	ROW	RIGHT OF WAY
R	REIN	REINFORCED OR REINFORCEMENT
R	RAF	RESILIENT ATHLETIC FLOOR
R	RB	RESILIENT BASE
R	RCVR	RECIPIER
R	REFG	REFRIGERATOR
R	RESL	RESILIENT
R	RFG	ROOFING
R	RFS	RUBBER FLOOR SHEET
R	RFT	RUBBER FLOOR TILE
R	RSTA	RESILIENT STAIR TREAD ACCESSORY
R	RT	RESILIENT TRANSITION
R	R.A.	RETURN AIR
R	RC	ROOF CONDUCTOR
R	REG	REGISTER
R	RF	RETURN FAN
R	RG	RETURN GRILLE
R	RH	ROOF HOOD
R	R.H.	RELATIVE HUMIDITY
R	RL	REFRIGERANT LIQUID
R	RP	RADIANT PANEL
R	R.P.M.	REVOLUTIONS PER MINUTE
R	RR	RETURN REGISTER
R	RS	REFRIGERANT SUCTION
R	RTU	ROOF TOP UNIT
R	RWB	RUBBER WALL BASE
R	RLA	RUNNING LOAD AMPS

S	SAF	SAFETY
S	SGH	SCHEDULE
S	SECT	SECTION
S	SECY	SECRETARY
S	SEQ	SEQUENCE
S	SHT	SHEET
S	SM	SIMILAR
S	SPEC	SPECIFICATIONS
S	SPP	SOUNDPROOF
S	SG	SQUARE
S	SST	STAINLESS STEEL
S	STA	STATION
S	STD	STANDARD
S	STL	STEEL
S	STOR	STORAGE
S	STR	STRUCTURAL
S	STAY	STAIRWAY
S	SUSP	SUSPENDED
S	SYM	SYMMETRICAL
S	SC	SEALED CONCRETE
S	SGT	STRUCTURAL GLAY TILE
S	SHTG	SHEATHING
S	SFM	SINGLE PLY MEMBRANE
S	ST	STONE THRESHOLD
S	SUB	SUB FLOOR
S	SV	SHEET VINYL FLOORING
S	SA	SOUND ATTENUATOR
S	SA	SUPPLY AIR
S	SAN	SANITARY SEWER
S	S.A.R.	SUPPLY AIR RETURN
S	SD	SUPPLY DIFFUSER
S	S.D.	SUB DRAIN
S	SH	SHOWER HEAD
S	SI	SOLID INTERCEPTOR
S	S.O.V.	SHUT OFF VALVE
S	SP	STATIC PRESSURE
S	SPH	SPACE HEATER
S	SS	SERVICE SINK
S	SS	SOIL STACK
S	ST	STORM
S	SW	SOFT WATER
S	SWC	STEAM TO WATER CONVECTOR
S	SPKR	SPEAKER
S	SSJB	SOUND SYSTEM JUNCTION BOX
S	SW	SWITCH
S	SWBD	SWITCHBOARD

T	TB	TEST BORING
T	TOP	TOP OF
T	TEL	TELEPHONE
T	TEMP	TEMPERATURE
T	TFA	TO FLOOR ABOVE
T	TFB	TO FLOOR BELOW
T	THK	THICK
T	TJA	THRU JOIST ABOVE
T	T	TOILET
T	TCL	TOTAL CONNECTED LOAD
T	TRANSV	TRANSVERSAL
T	TS	TUBE STEEL
T	TV	TELEVISION
T	TYP	TYPICAL
T	TQG	TOP OF CURB
T	TOPO	TOPOGRAPHY
T	TOP	TOP OF FOOTING
T	TOS	TOP OF STEEL
T	TOJ	TOP OF JOIST
T	TB	TACKBOARD
T	T & G	TONGUE AND GROOVE
T	TBA	TOILET/BATH ACCESSORY
T	TBS	TACKSTRIP
T	TM	TOP OF MASONRY
T	TM	TOP OF WALL
T	TP	TOILET PARTITION
T	TZ	TERRAZZO
T	TT	TERRAZZO TILE
T	TCC	TEMPERATURE CONTROL CONTRACTOR
T	T	THERMOSTAT
T	TCF	TEMPERATURE CONTROL PANEL
T	TCG	TEMPERATURE CONTROL PANEL

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

SHEET TITLE
DATA SHEET

SHEET NO.

© KINGS SCOTT ASSOCIATES INC. KALAMAZOO, MICHIGAN

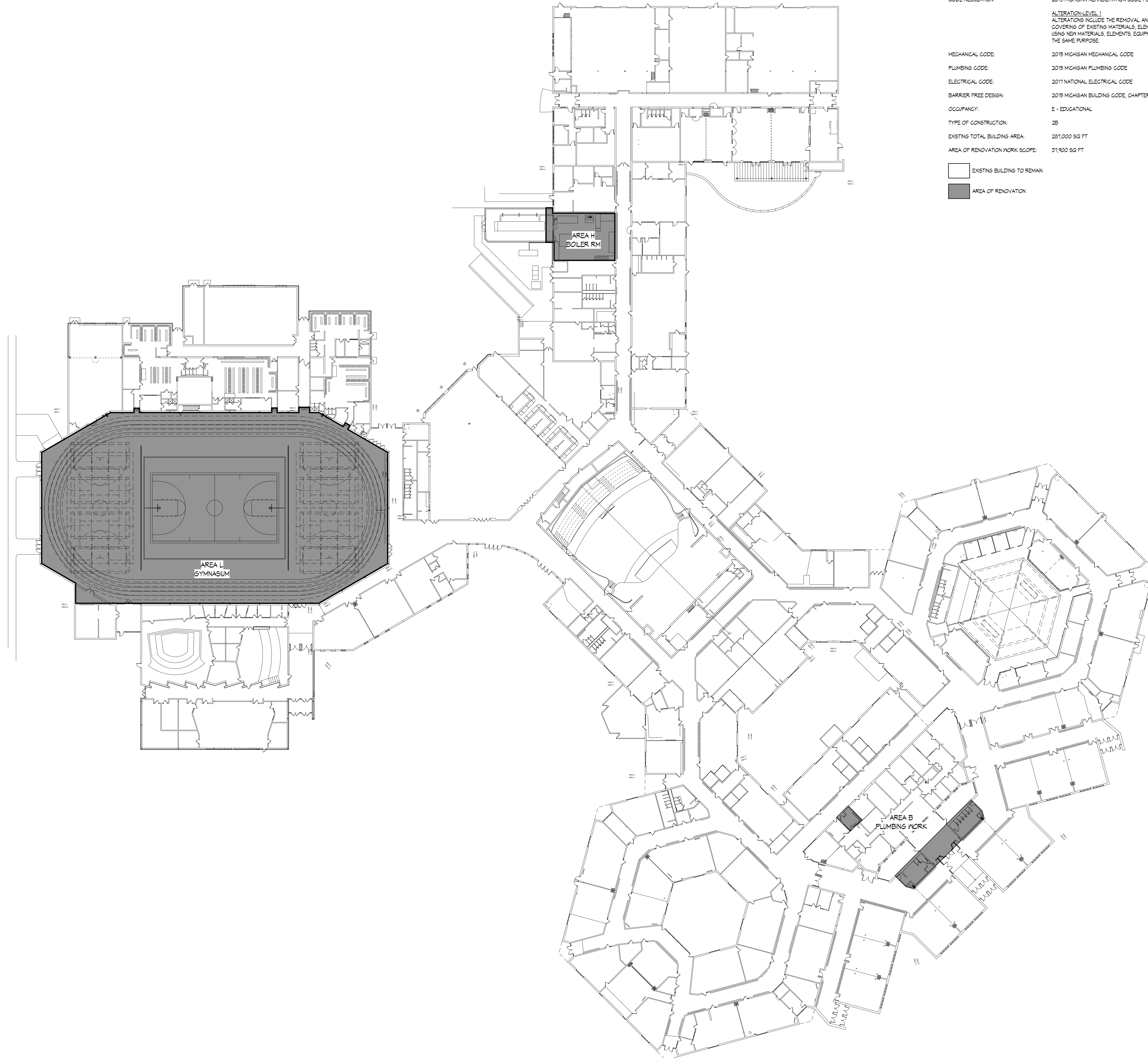
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BUILDING CODE INFORMATION:

FIRE SUPPRESSION:	NO FIRE PROTECTION SYSTEM
CODE REGULATION:	2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
	ALTERATION-LEVEL 1 ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES THAT SERVE THE SAME PURPOSE.
MECHANICAL CODE:	2015 MICHIGAN MECHANICAL CODE
PLUMBING CODE:	2015 MICHIGAN PLUMBING CODE
ELECTRICAL CODE:	2011 NATIONAL ELECTRICAL CODE
BARRIER FREE DESIGN:	2015 MICHIGAN BUILDING CODE, CHAPTER 11
OCCUPANCY:	E - EDUCATIONAL
TYPE OF CONSTRUCTION:	2B
EXISTING TOTAL BUILDING AREA:	287,000 SQ FT
AREA OF RENOVATION WORK SCOPE:	91,900 SQ FT

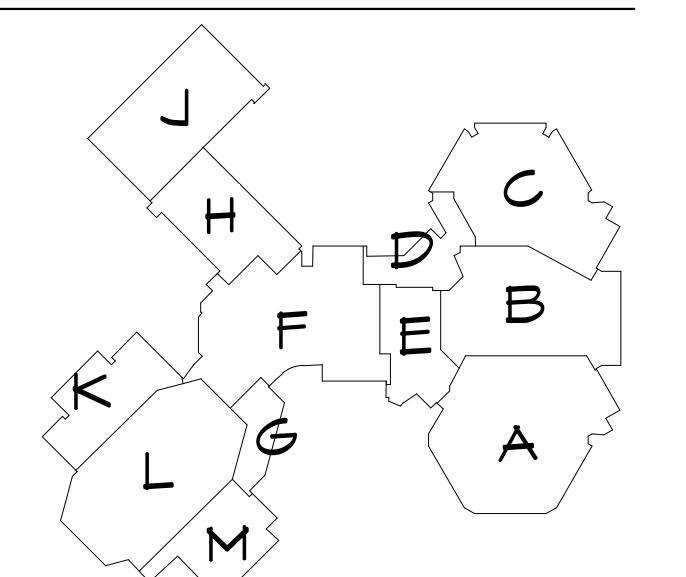
- EXISTING BUILDING TO REMAIN
- AREA OF RENOVATION



GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

ISSUANCES	DATE
95% REVIEW	10/29/21
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

SHEET TITLE
COMPOSITE FLOOR PLAN

SHEET NO.

A0.2

1 COMPOSITE FLOOR PLAN

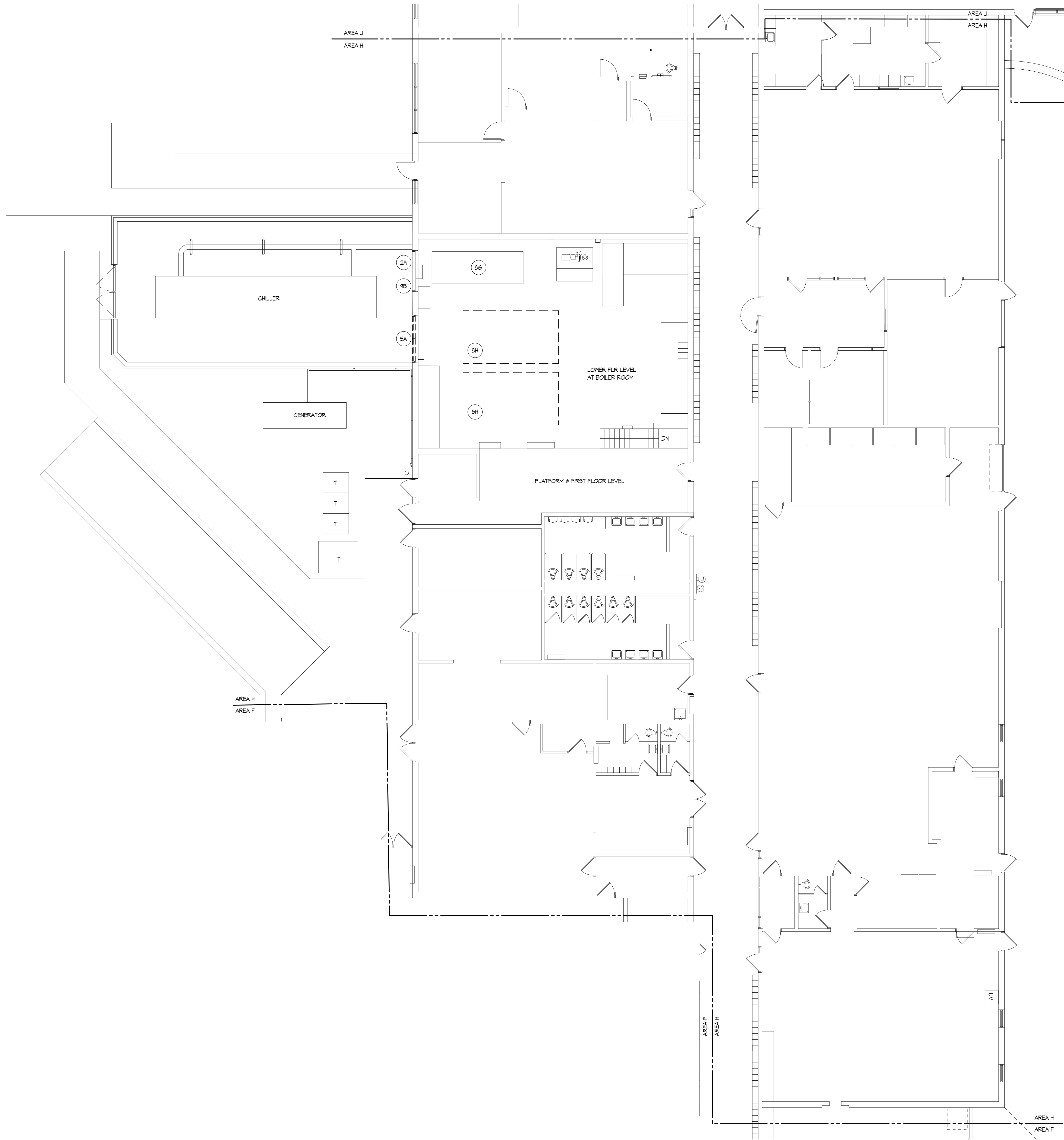
1/32" = 1'-0"

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GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



GENERAL DEMOLITION NOTES:

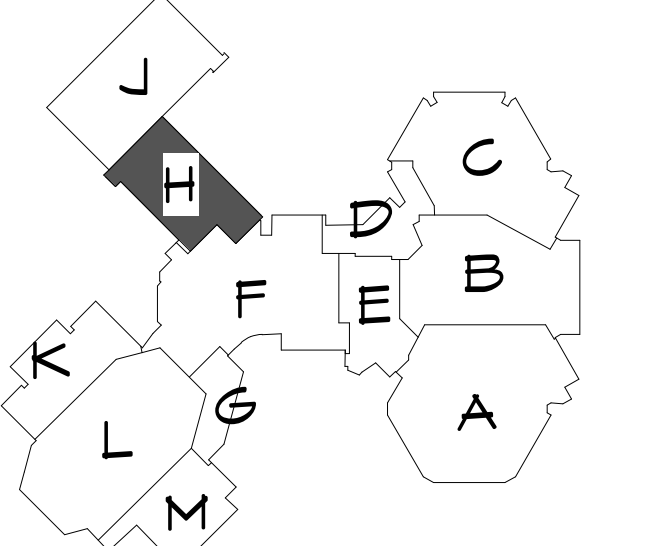
1. THE DEMOLITION PLANS GENERALLY INDICATE AREAS OF EXTENSIVE REMOVALS AND DO NOT INDICATE ALL OF THE WORK. CONTRACTOR SHALL PERFORM ALL THE DEMOLITION WHICH IS NECESSARY FOR THE PROPER EXECUTION OF THE PROJECT, WHETHER OR NOT SAID DEMOLITION IS SPECIFICALLY INDICATED WITHIN THE DOCUMENTS.
2. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FOR OTHER AREAS THAT WILL REQUIRE DEMOLITION NOT INDICATED ON THESE SHEETS.
3. CONTRACTOR IS RESPONSIBLE TO INFILL, PATCH AND/OR REPAIR EXISTING WALLS, FLOORS AND CEILINGS TO MATCH EXISTING WHERE DEMOLITION OCCURS OTHER THAN AS DESCRIBED IN THESE DOCUMENTS.
4. IT IS THE INTENTION OF THESE DOCUMENTS THAT THE DEMOLITION OF PORTIONS OF MASONRY WALLS (BOTH INTERIOR AND EXTERIOR) ARE GENERALLY TO BE DONE ALONG JOINT AND COURSING LINES.
5. PATCH AND REPAIR REMAINING ADJACENT SURFACES AT AREAS OF REMOVAL AND/OR ALTERATION TO MATCH EXISTING. PROVIDE A SOUND AND PROPER SUBSTRATE FOR NEW FINISH. COORDINATE WITH COLOR PLANS. WHERE A NEW FINISH IS NOT INDICATED, MATCH EXISTING ADJACENT FINISHES.
6. ALL DEMOLITION IS TO BE DONE WITH REASONABLE CARE AS TO MINIMIZE DAMAGE TO EXISTING REMAINING SURFACES. CONTRACTOR IS RESPONSIBLE TO PROPERLY DISPOSE OF ALL DEMOLISHED ITEMS NOT INDICATED TO BE RELOCATED OR TURNED OVER TO OWNER.
7. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR FURTHER DEMOLITION NOTES.
8. SEE SPECIFICATION SECTION 02411-SELECTIVE DEMOLITION FOR ITEMS TO BE REMOVED BY OWNER PRIOR TO WORK. COMMINGLING ITEMS TO BE REMOVED BY OWNER MAY BE SHOWN ON DEMOLITION PLAN FOR COORDINATION OR CLARITY.
9. PATCH ROOF AT AREAS OF DEMOLISHED VENT THRU ROOF FINISH (INSULATION, COVERBOARD AND ROOFING MEMBRANE) TO MATCH EXISTING CONSTRUCTION AND MAINTAIN EXISTING WARRANTIES.

ARCHITECTURAL DEMOLITION NOTES:

- | | |
|--|--|
| <p>1 FLOORS</p> <p>A. SAWCUT EXIST CONC FLOOR FOR NEW BOX OUTLETS. COORD SAWCUTTING IN ELECTRICAL DRAWINGS & EXISTING POWER LOCATION.</p> <p>B. SAWCUT OPENING IN EXIST CONC FLR FOR NEW RECESSED POLE VAULT BOX.</p> <p>C. TARTAN FLOORING, ASSOCIATED BASE, ALUMINUM TRANSITION, POLE VAULT FIT, & VOLLEYBALL SLEEVES TO BE REMOVED BY OWNER.</p> <p>2 WALLS</p> <p>A. DISMANTLE & SALVAGE EXISTING LOOSE BRICKS FOR REUSE.</p> <p>3 CEILINGS - NOT USED</p> <p>4 DOORS - NOT USED</p> <p>5 WINDOWS</p> <p>A. ALUMINUM WINDOW TO BE REMOVED BY OWNER.</p> <p>6 TOILETS/PLUMBING</p> <p>A. REMOVE DRINKING FOUNTAINS.</p> | <p>7 CASEWORK - NOT USED</p> <p>8 EQUIPMENT</p> <p>A. EXISTING SCOREBOARD DEMO- BY OTHERS</p> <p>B. FREESTANDING BLEACHERS TO BE REMOVED BY OWNER. CONTRACTOR TO COORDINATE ELECTRICAL DISCONNECT OF FREESTANDING BLEACHERS PRIOR TO REMOVAL BY OWNER.</p> <p>C. EXISTING BASKETBALL BACKSTOP DEMO- BY OTHERS</p> <p>D. EXISTING GYM CURTAIN DIVIDER CURTAIN DEMO- BY OTHERS</p> <p>E. EXISTING BATTING CAGE DEMO - BY OTHERS</p> <p>F. REMOVE EXISTING VDB AND ALL ASSOCIATED ANCHORS.</p> <p>G. HOT WATER HEATERS, BREAKING, STACKS, AND COLLARS TO BE REMOVED BY OWNER.</p> <p>H. BOILERS TO BE REMOVED BY OWNER.</p> <p>9 MISCELLANEOUS</p> <p>A. REMOVE LIGHT FIXTURE. SEE ELEC DRAWINGS.</p> <p>B. REMOVE EXISTING INSECT SCREEN AT EXTERIOR LOUVER.</p> |
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1 DEMOLITION PLAN - AREA H
1/8" = 1'-0"

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

SHEET TITLE
FLOOR PLAN - DEMOLITION -
AREA H

SHEET NO.

D1.1

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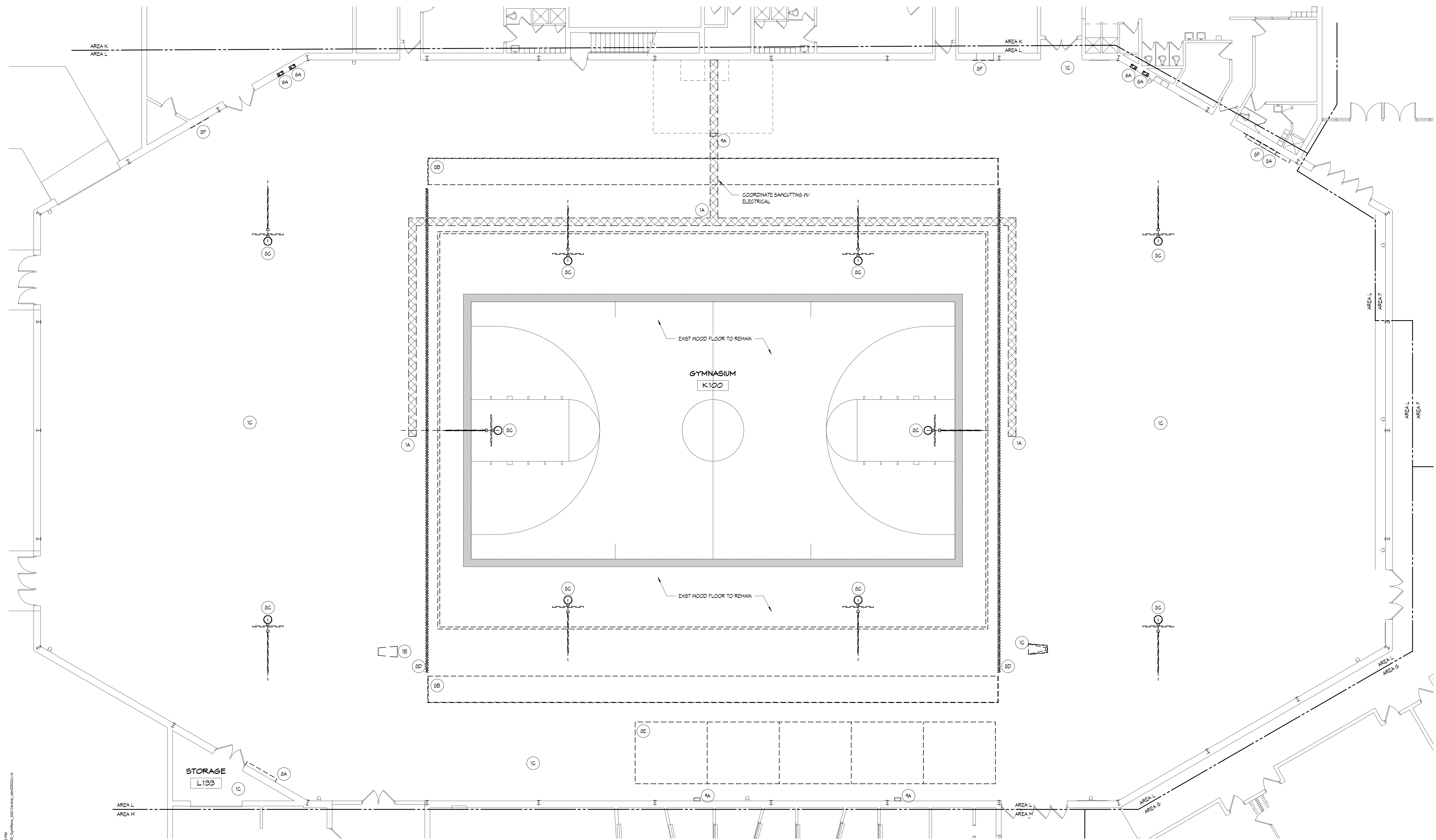


ARCHITECTURAL DEMOLITION NOTES:

- 1 FLOORS
 - A. SANKUT EXIST CONC FLOOR FOR NEW BOX OUTLETS. COORD SANKUTTING W/ ELECTRICAL DRAWINGS & EXISTING POWER LOCATION.
 - B. SANKUT OPENING IN EXIST CONC FLR FOR NEW RECESSED POLE VAULT BOX.
 - C. TARTAN FLOORING, ASSOCIATED BASE, ALUMINUM TRANSITION, POLE VAULT PIT, 4 VOLLEYBALL SLEEVES TO BE REMOVED BY OWNER.
- 2 WALLS
 - A. DISMANTLE & SALVAGE EXISTING LOOSE BRICKS FOR REUSE.
- 3 CEILINGS - NOT USED
- 4 DOORS - NOT USED
- 5 WINDOWS
 - A. ALUMINUM WINDOW TO BE REMOVED BY OWNER.
- 6 TOILETS/PLUMBING
 - A. REMOVE DRINKING FOUNTAINS.
- 7 CASEWORK - NOT USED
- 8 EQUIPMENT
 - A. EXISTING SCOREBOARD DEMO- BY OTHERS
 - B. FREESTANDING BLEACHERS TO BE REMOVED BY OWNER. CONTRACTOR TO COORDINATE ELECTRICAL DISCONNECT OF FREESTANDING BLEACHERS PRIOR TO REMOVAL BY OWNER.
 - C. EXISTING BASKETBALL BACKSTOP DEMO- BY OTHERS
 - D. EXISTING GYM CURTAIN DIVIDER CURTAIN DEMO- BY OTHERS
 - E. EXISTING BATTING CAGE DEMO - BY OTHERS
 - F. REMOVE EXISTING VDB AND ALL ASSOCIATED ANCHORS.
 - G. HOT WATER HEATERS, BREACHING, STACKS, AND COLLARS TO BE REMOVED BY OWNER.
 - H. BOILERS TO BE REMOVED BY OWNER.
- 9 MISCELLANEOUS
 - A. REMOVE LIGHT FIXTURE. SEE ELEC DRAWINGS.
 - B. REMOVE EXISTING INSECT SCREEN AT EXTERIOR LOUVER.

GENERAL DEMOLITION NOTES:

1. THE DEMOLITION PLANS GENERALLY INDICATE AREAS OF EXTENSIVE REMOVALS AND DO NOT INDICATE ALL OF THE WORK. CONTRACTOR SHALL PERFORM ALL THE DEMOLITION WHICH IS NECESSARY FOR THE PROPER EXECUTION OF THE PROJECT. WHETHER OR NOT SAID DEMOLITION IS SPECIFICALLY INDICATED WITHIN THE DOCUMENTS.
2. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FOR OTHER AREAS THAT WILL REQUIRE DEMOLITION NOT INDICATED ON THESE SHEETS.
3. CONTRACTOR IS RESPONSIBLE TO INFILL, PATCH AND/OR REPAIR EXISTING WALLS, FLOORS AND CEILINGS TO MATCH EXISTING WHERE DEMOLITION OCCURS OTHER THAN AS DESCRIBED IN THESE DOCUMENTS.
4. IT IS THE INTENTION OF THESE DOCUMENTS THAT THE DEMOLITION OF PORTIONS OF MASONRY WALLS (BOTH INTERIOR AND EXTERIOR) ARE GENERALLY TO BE DONE ALONG JOINT AND COURSE LINES.
5. PATCH AND REPAIR REMAINING ADJACENT SURFACES AT AREAS OF REMOVAL AND/OR ALTERATION TO MATCH EXISTING. PROVIDE A SOUND AND PROPER SUBSTRATE FOR NEW FINISH. COORDINATE WITH COLOR PLANS. WHERE A NEW FINISH IS NOT INDICATED, MATCH EXISTING ADJACENT FINISHES.
6. ALL DEMOLITION IS TO BE DONE WITH REASONABLE CARE AS TO MINIMIZE DAMAGE TO EXISTING REMAINING SURFACES. CONTRACTOR IS RESPONSIBLE TO PROPERLY DISPOSE OF ALL DEMOLISHED ITEMS NOT INDICATED TO BE RELOCATED OR TURNED OVER TO OWNER.
7. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR FURTHER DEMOLITION NOTES.
8. SEE SPECIFICATION SECTION 024114-SELECTIVE DEMOLITION FOR ITEMS TO BE REMOVED BY OWNER PRIOR TO WORK COMMENCING. ITEMS TO BE REMOVED BY OWNER MAY BE SHOWN ON DEMOLITION PLAN FOR COORDINATION OR CLARITY.
9. PATCH ROOF AT AREAS OF DEMOLISHED VENT THRU ROOF PIPING (INSULATION, COVERBOARD AND ROOFING MEMBRANE) TO MATCH EXISTING CONSTRUCTION AND MAINTAIN EXISTING WARRANTIES.

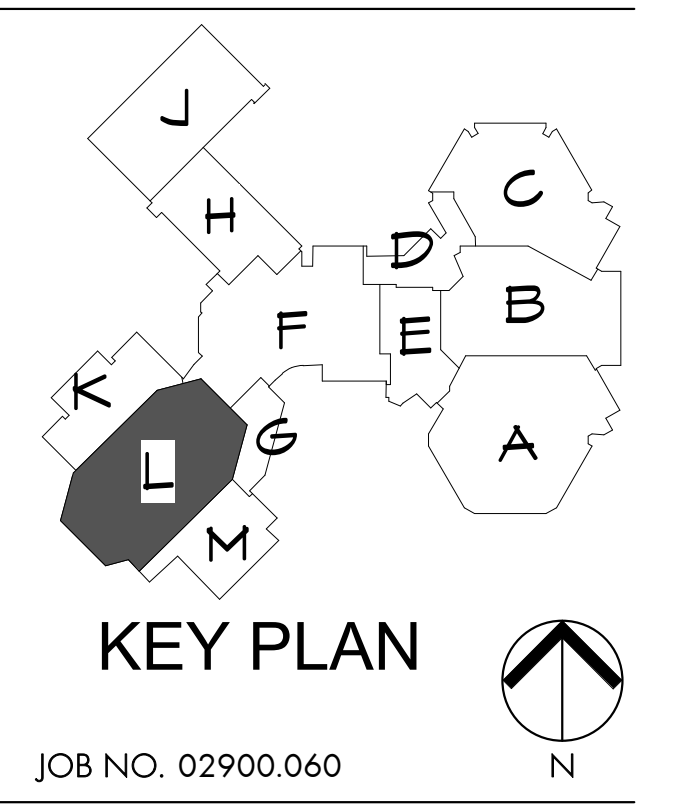


1 DEMOLITION PLAN - AREA L
1/8" = 1'-0"

GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

SHEET TITLE
FLOOR PLAN - DEMOLITION - AREA L

SHEET NO.
D1.2

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GYM & BOILER ROOM REMODELING

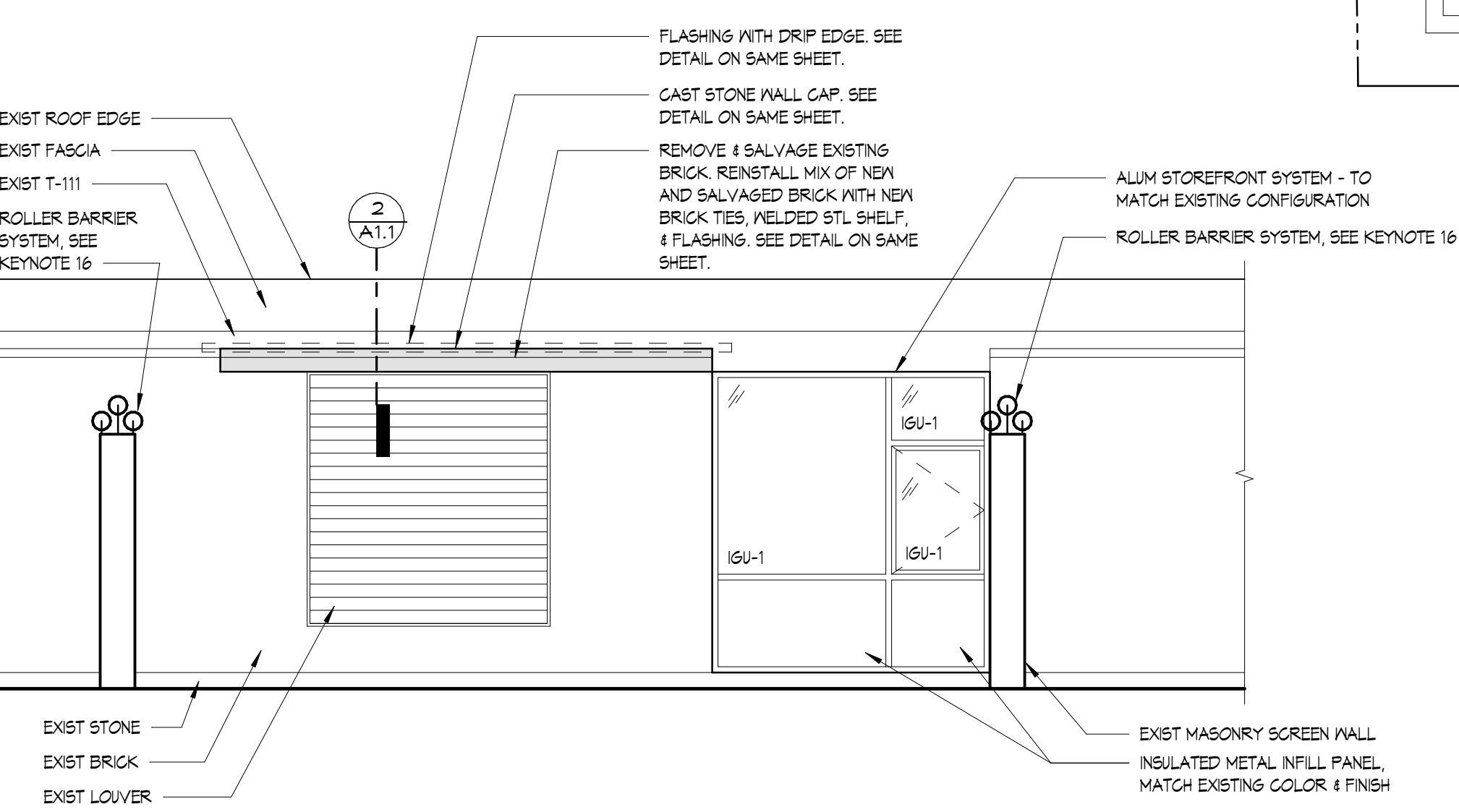
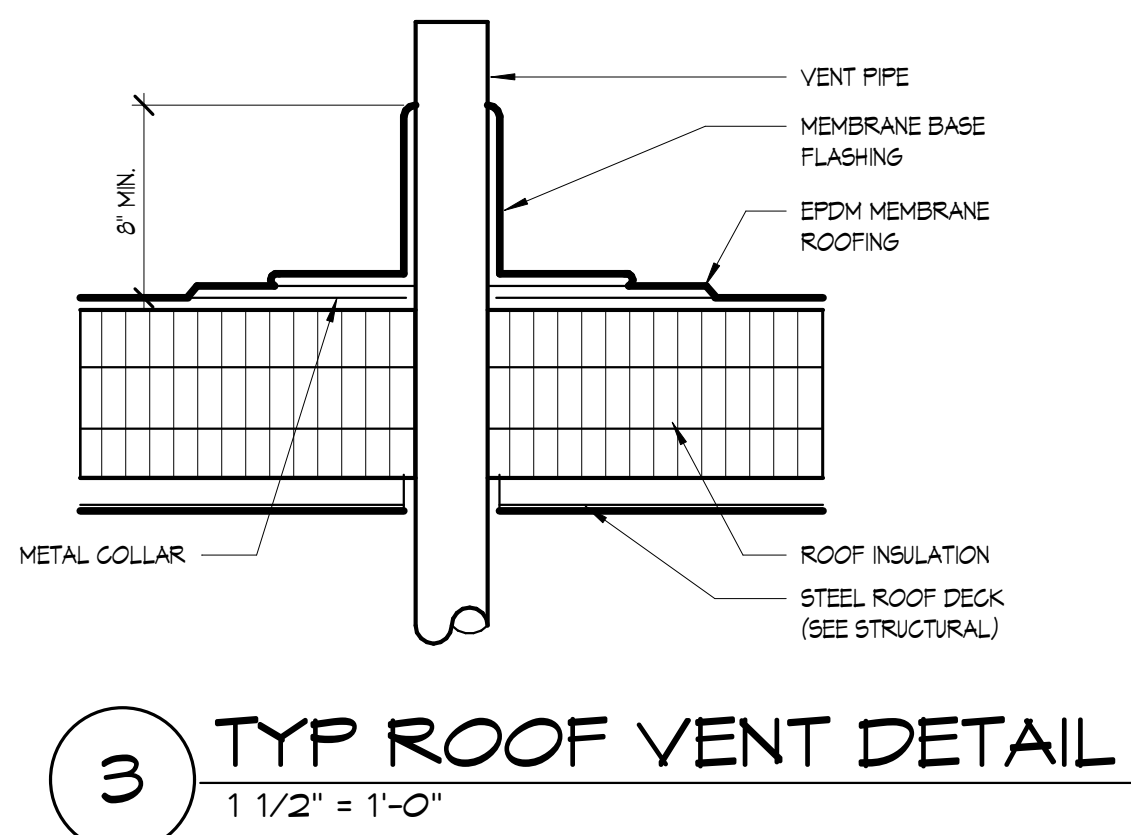
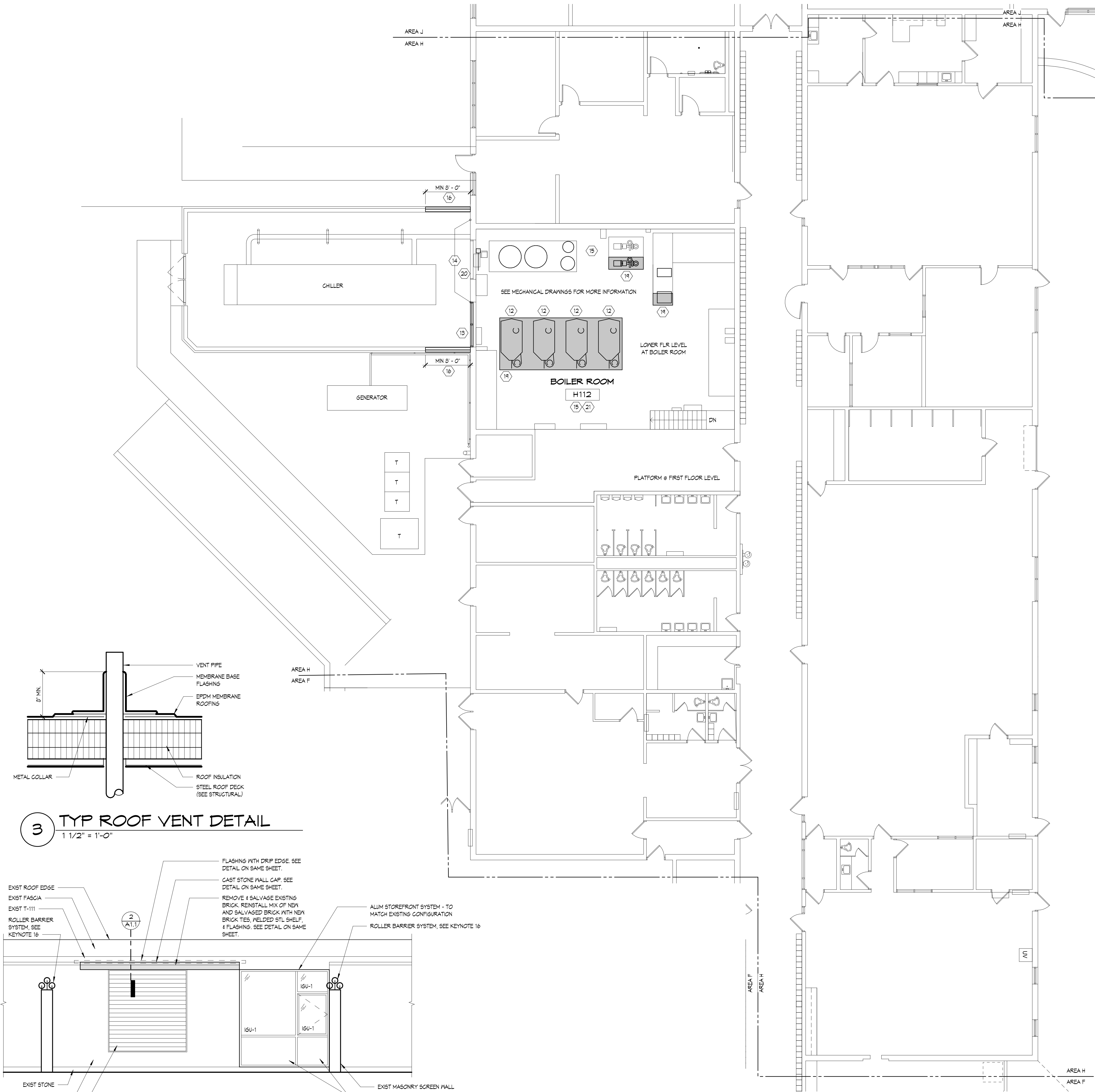
SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

GENERAL NOTES:

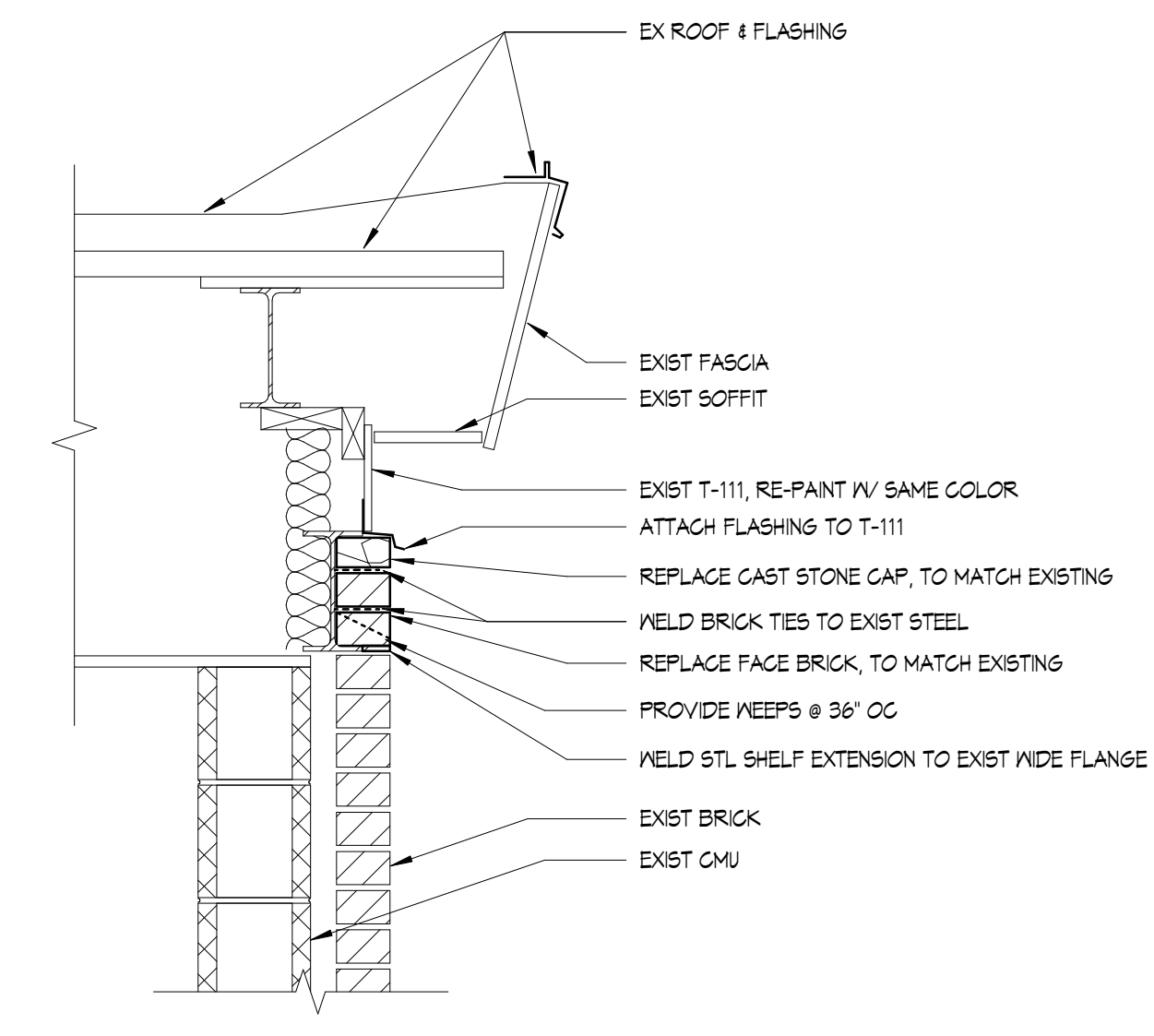
1. [XX] INDICATES CONSTRUCTION DOCUMENT ROOM NUMBERS.
2. REFER TO COLOR LAYOUT PLANS FOR FLOOR FINISH PATTERNS AND COLORS.
3. CONTRACTOR SHALL COORDINATE LOCATIONS OF FLOOR DRAINS, CLEAN OUTS, ETC. WITH APPROPRIATE TRADES.
4. REFER TO SHEET 62 FOR FLOOR PLAN SYMBOLS LEGEND.
5. REFER TO DEMOLITION PLANS FOR ADDITIONAL NOTES REGARDING PATCHING AT AREAS OF REMOVAL AND/OR ALTERATIONS. COORDINATE WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS.
6. CONTRACTORS SHALL FIELD VERIFY ALL DIMENSIONS LISTED AS "MATCH EXISTING", "EXISTING" OR PLUS OR MINUS (±).
7. CONTRACTOR TO TOOTH IN MASONRY AT ALL LOCATIONS WHERE NEW MASONRY ABUTS OR IS FILLED AT EXISTING MASONRY U.N.C. ALL NEW WALLS SHALL ALIGN WITH EXISTING ADJACENT WALLS WITH SMOOTH TRANSITIONS.
8. MASONRY CONTRACTOR TO INSTALL LOOSE LINTELS FOR MISCELLANEOUS OPENINGS NOT INDICATED ON DRAWINGS BUT REQUIRED FOR MECHANICAL, ELECTRICAL, FOOD SERVICE EQUIPMENT OR OTHER ITEMS THAT PASS THROUGH A WALL. STEEL LINTELS SHALL BE SUPPLIED BY THE STEEL CONTRACTOR.

FLOOR PLAN NOTES:

- | | |
|--|--|
| 1. REPLACEMENT (10) BASKETBALL BACKSTOPS (2) NEW BACKSTOPS BY OTHERS | 12. REPLACEMENT BOILERS. SEE MECHANICAL DRAWINGS FOR MORE INFO. PATCH & REPAIR ROOF @ REMOVED STACKS |
| 2. CEILING-MOUNTED BATTING CASE BY OTHERS | 13. CLEAR AND GEDGED ALUMINUM WINDOW. INSTALL STOREFRONT IN SAME LOCATION & CONFIGURATION AS EXIST. IV MANUFACTURER RECOMMENDED INSTALLATION METHODS. |
| 3. WALL-MOUNTED TELESCOPING STANDS SEE SPEC SECTION 12 66 00 | 14. REMOVE LOOSE BRICKS AND REPLACE WITH BRICK TO MATCH. SEE 2 & 3 ON A1.1. |
| 4. REPLACEMENT ROLL-UP DIVIDER CURTAIN ELECTRICALLY-OPERATED BY OTHERS | 15. PATCH ROOF AT AREAS OF DEMOLISHED VENT THRU ROOF PIPING (INSULATION, COVERBOARD AND ROOFING MEMBRANE) TO MATCH EXISTING CONSTRUCTION AND MAINTAIN EXISTING WARRANTIES. |
| 5. POLE VAULT BOX & COVER. RECESSED IN CONCRETE. INSTALL PER MANUFACTURER INSTRUCTIONS. UGS CAST ALUMINUM VAULT BOX MODEL# 111-1100 UGS POLE VAULT BOX COVER MODEL# 111-1400 | 16. ROLLER BARRIER SYSTEM ON TOP OF EXIST WALL. BASIS OF DESIGN: TRIGARD ROLLER SYSTEM. ATTACH TO T/O WALL TO PREVENT ROOF ACCESS. SUBMIT SELECTION TO ARCHITECT FOR REVIEW. |
| 6. REPLACEMENT DRINKING FOUNTAINS. SEE MECHANICAL. RECESSED IN EXISTING FOUNTAIN LOCATIONS. MODIFY OPENINGS AS REQUIRED FOR NEW FIT, TOOTH-IN MASONRY PATCHING. | 17. FLOOR OUTLET LOCATION. SEE ELECTRICAL DRAWINGS. TRENCH CONC FLR FROM EXIST ELEC SOURCE. |
| 7. RECESSED VOLLEYBALL SLEEVES. PROVIDED BY OWNER. INSTALLED BY CONTRACTOR | 18. NEW GYM EQUIPMENT CONTROLS LOCATION. CONTROLS BY OTHERS. SEE ELECTRICAL. |
| 8. MARKER BOARD WALL-MOUNTED. SEE INTERIOR ELEVATIONS FOR HEIGHT, SIZE, & LOCATION. | 19. CONC HOUSEKEEPING PAD. SEE MECHANICAL DRAWINGS. |
| 9. FLAT PANEL DISPLAY (OF/GI). SEE INTERIOR ELEVATIONS FOR MOUNTING LOCATIONS. | 20. CLEAN EXIST LOUISERS AND INSTALL NEW INSECT SCREEN. |
| 10. SCOREBOARD TYPE 'A' AT FACE OF PRESS BOX - BY OTHERS. SEE AR1 - INTERIOR ELEVATIONS FOR MOUNTING LOCATION | 21. BOILER ROOM FLOORING, WALLS, & CEILING TO BE PAINTED BY OWNER. |
| 11. SCOREBOARD TYPE 'B' - BY OTHERS. SEE AR1 - INTERIOR ELEVATIONS FOR MOUNTING LOCATIONS | |

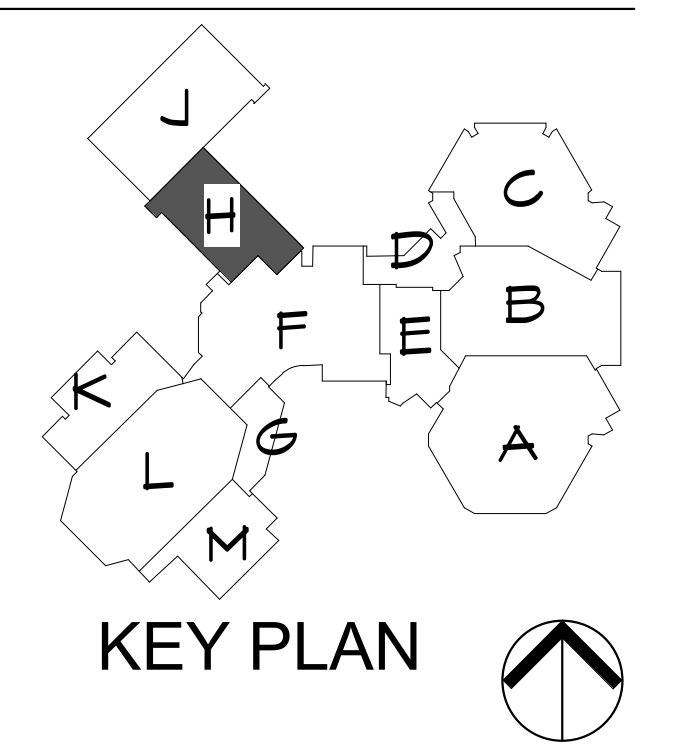


1 FLOOR PLAN - AREA H
1/8" = 1'-0"



2 WALL SECTION
1" = 1'-0"

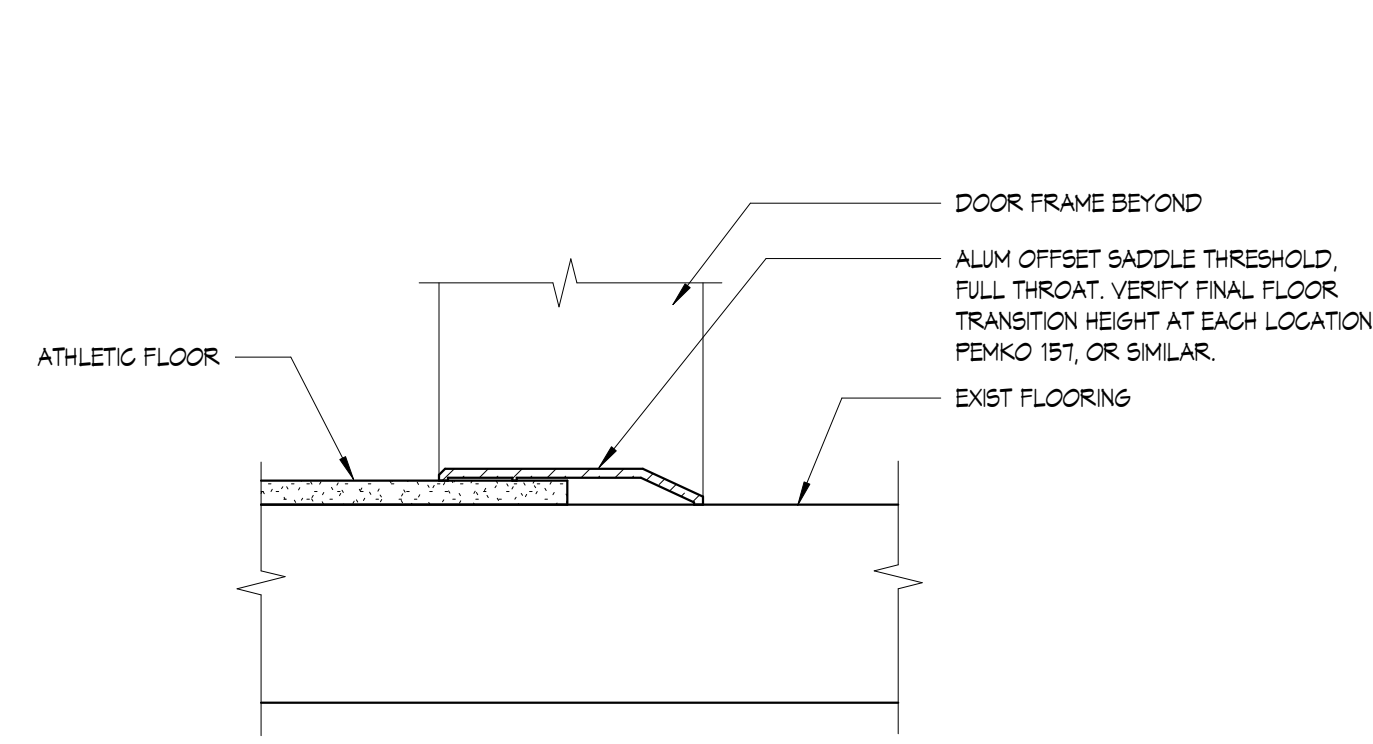
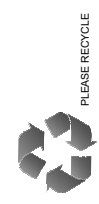
ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



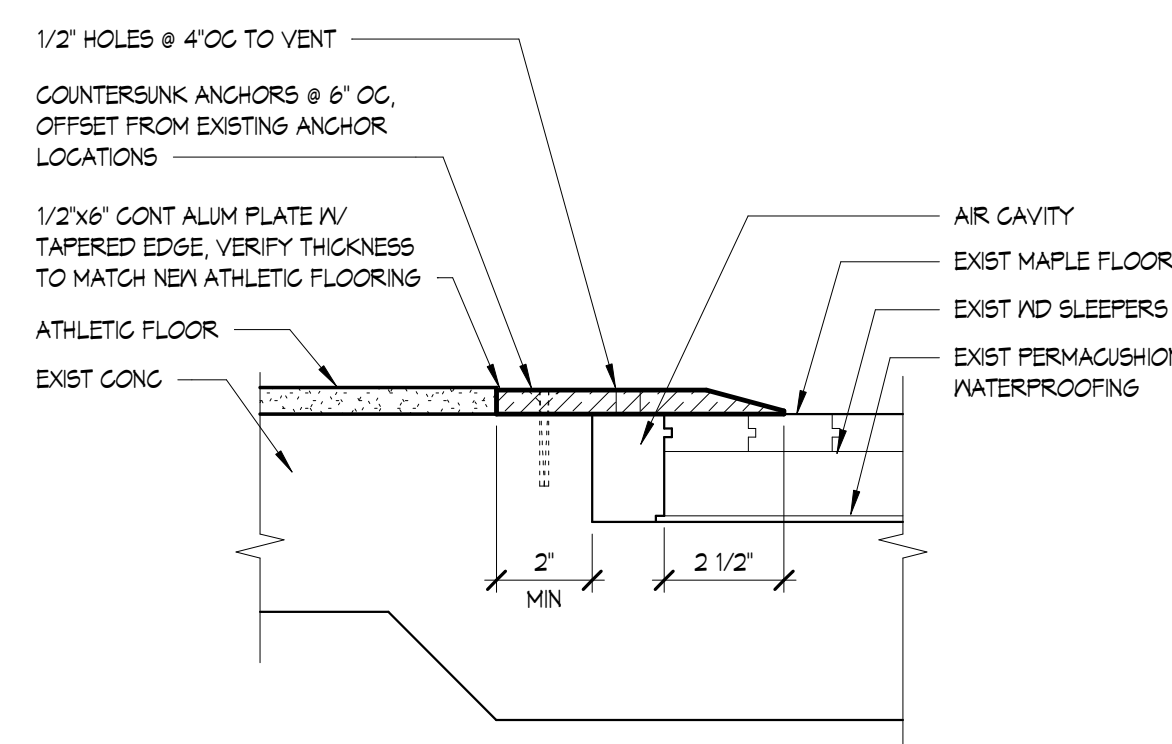
KEY PLAN
JOB NO. 02900.060
SHEET TITLE
FLOOR PLAN - AREA H

SHEET NO.
A1.1
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3 FLOOR TRANSITION DETAIL
3" = 1'-0"



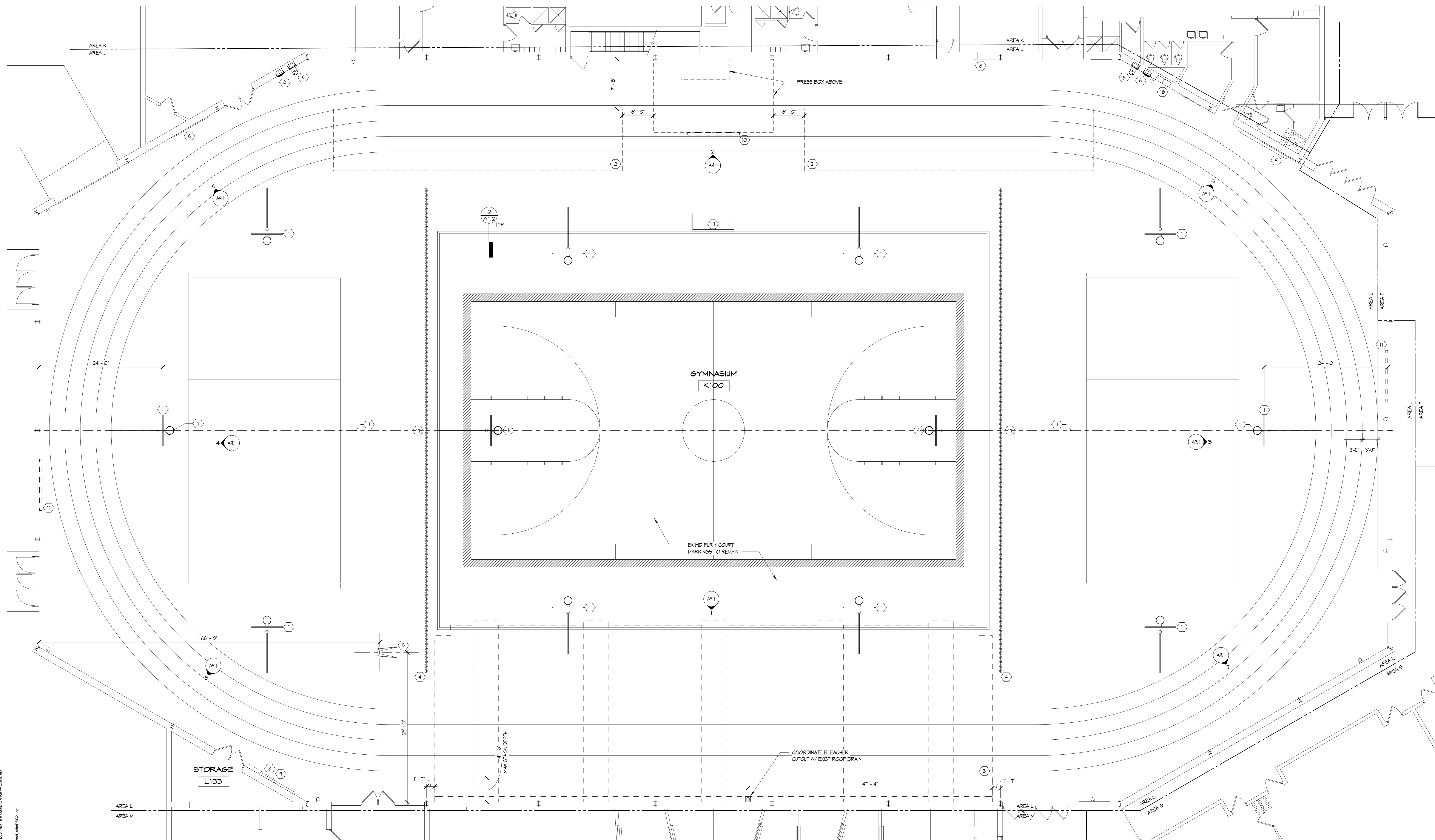
2 FLOOR TRANSITION DETAIL
3" = 1'-0"

FLOOR PLAN NOTES:

- 1 REPLACEMENT (10) BASKETBALL BACKSTOPS
- 2 NEW BACKSTOPS
- 3 CEILING-MOUNTED BATTING CASE BY OTHERS
- 4 WALL-MOUNTED TELESCOPING STANDS SEE SPEC SECTION 12 66 00
- 5 REPLACEMENT ROLL-UP DIVIDER CURTAIN ELECTRICALLY-OPERATED BY OTHERS
- 6 POLE VAULT BOX & COVER, RECESSED IN CONCRETE. INSTALL PER MANUFACTURER INSTRUCTIONS. USE CAST ALUMINUM VAULT BOX MODEL# T11-1100 USE POLE VAULT BOX COVER MODEL# T11-1400
- 7 REPLACEMENT DRINKING FOUNTAINS, SEE MECHANICAL. RECESSED IN EXISTING FOUNTAIN LOCATIONS. MODIFY OPENINGS AS REQUIRED FOR NEW FIT, TOOTH-IN MASONRY PATCHING.
- 8 RECESSED VOLLEYBALL SLEEVES, PROVIDED BY OWNER. INSTALLED BY CONTRACTOR
- 9 MARKER BOARD WALL-MOUNTED. SEE INTERIOR ELEVATIONS FOR HEIGHT, SIZE, & LOCATION.
- 10 FLAT PANEL DISPLAY (10'x10') SEE INTERIOR ELEVATIONS FOR MOUNTING LOCATIONS.
- 11 SCOREBOARD TYPE 'A' AT FACE OF PRESS BOX - BY OTHERS SEE A1.1 - INTERIOR ELEVATIONS FOR MOUNTING LOCATION
- 12 SCOREBOARD TYPE 'B' - BY OTHERS SEE A1.1 - INTERIOR ELEVATIONS FOR MOUNTING LOCATIONS
- 13 REPLACEMENT BOILERS. SEE MECHANICAL DRAWINGS FOR MORE INFO. PATCH & REPAIR ROOF @ REMOVED STACKS BY OTHERS
- 14 CLEAR AND DODDIZED ALUMINUM WINDOW. INSTALL STOREFRONT IN SAME LOCATION & CONFIGURATION AS EXIST W/ MANUFACTURER RECOMMENDED INSTALLATION METHODS.
- 15 REMOVE LOOSE BRICKS AND REPLACE WITH BRICK TO MATCH. SEE 2 13 ON A1.1.
- 16 PATCH ROOF AT AREAS OF DEMOLISHED VENT THRU ROOF PIPING INSULATION, COVERBOARD AND ROOFING MEMBRANE TO MATCH EXISTING CONSTRUCTION AND MAINTAIN WARRANTIES.
- 17 ROLLER BARRIER SYSTEM ON TOP OF EXIST WALL. BASIS OF DESIGN: TRIGARD ROLLER SYSTEM. ATTACH TO T/O WALL TO PREVENT ROOF ACCESS. SUBMIT SELECTION TO ARCHITECT FOR REVIEW.
- 18 FLOOR OUTLET LOCATION. SEE ELECTRICAL DRAWINGS. TRENCH CONG FLR FROM EXIST ELEC SOURCE.
- 19 NEW GYM EQUIPMENT CONTROLS LOCATION. CONTROLS BY OTHERS. SEE ELECTRICAL.
- 20 CONG HOUSEKEEPING PAD. SEE MECHANICAL DRAWINGS.
- 21 CLEAN EXIST LOUVERS AND INSTALL NEW INSECT SCREEN.
- 22 BOILER ROOM FLOORING, WALLS, & CEILING TO BE PAINTED BY OWNER.

GENERAL NOTES:

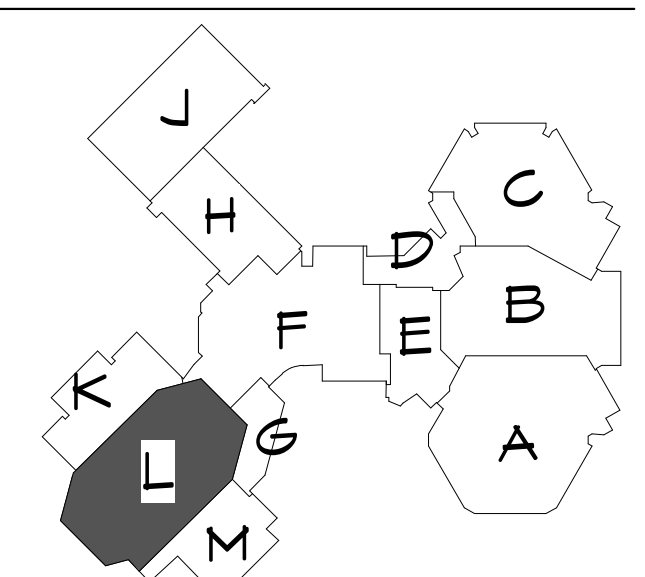
1. [XX] INDICATES CONSTRUCTION DOCUMENT ROOM NUMBERS.
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3. CONTRACTOR SHALL COORDINATE LOCATIONS OF FLOOR DRAINS, CLEAN OUTS, ETC. WITH APPROPRIATE TRADES.
4. REFER TO SHEET G2 FOR FLOOR PLAN SYMBOLS LEGEND.
5. REFER TO DEMOLITION PLANS FOR ADDITIONAL NOTES REGARDING PATCHING AT AREAS OF REMOVAL AND/OR ALTERATIONS. COORDINATE WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS.
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8. MASONRY CONTRACTOR TO INSTALL LOOSE LINTELS FOR MISCELLANEOUS OPENINGS NOT INDICATED ON DRAWINGS BUT REQUIRED FOR MECHANICAL, ELECTRICAL, FOOD SERVICE EQUIPMENT OR OTHER ITEMS THAT PASS THROUGH A WALL. STEEL LINTELS SHALL BE SUPPLIED BY THE STEEL CONTRACTOR.



1 FLOOR PLAN - AREA L
1/8" = 1'-0"

**GYM & BOILER ROOM
REMODELING**
SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060
SHEET TITLE
FLOOR PLAN - AREA L

SHEET NO.
A1.2
KINGSCOTT ASSOCIATES INC. KALAMAZOO, MICHIGAN

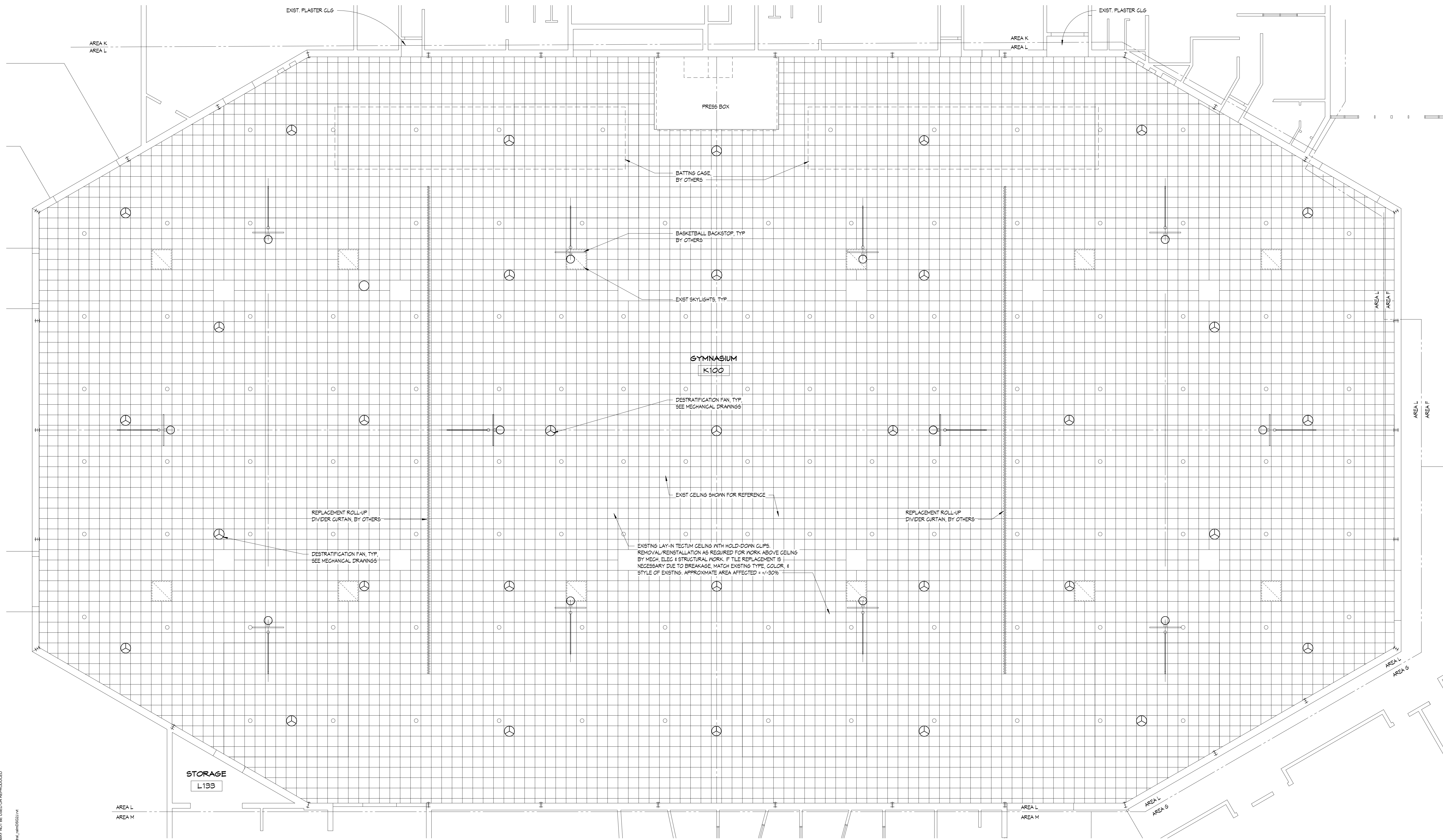
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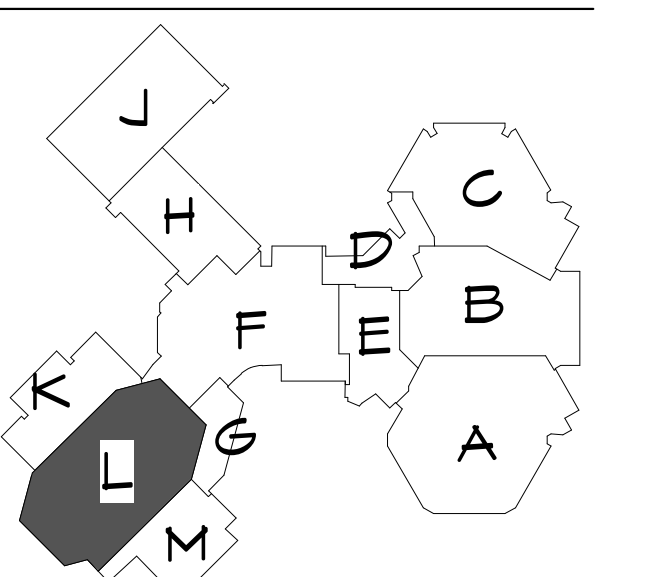
GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL

SALINE, MICHIGAN



ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

SHEET TITLE
REFLECTED CEILING PLAN - AREA L

SHEET NO.

A2.2

1 REFLECTED CEILING PLAN - AREA L
1/8" = 1'-0"

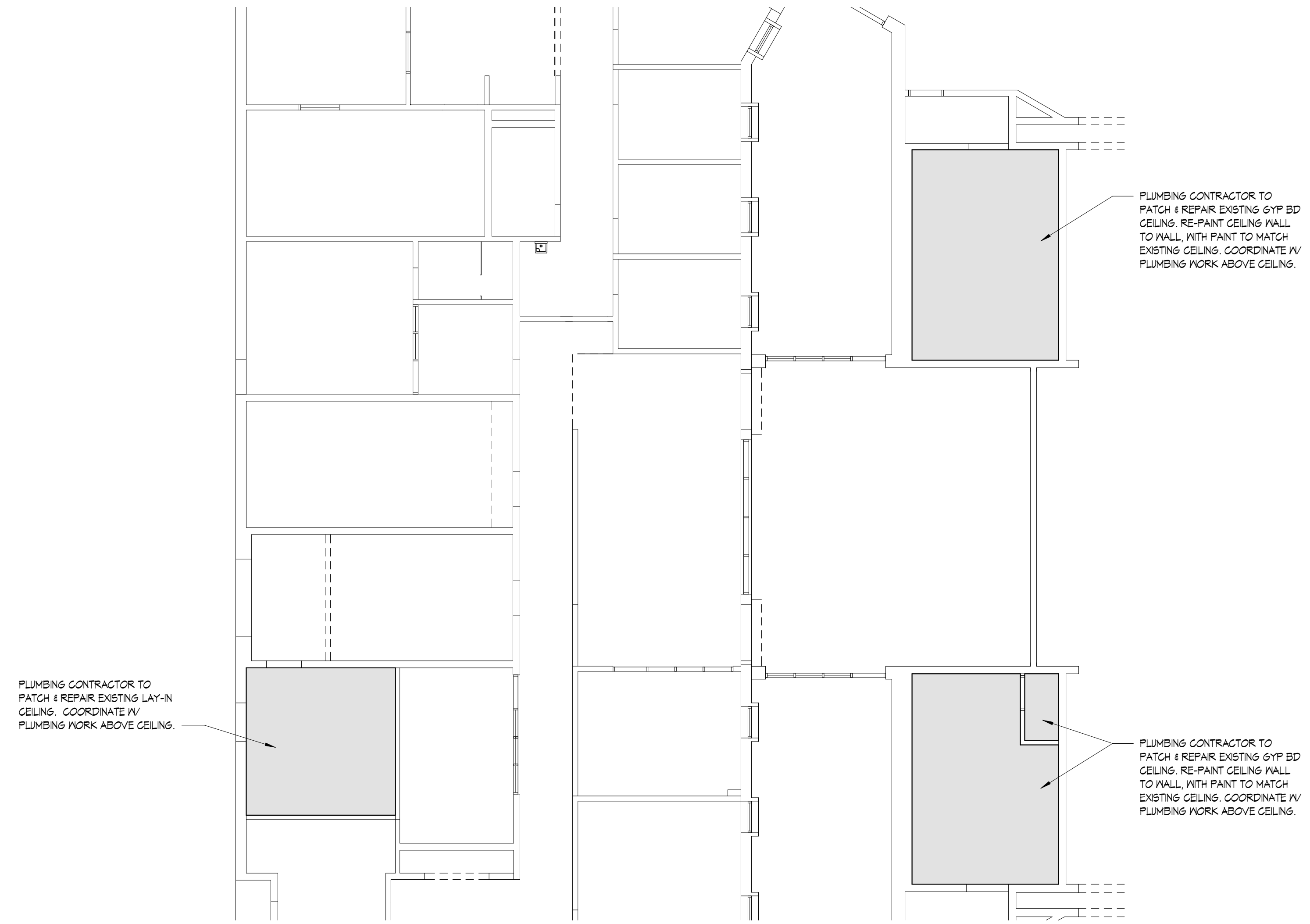
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GYM & BOILER ROOM REMODELING

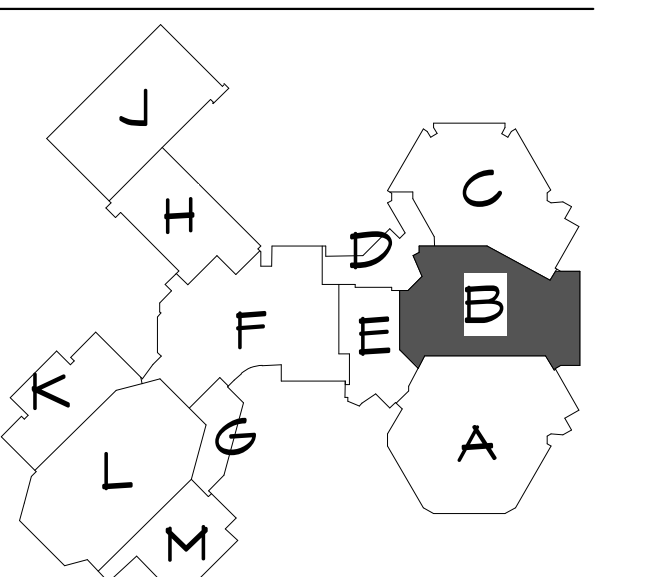
SALINE MIDDLE SCHOOL

SALINE, MICHIGAN



1 REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0"

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



JOB NO. 02900.060

SHEET TITLE
REFLECTED CEILING PLAN - AREA B

SHEET NO.
A2.3

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COLOR HATCH

- ATHLETIC FLOORING (RAF-1) GREY - SEE SPECS
- ATHLETIC FLOORING (RAF-2) DARK BLUE - SEE SPECS

COLOR LAYOUT SYMBOL

- PAINT (P)
- SEALED CONCRETE (SC)
- WORK POINT
- MATERIAL EXTENTS
- FULL THROAT METAL THRESHOLD TO EXIST. FLOORING SEE DETAIL ON A1.2
- RUBBER WALL BASE
- BARRIER FREE RESILIENT TRANSITION

COLOR LAYOUT KEYNOTES:

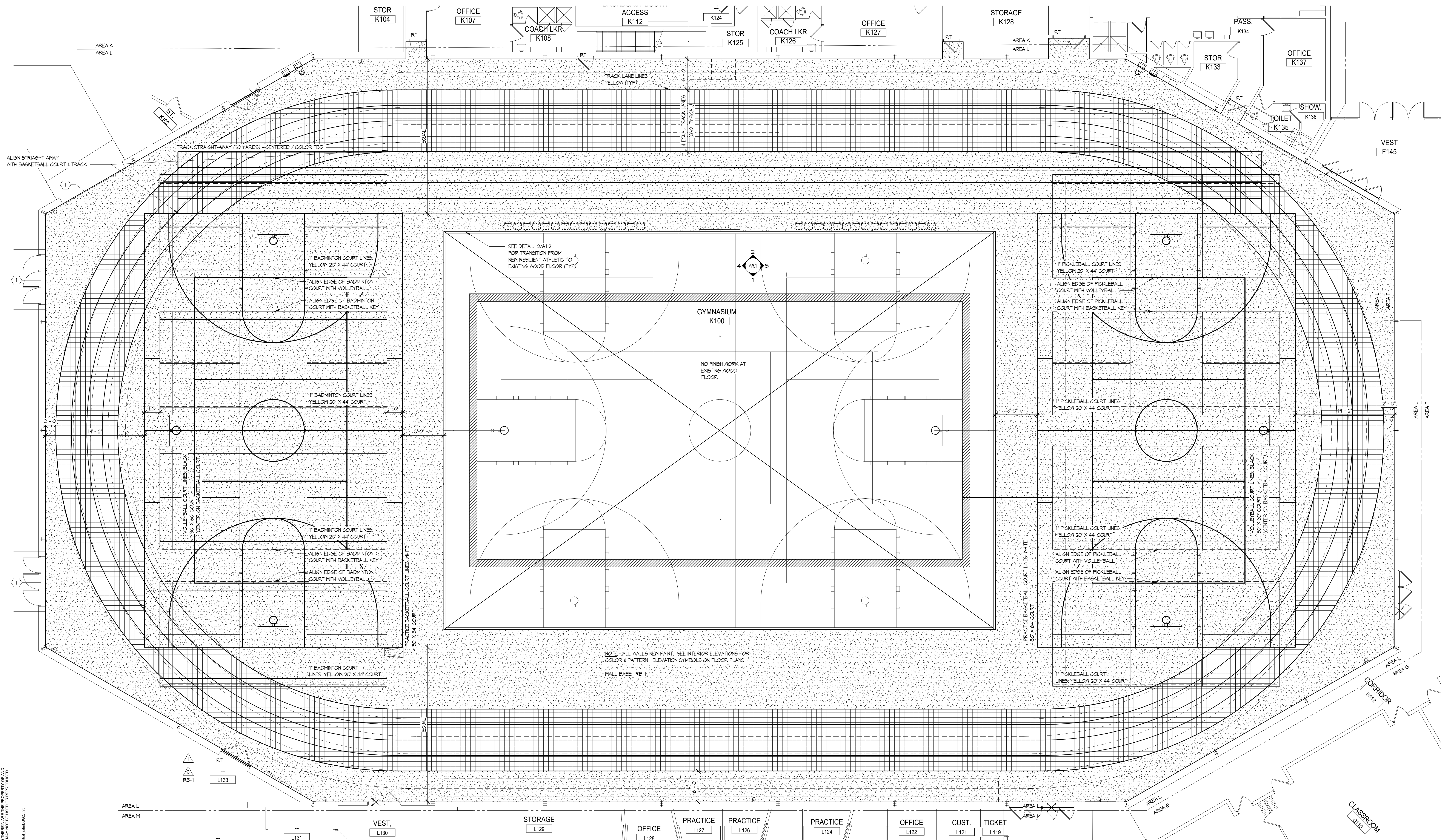
- REPLACE EXTERIOR THRESHOLD WITH SIMILAR TO EXISTING

GENERAL COLOR

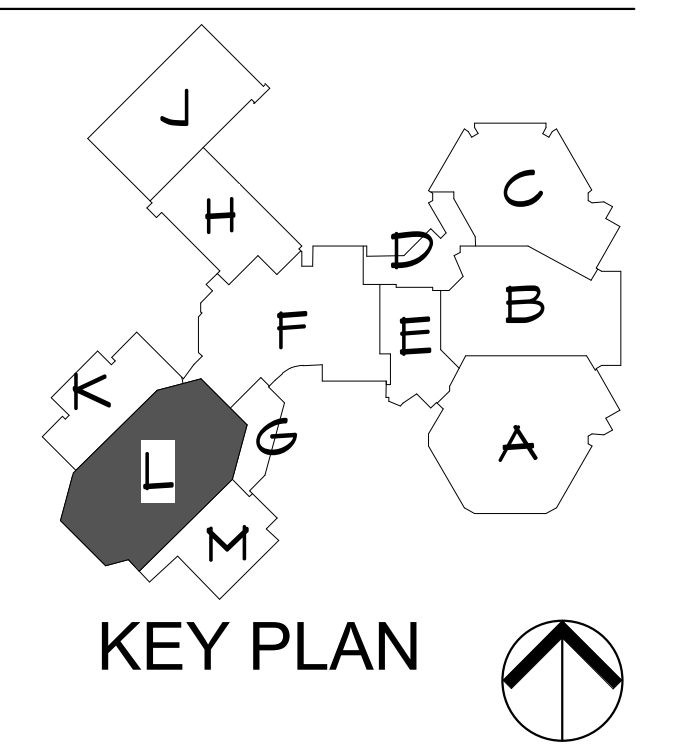
- REFER TO REFLECTED CEILING FOR CEILING TYPES.
- GYM WALLS TO RECEIVE NEW PAINT. WALL TO BE MULTIPLE COLORS. STRUCTURAL STEEL COLLINGS WILL BE A CONTRASTING COLOR. SEE INTERIOR ELEVATIONS.
- PROVIDE NEW METAL TRANSITIONS WHERE NEW FLOORING MEETS EXISTING FLOORING SURFACE.
- EXISTING TECTUM CEILING TILE TO REMAIN. PORTIONS OF THE CEILING WILL NEED TO BE REMOVED FOR EQUIPMENT INSTALLATION. CEILING TILE TO BE RE-INSTALLED. PROVIDE TOUCH-UP PAINT AS REQUIRED TO MATCH.
- COORDINATE ALL COURT MARKINGS WITH GYM EQUIPMENT. COURT LINES TO BE 2" U.N.O. AUTO CAD DRAWINGS CAN BE PROVIDED.
- SEE FLOOR PLAN FOR RECESSED VOLLEYBALL SLEEVES.
- PAINT HOLLOW METAL DOORS & DOOR FRAMES IN GYM K100, SEMI-GLOSS COLOR P-5.

GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



KEY PLAN

JOB NO. 02900.060

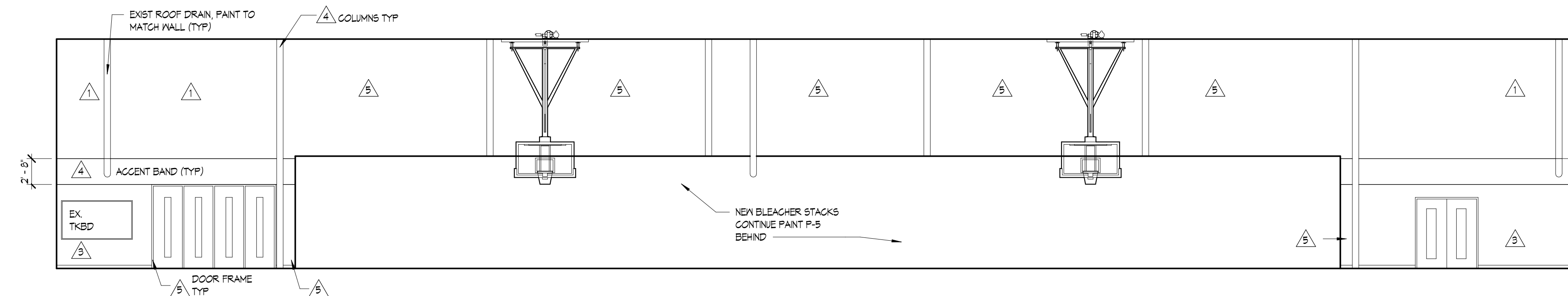
SHEET TITLE
COLOR LAYOUT PLAN - AREA L

SHEET NO.
A8.2

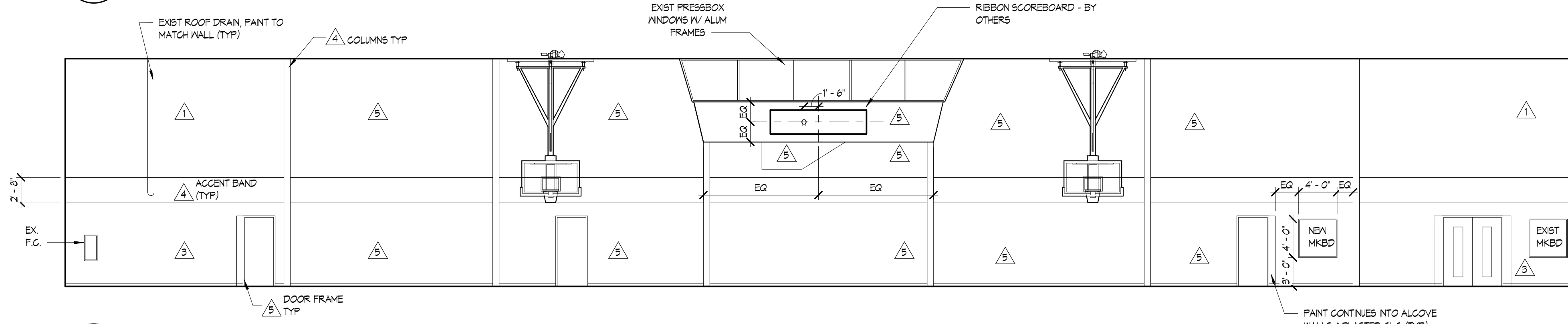
KINGSKOTT ASSOCIATES INC. KALAMAZOO, MICHIGAN

1 COLOR LAYOUT PLAN - AREA L
1/8" = 1'-0"

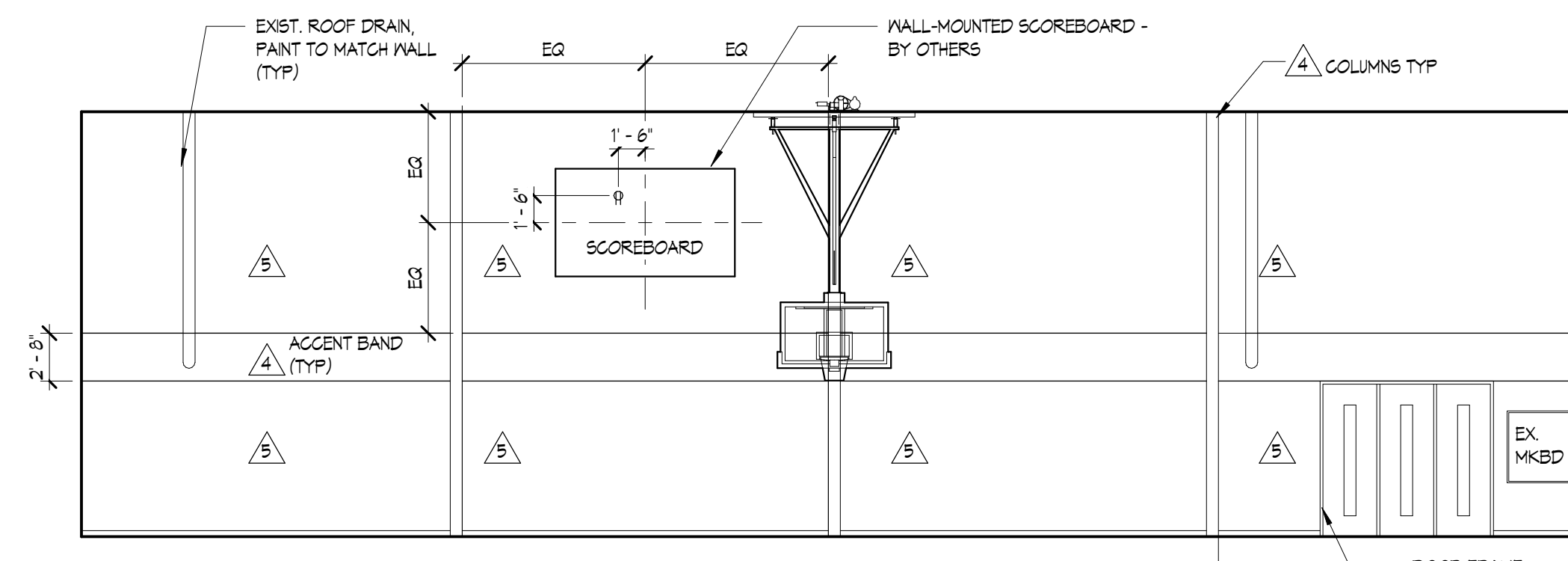
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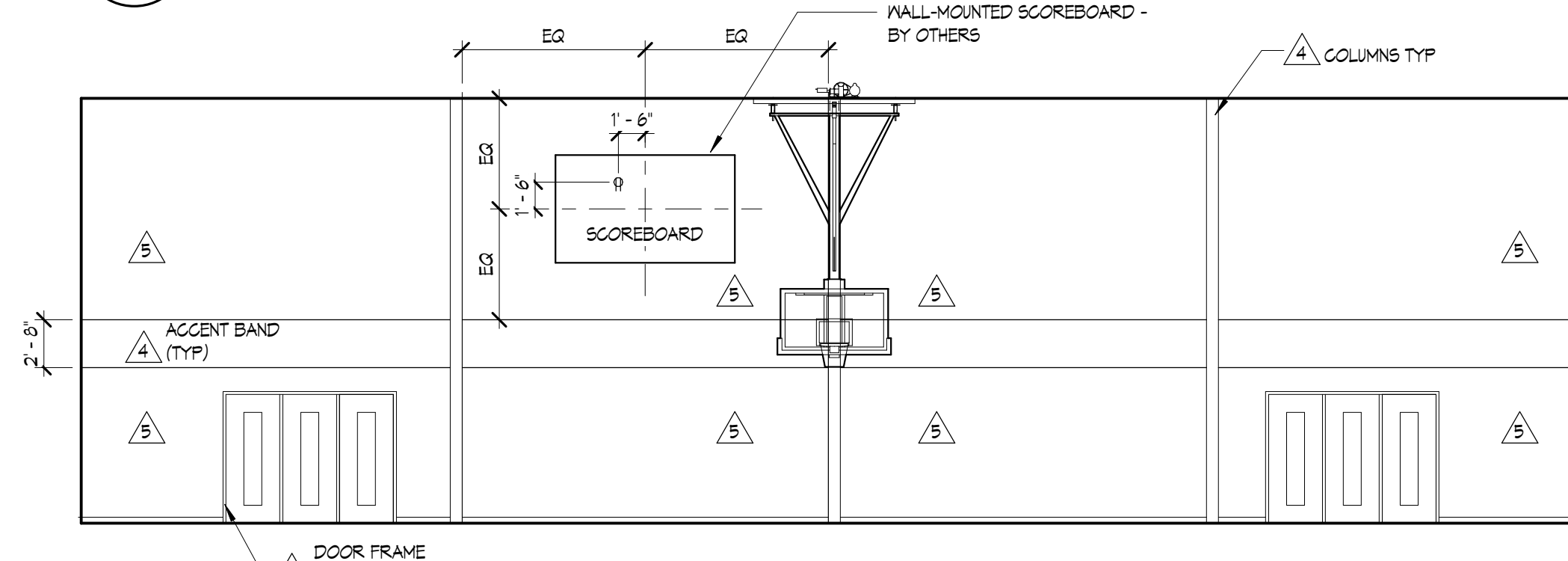
1 INTERIOR ELEVATION - SOUTH
 1/8" = 1'-0"



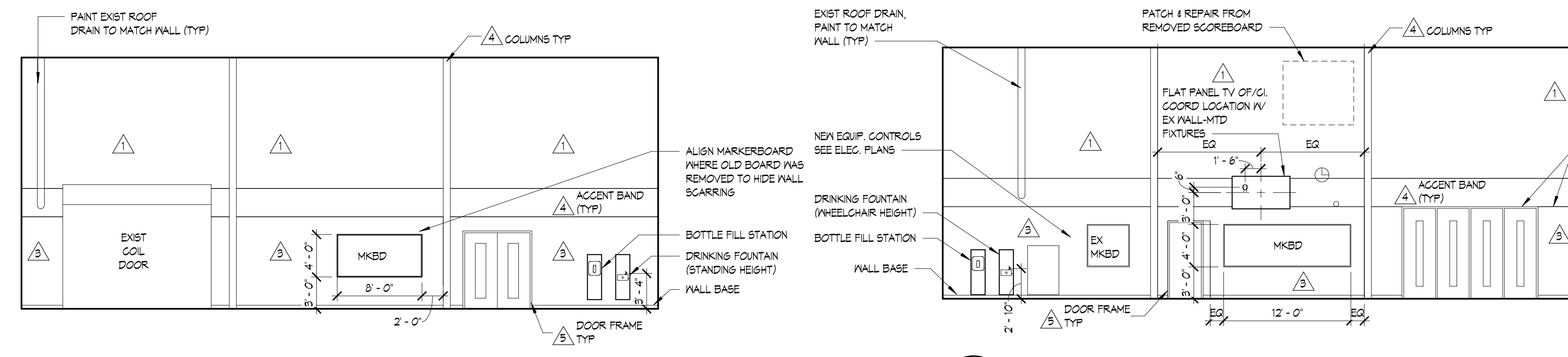
2 INTERIOR ELEVATION - NORTH
 1/8" = 1'-0"



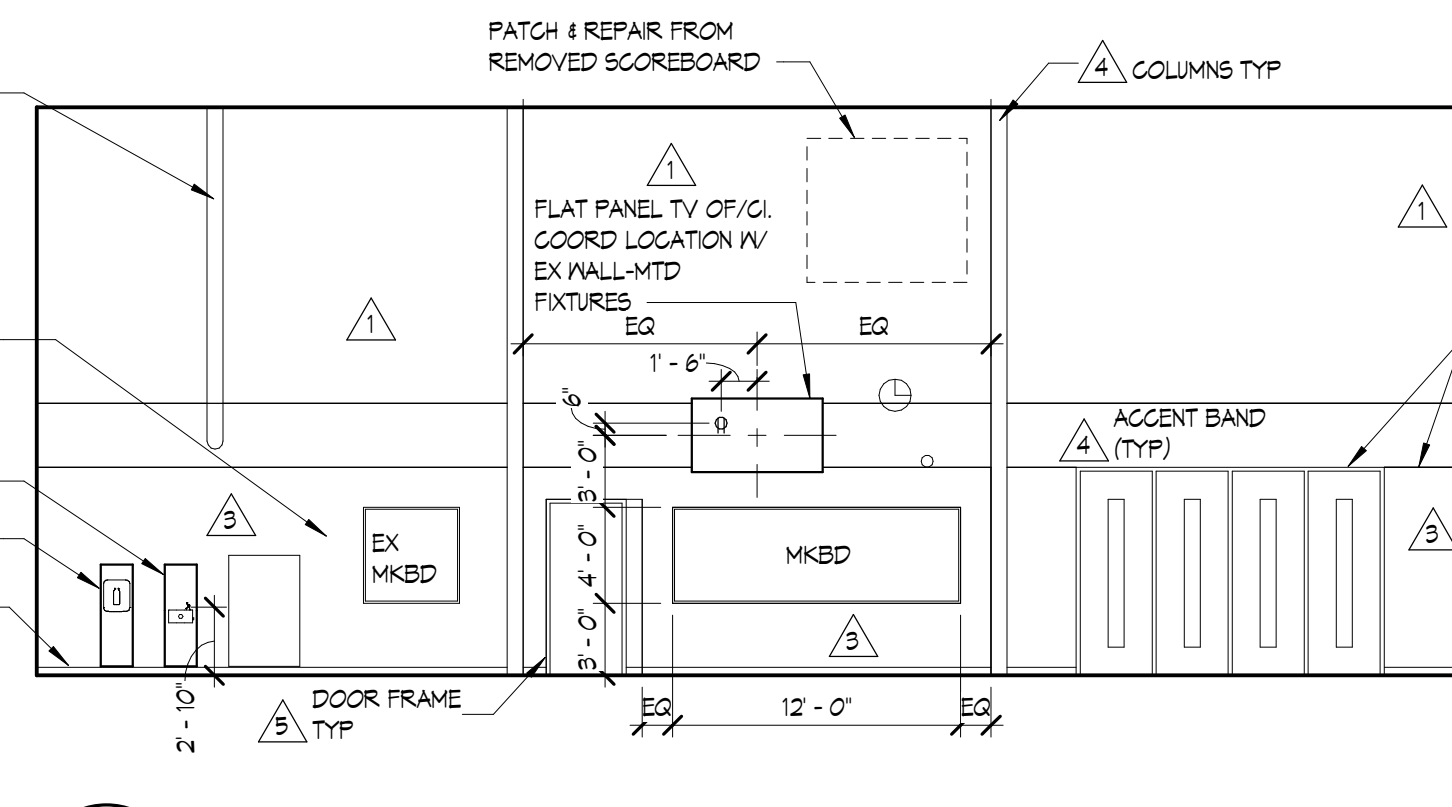
3 INTERIOR ELEVATION - EAST
 1/8" = 1'-0"



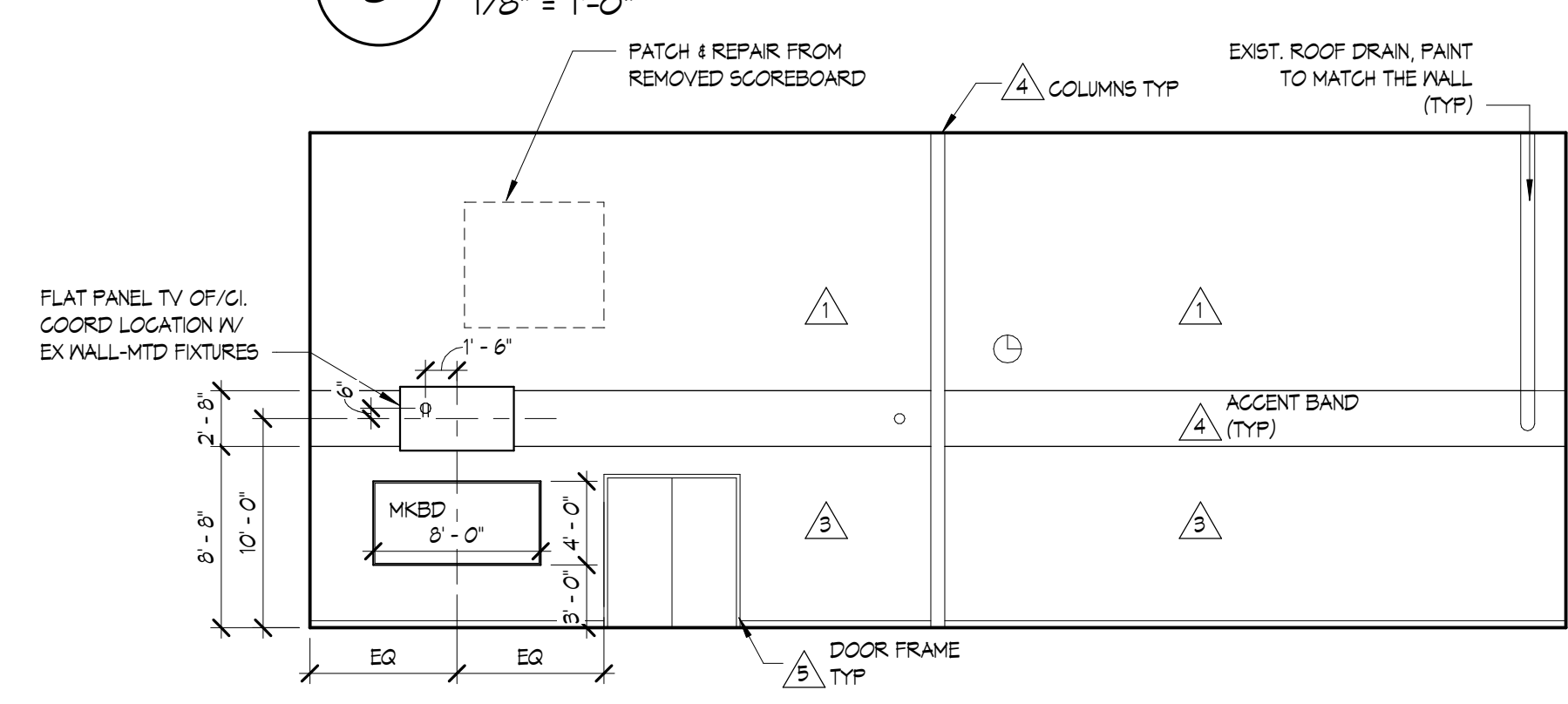
4 INTERIOR ELEVATION - WEST
 1/8" = 1'-0"



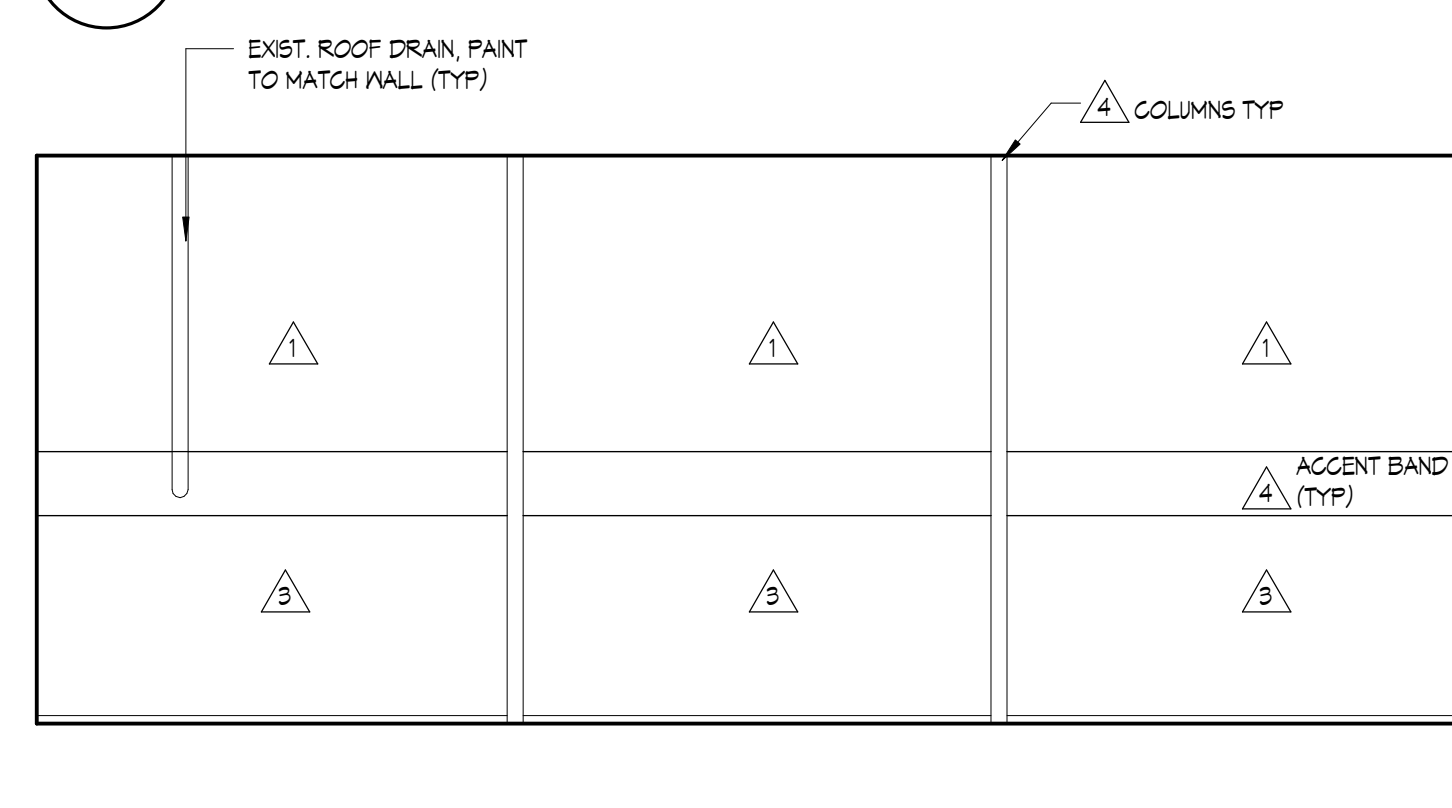
6 INTERIOR ELEVATION - NORTHWEST
 1/8" = 1'-0"



5 INTERIOR ELEVATION - NORTHEAST
 1/8" = 1'-0"



8 INTERIOR ELEVATION - SOUTHWEST
 1/8" = 1'-0"



7 INTERIOR ELEVATION - SOUTHEAST
 1/8" = 1'-0"

GENERAL INTERIOR ELEVATION NOTES:

- AT ALL NEW MARKERBOARD LOCATIONS IN THE GYM, PROVIDE MARKERBOARDS WITHOUT CHALKRAIL.
- GYM WALLS TO RECEIVE NEW PAINT. WALL TO BE MULTIPLE COLORS. STRUCTURAL STEEL COLUMNS WILL BE A CONTRASTING COLOR. SEE INTERIOR ELEVATIONS.
- PROVIDE NEW METAL TRANSITIONS WHERE NEW FLOORING MEETS EXISTING FLOORING SURFACE.
- EXISTING TEGTIM CEILING TILE TO REMAIN. PORTIONS OF THE CEILING WILL NEED TO BE REMOVED FOR EQUIPMENT INSTALLATION. CEILING TILE TO BE RE-INSTALLED. PROVIDE TOUCH-UP PAINT AS REQUIRED TO MATCH.
- COORDINATE ALL COURT MARKINGS WITH GYM EQUIPMENT. COURT LINES TO BE 2" U.N.O. AUTO CAD DRAWING CAN BE PROVIDED.
- SEE FLOOR PLAN FOR RECESSED VOLLEYBALL SLEEVES.
- PAINT HOLLOW METAL DOORS & DOOR FRAMES IN GYM K100, SEMI-GLOSS COLOR P-9.

COLOR LAYOUT SYMBOL

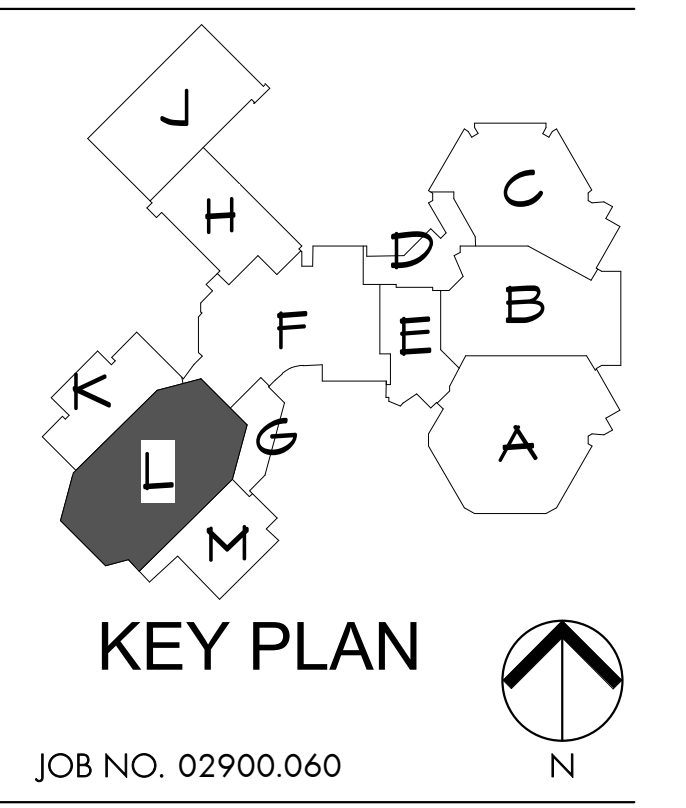
- PAINT (P)
- SEALED CONCRETE (SC)
- WORK POINT
- MATERIAL EXTENTS
- FULL-THROAT METAL THRESHOLD TO EXIST. FLOORING SEE DETAIL ON A1.2
- RUBBER WALL BASE
- BARRIER FREE RESILIENT TRANSITION

COLOR LAYOUT KEYNOTES:

- REPLACE EXTERIOR THRESHOLD WITH SIMILAR TO EXISTING

**GYM & BOILER ROOM
 REMODELING**
 SALINE MIDDLE SCHOOL
 SALINE, MICHIGAN

ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/05/21



SHEET TITLE
 INTERIOR ELEVATIONS

SHEET NO.
A9.1

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MECHANICAL ABBREVIATIONS	
ABBREV.	DESCRIPTION
AAV	AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE
AD	ACCESS DOOR
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
ASR	AUTOMATIC SPRINKLER RISER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CIRC	CIRCULATING
CLG	COOLING
CO	CLEAN OUT
CONT	CONTINUATION OR CONTINUED
CONV	CONNECTOR
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DEG	DEGREES
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
(E)	EXISTING
EA/EXH	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELECT	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB TEMPERATURE
EWV	ELECTRIC WATER COOLER
*F	DEGREES FAHRENHEIT
FA	FACE AREA (COIL) / FREE AREA (LOUVER)
FC	FLEXIBLE CONNECTION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FFD	FUNNEL FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FS	FLOOR SINK
FT	FEET
FURN	FURNISHED
FV	FACE VELOCITY
FVC	FIRE VALVE CABINET
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER

MECHANICAL ABBREVIATIONS	
ABBREV.	DESCRIPTION
HR	HOUR
HTG	HEATING
HYD	HYDRANT
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
INST	INSTALLED
INV	INVERT
ISP	INTERNAL STATIC PRESSURE
IW	INDIRECT WASTE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LDB	LEAVING DRY BULB TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER (AUTOMATIC)
MOP	MAXIMUM OVER-CURRENT PROTECTION
N.C.	NOISE CRITERIA
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER / CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
ORS	OVERFLOW ROOF SUMP
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PT	PRESSURE / TEMPERATURE PORT
RA	RETURN AIR
RH	RELATIVE HUMIDITY
REQD	REQUIRED
REL.A	RELIEF AIR
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RS	ROOF SUMP
SA	SUPPLY AIR
SH	SHOWER
SP	STATIC PRESSURE
SqFt / SF	SQUARE FOOT/SQUARE FEET
SS	SERVICE SINK
TC	TEMPERATURE CONTROL
T & P	TEMPERATURE AND PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE

MECHANICAL ABBREVIATIONS	
ABBREV.	DESCRIPTION
UR	URINAL
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VTR	VENT THRU ROOF
W	WASTE
W&V	WASTE AND VENT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WG	WATER GAUGE
WH	WALL HYDRANT

MECHANICAL PIPING SYMBOLS	
ABBREV.	DESCRIPTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE DOWN
	DIRECTION OF FLOW
	UNION
	STRAINER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	MISCELLANEOUS
	ISOLATION VALVE
	CIRCULATING PUMP
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	BACKWATER VALVE
	ANGLE VALVE
	CHECK VALVE (SWING)
	CHECK VALVE (SPRING)
	PLUG VALVE
	NEEDLE VALVE
	OUTSIDE SCREW AND YOKE VALVE (OS&Y)
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	CONTROL VALVE (2-WAY / 3-WAY)
	CENTRIFUGAL FAN
	AUTOMATIC GAS SHUT-OFF VALVE
	TRAP (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION)
	ROOF SUMP
	CLEAN OUT (IN FLOOR)
	CLEAN OUT (IN LINE)
	CLEAN OUT (WALL)
	BACKFLOW PREVENTER
	WATER METER ASSEMBLY
	HOSE BIBB, WALL HYDRANT
	DIRECTION OF PIPE PITCH
	SPRINKLER HEAD (UPRIGHT)
	SPRINKLER HEAD (SIDEWALL)
	FLOW SWITCH
	SIAMESE CONNECTION (YARD)
	SIAMESE CONNECTION (WALL MOUNTED)
	FIRE HYDRANT
	FLOW MEASURING DEVICE
	BALANCING VALVE
	COMBINATION FLOW MEASURING AND BALANCING DEVICE
	AUTOMATIC AIR VALVE
	MANUAL AIR VALVE

MECHANICAL SYMBOLS	
ABBREV.	DESCRIPTION
	RECTANGULAR TAKE-OFF (SINGLE LINE)
	RECTANGULAR TAKE-OFF (DOUBLE LINE)
	ROUND TAKE-OFF (SINGLE LINE)
	ROUND TAKE-OFF (DOUBLE LINE)
	SPIN-IN FITTING (WITH VOLUME DAMPER)
	ELBOW (WITH TURNING VANES)
	RADIUS RECTANGULAR ELBOW
	RADIUS ROUND ELBOW
	RECTANGULAR ELBOW UP
	ROUND ELBOW UP
	RECTANGULAR ELBOW DOWN
	ROUND ELBOW DOWN
	CONCENTRIC TRANSITION (DOUBLE LINE)
	CONCENTRIC TRANSITION (SINGLE LINE)
	ECCENTRIC TRANSITION (DOUBLE LINE)
	ECCENTRIC TRANSITION (SINGLE LINE)
	INCLINED RISE IN DIRECTION OF AIR FLOW (DOUBLE LINE)
	INCLINED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE)
	INCLINED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE)
	INCLINED DROP IN DIRECTION OF AIR FLOW (SINGLE LINE)
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	RETURN OR EXHAUST GRILLE
	TRANSFER GRILLE
	CROSS SECTION OF SUPPLY AIR DUCT
	CROSS SECTION OF EXHAUST OR RETURN AIR DUCT
	EXISTING FIRE DAMPER (HORIZONTAL)
	NEW FIRE DAMPER (HORIZONTAL)
	EXISTING FIRE DAMPER (VERTICAL)
	NEW FIRE DAMPER (VERTICAL)
	EXISTING SMOKE DAMPER
	NEW SMOKE DAMPER
	EXISTING COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
	NEW COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
	EXISTING COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	NEW COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	VOLUME DAMPER (MANUALLY ADJUSTABLE)
	MOTORIZED DAMPER
	SMOKE DETECTOR
	CO2 SENSOR
	THERMOSTAT OR TEMPERATURE SENSOR
	HUMIDISTAT OR HUMIDITY SENSOR
	RETURN OR EXHAUST / SUPPLY AIR FLOW

PIPING LEGEND	
ABBREV.	DESCRIPTION
—CA—	COMPRESSED AIR PIPING
—CD—	CONDENSATE DRAIN PIPING
—DT—	DRAIN TILE
—F—	FIRE PROTECTION PIPING
—FOR—	FUEL OIL RETURN PIPING
—FOS—	FUEL OIL SUPPLY PIPING
—G—	NATURAL GAS PIPING
—BCW—	BOOSTED-DOMESTIC COLD WATER PIPING
—BHW—	BOOSTED-DOMESTIC HOT WATER PIPING
—CW—	DOMESTIC COLD WATER PIPING
—NPCW—	NON POTABLE COLD WATER PIPING
—TW—	TEMPERED WATER PIPING
—HW—	DOMESTIC HOT WATER PIPING
—HW(XXX)—	DOMESTIC HOT WATER PIPING CIRCULATED AT XXX TEMPERATURE
—HWR—	DOMESTIC HOT WATER RETURN PIPING
—SAN—	SANITARY WASTE PIPING
—PSAN—	PUMPED SANITARY PIPING
—V—	VENT PIPING
—ST—	STORM SEWER PIPING
—PST—	PUMPED STORM PIPING
—RC—	RAIN CONDUCTOR PIPING
—ORC—	OVERFLOW RAIN CONDUCTOR PIPING
—CHWR—	CHILLED WATER RETURN PIPING
—CHWS—	CHILLED WATER SUPPLY PIPING
—CWR—	CONDENSER WATER RETURN PIPING
—CWS—	CONDENSER WATER SUPPLY PIPING
—HWR—	HEATING HOT WATER RETURN PIPING
—HHS—	HEATING HOT WATER SUPPLY PIPING
—HPLR—	HEAT PUMP LOOP RETURN PIPING
—HPLS—	HEAT PUMP LOOP SUPPLY PIPING
—RL—	REFRIGERANT LIQUID PIPING
—RS—	REFRIGERANT SUCTION PIPING
—HGB—	HOT GAS BY-PASS PIPING
—GXHR—	GEO HEAT EXCHANGE RETURN
—GXHS—	GEO HEAT EXCHANGE SUPPLY
—STM—	STEAM PIPING
—HPS—	HIGH PRESSURE STEAM PIPING
—LPS—	LOW PRESSURE STEAM PIPING
—CR—	STEAM CONDENSATE RETURN PIPING
—PCR—	PUMPED STEAM CONDENSATE RETURN PIPING
—LPC—	LOW PRESSURE CONDENSATE PIPING
—HPC—	HIGH PRESSURE CONDENSATE PIPING
—MA—	MEDICAL AIR PIPING
—N—	NITROGEN GAS PIPING
—O2—	OXYGEN GAS PIPING
—VAC—	VACUUM PIPING

APPLICABLE CODES AND REGULATIONS	
YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN PLUMBING CODE
2015	MICHIGAN MECHANICAL CODE
2015	MICHIGAN UNIFORM ENERGY CODE
2015	INTERNATIONAL FUEL GAS CODE
2012	NFPA 101 WITH BFS AMENDMENTS
2009	ICC/ANSI ACCESSIBLE AND USABLE BUILDING & FACILITIES
-	AMERICANS WITH DISABILITIES ACT ACCESSIBILITIES GUIDELINE (ADA-AG)

DRAWING INDEX	
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M2.0	MECHANICAL OVERALL PLAN
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MD4.0	ENLARGED BOILER MECHANICAL DEMO PLAN
P4.0	ENLARGED BOILER PLUMBING PLAN
P4.1	ENLARGED PLUMBING PLAN - AREA B
P4.2	ENLARGED PLUMBING PLAN - AREA L
M4.0	ENLARGED BOILER MECHANICAL PLAN
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M6.0	MECHANICAL SCHEDULES
M7.0	MECHANICAL PIPING DIAGRAMS
M8.0	TEMPERATURE CONTROLS

DRAWING NOTATION	
SYMBOL	DESCRIPTION
	NEW WORK KEY NOTE NO. 1
	DEMOLITION KEY NOTE NO. 1
EE-1	EQUIPMENT TAG
S-1 10x10 100-2	AIR TERMINAL TAG: IE: DIFFUSER TYPE = S-1 NECK SIZE = 10x10 CFM = 100 (TYPICAL FOR 2)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	EXISTING SYSTEM COMPONENT TO BE REMOVED
	POINT OF NEW CONNECTION
	SECTION NO. 4 SECTION NO. 6 SECTION NO. 6 SCALE: 1/4" = 1' - 0"
	SYSTEM RISER DESIGNATION RISER NUMBER
S:	SANITARY
D:	DOMESTIC WATER
H:	HEAT PIPING
SP:	STAIRWELL PRESSURIZATION
V:	VENT
E:	EXHAUST

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GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



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ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/09/21

JOB NO. 02900.060

SHEET TITLE
MECHANICAL GENERAL INFORMATION

SHEET NO.

M0.0

KINGS COTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN



Kingscott

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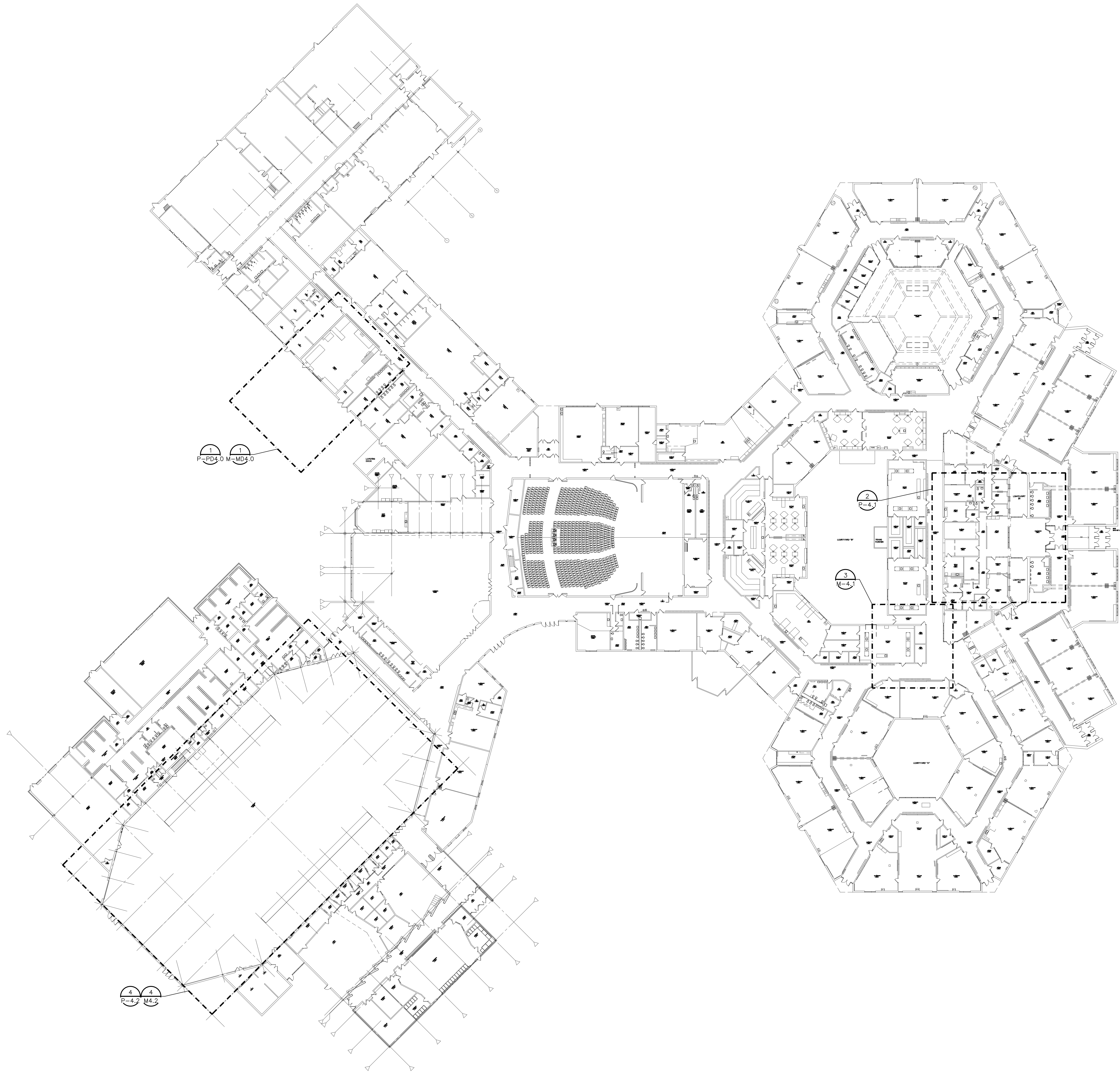
SALINE, MICHIGAN



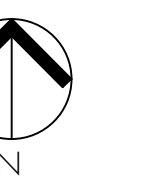
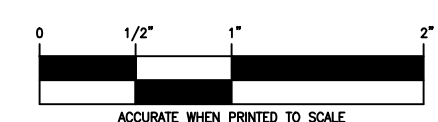
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MECHANICAL OVERALL PLAN
SCALE: 1/32" = 1'-0"



JOB NO. 02900.060

SHEET TITLE
MECHANICAL OVERALL PLAN

SHEET NO.

M2.0

KINGSKOTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN



MECHANICAL DEMOLITION NOTES

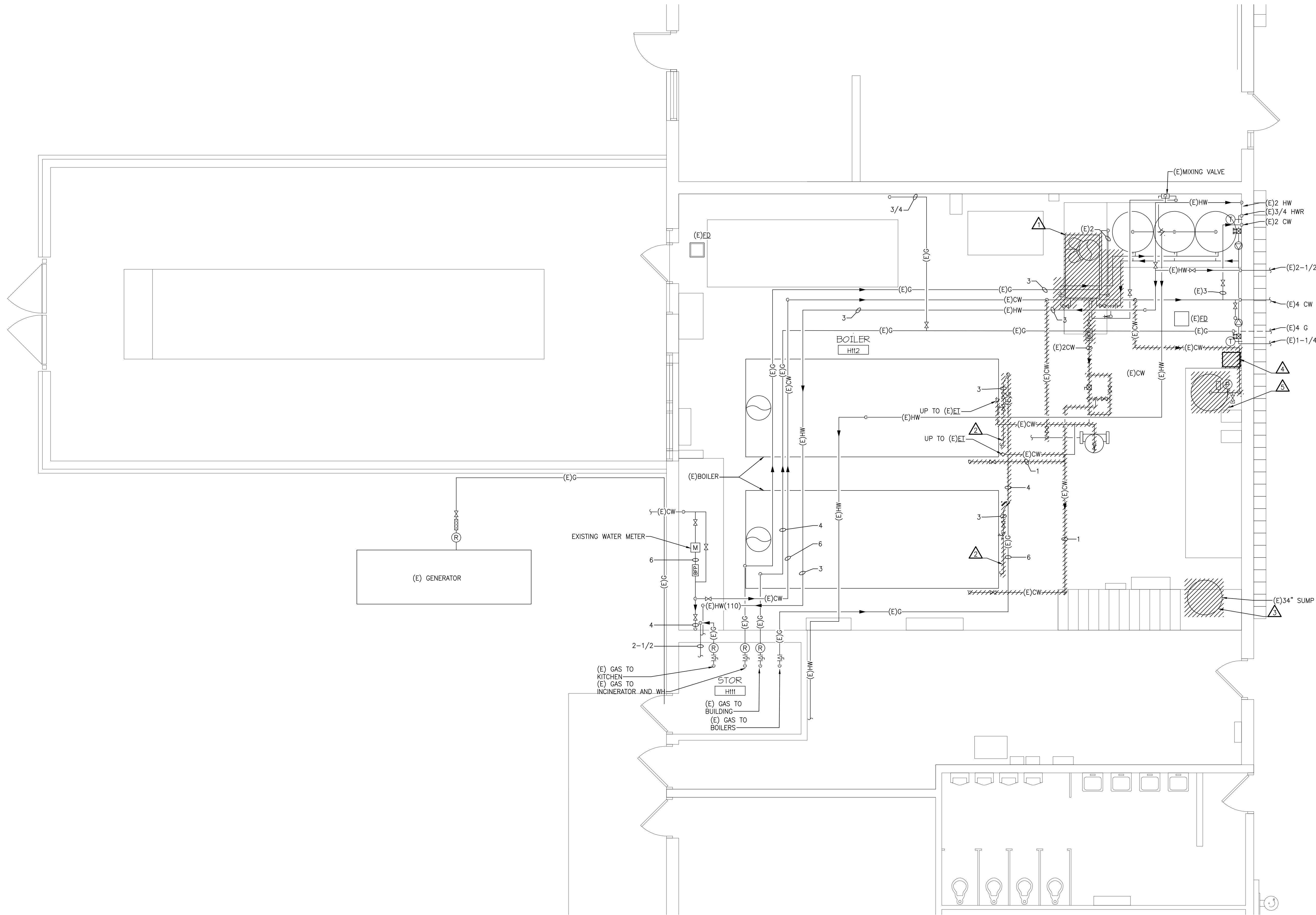
- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
- PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY ARCHITECT OF ANY INTERFERENCES OR DISCREPANCIES.
- VERIFY DEPTH, SIZE, LOCATIONS AND CONDITION OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
- ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
- ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
- ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETE, WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTS.
- ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE, WHERE DUCT OR PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER PROVIDED EQUIPMENT.
- REMOVE ALL EXISTING PIPING INSULATION ON THE MECHANICAL HVAC PIPING AND DOMESTIC WATER PIPING IN BOILER ROOM.

DEMOLITION KEYED NOTES

- EXISTING STACKED WATER HEATERS AND FLUES TO BE DEMOLISHED BY OTHERS. CONTRACTOR IS RESPONSIBLE FOR ALL OTHER DEMOLITION WORK RELATED TO HEATERS. DEMO THE EXISTING PIPING BACK TO THE NEAREST ISOLATION VALVE.
- RECLAIM THE EXISTING GAS TRAIN VALVES FOR THE FACILITY MAINTENANCE GROUP. REMOVE GAS PIPING AS INDICATED INCLUDING ANY GAS TRAIN VENTS OR ACCESSORIES, ETC.
- REMOVE THE EXISTING SUMP PUMP. STAGE WORK SO THERE IS NO DOWNTIME BETWEEN OLD PUMP REMOVAL AND NEW PUMP INSTALLATION.
- REMOVE EXISTING SERVICE SINK FAUCET.
- REMOVE THE EXISTING DOMESTIC HOT WATER EXPANSION TANK AND ITS ASSOCIATED PIPING AS SHOWN.

NOTE:

ALL DEMO AND INSTALLATION WORK SHALL BE SEQUENCED SUCH THAT COOLING TO SCHOOL SHALL REMAIN OPERATIONAL DURING WORKING HOURS. COORDINATE THE SCHEDULING OF THE DEMOLITION WORK WITH THE CM AND THE OWNER. BOILER AND WATER HEATER DEMOLITION (EQUIPMENT AND FLUES ONLY) TO BE DONE BY OTHERS AND THE MECHANICAL/PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL OTHER DEMOLITION RELATED TO THIS EQUIPMENT (PIPING, CONTROLS, ACCESSORIES, ETC). THE MECHANICAL/PLUMBING CONTRACTOR SHALL FULLY COORDINATE WORK WITH THE CM.



GYM & BOILER ROOM REMODELING

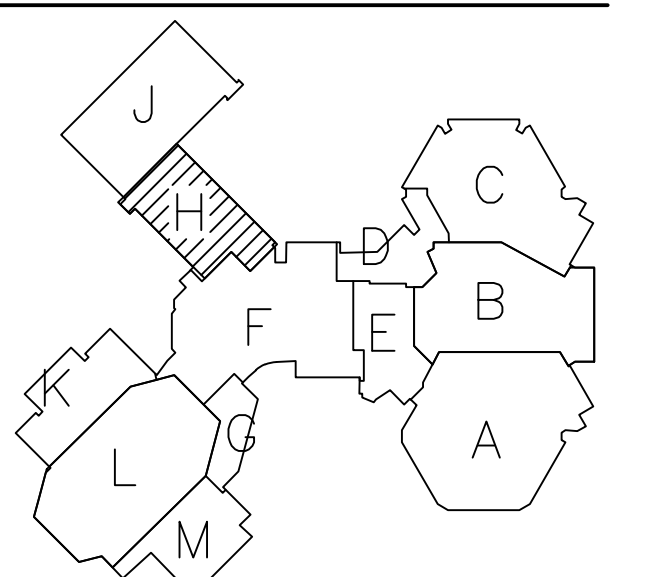
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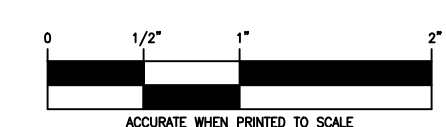


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KEY PLAN
JOB NO. 02900.060
SHEET TITLE
ENLARGED BOILER PLUMBING DEMO PLAN

SHEET NO.
PD4.0



ENLARGED BOILER PLUMBING DEMO PLAN
SCALE: 1/4" = 1'-0"



PLUMBING GENERAL NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE PLUMBING SYSTEMS COMPLETE AND PER APPLICABLE CODES INCLUDING REQUIRED COMPONENTS, OFFSETS REQUIRED TO AVOID THE STRUCTURE, ETC.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL PLUMBING FIXTURES, BOTH STANDARD AND BARRIER FREE. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE TYPES, BRANCH CONNECTION SIZES AND ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE STATE AND LOCAL COUNTY DEPARTMENT OF HEALTH CROSS CONTAMINATION CODE REQUIREMENTS.
- VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION. PRIOR TO STARTING ANY WORK, NOTIFY THE ARCHITECT/ENGINEER OF ANY INTERFERENCES OR DISCREPANCIES.
- CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING AND PIPING WORK WITH THE WORK OF ALL OTHER TRADES, EXISTING SITE CONDITIONS, AND EQUIPMENT MANUFACTURER RECOMMENDATIONS. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY NEW WORK.
- PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE AND SHALL MAINTAIN REQUIRED CLEARANCES OVER, AROUND AND IN FRONT OF ALL ELECTRICAL EQUIPMENT, PANELS, TRANSFORMERS, ETC. PIPING SHALL NOT INTERFERE WITH, OR BE INSTALLED IN A LOCATION THAT RESTRICTS ACCESS OR CLEARANCE TO ELECTRICAL OR MECHANICAL DEVICES. PROVIDE REQUIRED ACCESS AND CLEARANCE AROUND ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL MECHANICAL SYSTEMS.
- PROVIDE BRANCH LINE ISOLATION VALVES ON DOMESTIC PIPING TO EACH GROUP OF FIXTURES AND TOILET ROOMS.
- PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR VALVES/CLEANOUTS LOCATED IN WALLS OR ABOVE HARD CEILINGS. COORDINATE LOCATIONS WITH ARCHITECT. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS.
- PROVIDE "INLINE" TRAP SEAL PROTECTION OR TRAP PRIMER ON ALL FLOOR DRAINS AND TRAPS SUBJECT TO EVAPORATION.
- AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SHUT-OFF VALVE, TEE AND 6" LONG DIRT LEG WITH CAP. WEATHERPROOF PAINT ALL EXTERIOR GAS PIPING.

GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN

KEYED NOTES

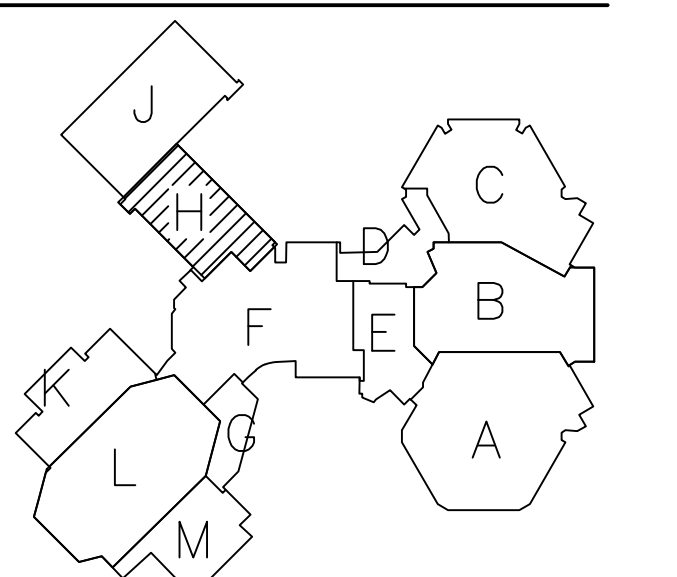
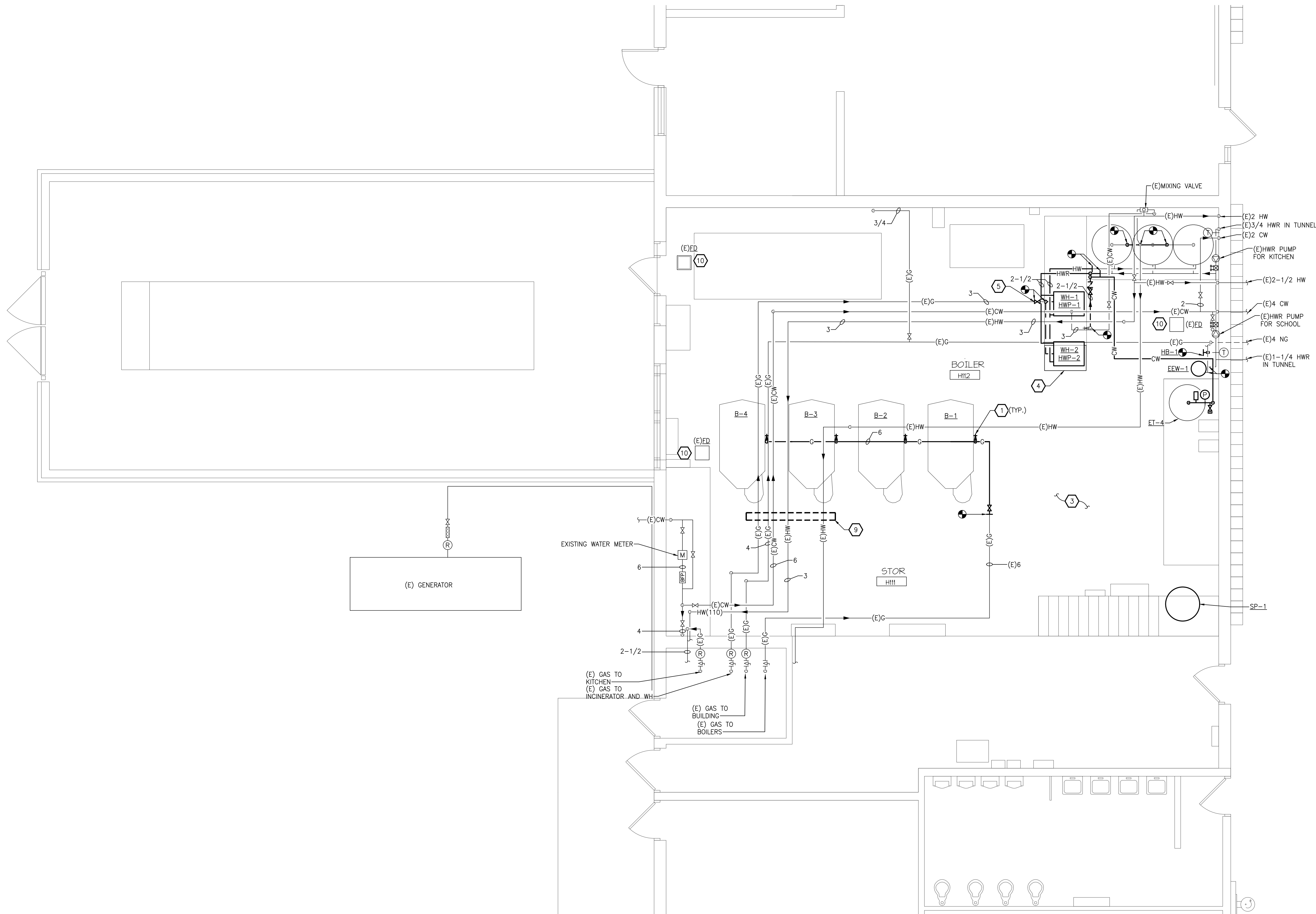
- 2 1/2" NATURAL GAS LINE WITH VALVE, DIRT LEG AND REGULATOR DOWN TO BOILER.
- DEMOLISH HW BRANCH TO LAVATORIES. RECONNECT TO EXISTING HW SERVING ADJACENT LAVATORIES (VIF). PROVIDE NEW 3/4" HWR BRANCH FROM NEW HW LINE TO MINIMIZE LENGTH OF UN-RECIRCULATED HW TO ALL LAVATORIES IN BATHROOM.
- PROVIDE NEW INSULATION AND PIPE LABELS FOR ALL EXISTING AND NEW DOMESTIC PIPING IN THE BOILER ROOM.
- MODIFY THE EXISTING PAD TO ALLOW FOR 24 INCH SPACING BETWEEN THE DOMESTIC HOT WATER HEATERS. COORDINATE WITH CM AND ARCH. PAD HEIGHT TO MATCH EXISTING.
- 3" NATURAL GAS LINE DOWN TO WATER HEATERS WITH VALVE, DIRT LEG AND REGULATOR. PROVIDE A NEW ISOLATION VALVE.
- DEMOLISH EXISTING DRINKING FOUNTAINS IN THIS LOCATION. INSTALL NEW ELECTRIC WATER COOLER AND BOTTLE FILLER. MODIFY THE EXISTING COLD WATER SUPPLY LINE TO SERVE THE NEW WATER FILTER, WATER COOLER AND BOTTLE FILLER. RECONNECT TO EXISTING SANITARY AND VENT PIPING WITHIN WALL. VERIFY IN FIELD.
- CONTRACTOR TO REMOVE AND REPLACE CEILING TILES AS REQUIRED TO PERFORM WORK IN THIS AREA. COORDINATE WITH CM.
- CONTRACTOR TO REMOVE AND PATCH/PAINT DRYWALL CEILING AS REQUIRED TO PERFORM WORK IN THIS AREA. COORDINATE WITH CM AND ARCH.
- CONTRACTOR SHALL RELOCATE PIPING IF REQUIRED FOR NEW BOILER INSTALLATION AND TO MAINTAIN 24" TOP CLEARANCE TO NEW BOILERS. VERIFY IN FIELD WITH MECHANICAL CONTRACTOR.
- CONTRACTOR CAMERA THE EXISTING SANITARY LINES IN BOILER ROOM SANITARY PIPING AND CLEAN/SNAKE/JET PIPING AND POWER WASH THE EXISTING FLOOR SINK SEDIMENT BUCKETS.



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ISSUANCES	DATE
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KEY PLAN

JOB NO. 02900.060

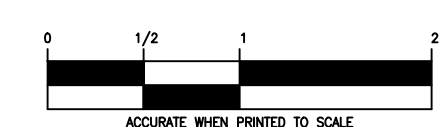
SHEET TITLE
ENLARGED BOILER PLUMBING PLAN

SHEET NO.

P4.0

KINGSKOTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN

ENLARGED BOILER PLUMBING PLAN
SCALE: 1/4" = 1'-0"



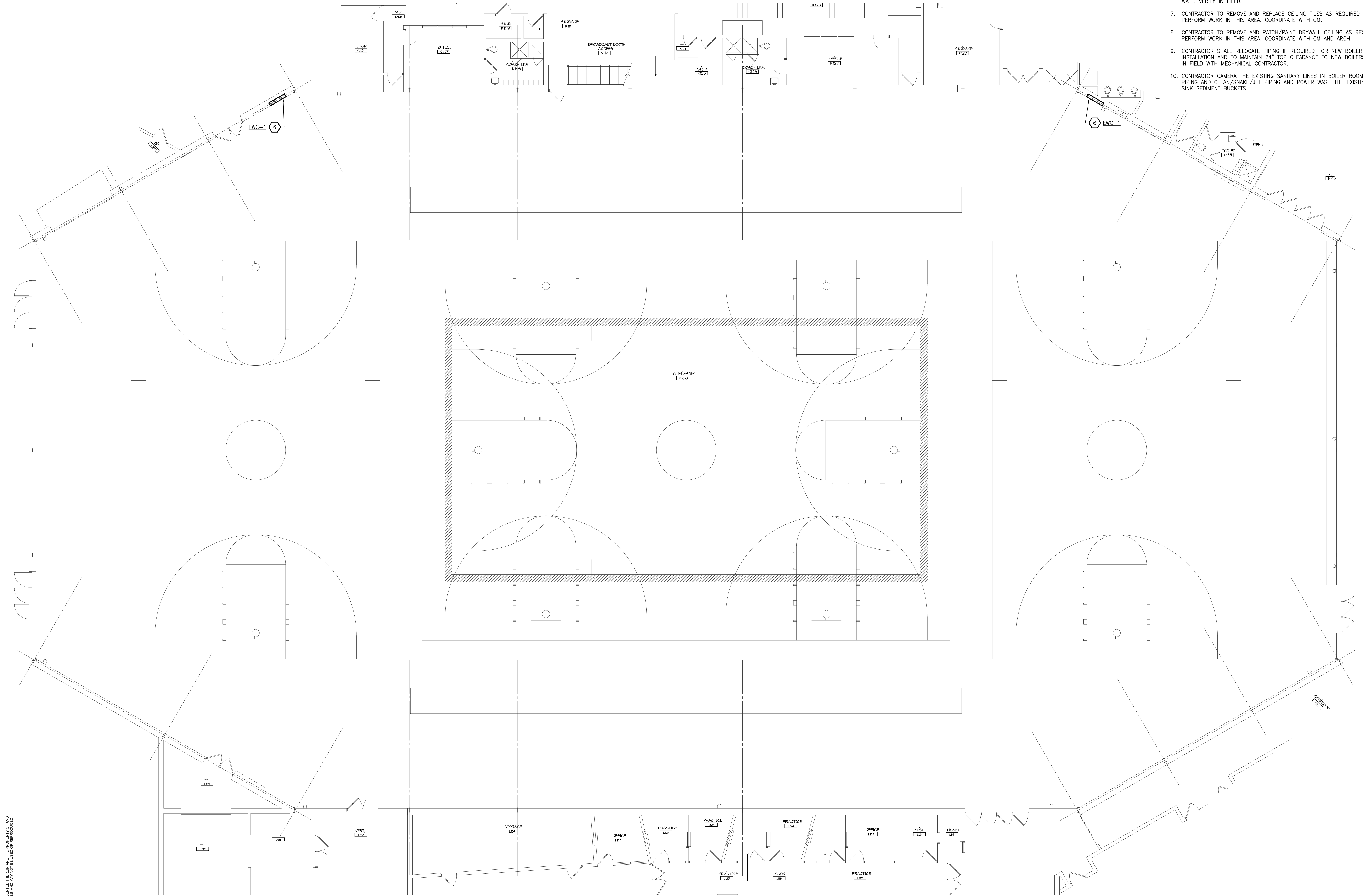


PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE PLUMBING SYSTEMS COMPLETE AND PER APPLICABLE CODES INCLUDING REQUIRED COMPONENTS, OFFSETS REQUIRED TO AVOID THE STRUCTURE, ETC.
2. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL PLUMBING FIXTURES, BOTH STANDARD AND BARRIER FREE. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE TYPES, BRANCH CONNECTION SIZES AND ADDITIONAL REQUIREMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE STATE AND LOCAL COUNTY DEPARTMENT OF HEALTH CROSS CONTAMINATION CODE REQUIREMENTS.
4. VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION, PRIOR TO STARTING ANY WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY INTERFERENCES OR DISCREPANCIES.
5. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING AND PIPING WORK WITH THE WORK OF ALL OTHER TRADES, EXISTING SITE CONDITIONS, AND EQUIPMENT MANUFACTURER RECOMMENDATIONS. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY NEW WORK.
6. PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE AND SHALL MAINTAIN REQUIRED CLEARANCES OVER, AROUND AND IN FRONT OF ALL ELECTRICAL EQUIPMENT, PANELS, TRANSFORMERS, ETC. PIPING SHALL NOT INTERFERE WITH, OR BE INSTALLED IN A LOCATION THAT RESTRICTS ACCESS OR CLEARANCE TO ELECTRICAL OR MECHANICAL DEVICES. PROVIDE REQUIRED ACCESS AND CLEARANCE AROUND ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
7. CONTRACTOR SHALL PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL MECHANICAL SYSTEMS.
8. PROVIDE BRANCH LINE ISOLATION VALVES ON DOMESTIC PIPING TO EACH GROUP OF FIXTURES AND TOILET ROOMS.
9. PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR VALVES/CLEANOUTS LOCATED IN WALLS OR ABOVE HARD CEILINGS. COORDINATE LOCATIONS WITH ARCHITECT. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS.
10. PROVIDE "INLINE" TRAP SEAL PROTECTION OR TRAP PRIMER ON ALL FLOOR DRAINS AND TRAPS SUBJECT TO EVAPORATION.
11. AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SHUT-OFF VALVE, TEE AND 6" LONG DIRT LEG WITH CAP. WEATHERPROOF PAINT ALL EXTERIOR GAS PIPING.

KEYED NOTES

1. 2 1/2" NATURAL GAS LINE WITH VALVE, DIRT LEG AND REGULATOR DOWN TO BOILER.
2. DEMOLISH HW BRANCH TO LAVATORIES. RECONNECT TO EXISTING HW SERVING ADJACENT LAVATORIES (VIF). PROVIDE NEW 3/4" HWR BRANCH FROM NEW HW LINE TO MINIMIZE LENGTH OF UN-RECIRCULATED HW TO ALL LAVATORIES IN BATHROOM.
3. PROVIDE NEW INSULATION AND PIPE LABELS FOR ALL EXISTING AND NEW DOMESTIC PIPING IN THE BOILER ROOM.
4. MODIFY THE EXISTING PAD TO ALLOW FOR 24 INCH SPACING BETWEEN THE DOMESTIC HOT WATER HEATERS. COORDINATE WITH CM AND ARCH. PAD HEIGHT TO MATCH EXISTING.
5. 3" NATURAL GAS LINE DOWN TO WATER HEATERS WITH VALVE, DIRT LEG AND REGULATOR. PROVIDE A NEW ISOLATION VALVE.
6. DEMOLISH EXISTING DRINKING FOUNTAINS IN THIS LOCATION. INSTALL NEW ELECTRIC WATER COOLER AND BOTTLE FILLER. MODIFY THE EXISTING COLD WATER SUPPLY LINE TO SERVE THE NEW WATER FILTER, WATER COOLER AND BOTTLE FILLER. RECONNECT TO EXISTING SANITARY AND VENT PIPING WITHIN WALL. VERIFY IN FIELD.
7. CONTRACTOR TO REMOVE AND REPLACE CEILING TILES AS REQUIRED TO PERFORM WORK IN THIS AREA. COORDINATE WITH CM.
8. CONTRACTOR TO REMOVE AND PATCH/PAINT DRYWALL CEILING AS REQUIRED TO PERFORM WORK IN THIS AREA. COORDINATE WITH CM AND ARCH.
9. CONTRACTOR SHALL RELOCATE PIPING IF REQUIRED FOR NEW BOILER INSTALLATION AND TO MAINTAIN 24" TOP CLEARANCE TO NEW BOILERS. VERIFY IN FIELD WITH MECHANICAL CONTRACTOR.
10. CONTRACTOR CAMERA THE EXISTING SANITARY LINES IN BOILER ROOM SANITARY PIPING AND CLEAN/SNAKE/JET PIPING AND POWER WASH THE EXISTING FLOOR SINK SEDIMENT BUCKETS.



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GYM & BOILER ROOM REMODELING

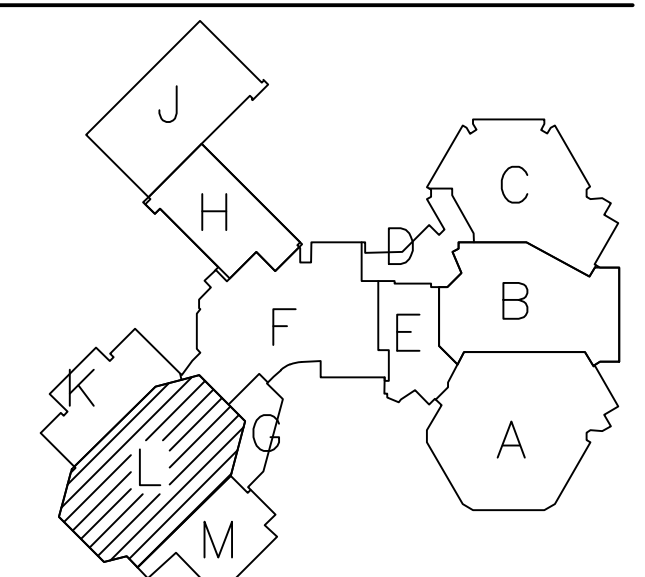
SALINE MIDDLE SCHOOL
 SALINE, MICHIGAN



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KEY PLAN

JOB NO. 02900.060
 SHEET TITLE
 ENLARGED PLUMBING PLAN - AREA L

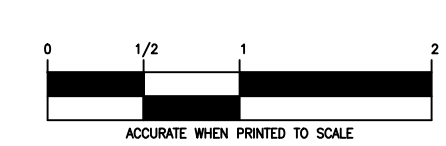
SHEET NO.

P4.2

KINGS-COTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN

ENLARGED PLUMBING PLAN - AREA L

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



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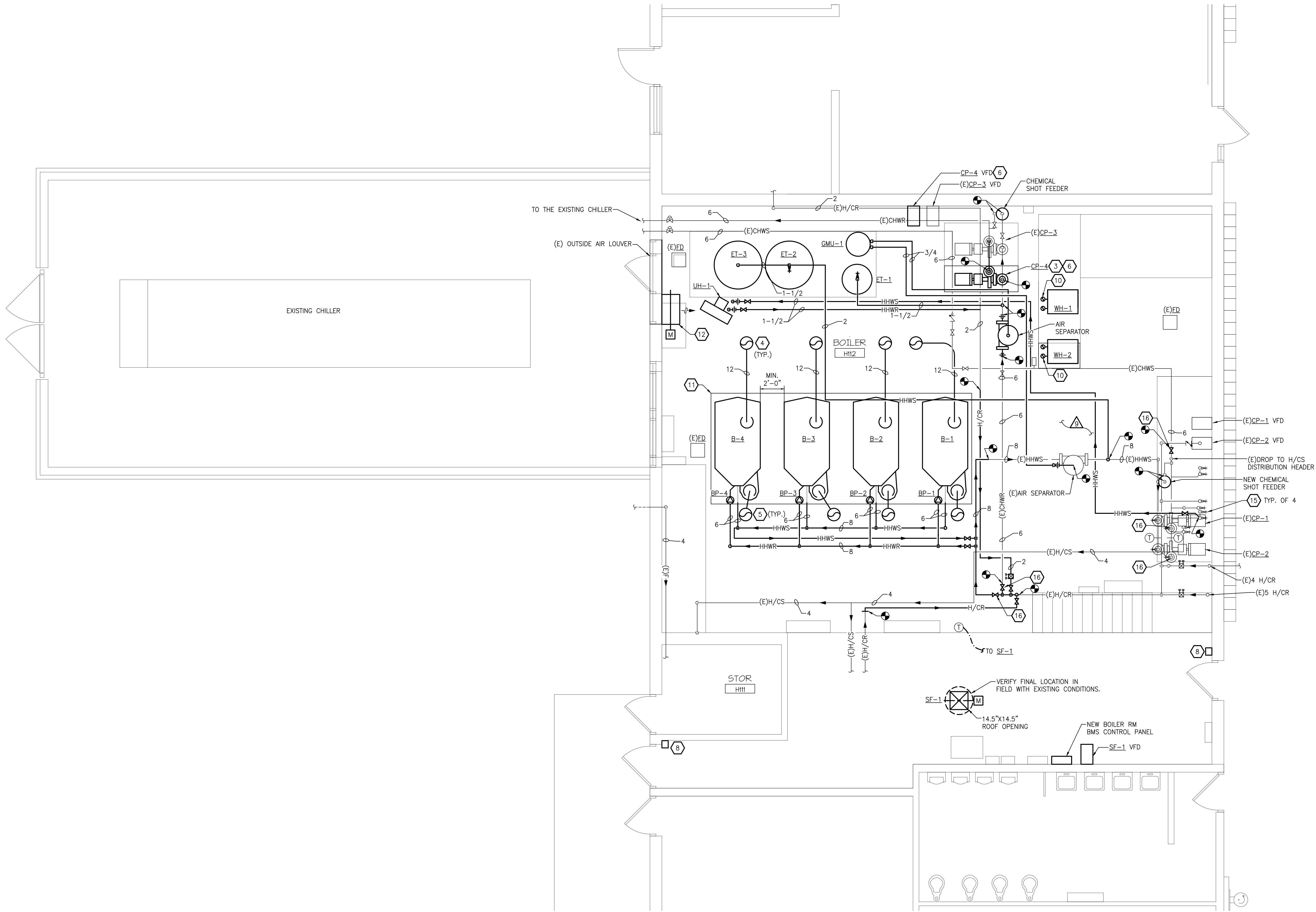


HVAC GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE HVAC SYSTEMS COMPLETE PER SPECIFICATION, SMACNA STANDARDS, AND PER APPLICABLE CODES INCLUDING ALL NECESSARY OFFSETS, FITTINGS, SPECIAL RADIIUS OR MITERED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR STRUCTURAL CONDITIONS OR OTHER CONDITIONS.
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3. DUCTWORK/PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE AND SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
4. DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
5. COORDINATE FLOOR, WALL, ROOF PENETRATIONS, LOUVER SIZES, PAD LOCATIONS ETC. WITH ARCHITECTURAL TRADES. SEAL ALL PIPING AND DUCT PENETRATIONS.

GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



KEYED NOTES

1. PROVIDE NEW DIFFERENTIAL PRESSURE SENSOR ON EXISTING PIPING. TIE INTO NEW TRANE SC CONTROLLER AND EXISTING BMS FOR MONITORING. CONTRACTOR SHALL REMOVE AND REPLACE CEILING TILE AS REQUIRED TO PERFORM WORK.
2. PROVIDE NEW TRANE SC CONTROLLER IN EXISTING MECHANICAL ROOM. TIE TWO (E) ELECTRIC METERS INTO NEW CONTROLLER FOR BMS MONITORING. TIE NEW CONTROLLER INTO EXISTING TRANE ENSEMBLE BMS. VERIFY IN FIELD EXACT CONTROLLER LOCATION AND METER TIE IN POINT.
3. PROVIDE NEW 4" HOUSEKEEPING PAD FOR NEW CHILLED WATER PUMP. MECHANICAL CONTRACTOR SHALL LAYOUT AND COORDINATE REQUIREMENTS OF EQUIPMENT PADS WITH ARCHITECTURAL TRADES.
4. 12" BOILER COMBUSTION AIR INTAKE UP TO THE ROOF. VERIFY ROUTING IN FIELD WITH EXISTING UTILITIES, STRUCTURE, ETC. FOLLOW MFR GUIDELINES AND CODES. ALL INTAKES SHALL TERMINATE AT SAME HEIGHT.
5. 12" STAINLESS STEEL BOILER FLUE VENT UP TO THE ROOF. VERIFY ROUTING IN FIELD WITH EXISTING UTILITIES, STRUCTURE, ETC. FOLLOW MFR GUIDELINES AND CODES. ALL FLUES SHALL TERMINATE AT SAME HEIGHT.
6. TIE THE NEW CHILLED PUMP INTO THE EXISTING TRANE BMS SYSTEM.
7. RELOCATE EXISTING AHU THERMOSTATS AS REQUIRED TO AVOID NEW BLEACHERS. COORDINATE WITH ARCH BLEACHER LAYOUT.
8. EMERGENCY STOP FOR PLUMBING AND HYDRONIC SYSTEMS. REFER TO DRAWING M8.0 AND ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES AND DETAILS.
9. PROVIDE NEW INSULATION AND PIPING LABELS FOR ALL NEW AND EXISTING BOILER ROOM PIPING.
10. 4" WATER HEATER COMBUSTION AIR AND FLUE VENT UP THROUGH ROOF. FLUE SHALL BE STAINLESS STEEL. VERIFY ROUTING IN FIELD WITH EXISTING UTILITIES, STRUCTURE, ETC. FOLLOW MFR GUIDELINES AND CODES. ALL FLUES SHALL TERMINATE AT SAME HEIGHT. ALL INTAKES SHALL TERMINATE AT SAME HEIGHT.
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12. ATTACH A NEW 36"X18" DUCT WITH AN INTERNAL MOTORIZED LOW VOLTAGE DAMPER TO THE EXISTING WALL LOUVER. INSULATE AND BLANK OFF THE UNUSED PORTION OF LOUVER.
13. COORDINATE THE EXACT LOCATION OF THE NEW "TRIANC" CONTROLLERS FOR THE DESTRATIFICATION FANS WITH THE OWNER IN THE FIELD.
14. EXTEND WIRING FROM THE "TRIANC" CONTROLLER TO ALL DESTRATIFICATION FANS IN THE DESIGNATED CONTROL ZONE. REFER TO SHEET M8.0.
15. PROVIDE NEW 2-WAY CONTROL VALVE TO BUILDING DISTRIBUTION PIPING ZONES. PROVIDE UNIONS AND ACCESSORIES AS REQUIRED.
16. MANUAL SYSTEM CHANGE-OVER VALVE.

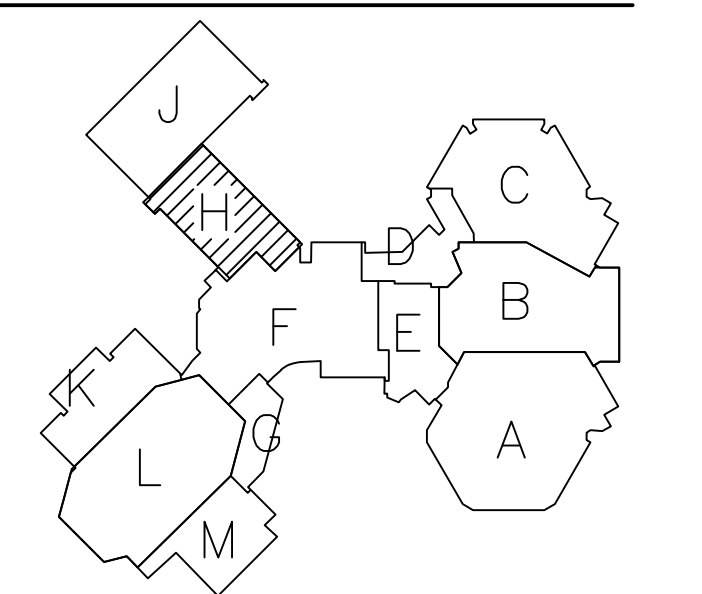


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KEY PLAN

JOB NO. 02900.060

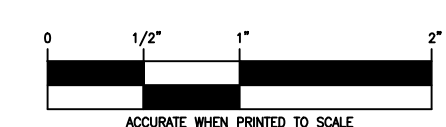
SHEET TITLE
ENLARGED BOILER MECHANICAL PLAN

SHEET NO.

M4.0

KINGSKOTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN

ENLARGED BOILER MECHANICAL PLAN
SCALE: 1/4" = 1'-0"





GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



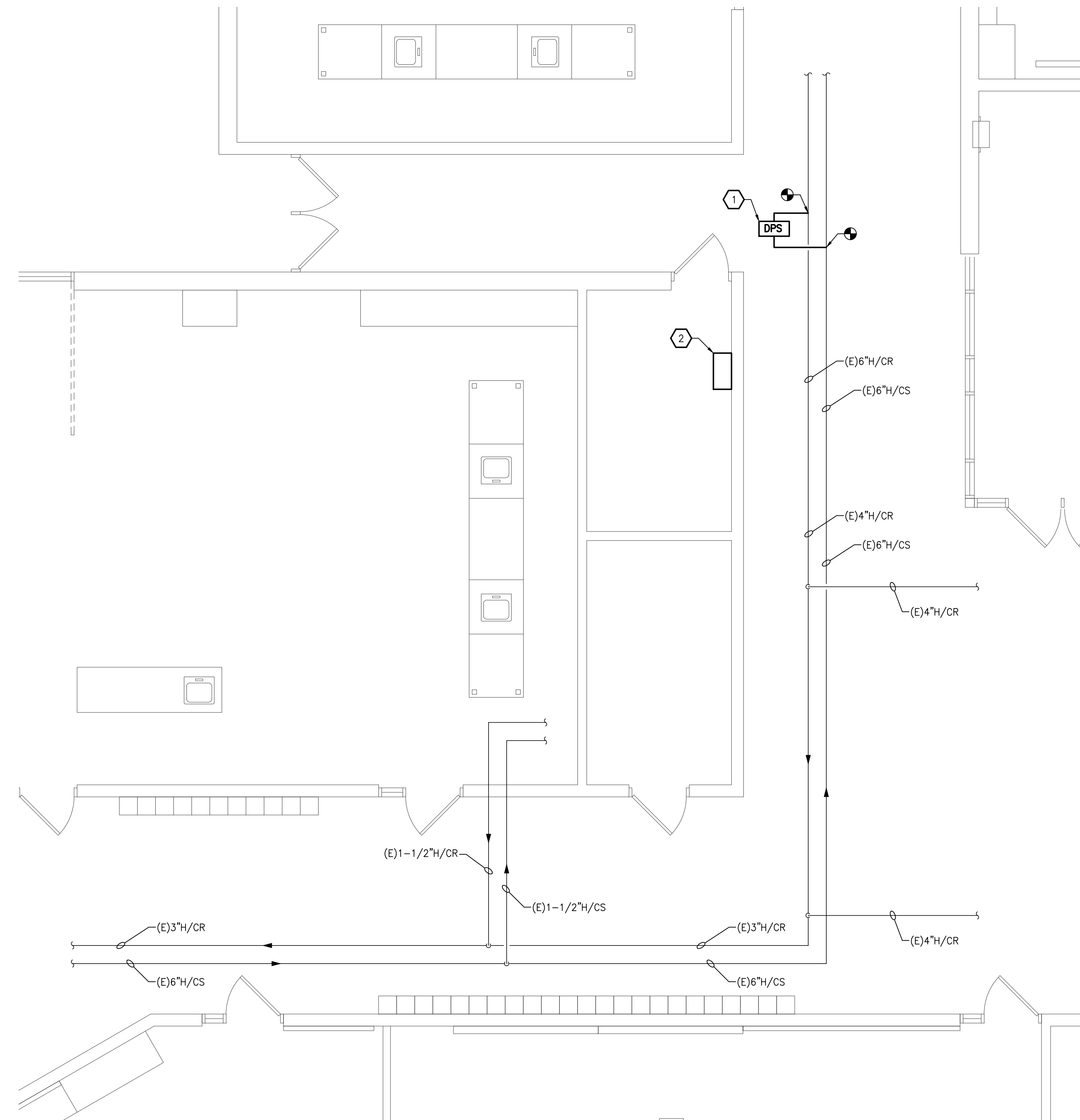
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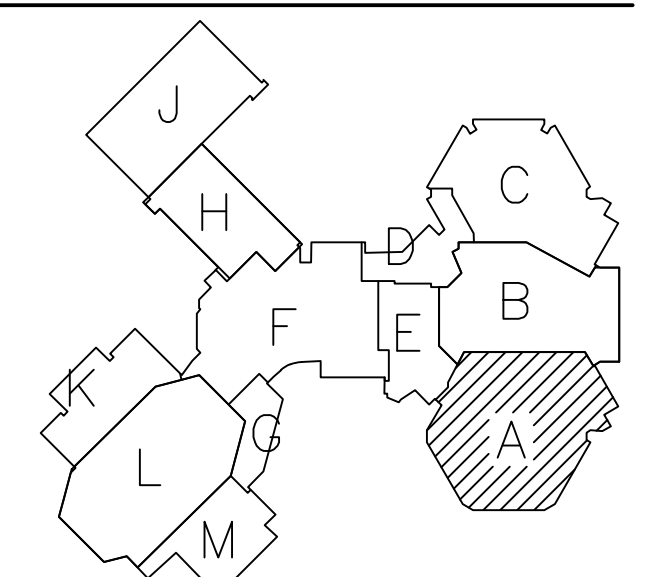
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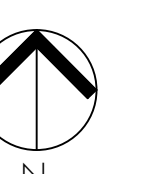


KEYED NOTES

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- MANUAL SYSTEM CHANGE-OVER VALVE.



KEY PLAN



JOB NO. 02900.060

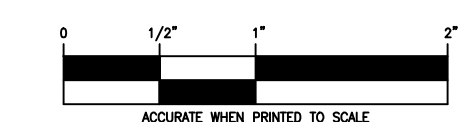
SHEET TITLE
ENLARGED MECHANICAL PLAN - AREA A

SHEET NO.

M4.1

KINGSKOTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN

ENLARGED MECHANICAL PLAN - AREA A
SCALE: 1/4" = 1'-0"





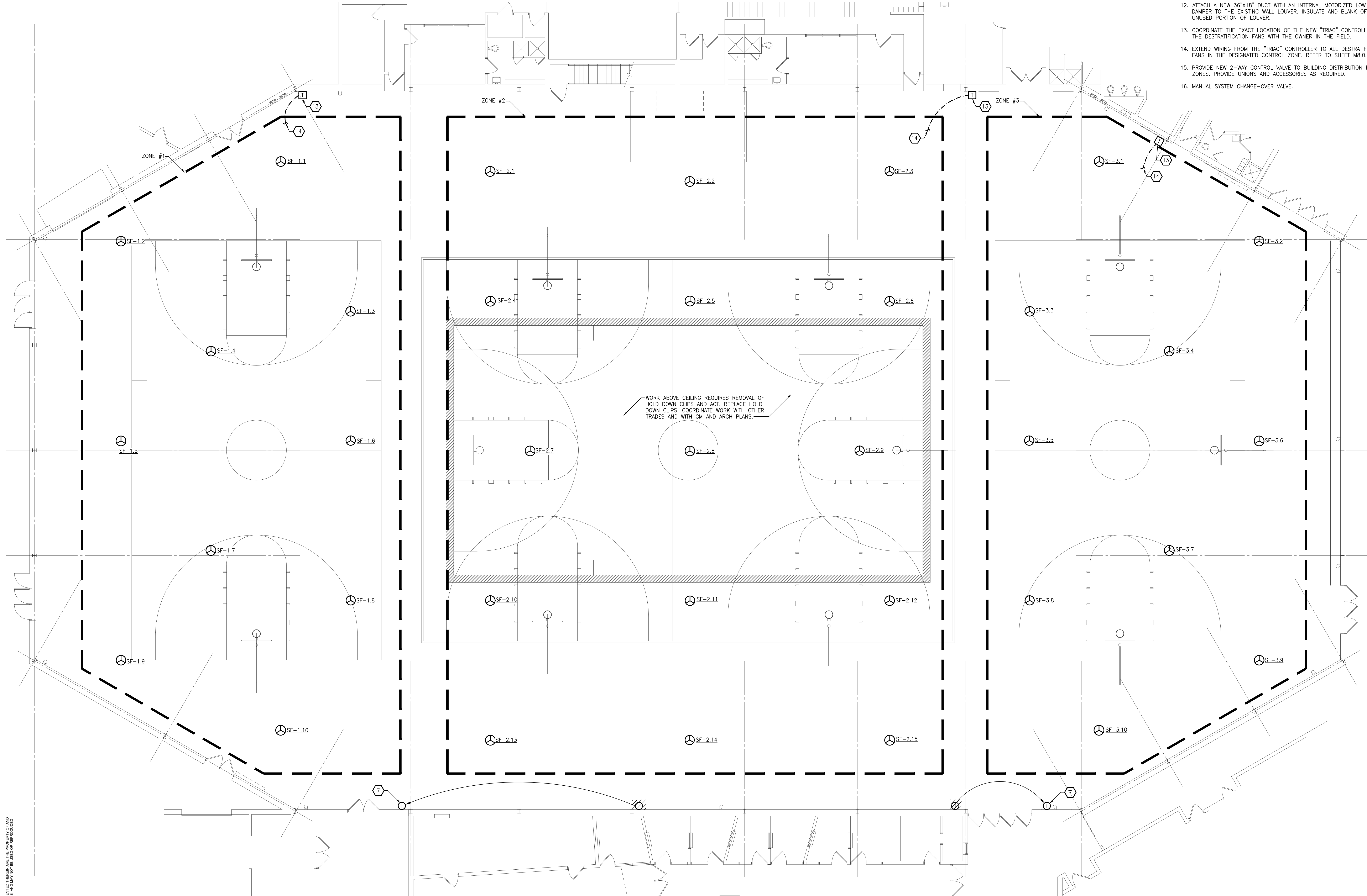
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GYM & BOILER ROOM REMODELING

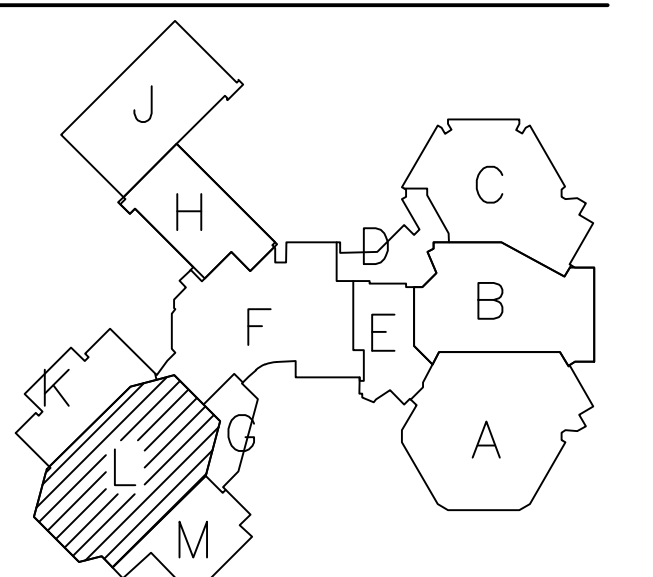
SALINE MIDDLE SCHOOL
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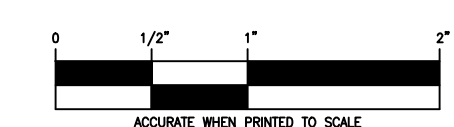
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 ENLARGED MECHANICAL PLAN - AREA L

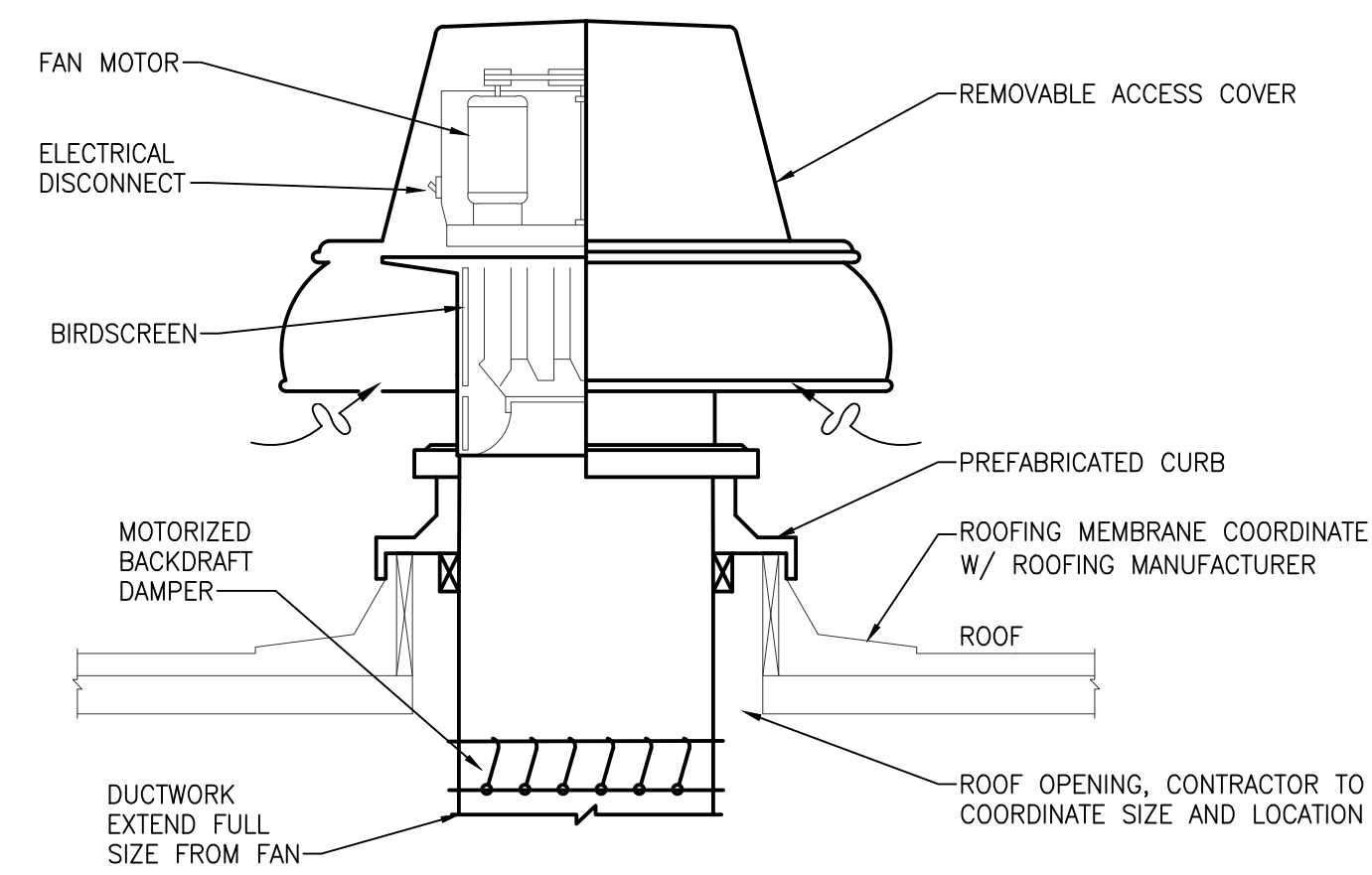
SHEET NO.

M4.2

KINGSKOTT ASSOCIATES INC. KALAMAZOO, MICHIGAN

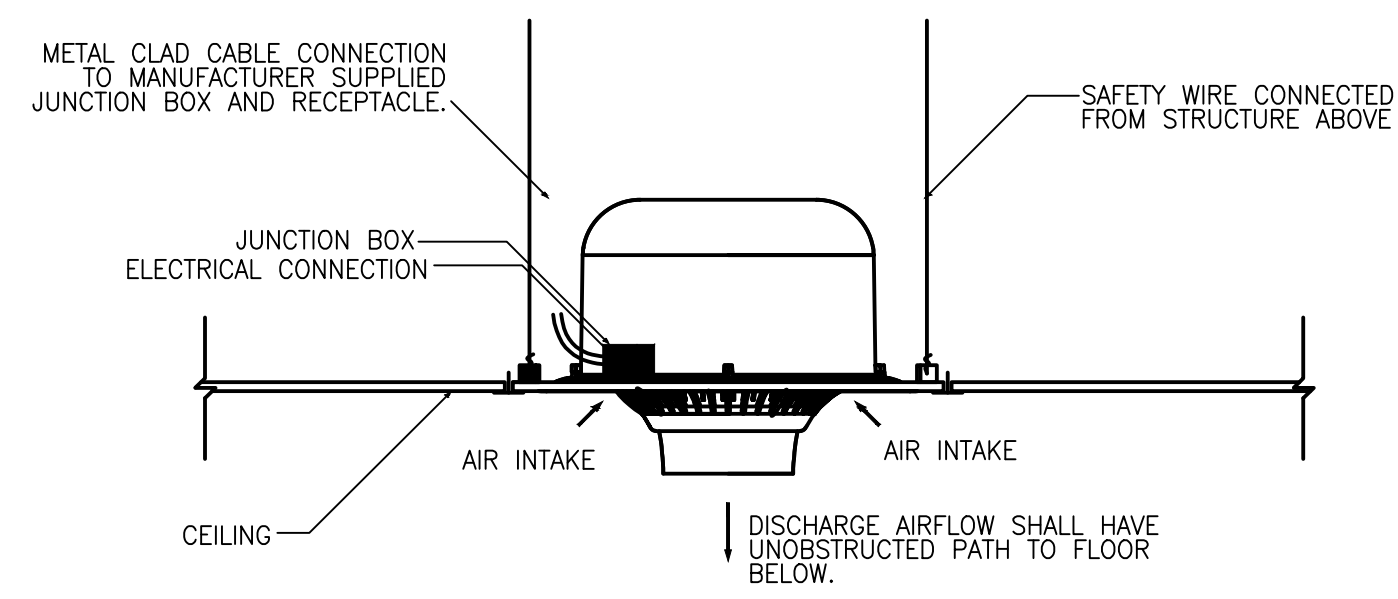
ENLARGED MECHANICAL PLAN - AREA L
 SCALE: 1/8" = 1'-0"





ROOF SUPPLY FAN MOUNTING DETAIL

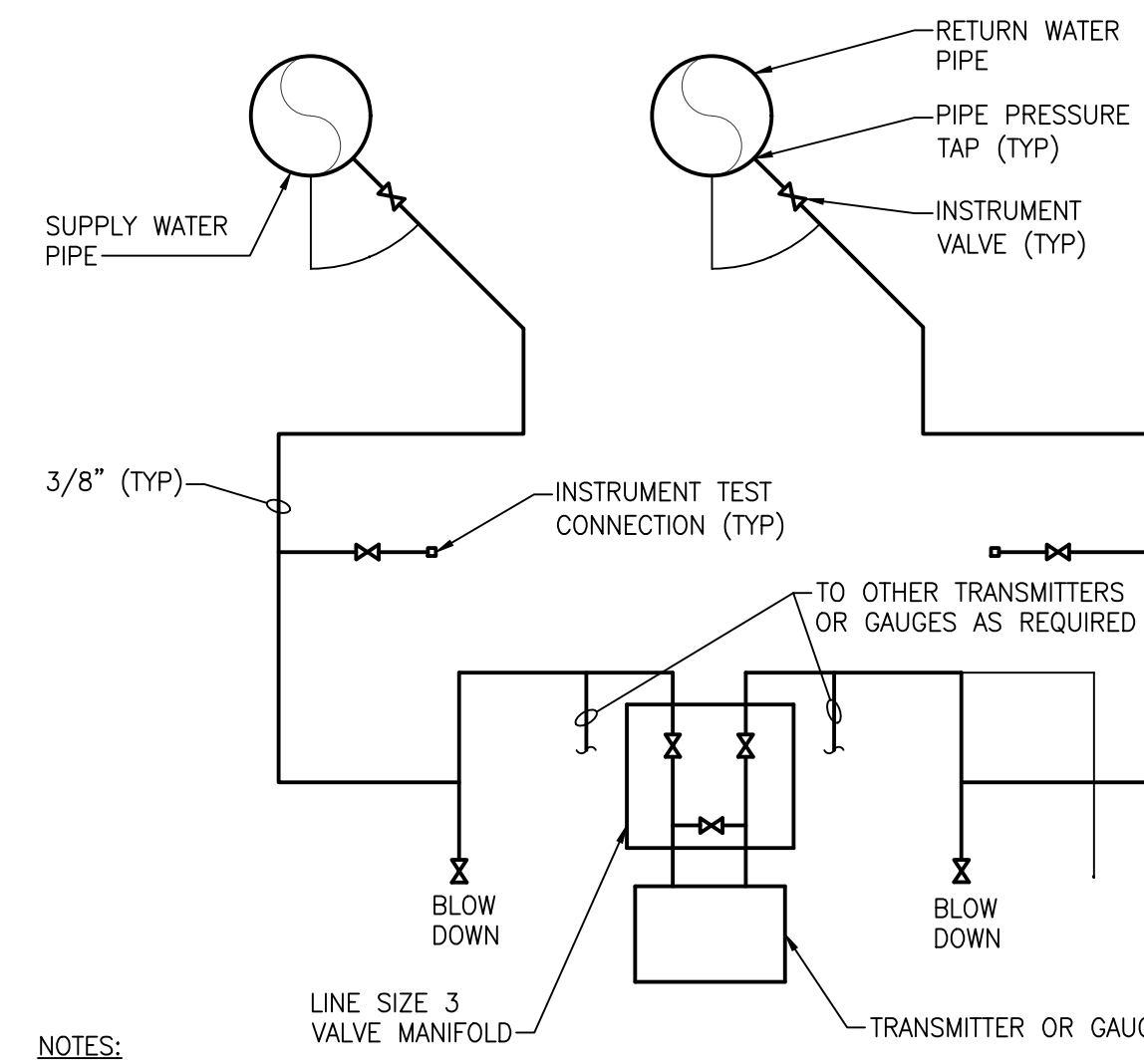
NO SCALE



DESTRATIFICATION FAN DETAIL

NO SCALE

- NOTES:
1. CONTRACTOR SHALL INSTALL METAL CLAD CABLE TO MANUFACTURER SUPPLIED JUNCTION BOX AND RECEPTACLE.
 2. DRILL EACH OF THE FOUR RIGHT ANGLE CORNER TABS AND SECURE TO THE STRUCTURE ABOVE WITH MECHANICS WIRE.

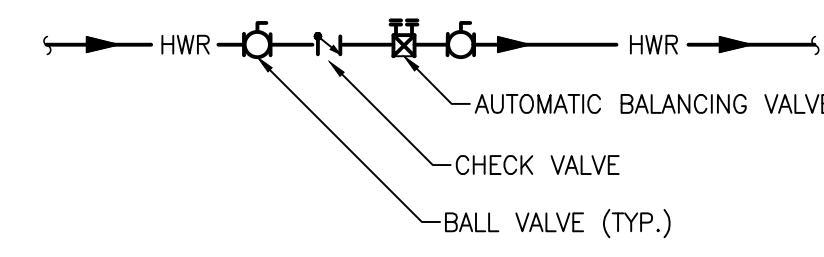


NOTES:

1. ON HORIZONTAL PIPES, INSTALL PIPE PRESSURE TAP AT 45° ANGLE FROM BOTTOM OF PIPE.
2. PROVIDE LINE SIZE 3-VALVE MANIFOLD AS INDICATED FOR EACH TRANSMITTER AND GAUGE.

DIFFERENTIAL PRESSURE SENSING DEVICE DETAIL

NO SCALE

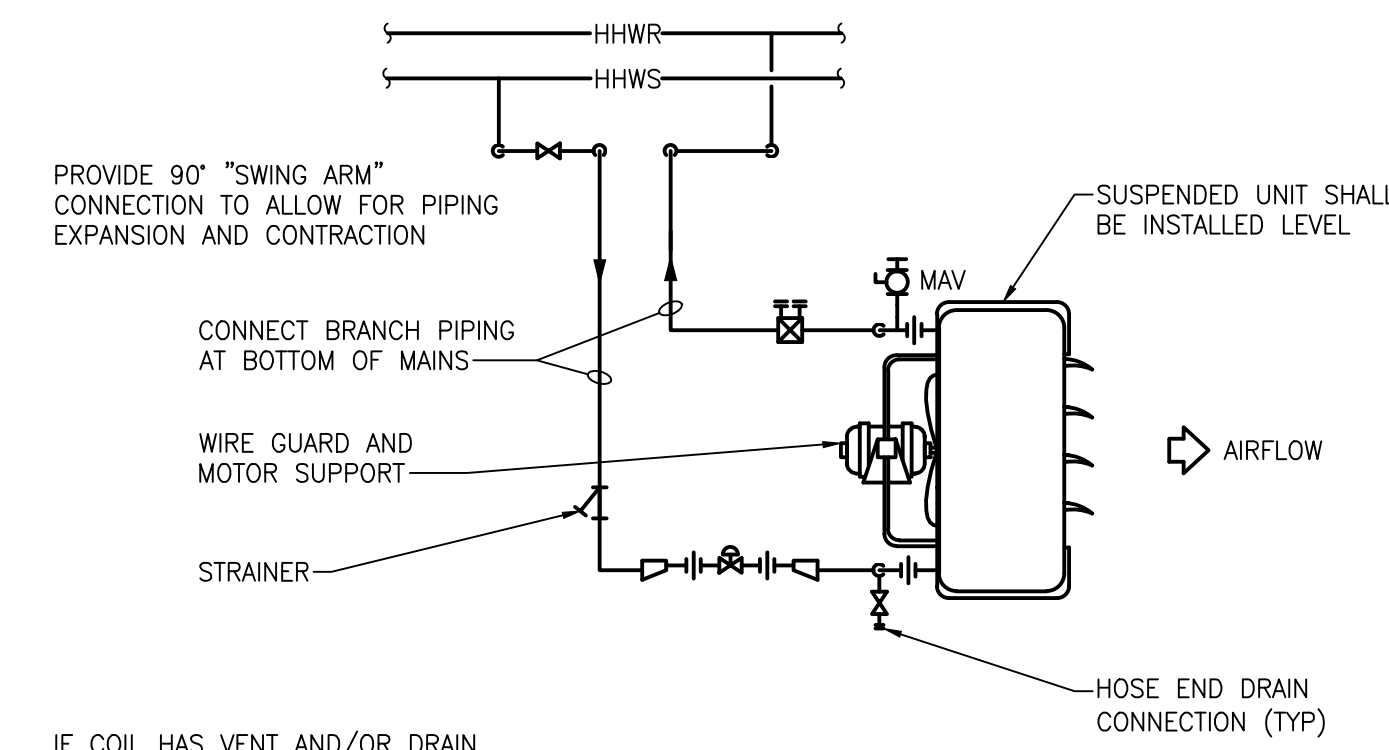


NOTES:

1. PROVIDE FOR ALL HWR CONNECTIONS TO HW MAIN BRANCH. REFER TO PLANS FOR BALANCING VALVE GPM.

HOT WATER RETURN CONNECTION DETAIL

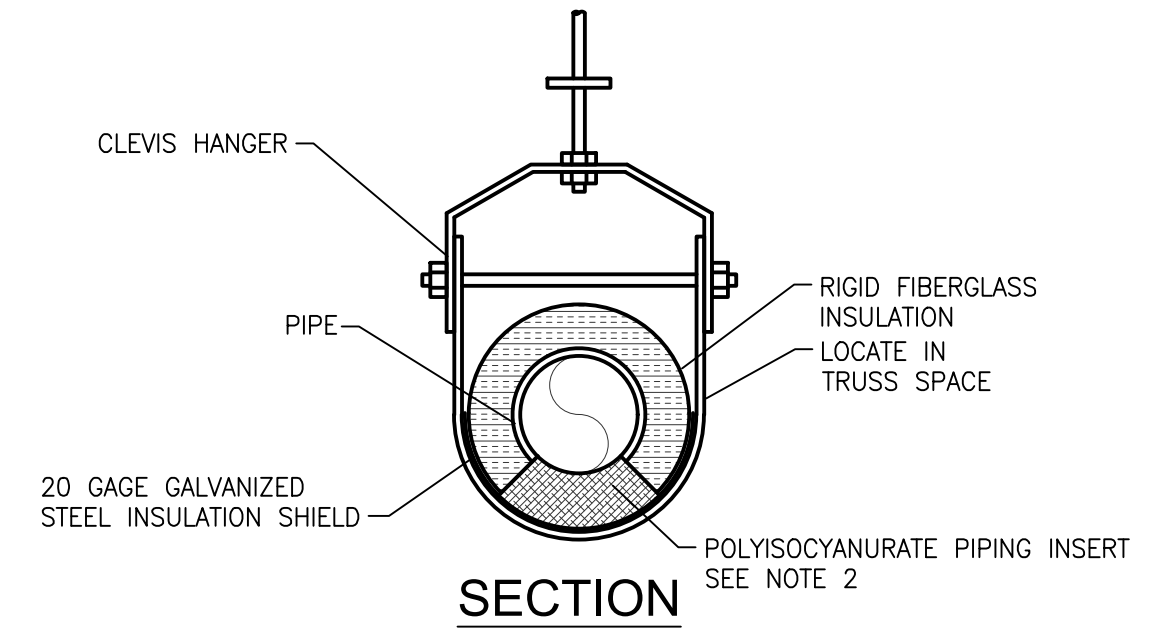
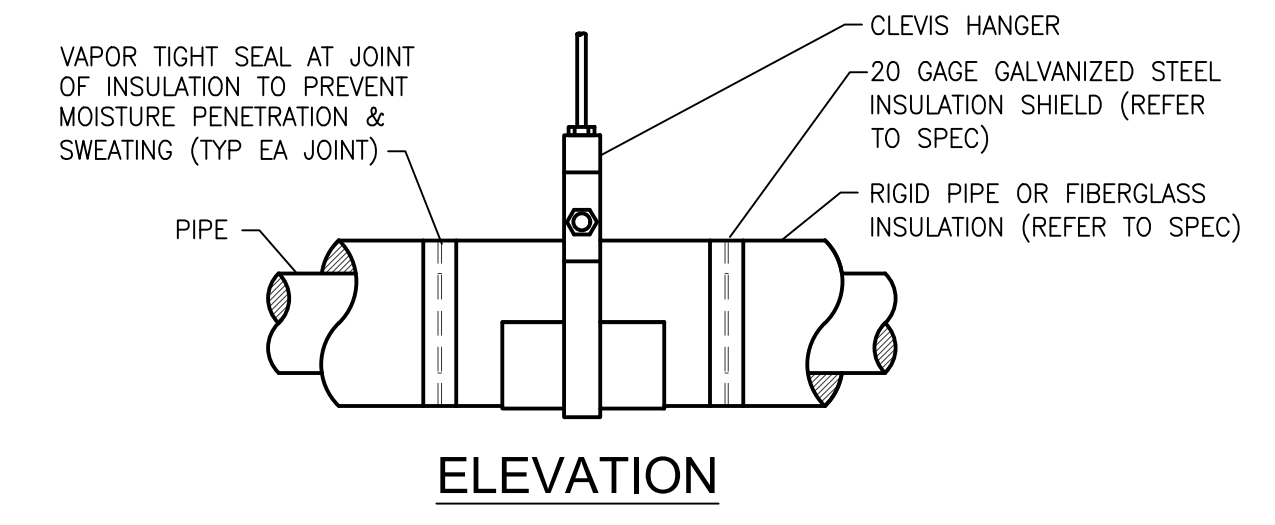
NO SCALE



IF COIL HAS VENT AND/OR DRAIN CONNECTIONS THEY ARE TO BE USED IN LIEU OF INSTALLING IN PIPING AS INDICATED

HOT WATER UNIT HEATER PIPING 2-WAY DIAGRAM

NO SCALE

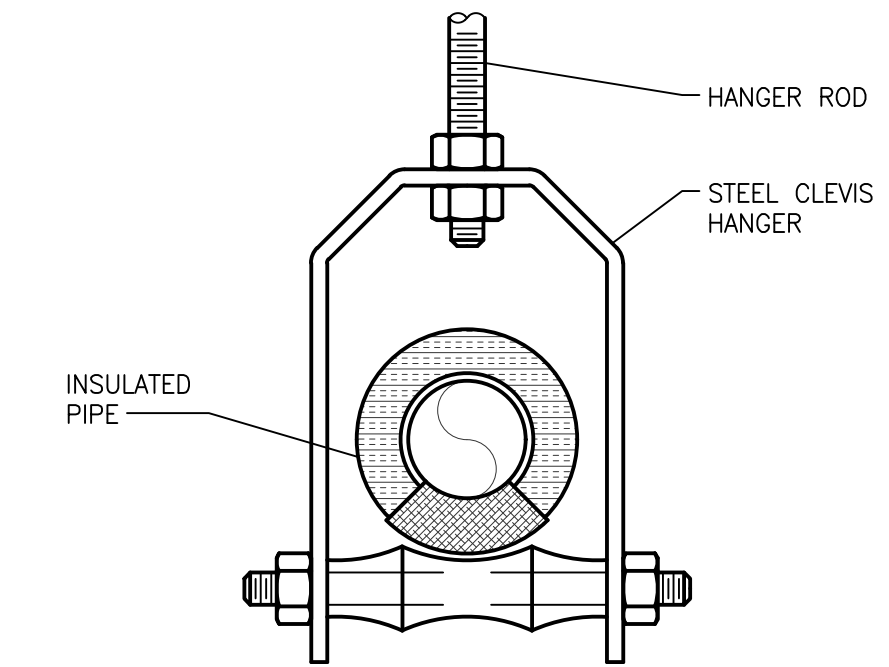


INSTALLATION NOTES:

1. PRE-INSULATED PIPE SUPPORTS SHALL BE USED FOR PROPER ALIGNMENT OF PIPING.
2. PROVIDE 3 PCF POLYISOCYANURATE PIPING INSERT THAT IS SIZED TO BUTT AGAINST RIGID FIBERGLASS PIPING INSULATION. MANUFACTURER TO BE BUCKROOS TRU-BALANCE 2550FS INSULATED SADDLES OR EQUAL.

INSULATED PIPE HANGER DETAIL

NO SCALE

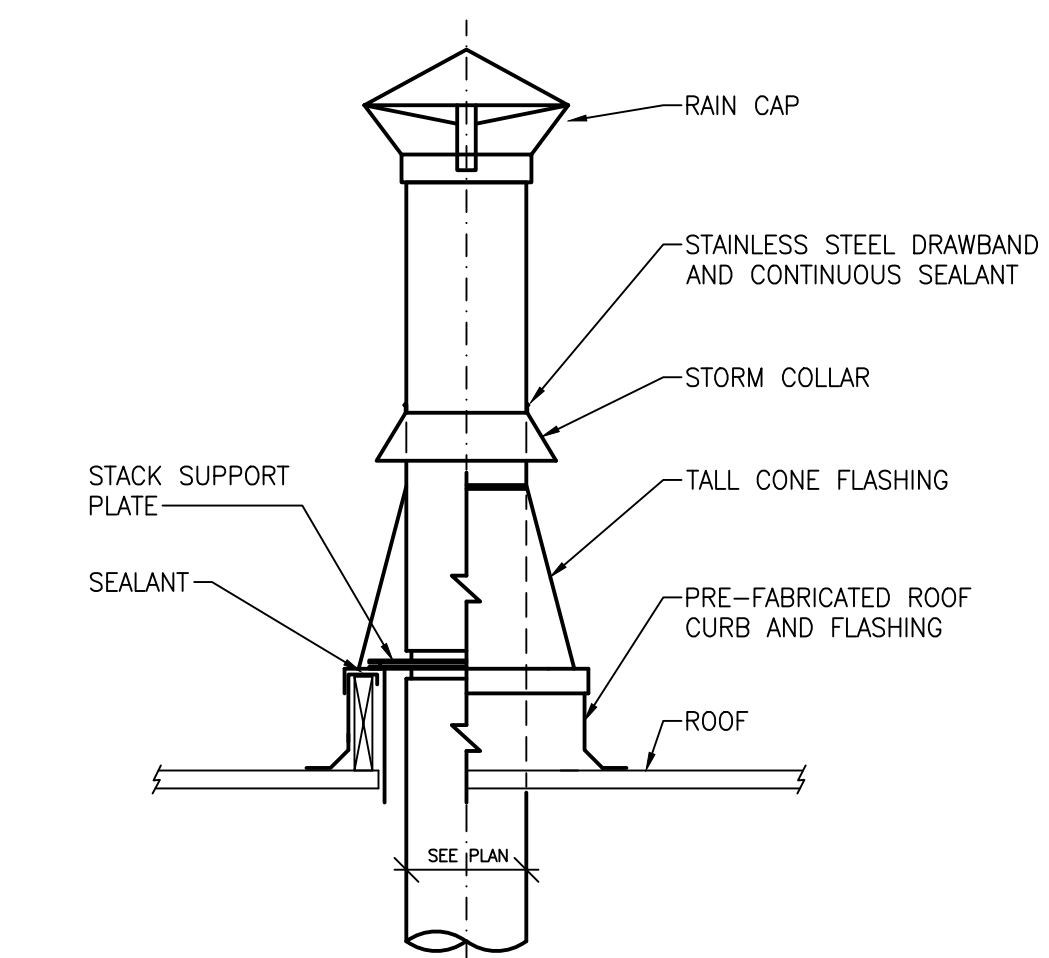


INSULATED PIPE HANGER ROLLER DETAIL

NO SCALE

NOTES:

1. SIZE ROLLER TO ADEQUATELY SUPPORT LOAD (REFER TO B-LINE HANGER CATALOG).
2. SIZE B3160 THRU B3165 TO PIPE SIZE AND INSULATION THICKNESS.
3. USE INSULATION SHIELDS AND PROTECTION SADDLES.



CONDENSING BOILER STACK DETAIL

NO SCALE

NOTES:

1. PROVIDE STACK SUPPORTS, GUIDES AND EXPANSION SECTIONS AS REQUIRED PER MANUFACTURER'S INSTRUCTIONS.
2. COORDINATE INSTALLATION OF STACK SUPPORTS DURING CONSTRUCTION.

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SHEET TITLE
MECHANICAL DETAILS

SHEET NO.

M5.0

KINGS COTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN



VARIABLE FREQUENCY DRIVE SCHEDULE

UNIT ID	EQUIPMENT SERVICE	LOCATION	MOUNTING		MANUFACTURER/ MODEL NO.	REMARKS
			SURFACE	PACKAGED WITH EQUIP.		
VFD-4	CP-4	BOILER ROOM	WALL	NO	DANFOSS VLT HVAC DRIVE	MATCH EXISTING VFDS

NOTES:

- VARIABLE SPEED DRIVE RATED HORSEPOWER SHALL MATCH THE REQUIREMENTS OF THE EQUIPMENT THAT IT SERVES. COORDINATE WITH MANUFACTURER.

GLYCOL MAKEUP UNIT SCHEDULE

UNIT ID	CAPACITY (GPM@PSI)	VOLUME	ELECTRICAL			MANUFACTURER/ MODEL NO.	REMARKS
			HP	VOLTS	PHASE		
GMU-1	1.8@70	50	1/2	115	1	WESSELS-GMPD25050	DUPLEX SYSTEM

NOTES:

- THE PACKAGE SHALL CONSIST OF A BASE, POLYETHYLENE RESERVOIR WITH REMOVABLE LID, VISIBLE SOLUTION LEVEL SCALE IN GALLONS AND LITERS, Y-STRAINER, ISOLATION VALVE, PUMPS, OPEN DRIP PROOF MOTOR, PUMP ISOLATION, HECK AND BALANCE VALVE, EXPANSION TANK, DISCHARGE PRESSURE GAGE, MOTOR CONTRACTOR AND CONTROL CIRCUIT IN A NEMA 1 PANEL, AND NECESSARY INTERCONNECTING PIPING.
- HYDRONIC SYSTEM SHALL BE FILLED MANUALLY, REFER TO SPECIFICATIONS. SYSTEM SHALL NOT BE DIRECT CONNECTED TO CITY WATER.
- MOUNT ON EXISTING HOUSEKEEPING PAD.

PLUMBING FIXTURE SCHEDULE

TAG	BARRIER FREE	ITEM	PIPE CONNECTION SIZES				MANUFACTURER & MODEL NO.	ACCESSORIES	REMARKS
			WASTE	VENT	CW	HW			
EEW-1	-	EMERGENCY EYE/FACE WASH - PEDESTAL	-	-	1/2"	1/2"	HAWS: 7777	CORROSION RESISTANT; STAINLESS STEEL DUST COVER, UNIVERSAL EMERGENCY SIGN AND STAY OPEN BALL VALVE ASSEMBLY, PROVIDE WITH TEST TAG AND ASSE 1071 MIXING VALVE.	
HB-1	-	HOSE BIBB - INTERIOR PUBLIC AREAS	-	-	3/4"	-	JR SMITH: 5672	MILD CLIMATE ANTI-SIPHON SILLCOCK WITH ASSE 1011 VACUUM BREAKER	
EW-1	Y	2 STATION ELECTRIC WATER COOLER SET - DRINKING FOUNTAIN WITH BOTTLE FILLER	1-1/2"	1-1/2"	1/2"	-	ELKAY: LZWS-SS8K	SHUT OFF VALVE AND 1-1/2" P-TRAP, VISUAL FILTER MONITOR, PROVIDE REPLACEMENT FILTERS (2-PACK), PROVIDE A TEE AFTER COOLER CONNECTION TO SUPPLY THE DRINKING FOUNTAIN AND BOTTLE FILLER.	COORDINATE (2) ELECTRICAL CONNECTIONS. ONE DEDICATED 120V/1PH - 20 AMP AND ONE 120V/1PH - 15 AMP

NOTES:

- PROVIDE ALL SLEEVES, TEMPLATES, HARDWARE, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION. VERIFY ALL COLORS AND FINISHES WITH ARCHITECT AND REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL FIXTURES.
- PROVIDE ASSE 1072 BARRIER-TYPE INLINE TRAP SEAL DEVICES FOR EACH FLOOR DRAIN AND FLOOR SINK (NEW AND EXISTING) SUBJECT TO EVAPORATION LOSS.

DESTRATIFICATION FAN SCHEDULE

UNIT ID	SERVING	TYPE	FAN (RPM)	MOTOR				ELECTRICAL		DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS
				BHP	HP	RPM	DRIVE TYPE	VOLTS	PHASE	FURN. BY	INST. BY	TYPE		
SF-1,1,2,3,4,5,6,7,8,9,10	GYM ZONE 1	DESTRATIFICATION	1670	0.31	37W	1670	DIRECT	120	1	ELEC	ELEC	SWITCH	AIRIUS SUSPENDED/ S-25-SP-SH-120-W	NOTES 1-3
SF-2,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15	GYM ZONE 2	DESTRATIFICATION	1670	0.31	37W	1670	DIRECT	120	1	ELEC	ELEC	SWITCH	AIRIUS SUSPENDED/ S-25-SP-SH-120-W	NOTES 1-3
SF-3,1,2,3,4,5,6,7,8,9,10	GYM ZONE 3	DESTRATIFICATION	1670	0.31	37W	1670	DIRECT	120	1	ELEC	ELEC	SWITCH	AIRIUS SUSPENDED/ S-25-SP-SH-120-W	NOTES 1-3

NOTES:

- DESTRATIFICATION FANS SHALL COME WITH A SHADED POLE MOTOR, SHORT NOZZLE, 120 VAC.
- DESTRATIFICATION FANS SHALL BE FURNISHED WITH JUNCTION BOX AND RECEPTACLE. ELECTRICAL CONTRACTOR WILL PROVIDE MC CABLE AND WIRE TO JUNCTION BOX (MOUNTED TO THE SIDE OF THE DOME). TEMPERATURE CONTROLS CONTRACTOR TO PROVIDE A RELAY ON THE FAN CIRCUITS (3 TOTAL) RELAY SHALL BE CONNECTED TO THE SCHOOL BMS FOR ON/OFF CONTROL.
- PROVIDE (3) TRIAC 5 AMP SPEED, 120V CONTROLLERS. CONTROLLERS TO BE WALL MOUNTED TO ALLOW LOCAL ADJUSTMENT OF SPEED CONTROL FOR EACH ZONE.
- CONTRACTOR SHALL FURNISH AND INSTALL INDEPENDENT SAFETY WIRE CONNECTION TO THE EXISTING STRUCTURE ABOVE PER MANUFACTURER INSTALLATION REQUIREMENTS.

DOMESTIC WATER HEATER SCHEDULE (BOILER TYPE)

UNIT ID	LOCATION/ AREA SERVED	FUEL TYPE	GAS PRESS MIN - MAX (IN WG)	INPUT (MBH)	RECOVERY AT 100°F (GPH)	THERMAL EFFICIENCY	MODULATION TURNDOWN RATIO	VENTING			PRIMARY PUMP PROVIDED WITH HEATER	ELECTRICAL				DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS
								SIZE (IN)	MATERIAL	MAX. ALLOWED LENGTH (FT)		PUMP ID	MOCP	MCA	VOLTS	PHASE	FURN. BY	INST. BY		
								WH-1	DOMESTIC HOT WATER	NAT GAS	4-14	500	600	99%	10:1	4	AL29-4C	150	HWP-1	15
WH-2	DOMESTIC HOT WATER	NAT GAS	4-14	500	600	99%	10:1	4	AL29-4C	150	HWP-2	15	6.6	120	1	EC	EC	SWITCH	LOCHINVAR/AWH0500NPM	

NOTES:

- HEATER PUMP SHALL BE PROVIDED BY HEATER MANUFACTURER AND POWERED BY HEATER. AMPERAGE IN SCHEDULE INCLUDES HEATER AND PUMP.
- MOUNT ON EXISTING HOUSEKEEPING PAD, EXTEND PAD AS REQUIRED TO ACCOMMODATE BOTH HEATERS.
- PROVIDE WITH CONDENSATE NEUTRALIZATION KIT, HEATER CIRC PUMPS, FLOW SWITCH, TANK SENSOR, CSD-1 GAS TRAIN AND BACNET MSTP COMMUNICATIONS.
- FLUE SHALL BE AL29-4C.

EXPANSION TANK SCHEDULE

UNIT ID	SYSTEM SERVED	TYPE	MIN PSIG	MAX PSIG	MIN (°F)	MAX (°F)	SYSTEM VOLUME (GAL)	TANK VOLUME (GAL)	DIA (IN)	HEIGHT (IN)	MANUFACTURER/ MODEL NO.	REMARKS
ET-1	CHILLED WATER	FULL ACCEPTANCE BLADDER	24	70	40	100	5400	149.1	30	64	AMTROL/600-L	
ET-2,3	HEATING HOT WATER	FULL ACCEPTANCE BLADDER	24	70	40	180	9804	400	48	69	AMTROL/3500-L	
ET-4	DOMESTIC HOT WATER	FULL ACCEPTANCE BLADDER	40	80	40	140	-	158	30	73	AMTROL/ST-451C	MATCH EXIST. CAPACITY

NOTES:

- ET-1,2,3: PERFORMANCE BASED ON 30% PROPYLENE GLYCOL.
- TANK SHALL BE PRE-CHARGED TO MIN. PRESSURE INDICATED IN SCHEDULE.
- MOUNT TANKS ON EXISTING HOUSEKEEPING PADS.

BOILER SCHEDULE

UNIT ID	FUEL TYPE	GAS PRESS MIN - MAX (IN WG)	INPUT (MBH)	OUTPUT (NOTE 5)	TURNDOWN RATIO	PRESSURE RELIEF VALVE RATING (PSIG)	FLUID (30% PROPYLENE GLYCOL)				ELECTRICAL				DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS	
							FLOW (GPM)	EW (°F)	LWT (°F)	WPD (FT HD)	MOCP	MCA	FLA	VOLTS	PHASE	FURN. BY	INST. BY			TYPE
B-1	NAT GAS	4-14	3,999	3,519	20:1	75	371	140	160	10.9	15	7.5	6	480	3	ELEC.	ELEC.	SWITCH	FCB4000	ON EMERGENCY POWER
B-2	NAT GAS	4-14	3,999	3,519	20:1	75	371	140	160	10.9	15	7.5	6	480	3	ELEC.	ELEC.	SWITCH	FCB4000	ON EMERGENCY POWER
B-3	NAT GAS	4-14	3,999	3,519	20:1	75	371	140	160	10.9	15	7.5	6	480	3	ELEC.	ELEC.	SWITCH	FCB4000	ON EMERGENCY POWER
B-4	NAT GAS	4-14	3,999	3,519	20:1	75	371	140	160	10.9	15	7.5	6	480	3	ELEC.	ELEC.	SWITCH	FCB4000	ON EMERGENCY POWER

NOTES:

- PROVIDE HELLCAT COMBUSTION TECHNOLOGY, REAL TIME O2 MONITORING, PRESSURE RELIEF VALVE, CONDENSATE NEUTRALIZATION KIT, BACNET MSTP COMMUNICATION, FLOW SWITCH AND CSD-1 GAS TRAIN. PROVIDE 5 YR PARTS WARRANTY. BOILER TO BE DIRECT VENTED WITH AIR DIRECTLY FROM OUTSIDE. COMBUSTION AIR TO BE DIRECTLY INTO BOILER FAN FOR SEALED COMBUSTION.
- MOUNT ON 4" HOUSEKEEPING PAD.
- FLUE SHALL BE AL29-4C.
- PROVIDE ADDITIONAL ALTERNATE PRICE FOR 10YR EXTENDED PARTS WARRANTY
- MIN. OUTPUT WITH 140 RETURN WATER TEMP AND AN AHRI RATING OF 96%.

PUMP SCHEDULE

UNIT ID	SYSTEM SERVED	TYPE	FLOW (GPM)	HEAD (FT)	MIN % EFF	ELECTRICAL				DISCONNECT			STARTER				MANUFACTURER/ MODEL NO.	REMARKS	
						KW (INPUT)	BHP	HP	VOLTS	PHASE	FURN. BY	INST. BY	TYPE	TYPE	SIZE	FURN. BY			INST. BY
(E) CP-1,2	HEATING HOT WATER - SECONDARY	END-SUCTION	1300	90	81.34	-	36.64	50	460	3						(E) VFD	TACO/1510 6E	EXISTING TO REMAIN (LEAD/STANDBY)	
(E) CP-3	CHILLED WATER - PRIMARY	END-SUCTION	720	100	77.25	-	23.96	30	460	3						(E) VFD	TACO/151 4GB	EXISTING TO REMAIN (LEAD)	
CP-4	CHILLED WATER - PRIMARY	END-SUCTION	720	100	77.25	-	23.96	30	460	3	MC	MC	VFD	VFD	-	MC	MC	TACO/151 4GB	STANDBY
BP-1,2,3,4	HEATING HOT WATER - PRIMARY BOILER PUMP	CIRCULATORS	371	11	-	7 AMPS	-	-	208	1	EC	EC	SWITCH	-	-	-	-	GRUNDFOS MAGNA3-D 80-100	ECM; PROVIDED BY BOILER MFR; ON EMERGENCY POWER

NOTES:

- PERFORMANCE BASED ON 30% PROPYLENE GLYCOL, UNLESS OTHERWISE INDICATED.
- BASE MOUNTED PUMPS SHALL BE MOUNTED ON 4" HOUSEKEEPING PAD.
- PUMPS SHALL BE NON-OVERLOADING.

SUMP PUMP SCHEDULE

UNIT ID	SYSTEM SERVED	TYPE	NUMBER OF PUMPS	FLOW PER PUMP (GPM)	HEAD (FT)	(E)SUMP BASIN		ELECTRICAL			DISCONNECT			CONTROL				MANUFACTURER/ MODEL NO.	REMARKS
						SIZE (IN)	DEPTH (IN)	HP	VOLTS	PHASE	FURN. BY	INST. BY	TYPE	TYPE	FURN. BY	INST. BY			
SP-1	SEWERAGE EJECTOR SUMP	SUBMERSIBLE	1	25	20	36	48	1/2	115	1	ELEC.	ELEC.	SWITCH		CONTROL PANEL	MANF.	MANF.	ZOELLER N153	ON EMERGENCY POWER

NOTES:

- PROVIDE WITH PIVOT SINGLE PHASE SIMPLEX CONTROL PANEL WITH AUX CONTACT FOR HIGH WATER ALARM TO BMS, (3) FLOAT SWITCHES AND QUIET CHECK VALVE (PVC).

SUPPLY FAN SCHEDULE

UNIT ID	SERVING	TYPE	AIRFLOW (CFM)	ESP (IN WG)	WHEEL DIA (IN)	FAN (RPM)	MOTOR				ELECTRICAL		DISCONNECT			STARTER				MANUFACTURER/ MODEL NO.	REMARKS
							BHP	HP	RPM	DRIVE TYPE	VOLTS	PHASE	FURN. BY	INST. BY	TYPE	TYPE	FURN. BY	INST. BY			
SF-1	BOILER ROOM	SUPPLY	570	0.26	28	1750	0.06	1/8	1750	DIRECT	115	1	MFR	MFR	VFD	VFD	MFR	MFR	GREENHECK/AS-12-4 20-A		

NOTES:

- PROVIDE WITH REMOTE VFD IN MECHANICAL ROOM BELOW.
- MOUNT FAN ON 14" HIGH INSULATED ROOF CURB.
- PROVIDE WITH MOTORIZED DAMPER AND ACTUATOR (115 VAC).
- FAN SHALL BE CONTROLLED VIA THERMOSTAT IN MECHANICAL ROOM SET TO 95°F (ADJ).

HOT WATER UNIT HEATER SCHEDULE

UNIT ID	CAPACITY (MBH)	AIRFLOW (CFM)	LAT @ 60° EAT (°F)	30% PROPYLENE GLYCOL				HP	ELECTRICAL		MANUFACTURER/ MODEL NO.	REMARKS
				FLOW (GPM)	EW (°F)	LWT (°F)	WPD (FT HD)		VOLTS	PHASE		
UH-1	190-238	2850	98	18	160	140	4.5	115	1	REZNOR/WS190		

NOTES:

- MANUFACTURER TO PROVIDE FACTORY MOUNTED STARTER AND DISCONNECT.
- PROVIDE WITH LINE VOLTAGE THERMOSTAT SET AT 60°F (ADJ).

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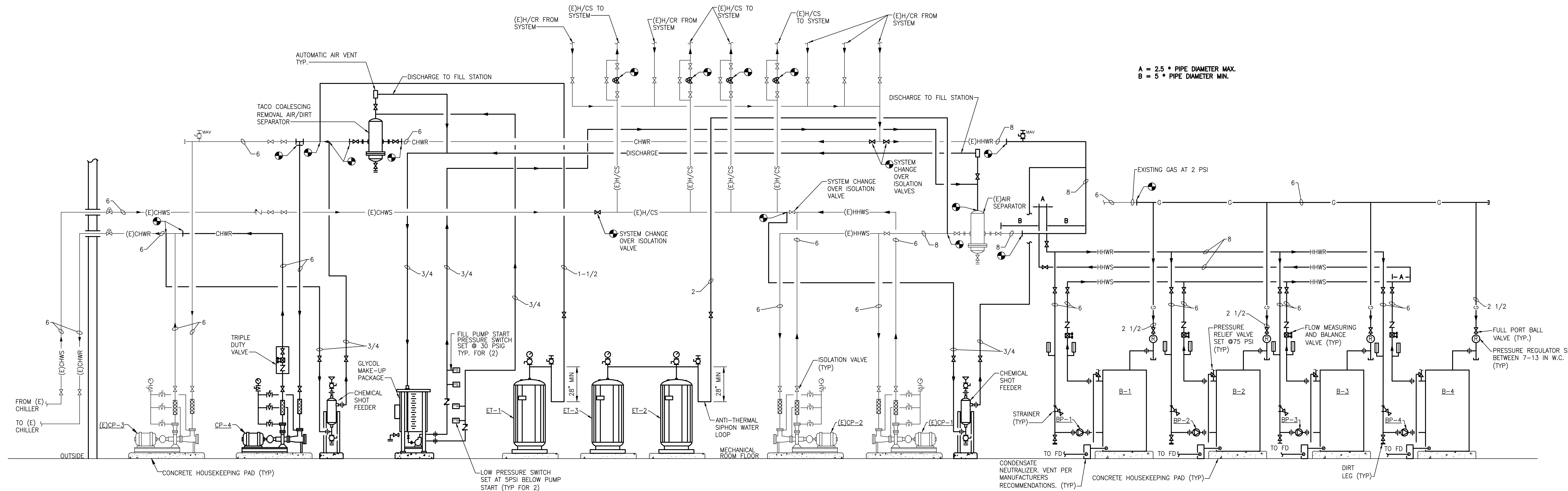
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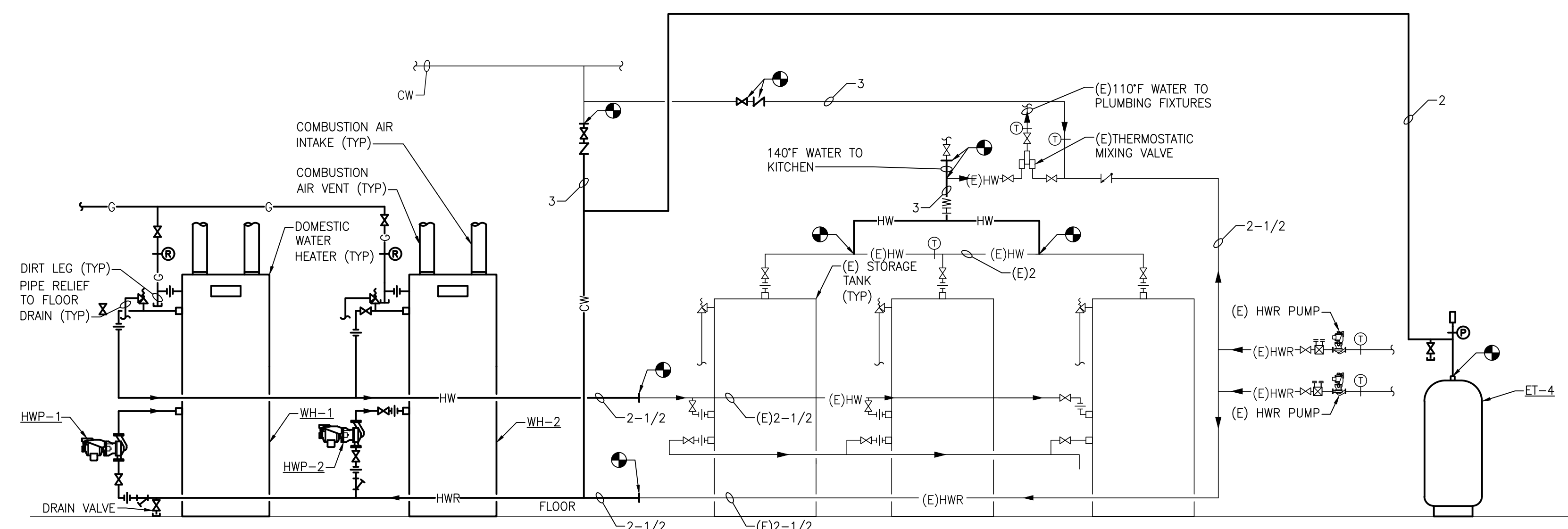


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CHILLED/HOT HEATING WATER SYSTEM PIPING DIAGRAM
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DOMESTIC WATER HEATER PIPING DIAGRAM
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GYM & BOILER ROOM REMODELING

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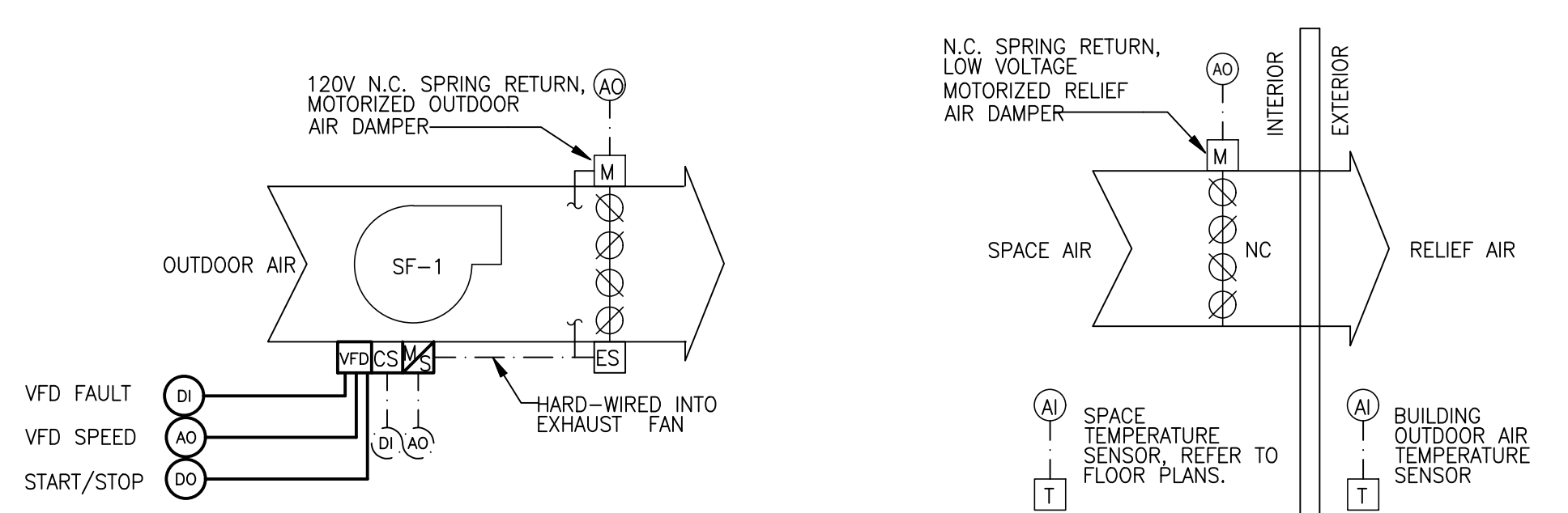
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TEMPERATURE CONTROLS

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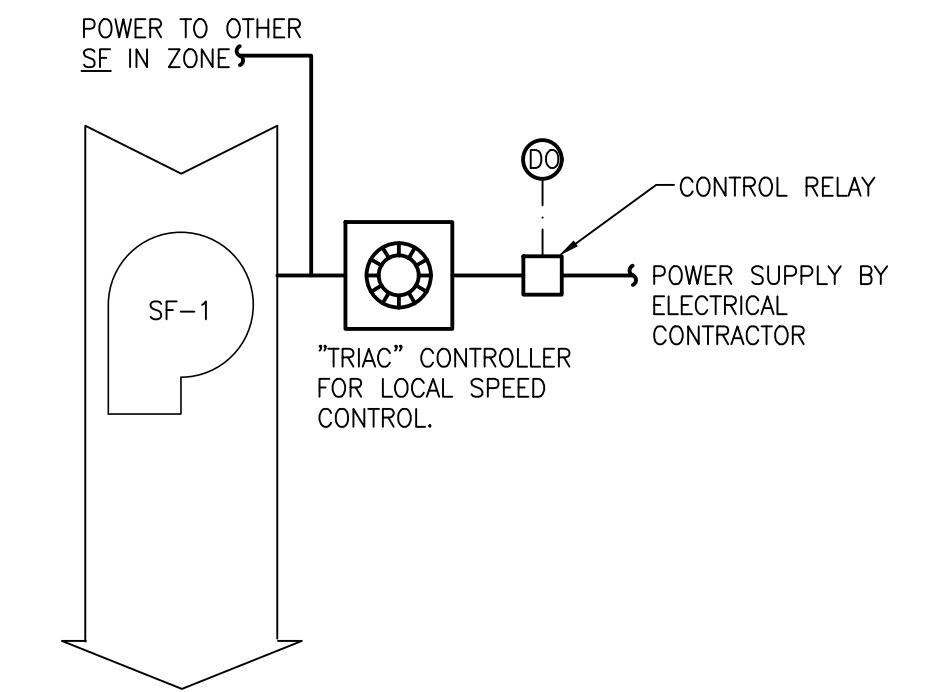


SEQUENCE OF OPERATION:

- NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.
- WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 55°F (ADJ.) AND THE SPACE TEMPERATURE SENSOR IS ABOVE COOLING SET-POINT OF 95°F (ADJ.), OUTDOOR AIR DAMPERS SHALL OPEN FULLY AND THE SUPPLY FAN SHALL BE ENERGIZED.
- WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 55°F (ADJ.) AND/OR THERE IS NO CALL FOR COOLING, DAMPERS SHALL BE CLOSED AND THE SUPPLY FAN SHALL BE OFF.
- FAN STATUS SHALL BE CONFIRMED BY A CURRENT SWITCH. UPON A FAN FAILURE THE DDC SYSTEM SHALL GENERATE AN ALARM AT THE BMS.

BOILER ROOM EXHAUST FAN CONTROL DIAGRAM

NO SCALE

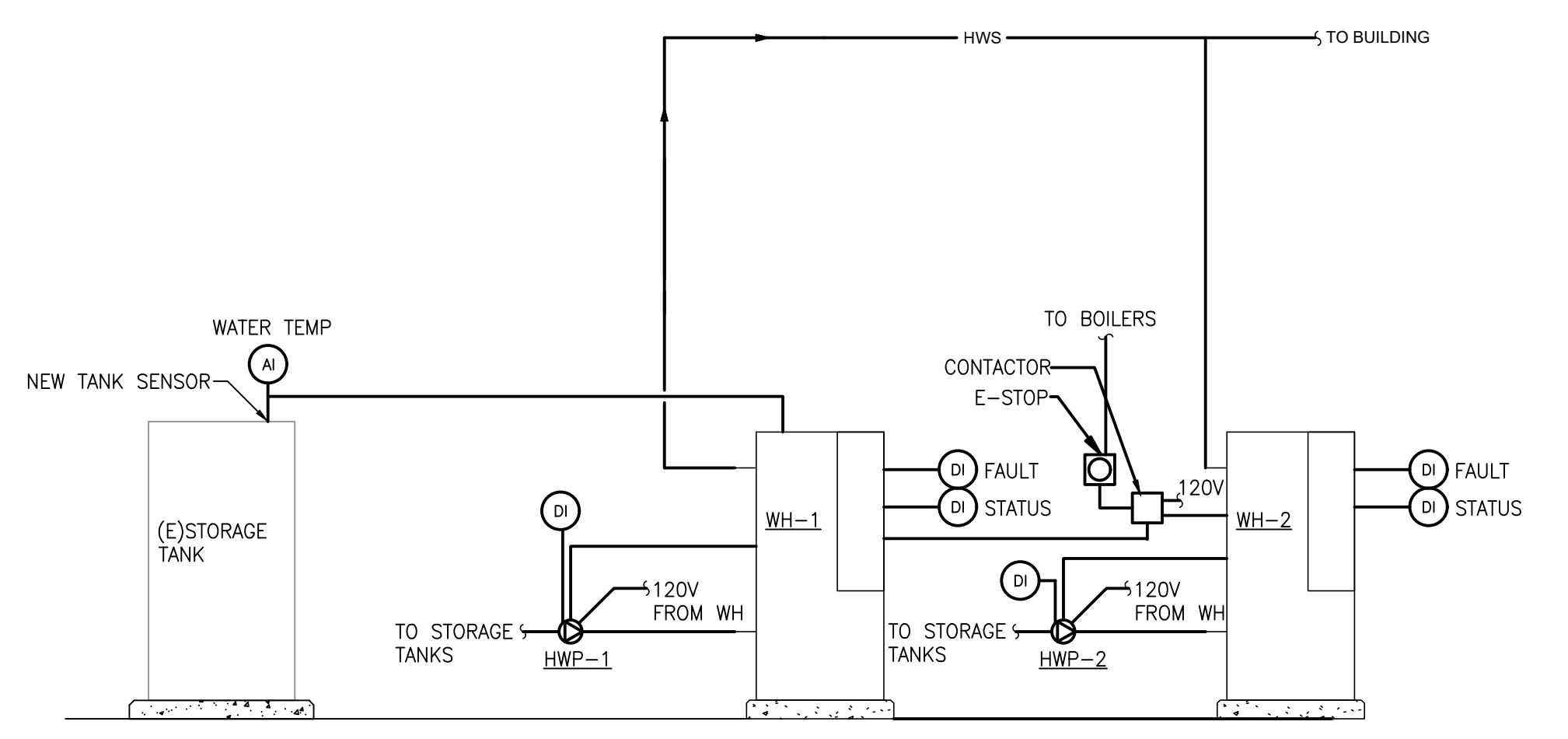


SEQUENCE OF OPERATION:

- THE FANS (BY ZONE) SHALL BE REMOTELY STARTED/STOPPED THROUGH THE BMS VIA A CONTROL RELAY ON THE POWER CIRCUIT. THE ZONE "TRIAC" CONTROLLER, WALL MOUNTED IN THE SPACE, SHALL CONTROL THE FAN SPEED OF ALL FANS IN THE DESIGNATED ZONE.

DESTRATIFICATION FAN CONTROL DIAGRAM

NO SCALE



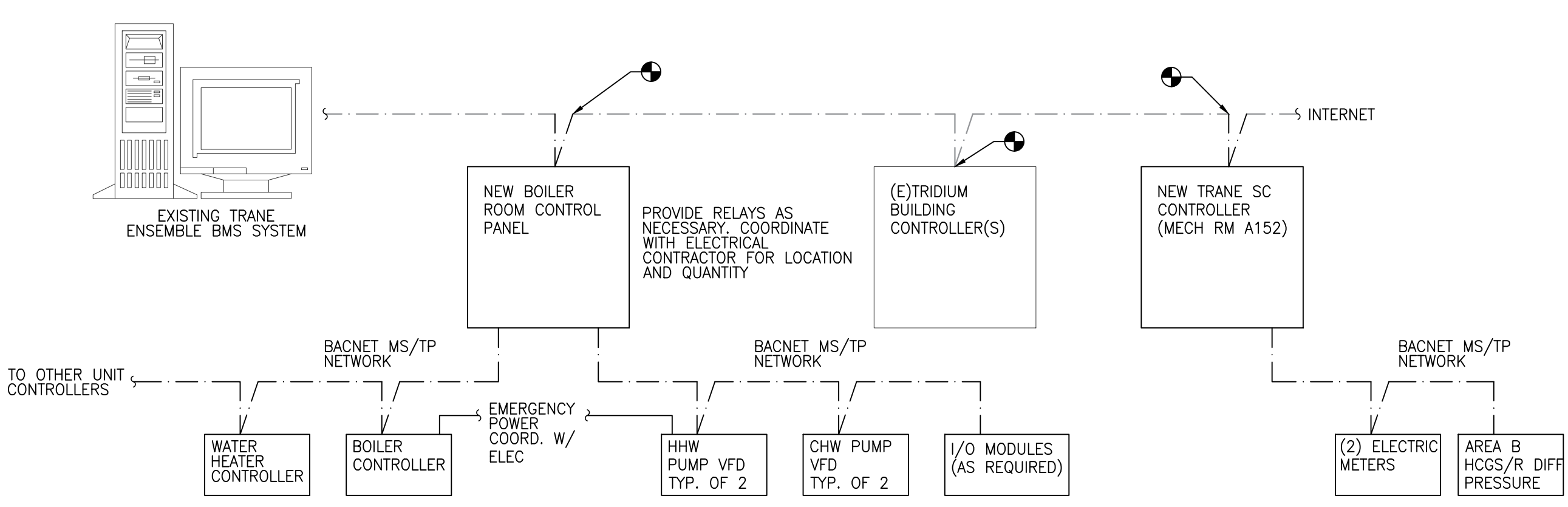
DOMESTIC HOT WATER CONTROL DIAGRAM

NO SCALE

SEQUENCE OF OPERATIONS:

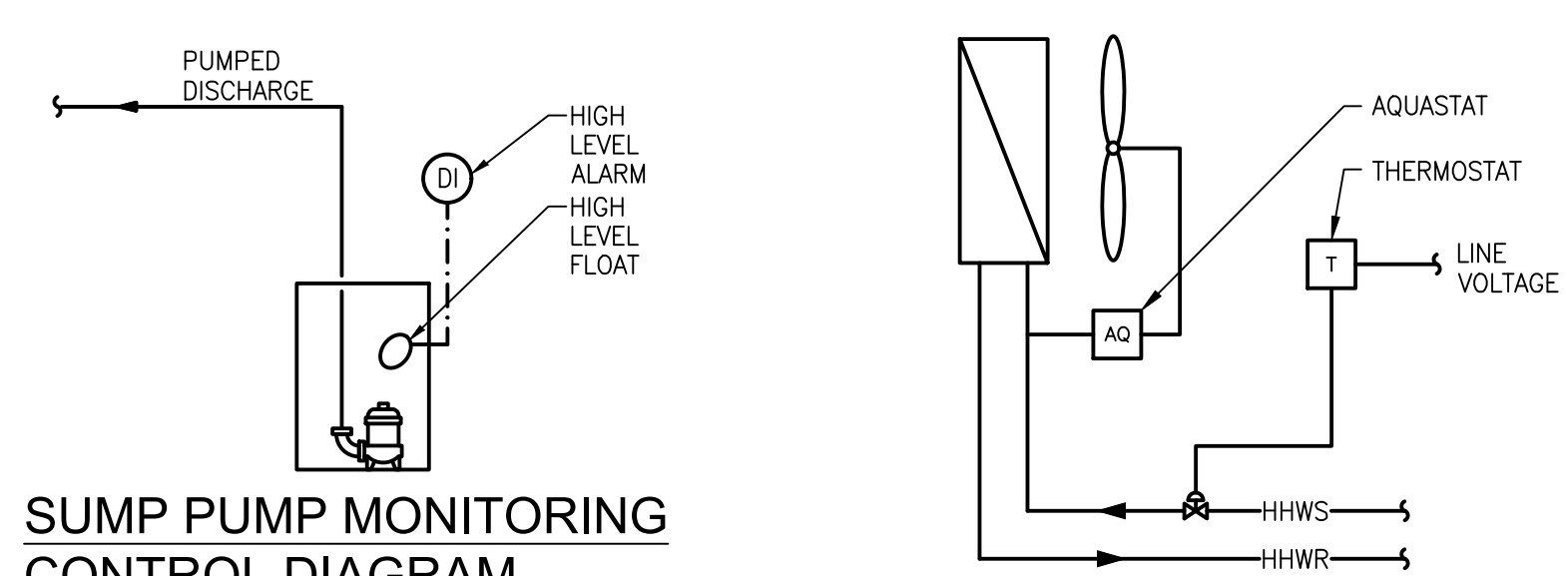
NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.

- THE HEATER CONTROL PANEL SHALL ALTERNATE HEATER OPERATION BASED ON RUN TIME HOURS. IF A HEATER FAILS, AN ALARM WILL BE SENT TO THE DDC SYSTEM AND THE STANDBY HEATER WILL BE ACTIVATED.
- THE HEATER CONTROL PANEL SHALL STAGE HEATERS TO MAINTAIN THE RETURN WATER TEMPERATURE (FROM TANKS TO HEATERS). UPON A CALL FOR HEATING, THE HEATER PRIMARY PUMP SHALL BE ENERGIZED AND RUN WHENEVER THE HEATER IS FIRING. AFTER FLOW IS PROVEN BY THE PUMPS CURRENT SWITCH, THE HEATER SHALL MODULATE FIRING RATE TO MAINTAIN THE SYSTEM RETURN WATER TEMPERATURE.
- IF THE PRIMARY HEATER CANNOT MAINTAIN SYSTEM SETPOINT, THE SECOND HEATER SHALL BE ENERGIZED.
- WHEN THE EMERGENCY SHUT OFF SWITCH IS ACTIVATED, THE HEATERS AND PUMPS SHALL IMMEDIATELY BE DE-ENERGIZED.
- THE BUILDING DDC SYSTEM SHALL MONITOR AND GRAPHICALLY SHOW THE FOLLOWING POINTS: ALL TEMPERATURE POINTS INDICATED, HEATER STATUS, HEATER ALARM, PUMP ALARM, AND STORAGE TANK TEMPERATURES.



BUILDING AUTOMATION SYSTEM NOTES:

- CONFIGURATION AND ORDER OF CONTROLLER CONNECTION IS FOR REPRESENTATION PURPOSES ONLY. CONTROL SYSTEM DRAWINGS SHALL REFLECT ACTUAL AS-BUILT CONDITIONS, INCLUDING ORDER IN WHICH CONTROLLERS ARE CONNECTED WITHIN THE NETWORK.
- AS PART OF PROJECT PROVIDE NEW CONTROLLERS AND CONTROL PANELS AS REQUIRED TO INTEGRATE NEW AND EXISTING MECHANICAL ROOM EQUIPMENT INTO EXISTING TRANE ENSEMBLE BMS. ADDITIONALLY, EXISTING MIDDLE SCHOOL TRIDUUM SYSTEM SHALL BE INTEGRATED INTO ENSEMBLE SYSTEM. NEW SC CONTROLLER SHALL BE LOCATED IN MECHANICAL ROOM A152 IN AREA A TO PICK UP POINTS FROM EXISTING ELECTRIC METER AND NEW HEATING/COOLING CHANGEOVER PIPING DIFFERENTIAL PRESSURE SENSOR (MONITORING PURPOSES ONLY).
- INTEGRATE NEW EQUIPMENT/CONTROLS/CONTROLLER INTO EXISTING DISTRICT BMS AS REQUIRED AND UPDATE GRAPHICS AND SEQUENCES ACCORDINGLY TO REFLECT ALL NEW EQUIPMENT. TEMPERATURE CONTRACTOR IS RESPONSIBLE FOR ROUTING POWER TO THEIR COMPONENTS. COORDINATE LOCATIONS OF SPARE CIRCUIT BREAKERS WITH ELECTRICAL CONTRACTOR. ALL POWER TO COME FROM GENERATOR PANELS.
- PROVIDE 5 YEAR SERVICE AGREEMENT - COORDINATE WITH OWNER.



SUMP PUMP MONITORING CONTROL DIAGRAM

SUMP PUMP MONITORING SEQUENCE OF OPERATIONS:

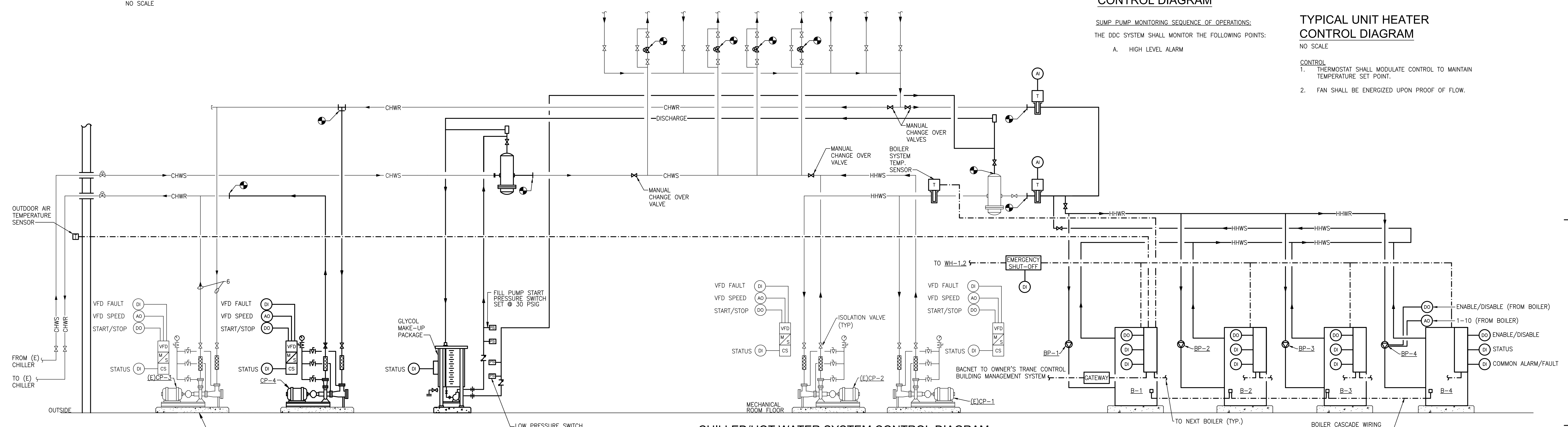
THE DDC SYSTEM SHALL MONITOR THE FOLLOWING POINTS:

- HIGH LEVEL ALARM

TYPICAL UNIT HEATER CONTROL DIAGRAM

NO SCALE

- CONTROL
- THERMOSTAT SHALL MODULATE CONTROL TO MAINTAIN TEMPERATURE SET POINT.
 - FAN SHALL BE ENERGIZED UPON PROOF OF FLOW.



CHILLED/HOT WATER SYSTEM CONTROL DIAGRAM

NO SCALE

- #### GLYCOL MAKE-UP UNIT
- THE GLYCOL MAKEUP UNIT SHALL PROVIDE A LOW LEVEL ALARM TO THE BMS. TCC SHOULD ADD RELAY BETWEEN THE GLYCOL MAKEUP UNIT AND THE CONTROLLER POINT AS REQUIRED. CONFIRM WITH FINAL GLYCOL MAKEUP UNIT SUBMITTAL OPTIONS.

- #### CHILLED WATER SECONDARY PUMP CONTROL
- WHEN THE CHILLED WATER SYSTEM IS ENABLED, THE LEAD HEATING CHILLED PUMP SHALL BE ENABLED.
 - EACH PUMP WILL PROVE OPERATION TO THE BMS WITH ITS CURRENT SWITCH. IF A PUMP FAILS, AN ALARM WILL BE SENT TO THE BMS AND THE LAG PUMP WILL BE ACTIVATED (IF NOT OPERATING).
 - THE PLANT MANAGER SHALL ALTERNATE PUMP OPERATION BASED ON RUN TIME HOURS OR AT THE BEGINNING OF EACH MONTH.

- #### DUAL TEMPERATURE TWO-WAY CONTROL VALVES
- TEMPERATURE CONTROLS CONTRACTOR SHALL CONNECT NEW ZONE CONTROL VALVES INTO BMS. EXISTING SEQUENCE FOR VALVE THROTTLING SHALL REMAIN.

- #### HEATING HOT WATER SYSTEM SEQUENCE OF OPERATIONS:
- NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.
- THE DUAL TEMPERATURE SYSTEM SHALL BE CHANGED OVER MANUALLY FROM CHILLED WATER TO HEATING HOT WATER BY OPERATORS. BMS SHALL NOT AUTOMATICALLY CHANGE SYSTEM OVER.

- #### HEATING HOT WATER PLANT MANAGER
- THE BUILDING MANAGEMENT SYSTEM (BMS) SHALL INCLUDE A HEATING HOT WATER PLANT MANAGER TO CONTROL THE SECONDARY HEATING HOT WATER PUMPS.
 - TO PREVENT SHORT CYCLING, THE HEATING HOT WATER SYSTEM SHALL RUN FOR AND BE OFF FOR A MINIMUM ADJUSTABLE TIME (BOTH TIMES USER ADJUSTABLE).

- #### SECONDARY PUMP CONTROL
- WHEN THE HEATING HOT WATER SYSTEM IS ENABLED, THE LEAD HEATING HOT WATER PUMP SHALL BE ENABLED.
 - EACH PUMP WILL PROVE OPERATION TO THE BMS WITH ITS CURRENT SWITCH. IF A PUMP FAILS, AN ALARM WILL BE SENT TO THE BMS AND THE LAG PUMP WILL BE ACTIVATED (IF NOT OPERATING).
 - THE PLANT MANAGER SHALL ALTERNATE PUMP OPERATION BASED ON RUN TIME HOURS OR AT THE BEGINNING OF EACH MONTH.
 - THE CONTROLLER SHALL MEASURE THE HEATING HOT WATER RETURN WATER TEMPERATURE AND MODULATE THE SECONDARY HEATING HOT WATER PUMP VFDs IN SEQUENCE TO MAINTAIN THE HEATING HOT WATER RETURN WATER SETPOINT. ALL SETPOINTS SHALL BE FIELD ADJUSTED DURING TESTING AND BALANCING TO MEET THE REQUIREMENTS OF THE ACTUAL FIELD CONDITIONS.

- #### BOILER CONTROL:
- WHEN THE BOILER IS ENABLED BY THE BMS, THE BOILER CONTROL PANEL (INTERNAL TO THE LEAD BOILER) SHALL CONTROL THE FIRING OF THE BOILERS BASED ON THE SYSTEM TEMPERATURE. UPON A CALL FOR HEATING THE BOILER PRIMARY PUMP SHALL BE ENERGIZED AND RUN WHENEVER THE BOILER IS FIRING. AFTER FLOW IS PROVEN, THE BOILER SHALL MODULATE THE FIRING RATE TO MAINTAIN SYSTEM SUPPLY WATER TEMPERATURE. THE BOILER SHALL CONTROL ITS ASSOCIATED PRIMARY PUMP SPEED BASED ON THE RETURN WATER TEMP. IF A BOILER OR A PRIMARY PUMP FAILS, AN ALARM WILL BE SENT TO THE BMS AND A STANDBY BOILER/PUMP WILL

- BE ACTIVATED.
- #### MONITOR AND ALARM:
- THE BMS SHALL MONITOR AND GRAPHICALLY SHOW, AT A MINIMUM, THE FOLLOWING POINTS. ALL POINTS SHALL BE ALARMED WHEN OUT OF RANGE:
 - BOILER STATUS AND STAGING
 - PRIMARY PUMP STATUS AND STAGING
 - BOILER RUN TIMES AND START/STOPS
 - BOILER ALARM
 - BOILER ENTERING AND LEAVING WATER TEMPERATURES (HIGH AND LOW ALARMS)
 - ALL TEMPERATURE POINTS INDICATED
 - ALL PUMPS SPEED STATUS AND ALARMS
 - DATA TRENDS SHALL BE ESTABLISHED TO RECORD AND TREND ALL POINTS INDICATED ABOVE AT INTERVALS DETERMINED BY OWNER.
 - ADDITIONAL BOILER INFORMATION AVAILABLE THROUGH THE BACNET INTEGRATION SHALL BE ACCESSIBLE THROUGH THE BMS FRONT END SYSTEM, BUT DOES NOT NEED TO BE CONTINUOUSLY PRESENTED ON THE GRAPHIC DISPLAY.

SECONDARY HEATING HOT WATER SUPPLY (HHWS) RESET SCHEDULE	
OUTSIDE AIR TEMP.	HHWS TEMPERATURE
≤ 50°F	140°F
≤ 25°F	160°F

THESE DRAWINGS AND THE WORK REPRESENTED THEREIN ARE THE PROPERTY OF SES AND SHALL BE KEPT IN CONFIDENTIALITY AND NOT TO BE REPRODUCED OR USED WITHOUT PERMISSION. SES PROJECT #21 0588 06



COPPER FEEDER SCHEDULE

FEEDER (AMPS)	COND. SIZE	2 WIRE WITH GROUND	FEEDER (AMPS)	COND. SIZE	3 WIRE WITH GROUND	FEEDER (AMPS)	COND. SIZE	4 WIRE WITH GROUND
15S	12	2#12, 1#12 GND IN 3/4"	15	12	3#12, 1#12 GND IN 3/4"	15N	12	4#12, 1#12 GND IN 3/4"
20S	12	2#12, 1#12 GND IN 3/4"	20	12	3#12, 1#12 GND IN 3/4"	20N	12	4#12, 1#12 GND IN 3/4"
25S	10	2#10, 1#10 GND IN 3/4"	25	10	3#10, 1#10 GND IN 3/4"	25N	10	4#10, 1#10 GND IN 3/4"
30S	10	2#10, 1#10 GND IN 3/4"	30	10	3#10, 1#10 GND IN 3/4"	30N	10	4#10, 1#10 GND IN 3/4"
35S	8	2#8, 1#10 GND IN 3/4"	35	8	3#8, 1#10 GND IN 3/4"	35N	8	4#8, 1#10 GND IN 3/4"
40S	8	2#8, 1#10 GND IN 3/4"	40	8	3#8, 1#10 GND IN 3/4"	40N	8	4#8, 1#10 GND IN 3/4"
45S	6	2#6, 1#10 GND IN 3/4"	45	6	3#6, 1#10 GND IN 3/4"	45N	6	4#6, 1#10 GND IN 1"
50S	6	2#6, 1#10 GND IN 3/4"	50	6	3#6, 1#10 GND IN 3/4"	50N	6	4#6, 1#10 GND IN 1"
60S	4	2#4, 1#10 GND IN 1"	60	4	3#4, 1#10 GND IN 1"	60N	4	4#4, 1#10 GND IN 1 1/4"
70S	4	2#4, 1#8 GND IN 1"	70	4	3#4, 1#8 GND IN 1"	70N	4	4#4, 1#8 GND IN 1 1/4"
80S	3	2#3, 1#8 GND IN 1"	80	3	3#3, 1#8 GND IN 1"	80N	3	4#3, 1#8 GND IN 1 1/4"
90S	2	2#2, 1#8 GND IN 1"	90	2	3#2, 1#8 GND IN 1 1/4"	90N	2	4#2, 1#8 GND IN 1 1/2"
100S	1	2#1, 1#8 GND IN 1 1/4"	100	1	3#1, 1#8 GND IN 1 1/4"	100N	1	4#1, 1#8 GND IN 1 1/2"
			110	2	3#2, 1#6 IN 1 1/4"	110N	2	4#2, 1#6 GND IN 1 1/4"
			125	1	3#1, 1#6 GND IN 1 1/4"	125N	1	4#1, 1#6 GND IN 1 1/2"
			150	1/0	3#1/0, 1#6 GND IN 1 1/2"	150N	1/0	4#1/0, 1#6 GND IN 2"
			175	2/0	3#2/0, 1#6 GND IN 1 1/2"	175N	2/0	4#2/0, 1#6 GND IN 2"
			200	3/0	3#3/0, 1#6 GND IN 2"	200N	3/0	4#3/0, 1#6 GND IN 2"
			225	4/0	3#4/0, 1#4 GND IN 2"	225N	4/0	4#4/0, 1#4 GND IN 2 1/2"
			250	250	3-250 KCMIL, 1#4 GND IN 2"	250N	250	4-250 KCMIL, 1#4 GND IN 2 1/2"
			300	350	3-350 KCMIL, 1#4 GND IN 2"	300N	350	4-350 KCMIL, 1#4 GND IN 3"
			350	500	3-500 KCMIL, 1#3 GND IN 3"	350N	500	4-500 KCMIL, 1#3 GND IN 3 1/2"
			400	600	3-600 KCMIL, 1#3 GND IN 3 1/2"	400N	600	4-600 KCMIL, 1#3 GND IN 4"
			450	2-4/0	(2) 3#4/0, 1#2 GND IN 2"	450N	2-4/0	(2) 4#4/0, 1#2 GND IN 2 1/2"
			500	2-250	(2) 3-250 KCMIL, 1#2 GND IN 2 1/2"	500N	2-250	(2) 4-250 KCMIL, 1#1 GND IN 3"
			600	2-350	(2) 3-350 KCMIL, 1#1 GND IN 2 1/2"	600N	2-350	(2) 4-350 KCMIL, 1#1 GND IN 3"
			700	2-500	(2) 3-500 KCMIL, 1#1/0 GND IN 3"	700N	2-500	(2) 4-500 KCMIL, 1#1/0 GND IN 3 1/2"
			800	2-600	(2) 3-600 KCMIL, 1#1/0 GND IN 3 1/2"	800N	2-600	(2) 4-600 KCMIL, 1#1/0 GND IN 4"
			1000	3-500	(3) 3-500 KCMIL, 1#2/0 GND IN 3"	1000N	3-500	(3) 4-500 KCMIL, 1#2/0 GND IN 3 1/2"
			1200	3-600	(3) 3-600 KCMIL, 1#3/0 GND IN 4"	1200N	3-600	(3) 4-600 KCMIL, 1#3/0 GND IN 4"
			1800	4-600	(4) 3-600 KCMIL, 1#4/0 GND IN 4"	1800N	4-600	(4) 4-600 KCMIL, 1#4/0 GND IN 4"
			2000	5-600	(5) 3-600 KCMIL, 1-250 KCMIL GND IN 4"	2000N	5-600	(5) 4-600 KCMIL, 1-250 KCMIL GND IN 4"
			2500	7-500	(7) 3-500 KCMIL, 1-350 KCMIL GND IN 3 1/2"	2500N	7-500	(7) 4-500 KCMIL, 1-350 KCMIL GND IN 3 1/2"
			3000	8-500	(8) 3-500 KCMIL, 1-400 KCMIL GND IN 3 1/2"	3000N	8-500	(8) 4-500 KCMIL, 1-400 KCMIL GND IN 3 1/2"
			4000	10-600	(10) 3-600 KCMIL, 1-500 KCMIL GND IN 4"	4000N	10-600	(10) 4-600 KCMIL, 1-500 KCMIL GND IN 4"
			5000	12-600	(12) 3-600 KCMIL, 1-700 KCMIL GND IN 4"	5000N	12-600	(12) 4-600 KCMIL, 1-700 KCMIL GND IN 4"
			6000	15-600	(15) 3-600 KCMIL, 1-500 KCMIL GND IN 4"	6000N	15-600	(15) 4-600 KCMIL, 1-800 KCMIL GND IN 4"

NOTES:
1. AMPACITIES FOR FEEDER SIZES ARE BASED ON N.E.C. CODE 110-14. (TERMINATION PROVISIONS FOR EQUIPMENT RATED 100A OR LESS ARE RATED FOR USE WITH CONDUCTORS RATED 60C. TERMINATION PROVISIONS FOR EQUIPMENT RATED GREATER THAN 100A ARE RATED FOR USE WITH CONDUCTORS RATED 75C.)
2. CONTRACTOR MAY OPTIONALLY USE 1/2" CONDUIT IN LIEU OF 3/4" CONDUIT FOR #10 AND #12 CONDUCTORS.
3. CONDUIT FILL IS BASED ON 40% FILL USING SINGLE CONDUCTOR BUILDING WIRE OF INSULATION TYPES THHN, THWN, THWN-2, XHH, XHHW, AND XHHW-2 IN RMC. FOR OTHER RACEWAY TYPES REFER TO APPROPRIATE N.E.C. APPENDIX C TABLES.
4. EQUIPMENT GROUND SIZING BASED ON N.E.C. TABLE 250.122.

LIGHTING CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH
	THREE WAY SWITCH
	FOUR WAY SWITCH
	LIGHT CONTROL LOCATION
	GENERATOR TRANSFER DEVICE

POWER SYMBOL LIST

SYMBOL	DESCRIPTION
	CONDUIT DOWN
	CONDUIT UP
	DISCONNECT SWITCH - NON FUSED
	DISCONNECT SWITCH - FUSED
	DISCONNECT SWITCH - COMB. MOTOR STARTER
	ELECTRICAL PANEL
	GROUNDING ROD
	GROUND
	GROUNDING BAR
	JUNCTION BOX
	METER
	MOTOR - SINGLE PHASE
	MOTOR - THREE PHASE
	MOTOR RATED SWITCH
	POWER RECEPTACLE - SIMPLEX TYPE
	POWER RECEPTACLE - DUPLEX TYPE
	POWER RECEPTACLE - DUPLEX 6" ABOVE COUNTER
	POWER RECEPTACLE - USB/DUPLEX COMBO DEVICE
	POWER RECEPTACLE - QUADRUPLEX TYPE
	POWER RECEPTACLE - RECESSED FLOOR TYPE
	POWER RECEPTACLE - SPECIALTY TYPE
	TIME CLOCK
	TRANSFORMER

NOTES:
1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

TECHNOLOGY SYMBOL LIST

SYMBOL	DESCRIPTION
	CAMERA
	CARD READER
	TECHNOLOGY OUTLET - 6" ABOVE COUNTER
	TECHNOLOGY OUTLET - FLOOR
	TECHNOLOGY OUTLET - WALL
	MAGNETIC DOOR HOLDER
	PUSH BUTTON
	SPEAKER
	WALL CLOCK - SINGLE FACE
	WALL CLOCK - DOUBLE FACE
	WALL CLOCK AND SPEAKER UNIT
	WIRELESS ACCESS POINT

NOTES:
1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED.
2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

FIRE ALARM SYMBOL LIST

SYMBOL	DESCRIPTION
	AUDIBLE DEVICE/WALL MOUNTED
	VISUAL DEVICE/WALL MOUNTED
	COMBO AUDIBLE/VISUAL DEVICE/WALL MOUNTED
	AUDIBLE DEVICE/CEILING MOUNTED
	VISUAL DEVICE/CEILING MOUNTED
	COMBO AUDIBLE/VISUAL DEVICE/CEILING MOUNTED
	CO ALARM/SMOKE DETECTOR
	SMOKE DETECTOR
	CO ALARM
	DUCT MOUNTED SMOKE DETECTOR
	HEAT DETECTOR
	FIRE DEPARTMENT COMMUNICATION OUTLET
	EXISTING COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	NEW COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	EXISTING COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
	NEW COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
	MANUAL PULL STATION
	FLOW SWITCH
	TAMPER SWITCH
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM CONTROL PANEL
	INPUT/OUTPUT CONTROL MODULE

NOTES:
1. DRAWINGS INDICATE DESIGN INTENT ONLY; FINAL LOCATIONS AND DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.
2. FIRE DETECTION AND SIGNALING DEVICES ARE SHOWN FOR COORDINATION PURPOSES. FINAL SYSTEM DESIGN TO BE PERFORMED BY CONTRACTOR AND SUPPLIER FOR OFFICIAL SUBMISSION. COORDINATE ALL DEVICE QUANTITIES AND LOCATIONS WITH SUPPLIER PRIOR TO INSTALLATION. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PATHWAYS, POWER SUPPLIES AND DEVICES PER SUPPLIER CONTRACT DOCUMENTS.

ELECTRICAL ABBREVIATIONS

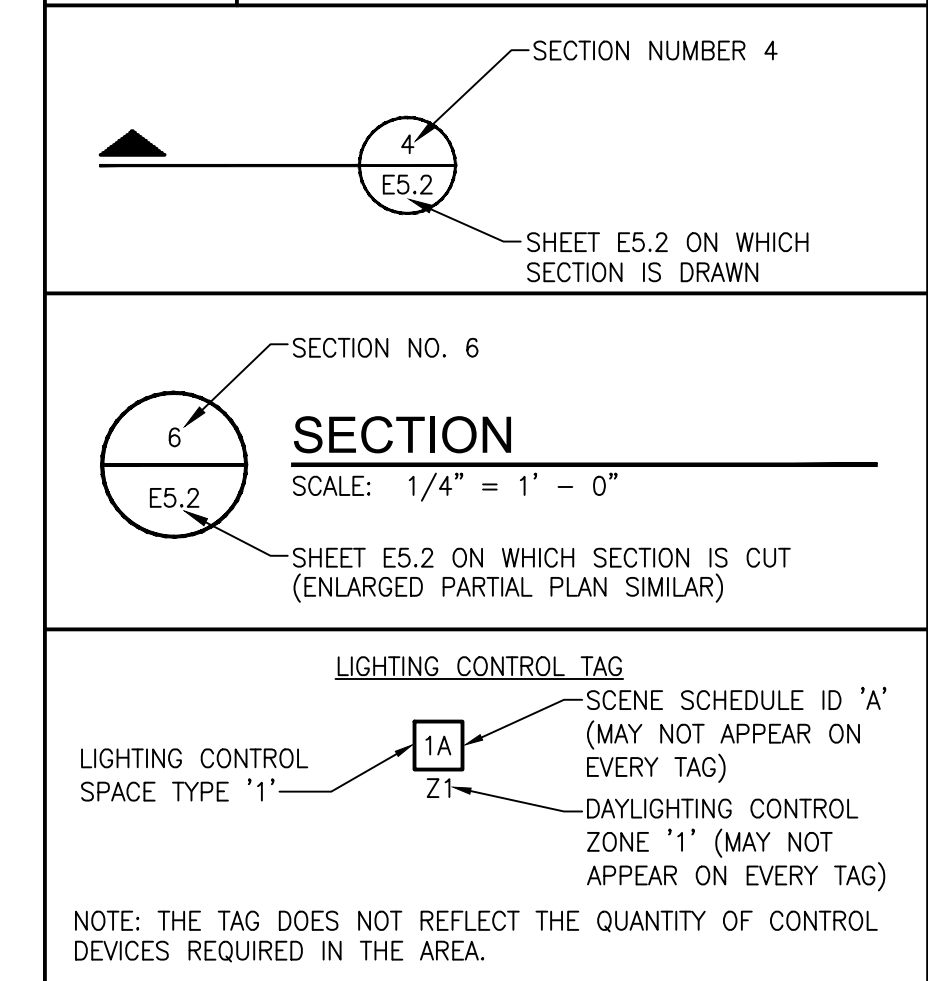
ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A	AMPERE
AF	AMPERE FUSE/AMPERE FRAME
AWG	AMERICAN WIRE GAUGE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AC	AVAILABLE INTERRUPTING CURRENT (AMPS)
C	CONDUIT OR CEILING MOUNTED
CB	CIRCUIT BREAKER
CU	COPPER
CT	CURRENT TRANSFORMER
DA	DIAMETER
DISC	DISCONNECT
EMT	ELECTRICAL METALLIC TUBING
EWG	ELECTRIC WATER COOLER
EPO	EMERGENCY POWER OFF
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
F	FUSE
G/GRO	GROUND
GFCI/GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MAX	MAXIMUM
MIN	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
N/NEU	NEUTRAL
NF	NON-FUSIBLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
PH, OR #	PHASE
P	POLE
PF	POWER FACTOR
PVC	POLYVINYL CHLORIDE (PLASTIC)
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
RP	RECEPTACLE PANEL
TBB	TELEPHONE BACKBOARD
TYP.	TYPICAL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
V	VOLT
VA	VOLT AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

DRAWING INDEX

SHT. NO.	DESCRIPTION
E0.0	ELECTRICAL GENERAL INFORMATION
E2.0	ELECTRICAL OVERALL PLAN
ED1.0L	ELECTRICAL DEMO PLAN - AREA L
ED4.0	ENLARGED BOILER ELECTRICAL DEMO PLAN
E1.0L	ELECTRICAL PLAN - AREA L
E4.0	ENLARGED BOILER ELECTRICAL PLAN
E6.0	ELECTRICAL DETAILS SCHEDULES & ONE-LINE

DRAWING NOTATION

SYMBOL	DESCRIPTION
L1	LIGHTING FIXTURE TAG
	CONSTRUCTION KEY NOTE NUMBER 1
	DEMOLITION KEY NOTE NUMBER 1
	COPPER FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE)
	ALUMINUM FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE)
EQUIPMENT	EQUIPMENT TAG
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	NEW OR MODIFIED UNDERGROUND WIRING
	EXISTING SYSTEM COMPONENT TO BE REMOVED
	POINT OF NEW CONNECTION



APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN ENERGY CODE
2015	MICHIGAN REHABILITATION CODE
2017	MICHIGAN ELECTRICAL CODE RULES, PART 8
2017	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2013	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES



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GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL
SALINE, MICHIGAN



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ISSUANCES DATE
CONSTRUCTION DOCUMENTS 11/05/21

YEAR CODE

JOB NO. 02900.060

SHEET TITLE
ELECTRICAL GENERAL INFORMATION

SHEET NO.

E0.0

KINGS COTT ASSOCIATES, INC. KALAMAZOO, MICHIGAN



ELECTRICAL GENERAL NOTES

1. ALL RECEPTACLES ON EXTERIOR, IN KITCHEN, IN CONCESSION, IN LABORATORY, AND WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE READILY ACCESSIBLE GFCI TYPE RECEPTACLE.
2. REFER TO ARCHITECTURAL FLOOR PLANS AND ELEVATIONS TO VERIFY LOCATION OF DEVICES.
3. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
4. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
5. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
6. RECEPTACLES INSTALLED IN ELEVATOR HOISTWAY(S), ELEVATOR MACHINE ROOM(S), CONTROL ROOM(S)/SPACE(S) SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI) WITH THE EXCEPTION OF A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING AN ELEVATOR PIT SLUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.
7. ALL BRANCH CIRCUITS THAT SUPPLY 125-V SINGLE PHASE, 15 AND 20 AMP OUTLETS TO BE INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
9. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
10. WHERE MORE THAN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.
11. ALL POWER PACKS TO BE LOCATED DIRECTLY ABOVE SWITCH.
12. LIGHT FIXTURES ARE LOOPED TOGETHER TO INDICATE CONTROL ZONE GROUPS. CONNECTED FIXTURES ARE TO BE CONTROLLED TOGETHER. CIRCUITS MAY BE SHARED AMONG SEPARATE CONTROL ZONE GROUPS. MULTIPLE ZONES ZONES MAY BE COMBINED IN SOFTWARE TO FORM SCENES. SEE LIGHTING CONTROL MATRIX, SCENE SCHEDULE (IF PROVIDED), AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
13. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.

GYM & BOILER ROOM REMODELING

SALINE MIDDLE SCHOOL

SALINE, MICHIGAN



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ISSUANCES	DATE
CONSTRUCTION DOCUMENTS	11/09/21

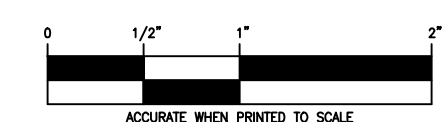
JOB NO. 02900.060

SHEET TITLE
ELECTRICAL OVERALL PLAN

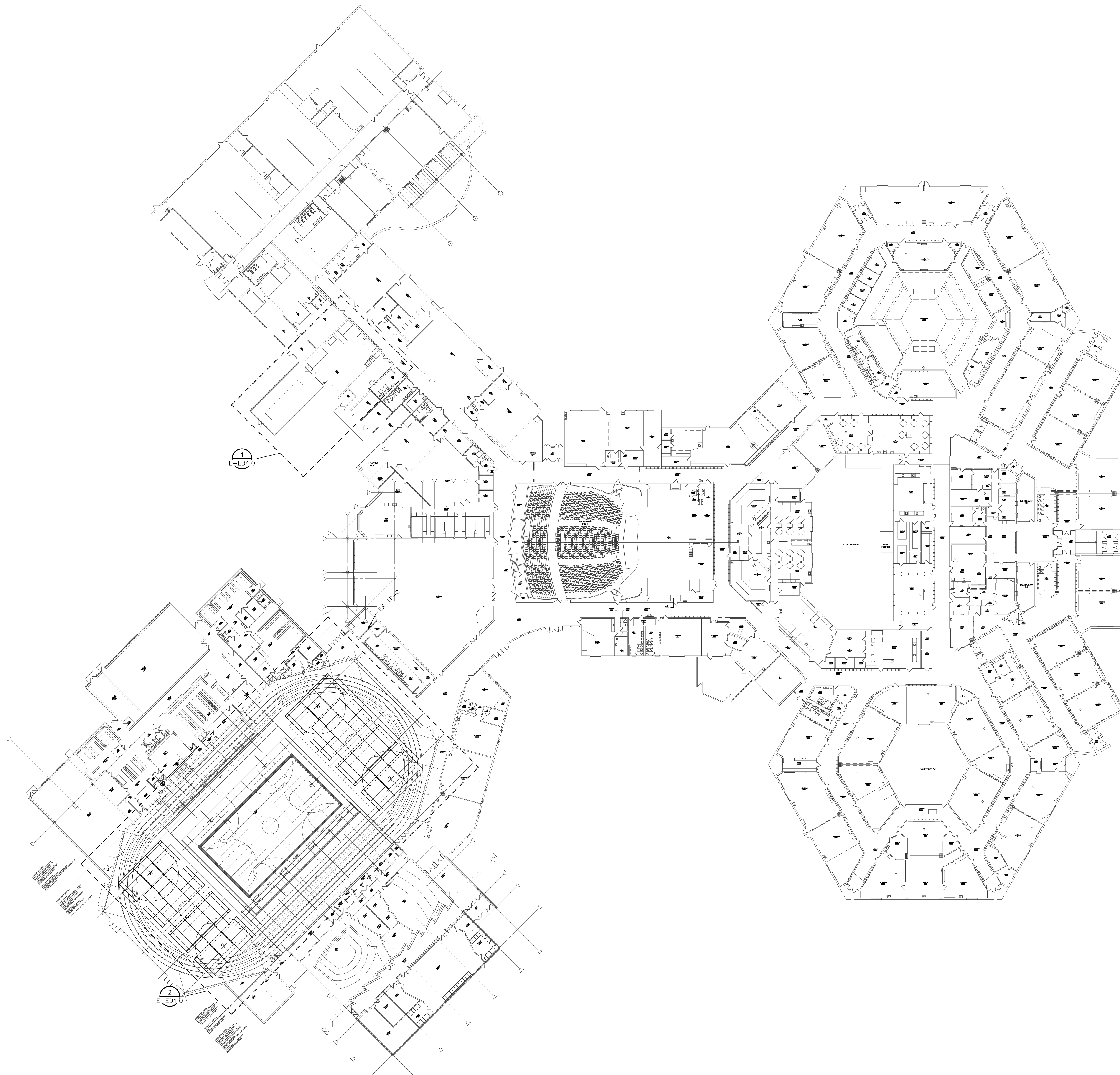
SHEET NO.

E2.0

KINGSKOTT ASSOCIATES INC. KALAMAZOO, MICHIGAN



ELECTRICAL OVERALL PLAN
SCALE: 1/32" = 1'-0"



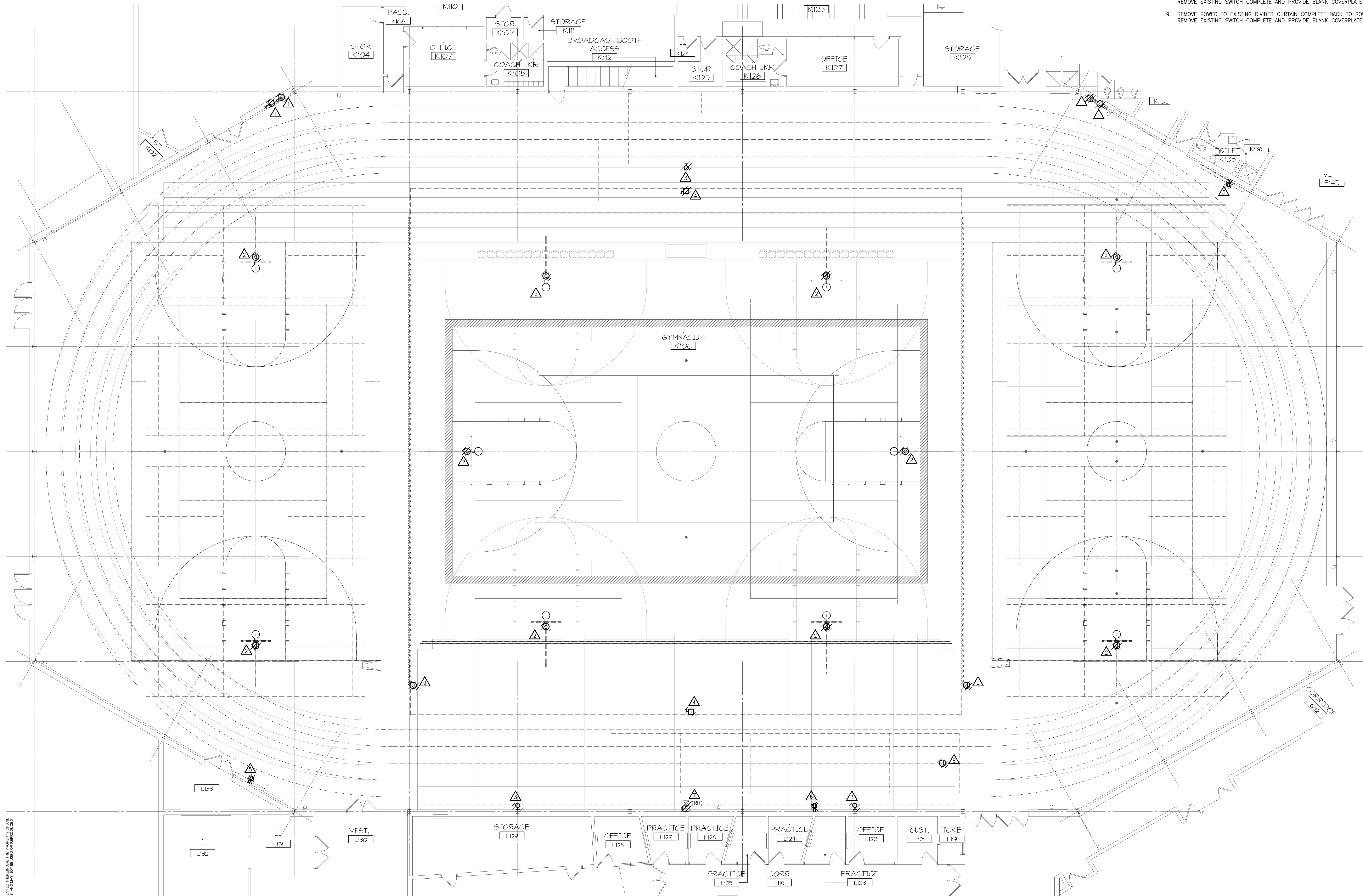


ELECTRICAL DEMOLITION NOTES

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES, BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES.
3. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE, AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. COORDINATE ANY SHUTDOWN OF EXISTING SERVICES AND EQUIPMENT REMAINING IN USE WITH OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COST TO PERFORM THIS WORK DURING EVENING AND WEEKENDS. INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER.
6. REMOVE ALL CONDUIT AND WIRE BACK TO NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
7. WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM DEVICES TO REMAIN; EXTEND CONDUIT AND WIRE AS REQUIRED TO MAINTAIN ELECTRICAL SERVICE.
8. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED AND WALL REMAINS INTACT. MARK ALL UNUSED CIRCUIT BREAKERS AS "SPARE".
9. CONTRACTOR TO TAG ALL CIRCUITS AT BOTH ENDS AFFECTED BY THIS SCOPE OF WORK.
10. CONTRACTOR SHALL PROVIDE UPDATED, TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS SCOPE OF WORK.
11. CONTRACTOR SHALL VERIFY ALL UNDERGROUND AND IN-SLAB UTILITIES LOCATIONS PRIOR TO SAW CUTTING OR PENETRATING ANY FLOOR SLABS. CONTRACTOR SHALL REPAIR ALL UTILITIES DAMAGED BY SAW CUTTING.

DEMOLITION KEYED NOTES

1. REMOVE EWC ELECTRICAL CONNECTION COMPLETE BACK TO SOURCE. RETAIN BREAKER FOR CONNECTION TO NEW EWC.
2. REMOVE MOTORIZED BACKBOARD ELECTRICAL CONNECTION COMPLETE BACK TO SOURCE. RETAIN BREAKER FOR CONNECTION TO NEW MOTORIZED BACKBOARD. REMOVE EXISTING SWITCH COMPLETE AND PROVIDE BLANK COVERPLATE.
3. REMOVE EXISTING LIGHTING COMPLETE BACK TO SOURCE.
4. REMOVE POWER TO MOTORIZED BLEACHERS COMPLETE BACK TO SOURCE.
5. REMOVE POWER FOR EXISTING BACKBOARD BACK TO SOURCE.
6. REMOVE EXISTING RECEPTACLE. EXISTING BRANCH CIRCUIT SHALL REMAIN FOR CONNECTION TO NEW RECEPTACLE. REFER TO NEW WORK PLANS.
7. REMOVE AND RELOCATE EXISTING FIRE ALARM HORN/STROBE. REFER TO NEW WORK PLANS.
8. REMOVE POWER TO EXISTING BATTING CAGE COMPLETE BACK TO SOURCE. REMOVE EXISTING SWITCH COMPLETE AND PROVIDE BLANK COVERPLATE.
9. REMOVE POWER TO EXISTING DIVIDER CURTAIN COMPLETE BACK TO SOURCE. REMOVE EXISTING SWITCH COMPLETE AND PROVIDE BLANK COVERPLATE.



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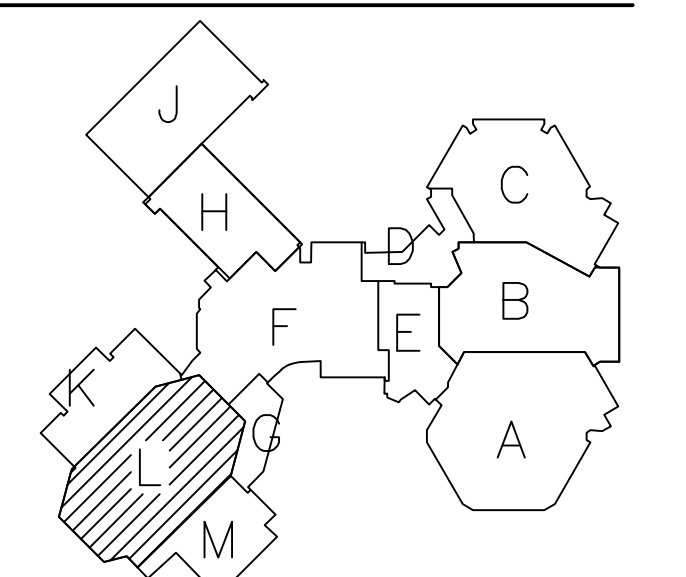
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KEY PLAN

JOB NO. 02900.060

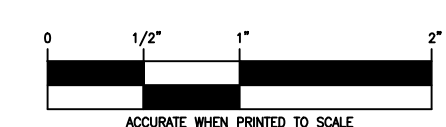
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 ELECTRICAL DEMO PLAN - AREA L

SHEET NO.

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ELECTRICAL DEMO PLAN - AREA L
 SCALE: 1/8" = 1'-0"



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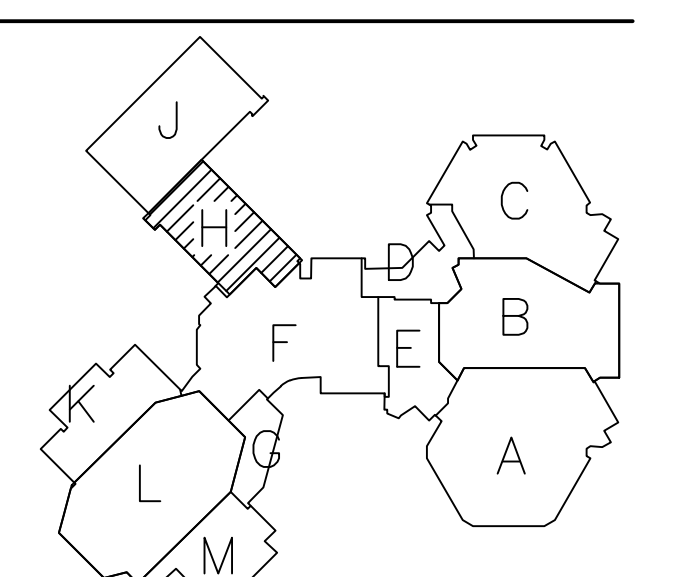
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KEY PLAN

JOB NO. 02900.060

SHEET TITLE
ENLARGED BOILER ELECTRICAL DEMO PLAN

SHEET NO.
ED4.0

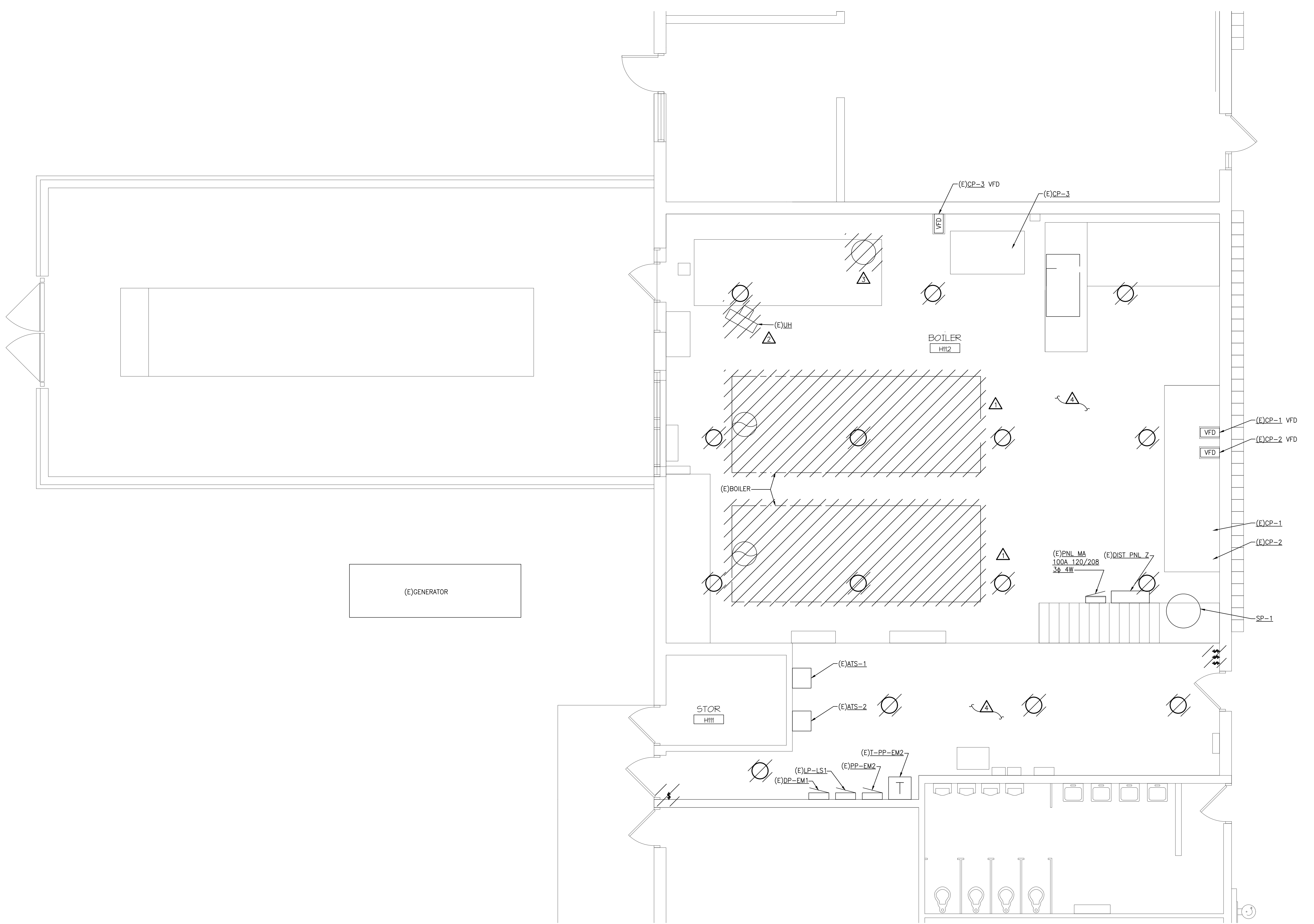
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ELECTRICAL DEMOLITION NOTES

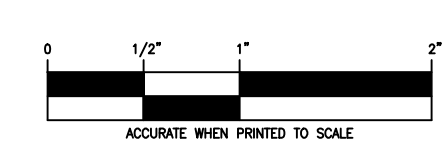
- VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
- EXAMINE THE DRAWINGS OF OTHER TRADES, BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES.
- PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES.
- COORDINATE WITH NEW WORK PLANS, ONE LINE, AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
- COORDINATE ANY SHUTDOWN OF EXISTING SERVICES AND EQUIPMENT REMAINING IN USE WITH OWNERS' REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COST TO PERFORM THIS WORK DURING EVENING AND WEEKENDS. INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER.
- REMOVE ALL CONDUIT AND WIRE BACK TO NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
- WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM DEVICES TO REMAIN; EXTEND CONDUIT AND WIRE AS REQUIRED TO MAINTAIN ELECTRICAL SERVICE.
- PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED AND WALL REMAINS INTACT. MARK ALL UNUSED CIRCUIT BREAKERS AS "SPARE".
- CONTRACTOR TO TAG ALL CIRCUITS AT BOTH ENDS AFFECTED BY THIS SCOPE OF WORK.
- CONTRACTOR SHALL PROVIDE UPDATED, TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS SCOPE OF WORK.
- CONTRACTOR SHALL VERIFY ALL UNDERGROUND AND IN-SLAB UTILITIES LOCATIONS PRIOR TO SAW CUTTING OR PENETRATING ANY FLOOR SLABS. CONTRACTOR SHALL REPAIR ALL UTILITIES DAMAGED BY SAW CUTTING.

DEMOLITION KEYED NOTES

- ELECTRICAL FEED TO EXISTING BOILER TO BE REMOVED BACK TO SOURCE. RETAIN BREAKER AND LABEL AS SPARE. EXISTING ORIGINAL UNDERGROUND FEED TO ALL BE REMOVED BACK TO SOURCE.
- EXISTING ELECTRICAL CONNECTION TO UNIT HEATER TO BE REMOVED. EXISTING BRANCH CIRCUIT TO REMAIN FOR CONNECTION TO NEW UNIT HEATER. REFER TO NEW WORK PLANS.
- EXISTING ELECTRICAL CONNECTION TO GLYCOL MAKE UP UNIT TO BE REMOVED. EXISTING BRANCH CIRCUIT SHALL REMAIN FOR CONNECTION TO NEW UNIT. REFER TO NEW WORK PLANS.
- EXISTING LIGHT FIXTURES AND SWITCHES TO BE REMOVED BACK TO SOURCE.



ENLARGED BOILER ELECTRICAL DEMO PLAN
SCALE: 1/4" = 1'-0"



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ELECTRICAL GENERAL NOTES

1. ALL RECEPTACLES ON EXTERIOR, IN KITCHEN, IN CONCESSION, IN LABORATORY, AND WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE READILY ACCESSIBLE GFCI TYPE RECEPTACLE.
2. REFER TO ARCHITECTURAL FLOOR PLANS AND ELEVATIONS TO VERIFY LOCATION OF DEVICES.
3. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
4. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
5. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
6. RECEPTACLES INSTALLED IN ELEVATOR HOISTWAY(S), ELEVATOR MACHINE ROOM(S), CONTROL ROOM(S)/SPACE(S) SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI) WITH THE EXCEPTION OF A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING AN ELEVATOR PIT SUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.

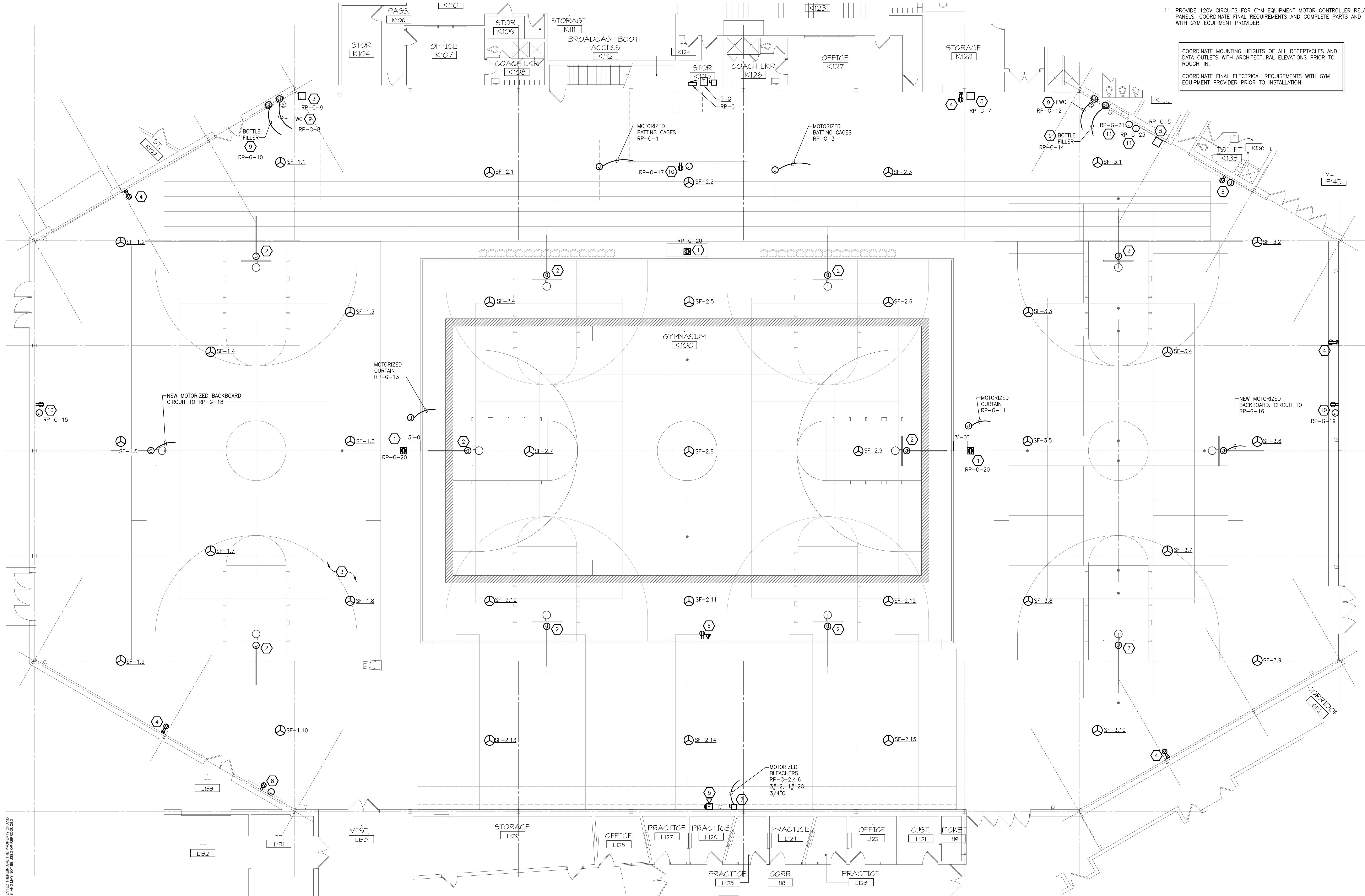
7. ALL BRANCH CIRCUITS THAT SUPPLY 125-V SINGLE PHASE, 15 AND 20 AMP OUTLETS TO BE INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
9. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
10. WHERE MORE THAN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.
11. ALL POWER PACKS TO BE LOCATED DIRECTLY ABOVE SWITCH.
12. LIGHT FIXTURES ARE LOOPED TOGETHER TO INDICATE CONTROL ZONE GROUPS. CONNECTED FIXTURES ARE TO BE CONTROLLED TOGETHER. CIRCUITS MAY BE SHARED AMONG SEPARATE CONTROL ZONE GROUPS. MULTIPLE ZONE ZONES MAY BE COMBINED IN SOFTWARE TO FORM SCENES. SEE LIGHTING CONTROL MATRIX: SCENE SCHEDULE (IF PROVIDED), AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

KEYED NOTES

1. PROVIDE RECESSED POWER AND DATA FLOOR BOX (MODEL NUMBER: RFB4 BY WIREMOLD OR EQUAL) WITH 3/4" CONDUIT FOR POWER AND 1-1/2" CONDUIT FOR DATA. EACH FLOOR BOX SHALL HAVE (2) DUPLEX RECEPTACLES AND PROVISIONS FOR DATA. PROVIDE WITH BRUSHED ALUMINUM FACE PLATE.
2. POWER FOR MOTORIZED BACKBOARD, EXTEND EXISTING CONDUIT AND WIRING TO NEW LOCATION AS REQUIRED.
3. PROVIDE ELECTRICAL CONNECTION TO NEW MECHANICAL DESTRATIFICATION UNITS (35 TOTAL). EACH CONTROLLER SHALL RECEIVE A 120V CIRCUIT. EC SHALL RUN 120V POWER FROM CONTROLLER TO EACH FAN. REFER TO MECHANICAL PLANS FOR CONTROLLER GROUPING.
4. ADDITIONAL GENERAL PURPOSE OUTLET (RUN CONDUIT ADJACENT TO EXISTING COLUMN.)
5. RELOCATED FIRE ALARM DEVICE TO BE RELOCATED ABOVE NEW MOTORIZED BLEACHERS.

6. PROVIDE DUPLEX RECEPTACLE AND DATA OUTLET IN FACE OF BLEACHER RISER. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. CIRCUIT TO EXISTING BRANCH CIRCUIT THAT FED REMOVED RECEPTACLE BEHIND BLEACHERS. COORDINATE WORK WITH BLEACHER MANUFACTURER.
7. DISCONNECT SWITCH FOR MOTORIZED BLEACHERS TO BE MOUNTED AT 5'-0" AFF. CIRCUIT AS SHOWN. PROVIDE WALL MOUNTED JUNCTION BOX AT 5'-0" AT EACH MOTOR LOCATION. COORDINATE LOCATIONS WITH APPROVED BLEACHER SHOP DRAWINGS.
8. PROVIDE DUPLEX RECEPTACLE AND DOUBLE GANG JUNCTION BOX WITH 1-1/2" CONDUIT FOR WALL MOUNTED TV. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS. CIRCUIT TO EXISTING CIRCUIT THAT FED THE REMOVED SCOREBOARD.
9. NEW ELECTRIC WATER COOLER AND BOTTLE FILLER TO EACH RECEIVE A DEDICATED CIRCUIT. CIRCUIT AS SHOWN ON PLAN. PROVIDE A GFI BREAKER IN PANEL.
10. PROVIDE DUPLEX RECEPTACLE AND DOUBLE GANG JUNCTION BOX WITH 1-1/2" CONDUIT FOR WALL MOUNTED SCOREBOARD. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS. CIRCUIT AS SHOWN ON PLAN. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH OWNER PROVIDED EQUIPMENT.
11. PROVIDE 120V CIRCUITS FOR GYM EQUIPMENT MOTOR CONTROLLER RELAY PANELS. COORDINATE FINAL REQUIREMENTS AND COMPLETE PARTS AND PIECES WITH GYM EQUIPMENT PROVIDER.

COORDINATE MOUNTING HEIGHTS OF ALL RECEPTACLES AND DATA OUTLETS WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH GYM EQUIPMENT PROVIDER PRIOR TO INSTALLATION.



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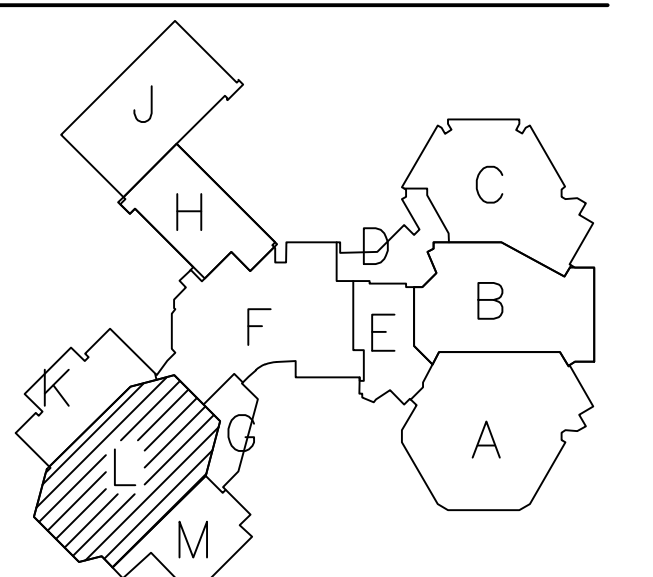
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ELECTRICAL PLAN - AREA L

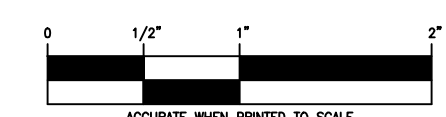
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ELECTRICAL PLAN - AREA L

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



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