



BIOSCIENCES / BIOTECHNOLOGY BUILDING ARKANSAS STATE UNIVERSITY

Large Scale Culture Facility

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THE FOLLOWING DRAWINGS ARE TO BECOME A PART OF THE BIOSCIENCES/BIOTECHNOLOGY BUILDING, ARKANSAS STATE UNIVERSITY CONTRACT. ALL PROVISIONS AND REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS ISSUED NOVEMBER 7, 2002 WITH ARCHITECTS COMMISSION NO. 10301 ARE PART OF THESE DOCUMENTS AND APPLY TO THE LARGE SCALE CULTURE FACILITY.



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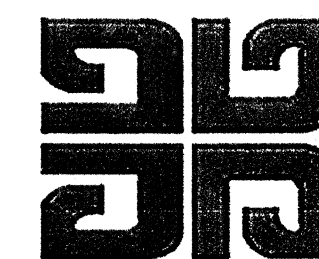
Jonesboro, Arkansas

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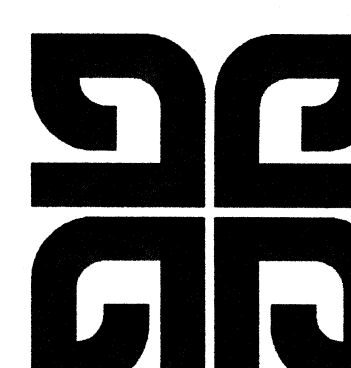
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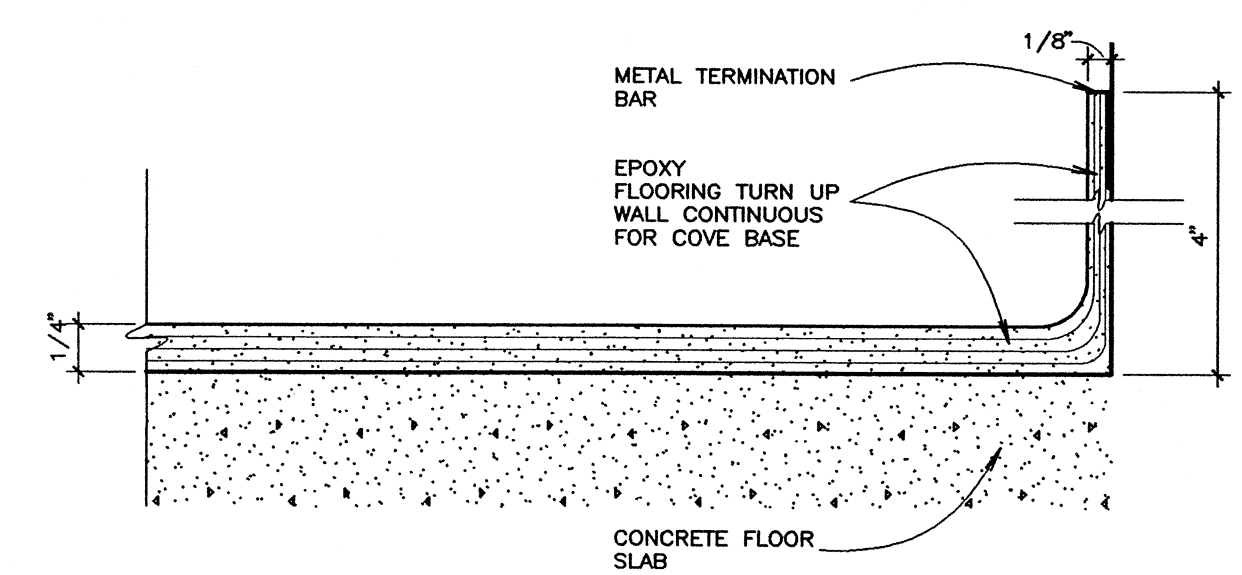


FINISH SCHEDULE
DOOR SCHEDULE
VISUAL DOOR TYPE
HOLLOW METAL FRAME

Commission Number
10301

A003.1

Date: October 1, 200

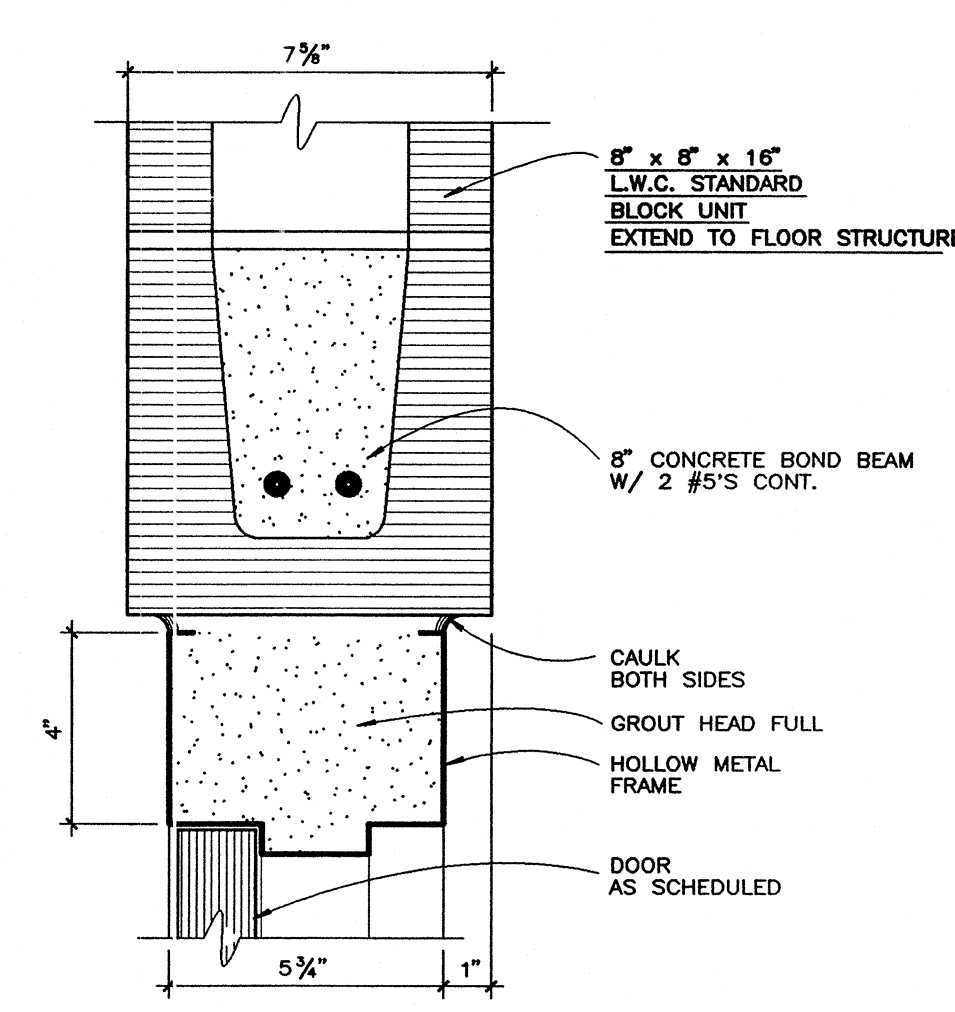


epoxy / cove base
FULL SCALE

1

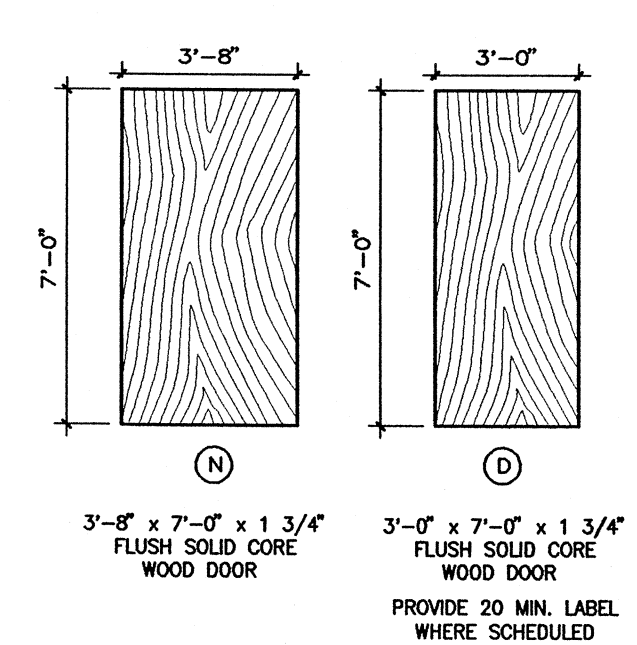
LARGE SCALE CULTURE FACILITY FINISH SCHEDULE						
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING HEIGHT	CEILING
A100	CORRIDOR	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A101	GOWNING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A102	OFFICE	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A103	CLEAN CAGE WASH	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A104	FEED/BEDDING STORAGE	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A105	JANITOR	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A106	EQUIPMENT ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	11'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A107	SURGERY PREP	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A108	CORRIDOR	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A109	DIRTY CAGE WASH	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A110	SURGERY ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A111	CORRIDOR	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A112	HOLDING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A113	PROCEDURE ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A114	HOLDING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A115	HOLDING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A116	PROCEDURE ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A117	HOLDING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID
A118	HOLDING ROOM	1/4" TROWELED EPOXY	INTERGRAL 4" EPOXY	EPOXY PAINTED CONCRETE BLOCK	10'-0"	EPOXY PAINTED GYP. BOARD ON SUSPENSION GRID

LARGE SCALE CULTURE FACILITY DOOR SCHEDULE											
OPNG NMBR.	DOOR					DETAILS			LBL	HDWE	DOOR LOCATION ROOM NAMES
	TYPE	NUMBER	THRESH	FRAME	FRAME DEPTH	HEAD	JAMB	SILL			
273	D	PAIR	—	HM-7	5 3/4"	1/A003.1	2/A003.1	—	20 MIN.	A1	CORRIDOR A100
274	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—		A2	GOWNING ROOM A101
275	D	SINGLE	—	HM-14	5 3/4"	1/A003.1	2/A003.1	—	A4	OFFICE A102	
276	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	CLEAN CAGE WASH A103	
277	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A2	GOWNING ROOM A101	
278	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	FEED/BEDDING STORAGE A104	
279	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A2	JANITOR A105	
280	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A4	EQUIPMENT ROOM A106	
281	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A2	SURGERY PREP A107	
282	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A2	SURGERY ROOM A110	
283	D	SINGLE	—	HM-4	5 3/4"	1/A003.1	2/A003.1	—	A2	SURGERY ROOM A110	
284	D	PAIR	—	HM-7	5 3/4"	1/A003.1	2/A003.1	—	A5	DIRTY CAGE WASH A109	
285	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	HOLDING ROOM A112	
286	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	HOLDING ROOM A114	
287	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	PROCEDURE ROOM A113	
288	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	HOLDING ROOM A115	
289	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	PROCEDURE ROOM A116	
290	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	HOLDING ROOM A117	
291	N	SINGLE	—	HM-13	5 3/4"	1/A003.1	2/A003.1	—	A3	HOLDING ROOM A118	

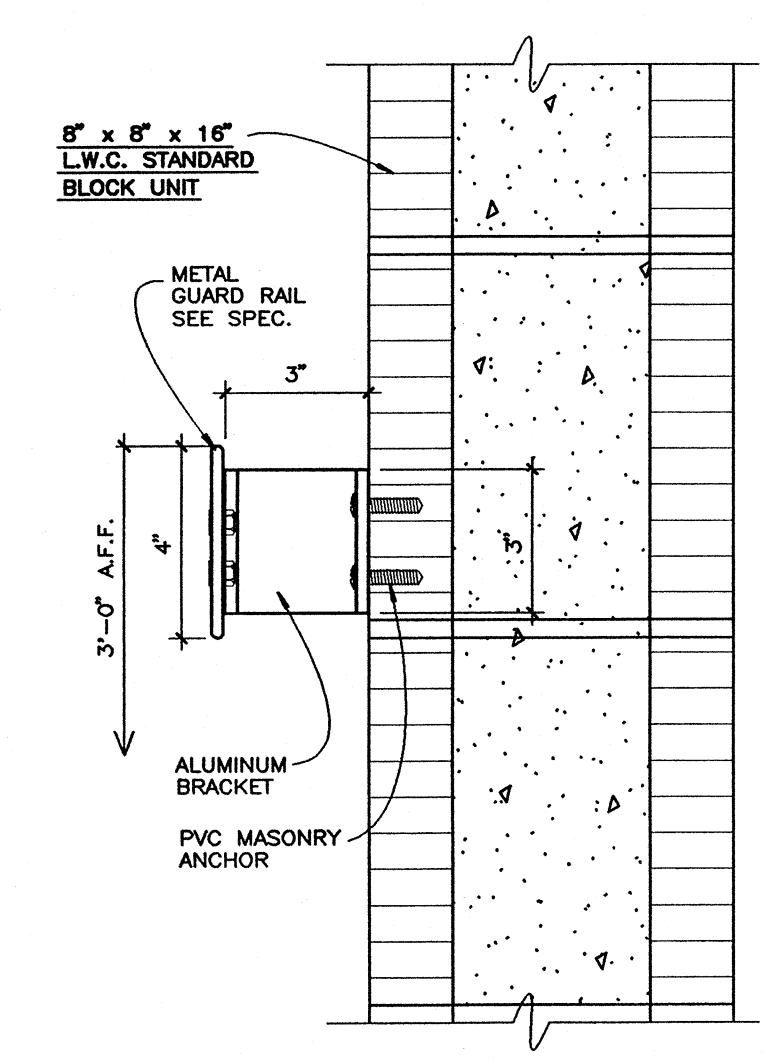


head
SCALE: 3" = 1'-0"

1

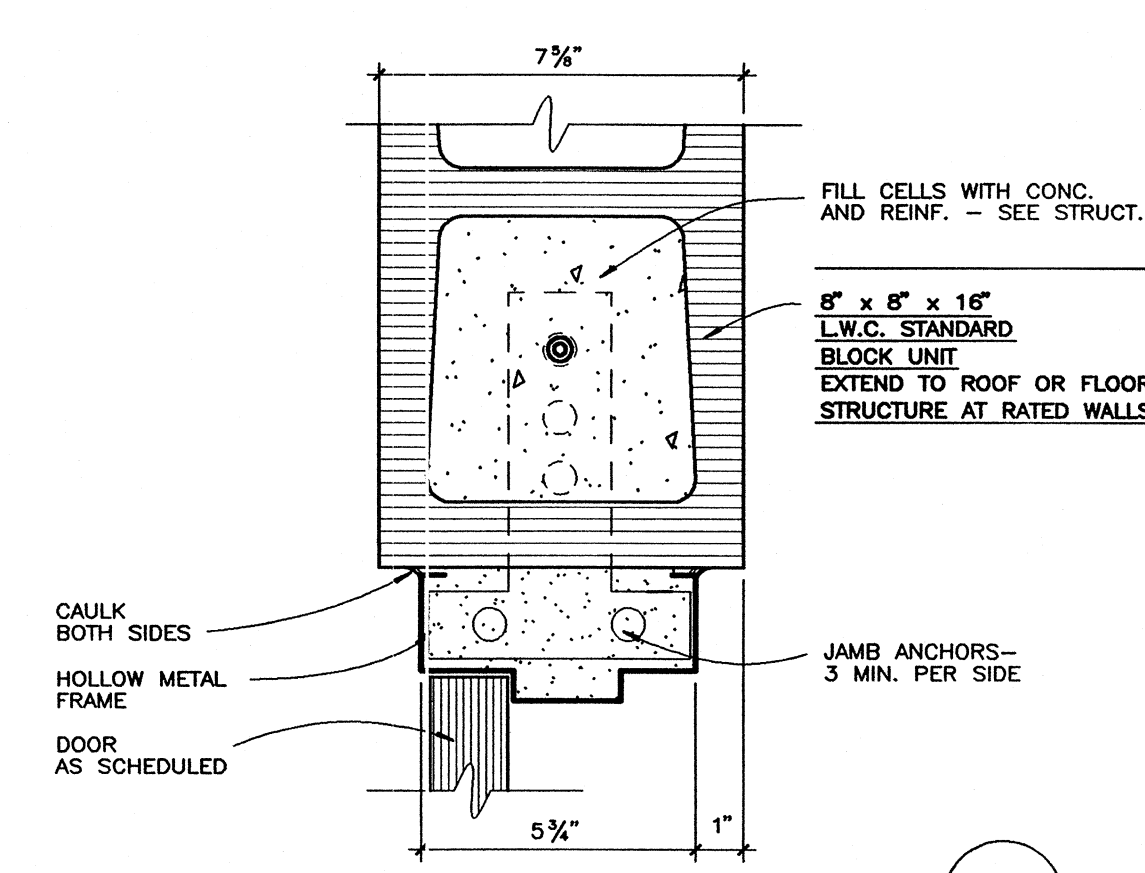


visual door types
SCALE: 1/4" = 1'-0"



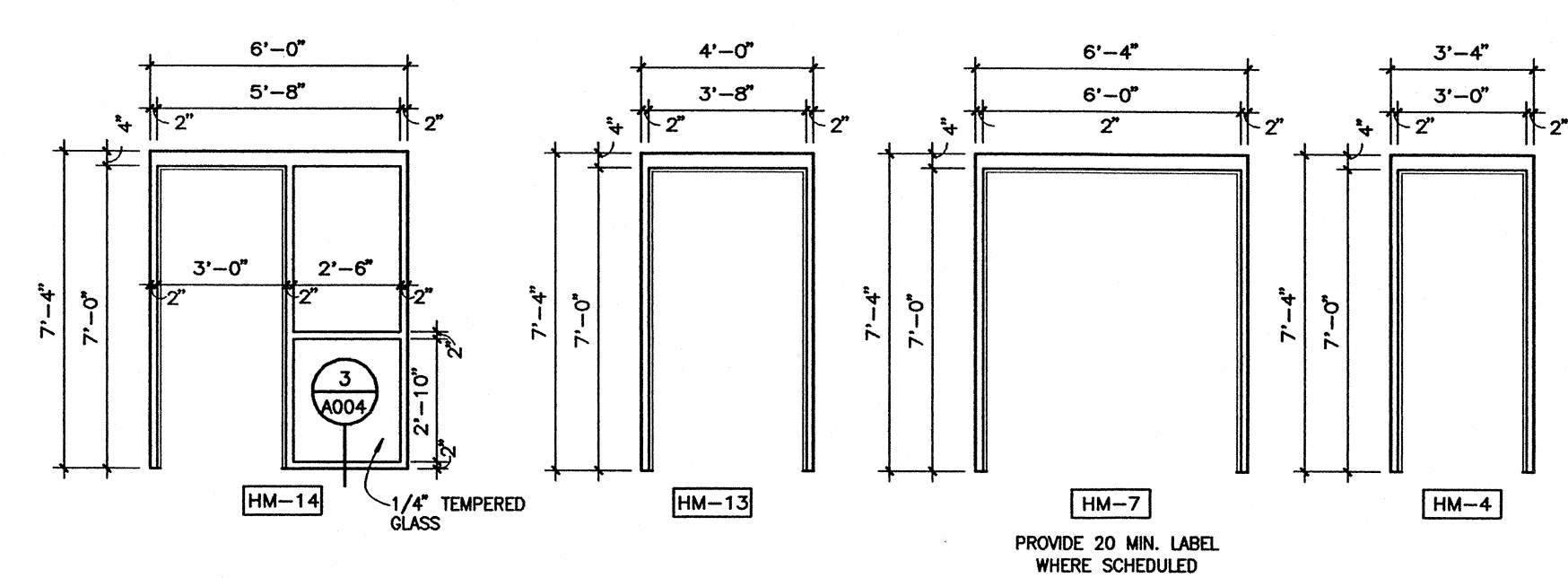
detail at guard rail
SCALE: 3" = 1'-0"

3



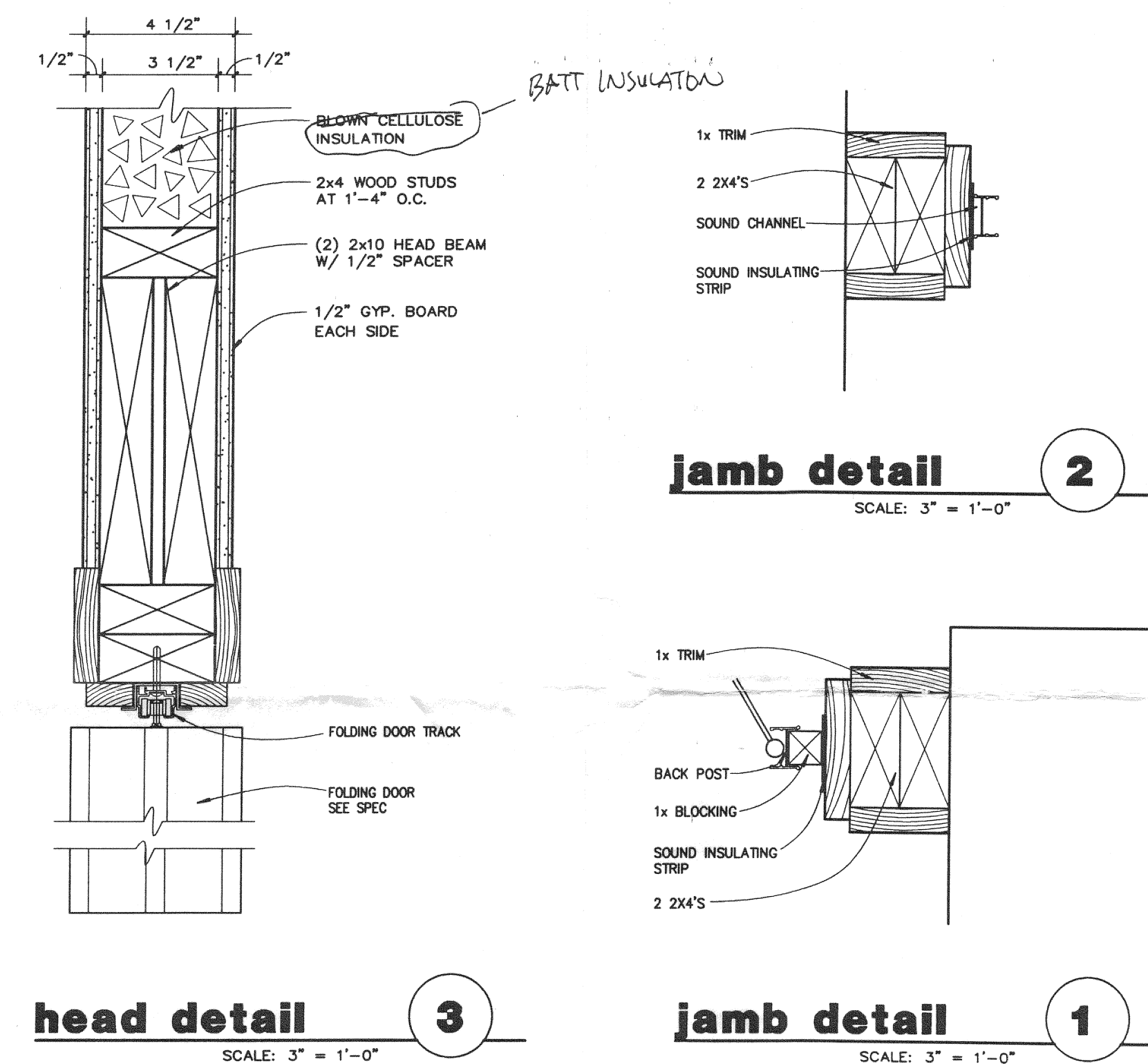
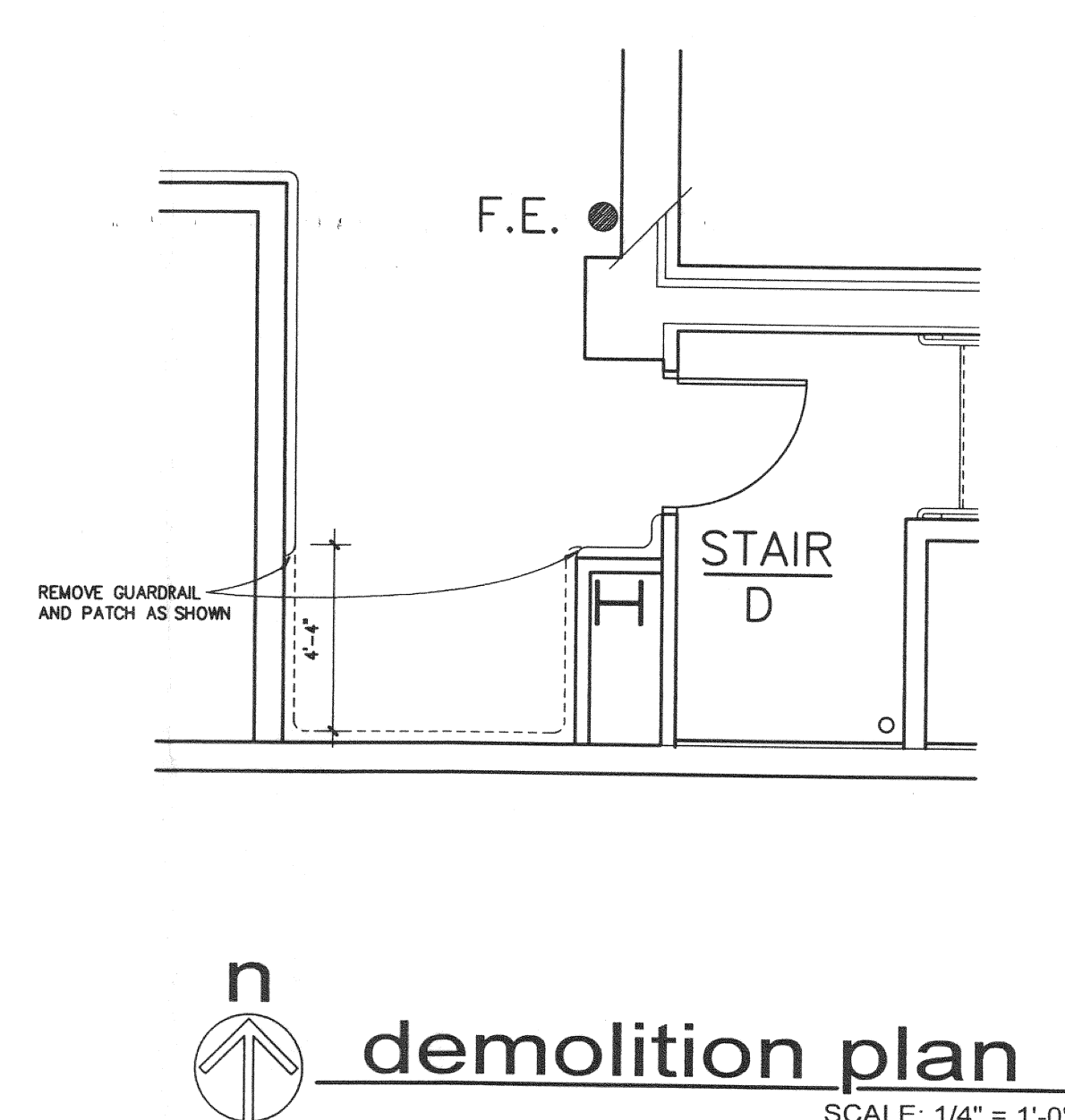
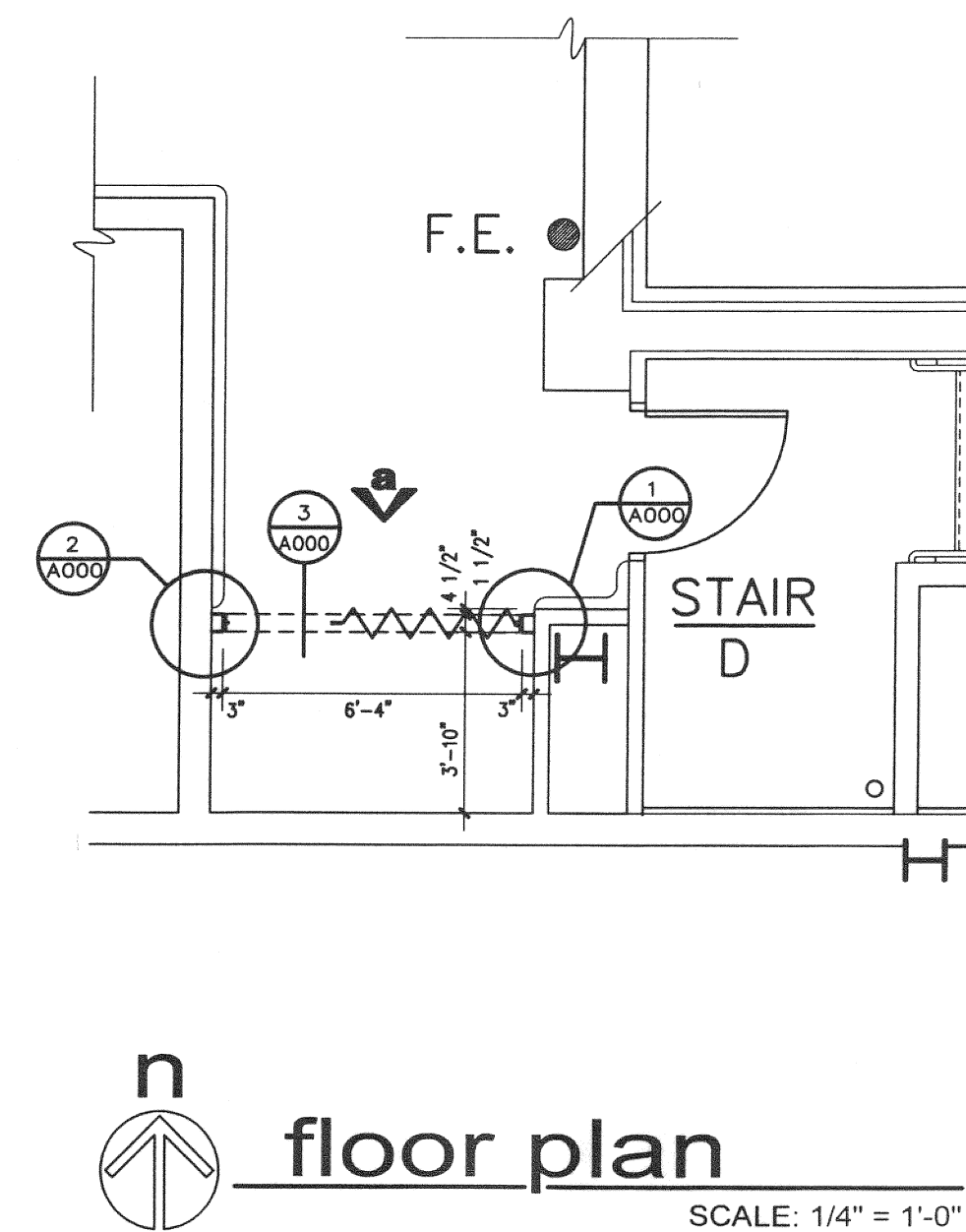
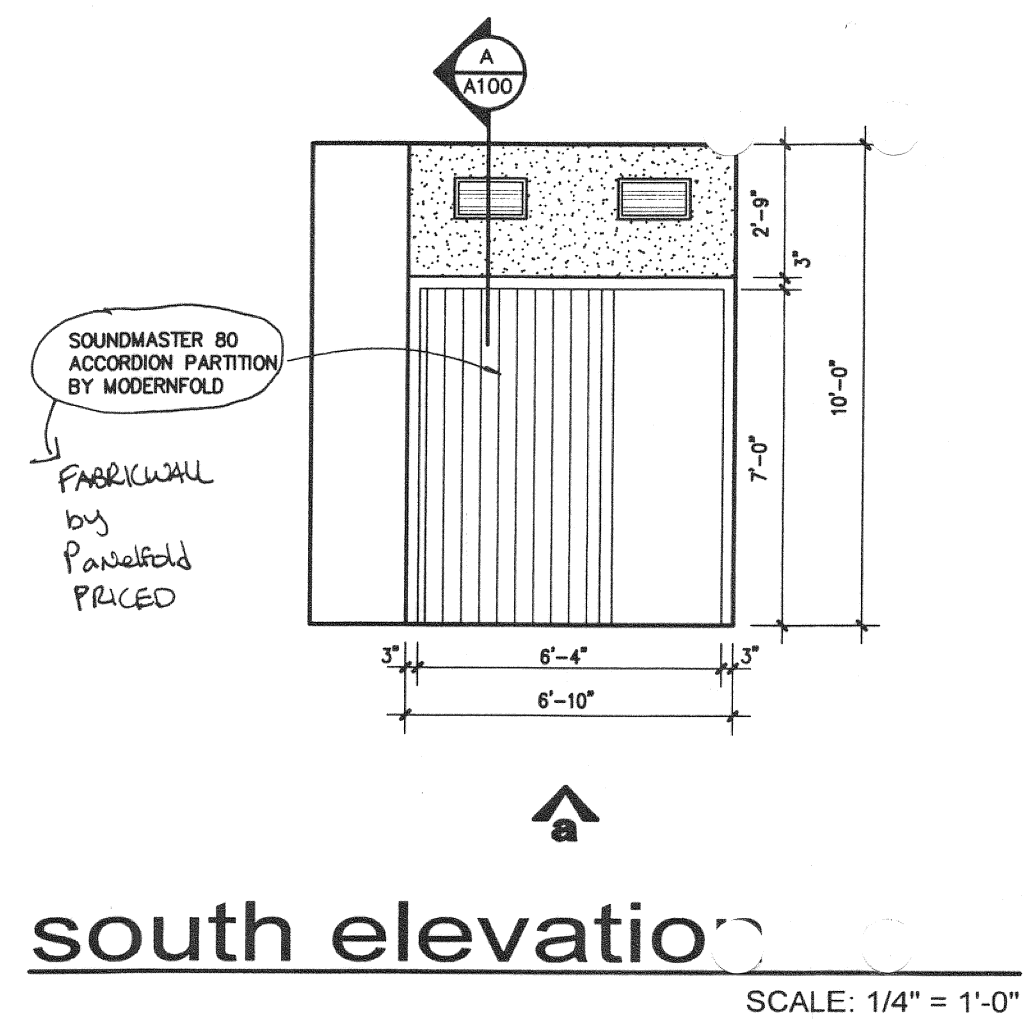
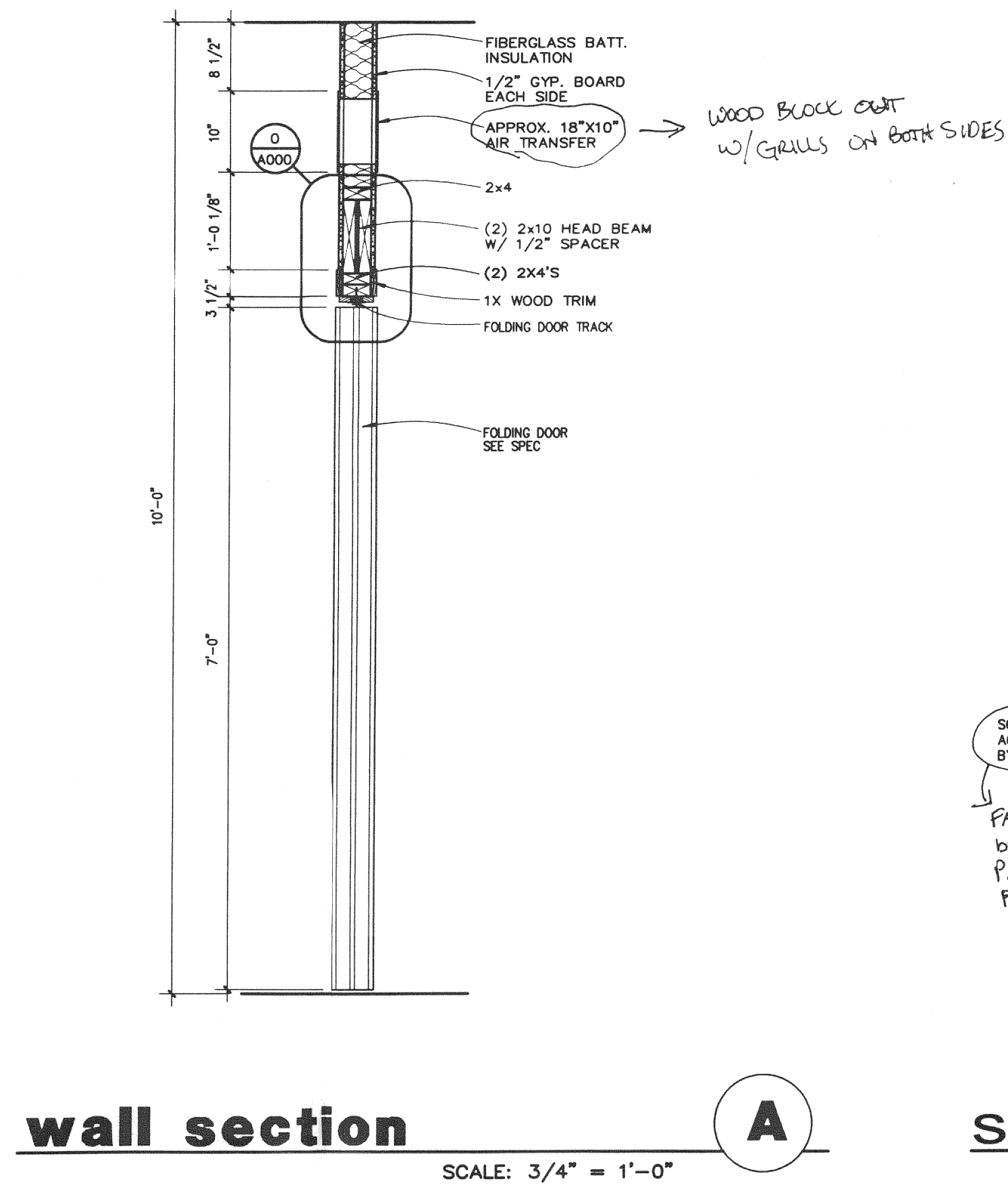
jamb
SCALE: 3" = 1'-0"

2

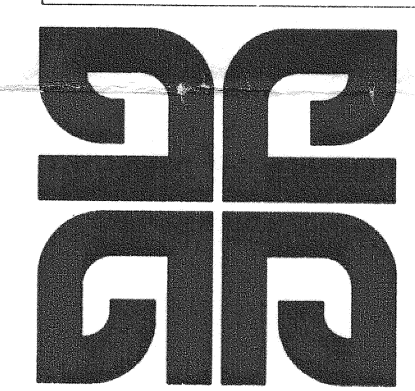


hollow metal frame schedule
SCALE: 1/4" = 1'-0"

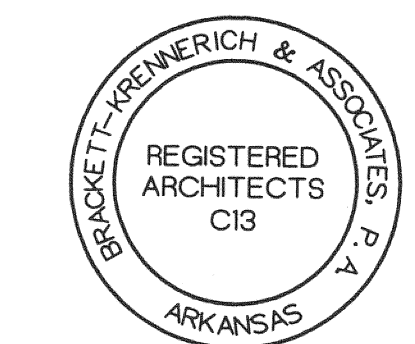
Date: October 1, 200



LARGE SCALE CULTURE FACILITY
BIOSCIENCES / BIOTECHNOLOGY BUILDING
ARKANSAS STATE UNIVERSITY
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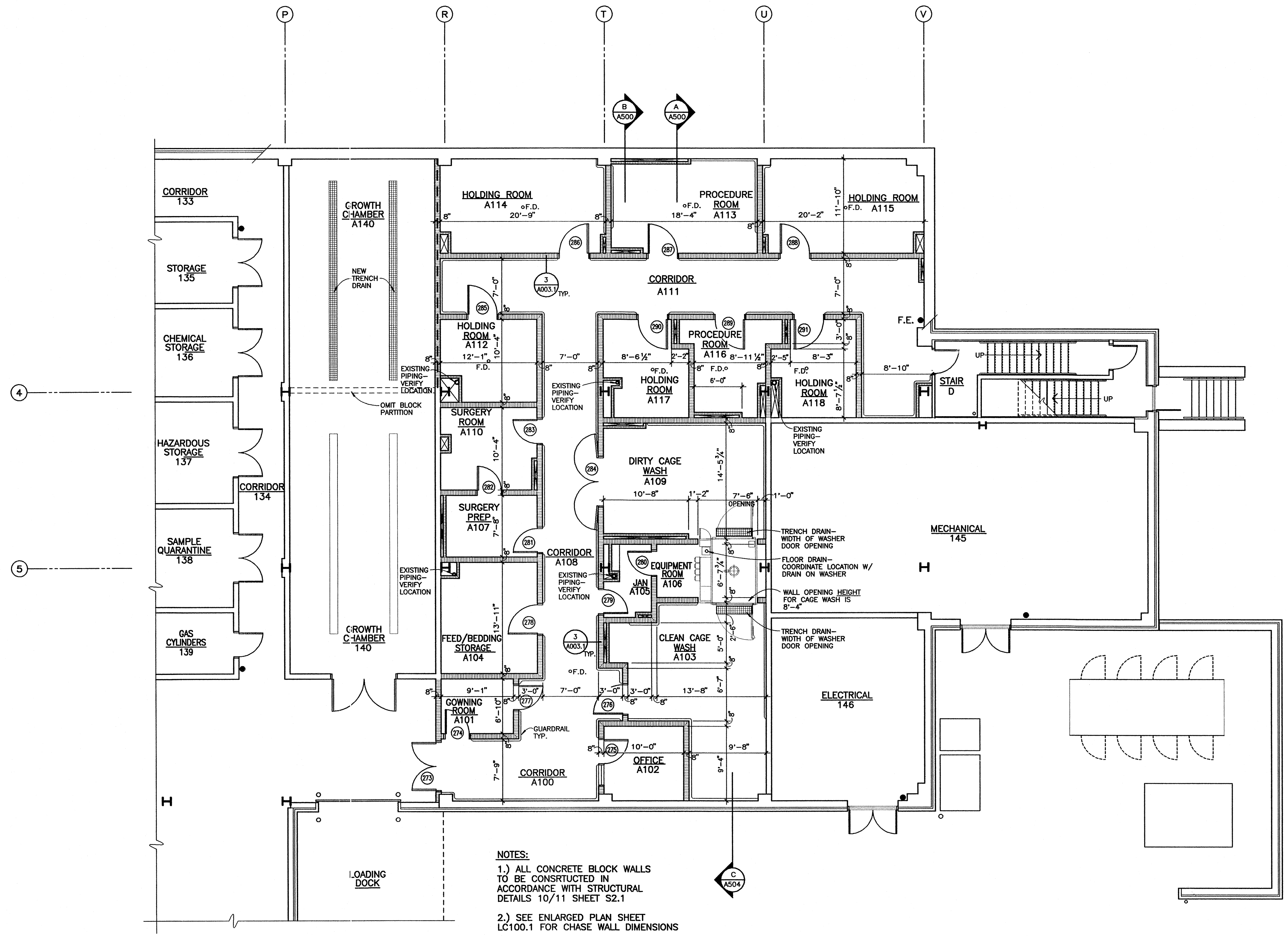
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LARGE SCALE
CULTURE FACILITY
FLOOR PLAN

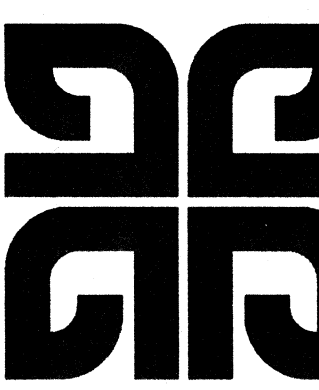
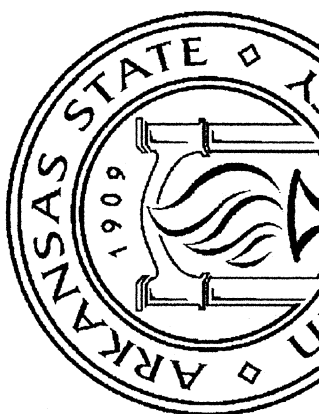
Commission Number
00000
A100
Date: March 3, 2005

2807



NOTES:
 1.) ALL CONCRETE BLOCK WALLS TO BE CONSTRUCTED IN ACCORDANCE WITH STRUCTURAL DETAILS 10/11 SHEET S2.1
 2.) SEE ENLARGED PLAN SHEET LC100.1 FOR CHASE WALL DIMENSIONS

n large scale culture facility floor plan
 3,911 Sq.Ft. SCALE: 1/8" = 1'-0"



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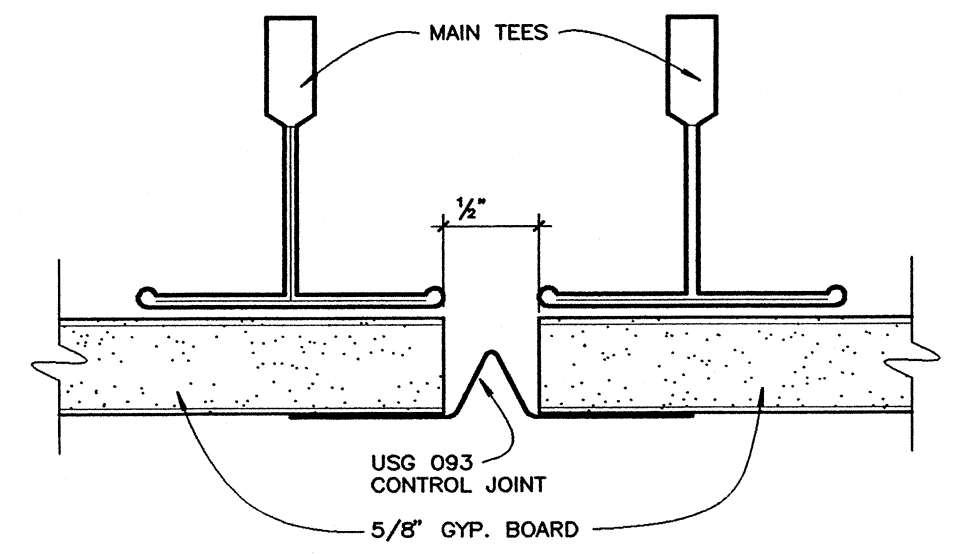
LARGE SCALE CULTURE FACILITY FLOOR PLAN

Commission Number 10301

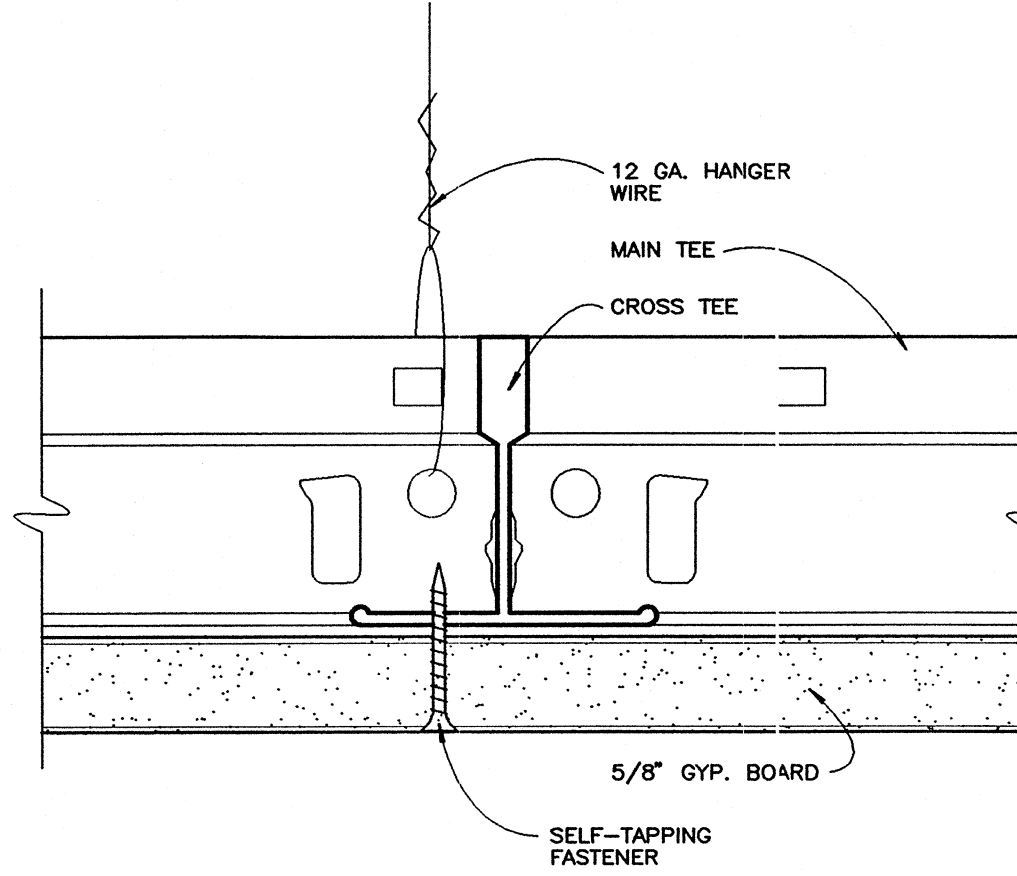
A100.

Date: October 1, 2003

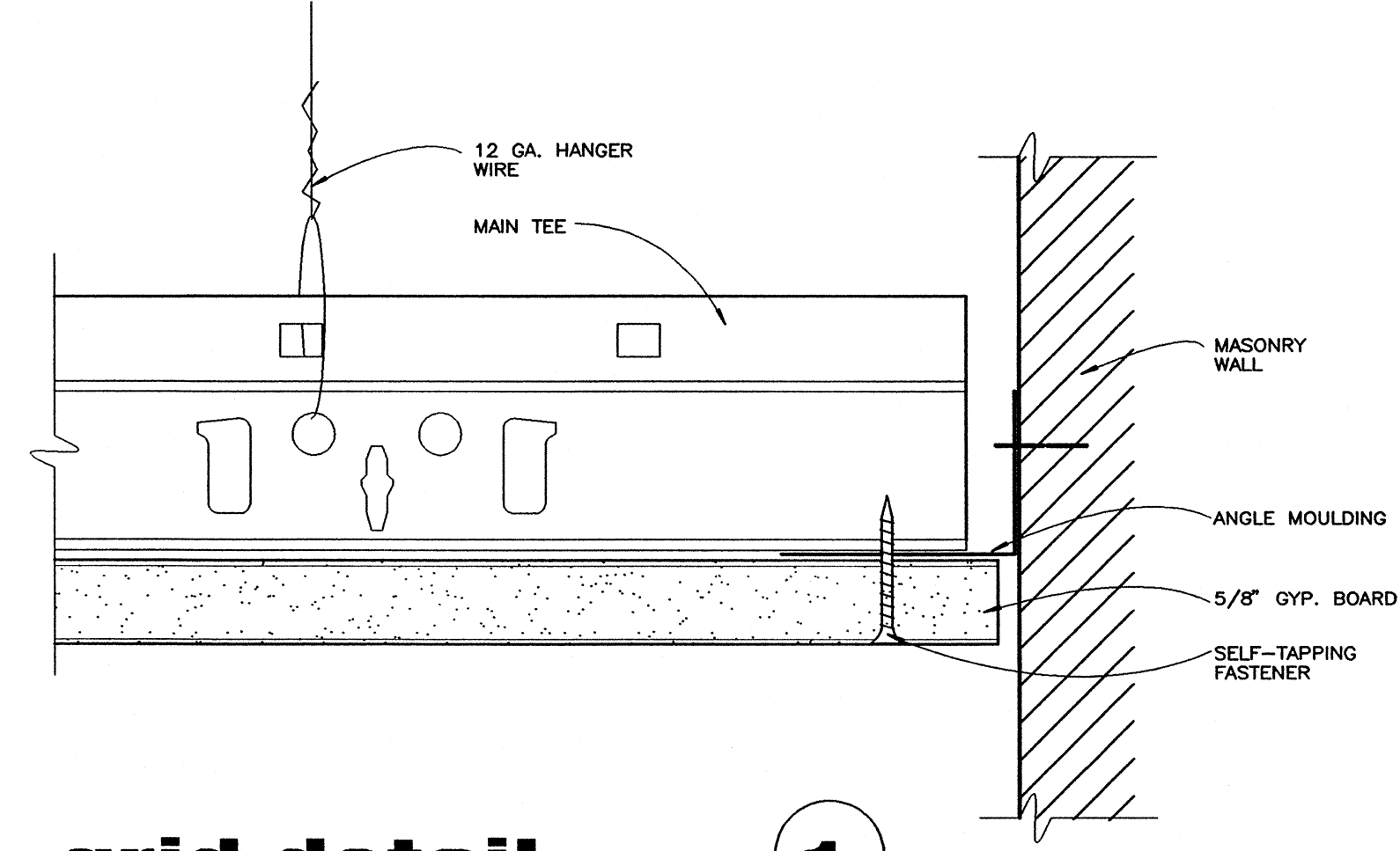
control joint 3
SCALE: FULL



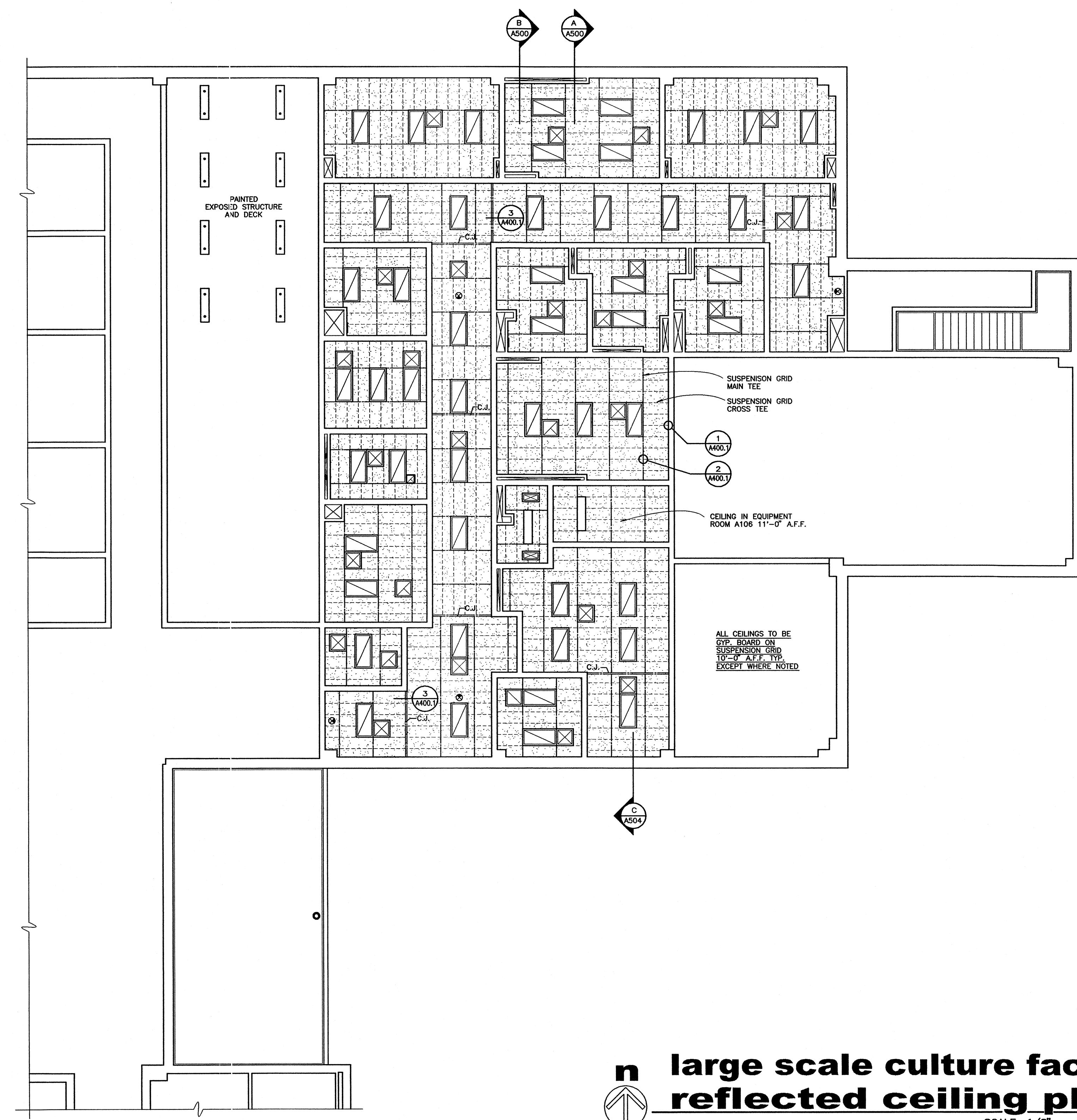
grid detail 2
SCALE: FULL



grid detail 1
SCALE: FULL

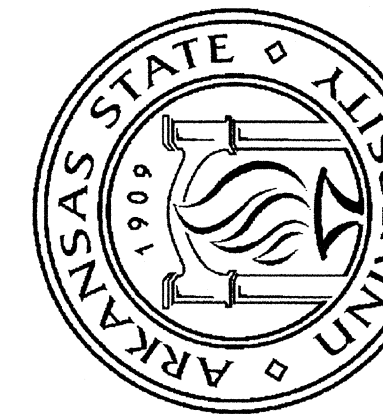


LEGEND	
ARCHITECTURAL	ELECTRICAL
GYPSUM BOARD SUSPENSION SYSTEM	FLUORESCENT LIGHT FIXTURE
OPEN TO STRUCTURE ABOVE	SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE
RETURN AIR GRILLE	SUSPENDED FLUORESCENT LIGHT FIXTURE
SUPPLY AIR GRILLE	CEILING MOUNT EXIT SIGN
SEE MECHANICAL PLAN FOR FURTHER DETAILS AND INFO.	
SEE LIGHTING PLAN FOR FURTHER DETAILS AND INFO.	

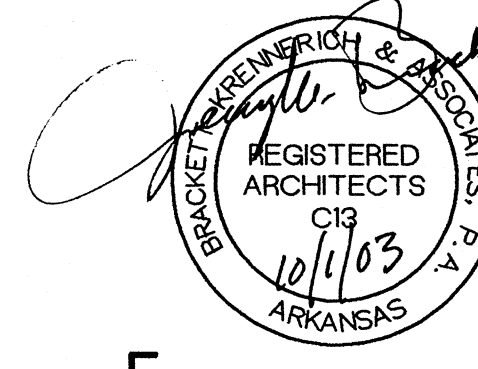


large scale culture facility
reflected ceiling plan
SCALE: 1/8" = 1'-0"

LARGE SCALE CULTURE FACILITY
BIOSCIENCES / BIOTECHNOLOGY BUILDING
ARKANSAS STATE UNIVERSITY



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REFLECTED
CEILING PLAN

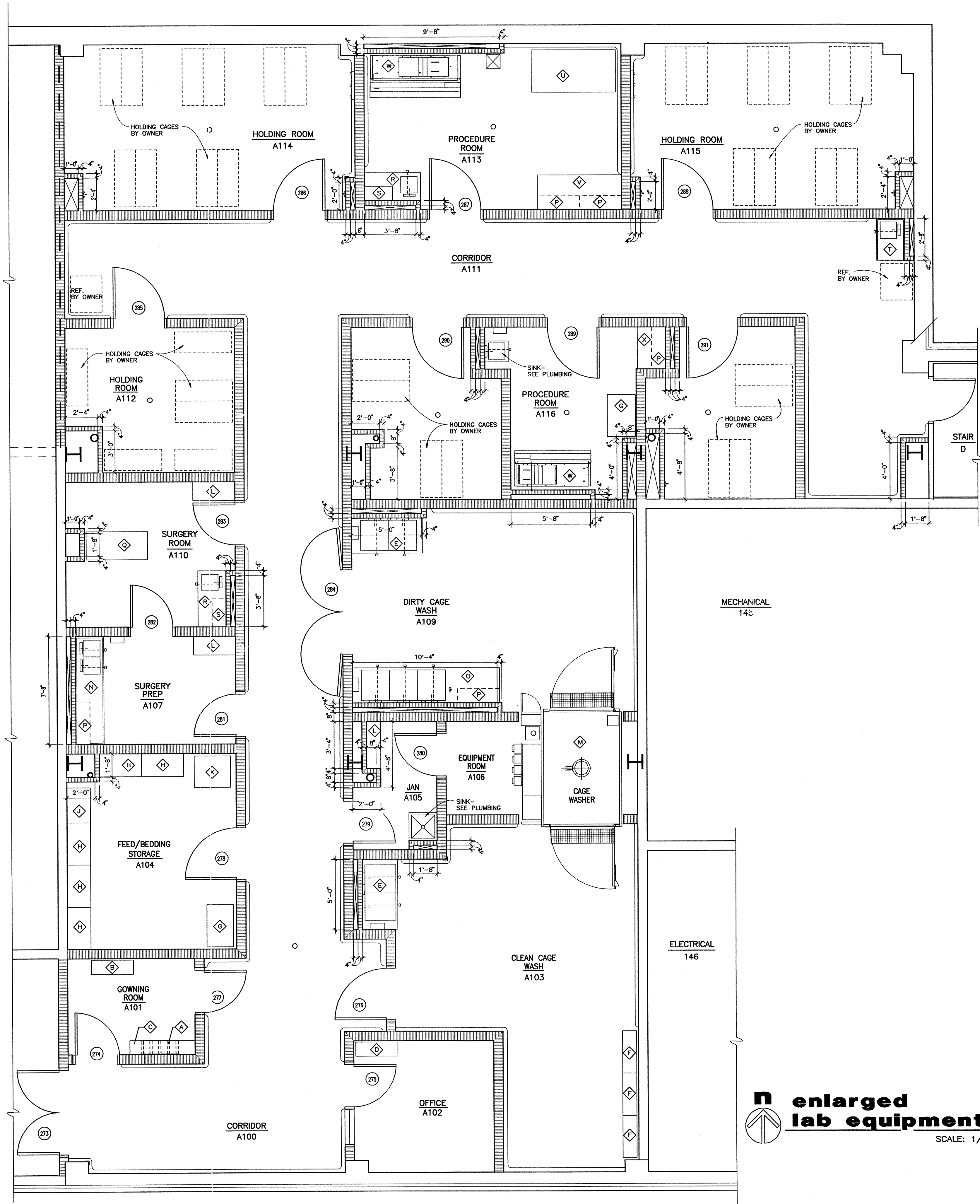
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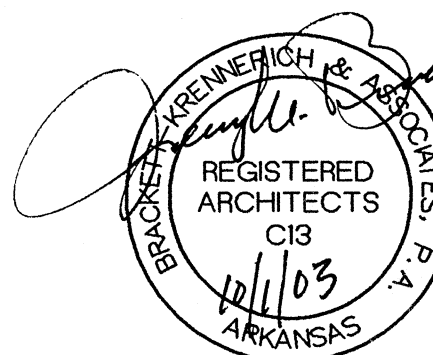
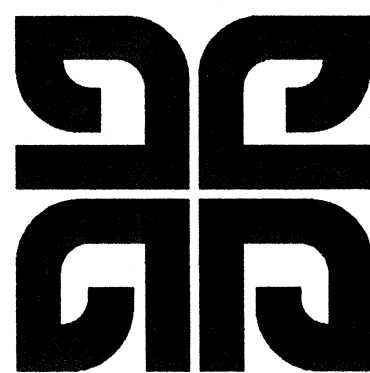
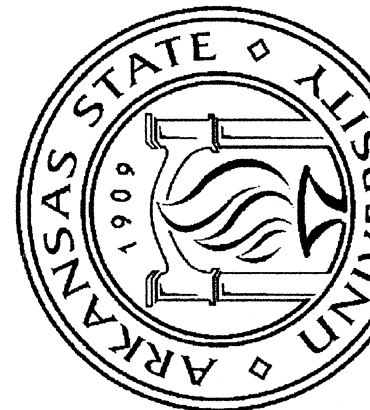
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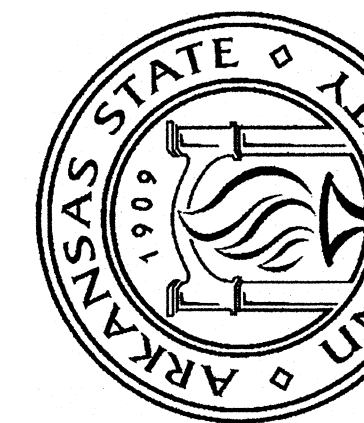
LAB EQUIPMENT SCHEDULE			
KEY	QUANTITY	DESCRIPTION	* EQUIPMENT ELEVATION #
A	2	BOOT RACKS - MODEL 3BW-51649. RACKS ARE PVC COATED AND EACH RACK HOLDS (4) PAIR OF BOOTS.	4
B	1	STAINLESS STEEL MOBILE BENCH. 48"x18"x18"	5
C	1	STAINLESS STEEL WALL MOUNTED, ADJUSTABLE SHELF UNITS. THREE TIER 60" WIDE X 12" DEEP X 48" TALL. MANUF. BY ASBEKA.	4
D	1	PLASTIC LAMINATE CABINET WITH METAL NARCOTICS LOCKER 24" x 31 5/8" x 14". MANUF. BY TMI	1
E	2	TWO COMPARTMENT STAINLESS STEEL SCULLERY SINK 60"x30"x36" BY ASBEKA. INCLUDES (1) PR511-110-WSA FIXTURE BY WATERSAVER AND (2) B-3912 TWIST WASTE VALVES BY T&S BRASS.	3/13
F	3	5 TIER STAINLESS STEEL WALL MOUNT ADJUSTABLE SHELVING WITH OPEN MESH SHELVES. 36"x12"x84" BY ASBEKA.	2
G	2	STAINLESS STEEL MOBILE TABLE WITH SHELF 36"x24"x36"	8/20
H	5	5 TIER STAINLESS STEEL WALL MOUNT ADJUSTABLE SHELVING WITH SOLID SHELVES. 36"x18"x84" BY ASBEKA.	6/7
J	1	5 TIER STAINLESS STEEL WALL MOUNT ADJUSTABLE SHELVING WITH SOLID SHELVES. 30"x18"x84" BY ASBEKA.	6
K	1	CUBE TRUCK WITH LID. MODEL 3BW-30929 20 CUBIC FOOT/600 POUND CAPACITY TRUCK AND MODEL 3BW-30935 LID. BY RUBBERMAID.	N/A
L	3	5 TIER STAINLESS STEEL WALL MOUNT ADJUSTABLE SHELVING WITH SOLID SHELVES. 36"x12"x84" BY ASBEKA.	9/11/14
M	1	MODEL 4600 CAGE AND RACK WASHER BY STERIS.	N/A
N	1	7'-8" STAINLESS STEEL BASE CABINETS WITH STAINLESS STEEL COUNTERTOPS. INCLUDES A STAINLESS DOUBLE BOWL SINK, FLOOR MOUNTED/FOOT OPERATIONAL FIXTURE, MODEL L162-BVWSA AND L3050RCP BY WATERSAVER, SINGLE SELF CLOSING VALVE, AND (2) 9690 STAINLESS STEEL STRAINERS.	10
O	1	THREE COMPARTMENT SCULLERY SINK 127"x30"x36" BY ASBEKA. WITH (1) PR511-110-WSA FIXTURE BY WATERSAVER AND (3) B-3912 WASTE VALVES BY T&S BRASS	12
P	4	STAINLESS STEEL WALL CABINET WITH GLASS DOORS. 36"x30"x14"	10/18/19/20
Q	1	MODEL 102765 IMPERIAL 58 FLAT TOP OPERATING TABLE ON HYDRAULIC BASE. BY SUBURBAN SURGICAL COMPANY.	N/A
R	2	48" STAINLESS STEEL BASE AND WALL UNIT WITH STAINLESS STEEL BOWL SINK BY ASBEKA. INCLUDES (1) L411VB-BH FIXTURE BY WATERSAVER AND (1) 9690 STAINLESS STEEL STRAINER.	15
S	2	STAINLESS STEEL WALL CABINET WITH GLASS DOORS. 24"x30"x14"	15
T	1	36" STAINLESS STEEL BASE AND WALL UNIT WITH STAINLESS STEEL BOWL SINK BY ASBEKA. INCLUDES (1) L411VB-BH FIXTURE BY WATERSAVER AND (1) 9690 STAINLESS STEEL STRAINER.	16
U	1	STAINLESS STEEL MOBILE TABLE WITH SHELF 72"x36"x36"	17
V	1	STAINLESS STEEL MOBILE TABLE WITH SHELF 72"x36"x30"	18
W	2	6" BAKER BIOLOGICAL SAFETY CABINET	N/A
X	1	36" STAINLESS STEEL BASE CABINET BY ASBEKA.	19

* NOTE: EQUIPMENT ELEVATION DRAWINGS ARE SHOWN IN THE SPECIFICATIONS ONLY.



enlarged lab equipment plan
 SCALE: 1/4" = 1'-0"



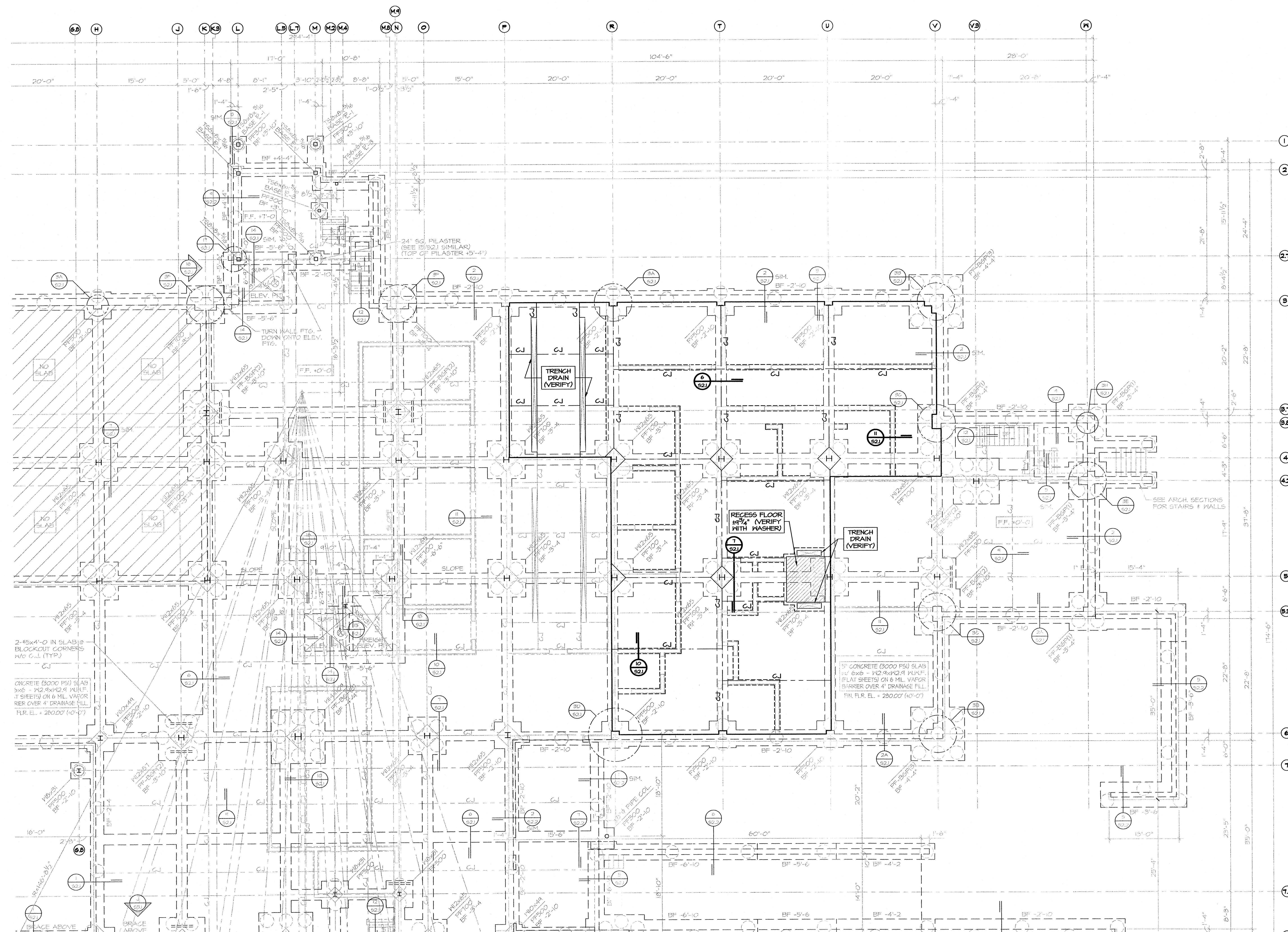
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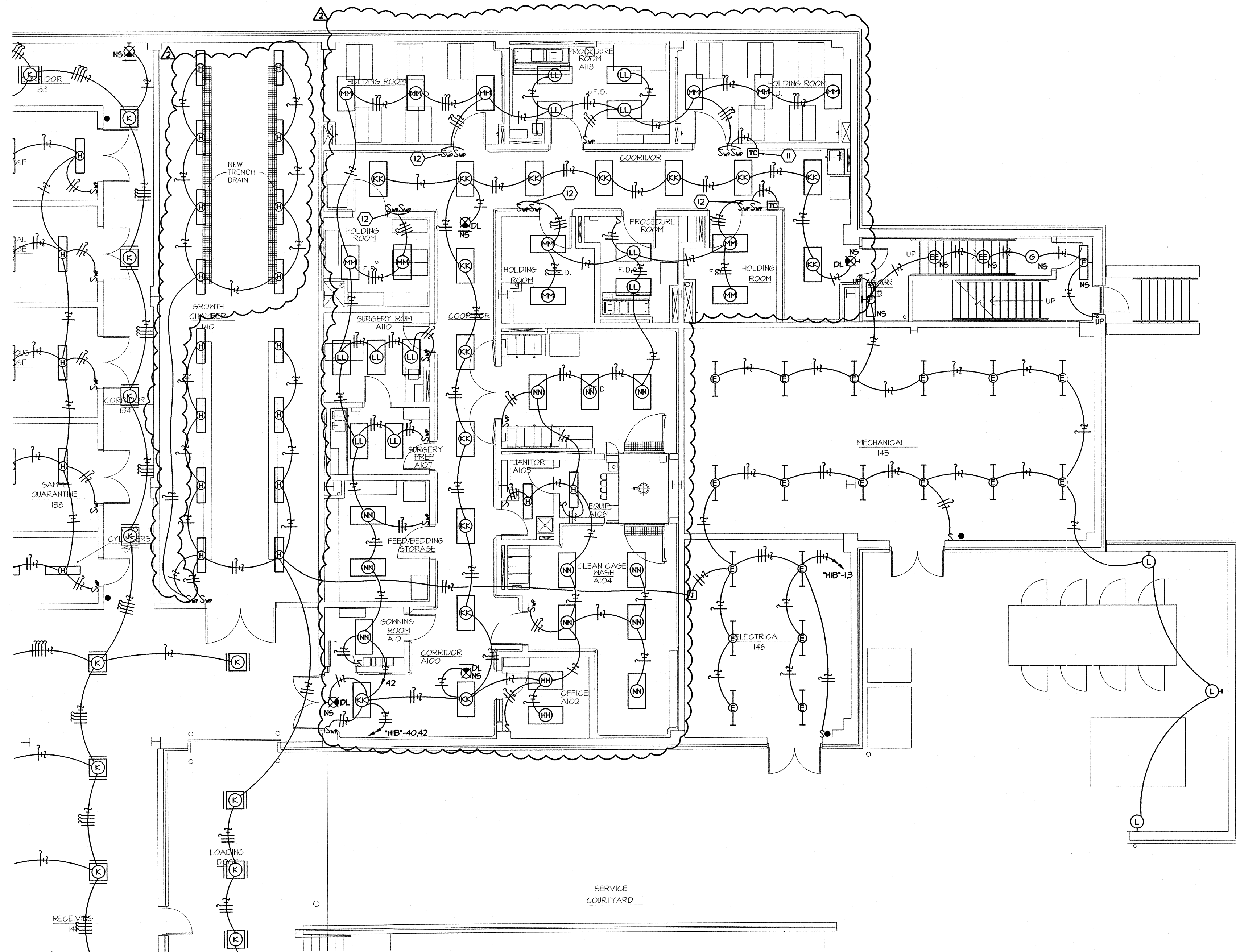
**FOUNDATION
PLAN**

Commission Number
10301

S1.1

Date: October 1, 2



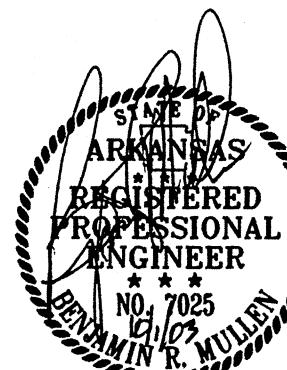


KEYED ELECTRICAL NOTES

- 1 PROVIDE AND INSTALL PRESCLITE #1T4MH (4'-0" LONG), 2 CIRCUIT TRACK, #1T14MH (2 CIRCUIT, 90° FITTINGS), #1T0MH (8'-0" LONG) 2 CIRCUIT TRACK, AND #1T5MH 2 CIRCUIT OUTLET BOX FEED CONNECTOR. SURFACE MOUNT WHERE SHOWN AND SUPPORT FROM STRUCTURE ABOVE CEILING. INSTALL FIXTURES ON ALTERNATING TRACK CIRCUITS.
- 2 PROVIDE AND INSTALL LUTRON #NF-10-27T SLIDE DIMMER SWITCH.
- 3 MOUNT LIGHT FIXTURE HORIZONTALLY AND 60" ABOVE PIT FLOOR. MOUNT LIGHT SWITCH ADJACENT TO LADDER.
- 4 ROUTE 3#12, #12-E6, IN 1/2" CONDUIT UP TO TORK #2104 PHOTOCELL, CONDUIT MOUNTED ON ROOF. COORDINATE LOCATION WITH POSSIBLE LIGHT SOURCE CONFLICT.
- 5 PROVIDE AND INSTALL LUTRON #GRX-3106-A-MH GRAFIK EYE PRESET DIMMING CONTROL UNIT IN WALL AT 48" AFF TO CENTER (REQUIRES 4-GANG X 3-1/2" DEEP JUNCTION BOX).
- 6 PROVIDE AND INSTALL LUTRON #F2, 27TV DIMMING MODULE.
- 7 PROVIDE AND INSTALL LUTRON #NTRX-45-MH ENTRY STATION AT 48" AFF TO CENTER IN SINGLE GANG X 3-1/2" DEEP JUNCTION BOX.
- 8 PROVIDE AND INSTALL LUTRON #NTRX-PB POWER BOOSTER, SURFACE MOUNTED IN 2 GANG X 3-1/2" DEEP JUNCTION BOX.
- 9 STRIP FIXTURES TO BE MOUNTED IN RECESS COVE ABOVE LOUVER (PROVIDED BY ARCHITECT).
- 10 INSTALL SEMINAR #101 DIMMING SYSTEM COMPONENTS ON 5'-0" W X 3'-0" H X 3/4" PLYWOOD BOARD.
- 11 ROUTE THROUGH TORK #1702-FLI FLUSH MOUNTED WITH LOCK AND KEY TIME CLOCK, FOR DAY/NIGHT CYCLE CONTROL OF LIGHTING IN HOLDING ROOMS (VERIFY EXACT HOURS OF ON/OFF OPERATION WITH OWNER).
- 12 FIRST SWITCH TO CONTROL 2 OUTBOARD LAMPS OF FIXTURES IN ROOM, SECOND SWITCH TO CONTROL 1 CENTER LAMP OF FIXTURES IN ROOM.

LIGHT FIXTURE SCHEDULE

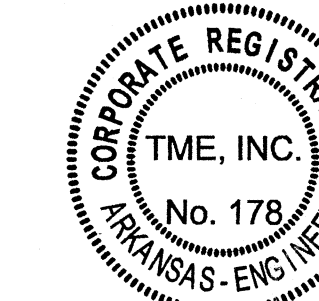
TYPE	MANUFACTURER CAT. NO.	VOLT	LAMP	REMARKS
A	COLUMBIA #51R-24-2-50TT-6-MPO-EBTT-27TV	27V	4-F50BX/SPX41/R5	2' X 4' RECESSED INDIRECT FLUORESCENT FIXTURE
B	COLUMBIA #4PS-24-432-6-F5-A12125-2EBLH-27T	27V	4-F32T8/SPX41	2' X 4' FLUORESCENT LAY-IN, PRISMATIC LENS, 4 LAMP
C	COLUMBIA #4PS-24-392-6-F5-A12125-2EBLH-27T	27V	3-F32T8/SPX41	2' X 4' FLUORESCENT LAY-IN, PRISMATIC LENS, 3 LAMP
D	COLUMBIA #4PS-24-232-6-F5-A12125-2EBLH-27T	27V	2-F32T8/SPX41	2' X 4' FLUORESCENT LAY-IN, PRISMATIC LENS, 2 LAMP
E	COLUMBIA #C54-232-EB0LH-27T-CSH64-KHC	27V	2-F32T8/SPX41/R5	4' FLUORESCENT STRIP FIXTURE W/ WIREGUARD, CHAIN HANG AT 10'-0" AFF
F	COLUMBIA #M4-232-EB0LH-27T-LSH-LCO	27V	2-F32T8/SPX41	4' WALL MOUNTED FLUORESCENT FIXTURE (MOUNTING HEIGHT AS NOTED ON PLANS)
G	PRESCLITE #CFR826UEB-ST492-27T	27V	2-F26DBX/T4/SPX41	8" DIA. OPEN RECESSED COMPACT FLUORESCENT CAN FIXTURE
H	COLUMBIA #4T5-4-232-EBTLH-27T-DHR	27V	2-F32T8/SPX41	SURFACE MOUNTED FLUORESCENT FIXTURE, GASKETED
K	SPALDING #HTI-CM-MT5-DA-MT-PL5-GZ	27V	1-T5W ED28 MH 1-BOW GT4	SURFACE OR CONDUIT MOUNTED AT 12'-0" AFF 8"W X 14"L PRISMATIC LENS
L	SPALDING #N551-MT5-MT-PE-PL5	27V	1-T5W ED17 MH COATED	EXTERIOR WALL PACK MOUNTED AT 12'-0" AFF 8"W "PE" CELL
M	PRESCLITE #RHD01-TOMHE-STH002-27TV	27V	1-TOM ED17 MH COATED	8" DIA. OPEN RECESSED EXTERIOR SOFFIT LIGHT
N	COLUMBIA #554-132-EB0LH-27TV	27V	1-F32T8/SPX41	4' STAGGERED STRIP FIXTURE MOUNTED IN METAL CEILING RECESSED COVE
P	PRESCLITE #CF1026RDEB-F8-27TV-W TR6-TL6 AND #261 KIT	27V	2-F26DBX/T4/SPX41	10" DIA. RECESSED LENSED GASKETED PRISMATIC FLUORESCENT CAN FIXTURE
Q	PRESCLITE #1500MH	120V	1-150W PAR 38 SP	TRACK MOUNTED GIMBAL FIXTURE
R	PRESCLITE #4468-60	120V	2-T5W A19	SURFACE MOUNTED INCANDESCENT FIXTURE
S	COLUMBIA #C54-232-EB0LH-27T-C54	27V	2-F32T8/SPX41	SURFACE MOUNTED STRIP FIXTURE W/ 1-1/2" SPACER
T	COLUMBIA #51R-24-2-50TT-6-MPO-27T-DIMMING BALLASTS	27V	4-F50BX/SPX41/R5	2' X 4' RECESSED INDIRECT FLUORESCENT FIXTURE WITH 2 LUTRON #FDB-2245-27T-2 (DIMMING BALLAST)
U	PRESCLITE #CFR826BDM-ST492A-27TV	27V	2-F26DBX/T4/SPX41/R5	8" DIA. RECESSED COMPACT FLUORESCENT CAN W/ DIMMING BALLASTS
V	COLUMBIA #51R-22-250TT-6-MPO-EBTT-27TV	27V	4-F50BX/SPX41/R5	2' X 2' RECESSED INDIRECT FLUORESCENT FIXTURE
W	VISA #0H410-1H15(27TV)-BA (UP LIGHT ONLY)	27V	1-T5W ED17 MH	WALL MOUNTED AT 24" ABOVE 2ND FLOOR LINE (BALLAST ABOVE 1ST FLOOR CEILING)
Y	VISA #0H414-1H15(27TV)-BA (UP AND DOWN LIGHT)	27V	1-T5W ED17 MH	WALL MOUNTED AT 24" ABOVE 2ND FLOOR LINE (BALLAST ABOVE 1ST FLOOR CEILING)
Z	COLUMBIA #552-21T-EB0LH-27T	27V	2-FIT18/SPX41	STAGGERED STRIP FIXTURE MOUNTED IN METAL CEILING RECESS
AA	VISA #CC801-4F34-27TV-BA-SBC (36" OVERALL HEIGHT)	27V	4-F34/36BX/SPX41	PENDANT MOUNTED 2 ARM, 2 BOWL INDIRECT (MODIFIED PENDANT)
BB	VISA #CC802-4H250-27TV-BA-SBC (84" OVERALL HEIGHT)	27V	4-250W MH	PENDANT MOUNTED 4 ARM, 4 BOWL INDIRECT (MODIFIED PENDANT) W/ LOWERING DEVICE
CC	VISA #CB2740-20F2-27TV-BA	27V	2-F26DBX/T4/SPX41/R5	WALL MOUNTED SCONCE, MOUNTED 6" T-6" AFF
DD	ALS #V524-141-27T-E108-O-D-I-VSF-180IP CENTARE FINISH	27V	6-F32T8/SPX41/R5 2-FIT18/SPX41/R5	COVE LIGHT MOUNTED AT 7'-2" AFF TO BOTTOM (15'-0" X 8") FACIA
EE	PRESCLITE #CFR826UEB-ST492-27TV-SCA32	27V	2-F26DBX/T4/SPX41	RECESSED 8" DIAMETER COMPACT FLUORESCENT WITH 32 DEGREE SLOPE ADAPTER
FF	SPALDING #N551-MT5-MT-PE-PL5	27V	1-T5W ED-17 MH COATED	EXTERIOR WALL PACK MOUNTED AT 12'-0" AFF
GG	APPLETON #VX10T56	120V	1 - 60W A19IF	SURFACE MOUNTED INSIDE MECH DUCT, ENCLOSED AND GASKETED
HH	COLUMBIA #4PS-24-432-F-F5-A12125-E2BLH-27T	27TV	4-F32T8/SPX41	RECESSED 2' X 4' FLUORESCENT FLANGED, PRISMATIC LENS
KK	COLUMBIA #MLT-24-232-F-F5-A12125-EB01-27TV	27TV	2-F32T8/SPX41	RECESSED 2' X 4' FLUORESCENT FLANGED, PRISMATIC LENS (GASKETED)
LL	COLUMBIA #MLT-24-432-F-F5-A12125-EB01-27TV	27TV	4-F32T8/SPX41	RECESSED 2' X 4' FLUORESCENT FLANGED, PRISMATIC LENS, (GASKETED) (2 BALLAST)
MM	COLUMBIA #MLT-24-332-F-F5-A12125-EB02-27TV	27TV	3-F32T8/SPX41	RECESSED 2' X 4' FLUORESCENT FLANGED, PRISMATIC LENS, (GASKETED) (2 BALLAST)
NN	COLUMBIA #MLT-24-332-F-F5-A12125-EB01-27TV	27TV	3-F32T8/SPX41	RECESSED 2' X 4' FLUORESCENT FLANGED, PRISMATIC LENS, (GASKETED) (1 BALLAST)
DL	PRESCLITE #DMX-1-R-A-H	27V	LED W/ UNIT	SINGLE FACE EXIT SIGN
DL	PRESCLITE #DMX-2-R-A-H	27V	LED W/ UNIT	DOUBLE FACE EXIT SIGN
DL	PRESCLITE #EYDE-1-R-A-H	27V	LED W/ UNIT	SINGLE FACE EXIT SIGN (DAMP LOCATION)



LARGE SCALE CULTURE FACILITY
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LARGE SCALE
CULTURE FACILITY
FLOOR PLAN

Commission Number
10301

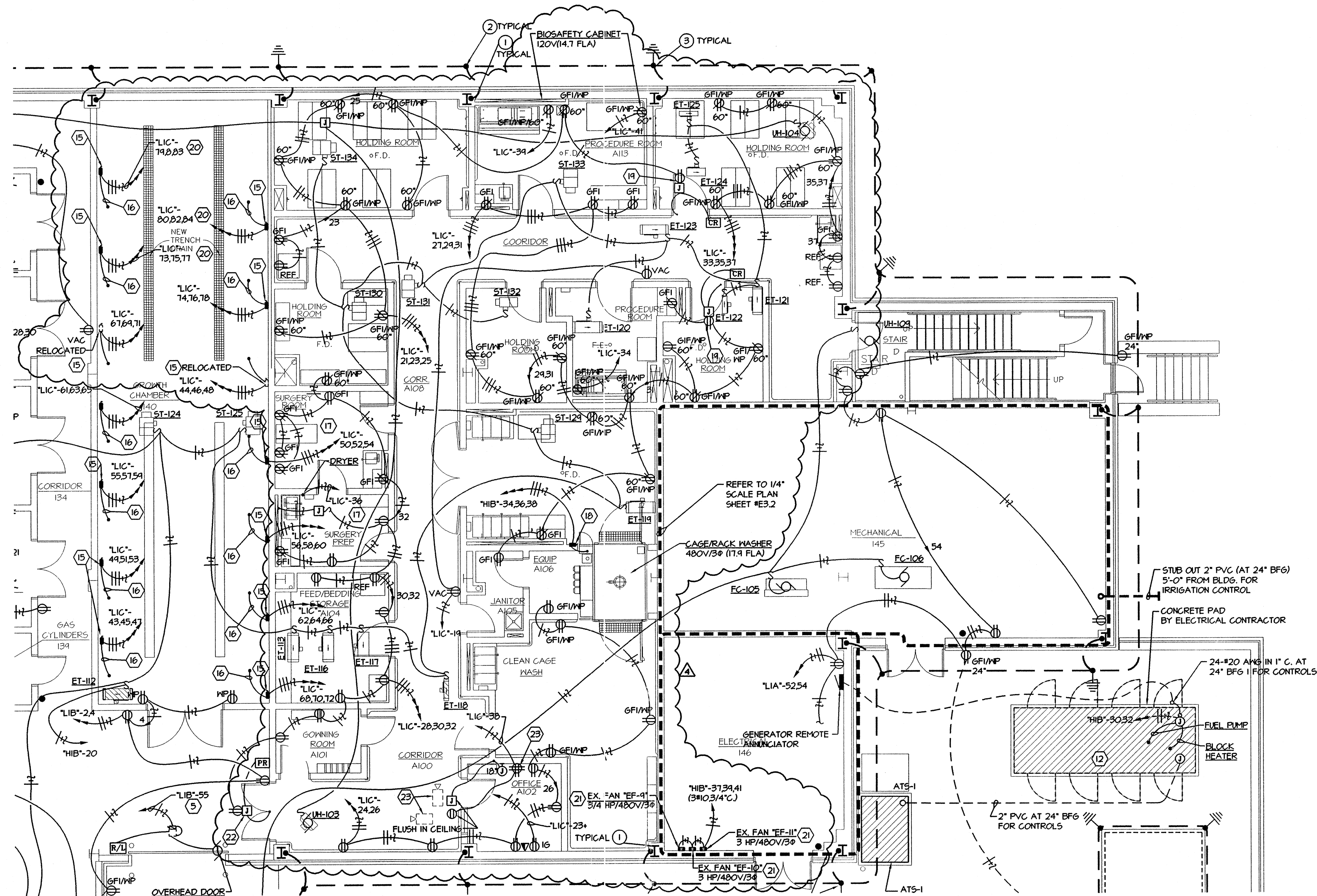
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Date: October 1, 2003

large scale culture facility
floor plan - lighting

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

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KEYED ELECTRICAL NOTES

- (1) ROUTE 2#10, 1#10-EG, IN 3/4" CONDUIT TO PANEL INDICATED.
- (2) INSTALL NEMA 4, STAINLESS STEEL, 60A/3P NON-FUSED DISCONNECT SWITCH. ROUTE 3#8, 1#10-EG IN 3/4" CONDUIT TO PANEL INDICATED.
- (3) INSTALL NEMA 4, STAINLESS STEEL, 30A/3P NON-FUSED DISCONNECT SWITCH. ROUTE 3#12, 1#12-EG IN 3/4" CONDUIT TO PANEL INDICATED.
- (4) RECEPTACLE MOUNTED ABOVE CEILING FOR PALM READER POWER SUPPLY. ROUTE LOW VOLTAGE CONTROL WIRING TO READER AND DOOR LOCK.
- (5) INSTALL 30A/1P 5A DISCONNECT SWITCH, FUSED AT 15 AMPS AT CONTROLLER. CONNECT TO AND INSTALL RAISE/LOWER PUSHBUTTON STATION PROVIDED BY DOOR SUPPLIER.
- (6) INSTALL NEMA 4X STAINLESS STEEL 30A/3P NON-FUSED DISCONNECT SWITCH ON WALL AT 10'-6" AFF. CONNECT TO UNIT WITH LIQUID-TIGHT, METALLIC FLEX CONDUIT.
- (7) INSTALL 30A/1P DISCONNECT SWITCH FUSED AT 15 AMPS FOR ELEVATOR CAB LIGHTS AND RECEPTACLES. ROUTE 3/4" CONDUIT WITH 2#12, 1#12-EG TO ELEVATOR TRAVELING CABLE JUNCTION BOX.
- (8) RECEPTACLE TO BE MOUNTED IN WALL BEHIND "EP-C". VERIFY EXACT PLACEMENT WITH MANUFACTURER.
- (9) INSTALL 100A/3P DISCONNECT SWITCH FUSED AT 10 AMPS WITH DUAL-ELEMENT, TIME-DELAY FUSES. CONNECT TO UNIT WITH METALLIC, FLEXIBLE CONDUIT AND ROUTE 3-#3, 1-#6 EG IN 1-1/4" CONDUIT FROM UNIT TO PANEL INDICATED.
- (10) VAPORTITE ONE LAMP 48" LONG FLUORESCENT FIXTURES PROVIDED WITH STERILIZER HOOD.
- (11) INSTALL NEMA 4X STAINLESS STEEL 60A/3P NON-FUSED DISCONNECT SWITCH ON WALL AT 10'-6" AFF. CONNECT TO UNIT WITH LIQUID-TIGHT, METALLIC FLEX CONDUIT.
- (12) USED 1500W EMERGENCY GENERATOR, PROVIDED BY OWNER. RELOCATED AND SET IN PLACE BY ELECTRICAL CONTRACTOR.
- (13) ISOLATED GROUND DUPLEX RECEPTACLE MOUNTED ABOVE CEILING FOR FUTURE WIRELESS NETWORK EQUIPMENT. VERIFY EXACT MOUNTING LOCATION WITH CHRIS COCKRELL, ASU IT DEPARTMENT.
- (14) VAPORTITE ONE LAMP 24" LONG FLUORESCENT FIXTURE PROVIDED WITH HOOD.
- (15) INSTALL NEMA 4X STAINLESS STEEL 30A/3P NON-FUSED DISCONNECT SWITCH ON WALL AT 10'-0" AFF. CONNECT TO UNIT WITH LIQUID-TIGHT, METALLIC FLEX CONDUIT. ROUTE 4#10, 1#10-EG IN 3/4" CONDUIT FROM UNIT TO PANEL INDICATED.
- (16) FINALL CONNECTION TO BE MADE BY GROWTH CHAMBER SUPPLIER.
- (17) ALL CONDUIT ENTERING SURGERY ROOM ARE TO BE SEALED. PROVIDE AND INSTALL SEAL FITTINGS WITH SEALING COMPOUND.
- (18) PROVIDE AND INSTALL NEMA 4X STAINLESS STEEL 30A/3P NON-FUSED DISCONNECT SWITCH ON WALL AT 48" AFF. CONNECT TO UNIT WITH LIQUID-TIGHT, METALLIC FLEX CONDUIT. ROUTE 4#10, 1#10-EG IN 3/4" CONDUIT FROM UNIT TO PANEL INDICATED. INSTALL 25A/3P CIRCUIT BREAKER IN SPACE INDICATED.
- (19) RECEPTACLE MOUNTED ABOVE CEILING FOR CARE READER POWER SUPPLY. ROUTE LOW VOLTAGE CONTROL WIRING TO CARD READER AND DOOR LOCK. (PROVIDE ACCESS PANELS IN GYPED CEILING)
- (20) PROVIDE AND INSTALL 20A/3P CIRCUIT BREAKER IN SPACE OF EXISTING PANEL.
- (21) PROVIDE AND INSTALL NEMA SIZE #0 STARTER WITH H-O-A SWITCH, RED/GREEN PILOT LIGHT, START/STOP PUSH BUTTON, OVERLOAD RELAYS AND CONTROL TRANSFORMER FOR EACH EXHAUST FAN INDICATED. PROVIDE (2) NO. 1, (2) N.C. AUXILIARY CONTACTS AND NEMA 1 ENCLOSURE. ROUTE 3#10, 1#10-EG, IN 3/4" CONDUIT UP TO ASSOCIATED EXHAUST FAN DISCONNECT SWITCH. REFER TO ROOF PLAN, SHEET E2.11A FOR LOCATIONS.
- (22) RECEPTACLE MOUNTED ABOVE CEILING FOR PALM READER POWER SUPPLY. ROUTE LOW VOLTAGE CONTROL WIRING TO CARD READER AND DOOR LOCK.
- (23) FUTURE DIGITAL VIDEO CAMERAS AND RECORDERS. PROVIDE RECEPTACLE FLUSH IN CEILING, SUPPORT FOR FUTURE CAMERAS. JUNCTION BOX FLUSH IN CEILING WITH 1" CONDUIT TO JUNCTION BOX AT 18" AFF IN OFFICE A102. (LOCATION OF FUTURE HEAD END AND RECORDERS)

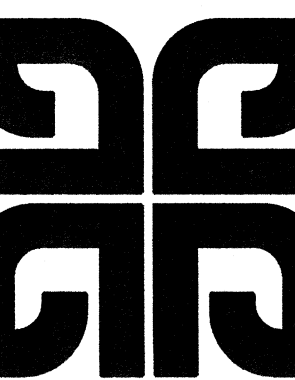
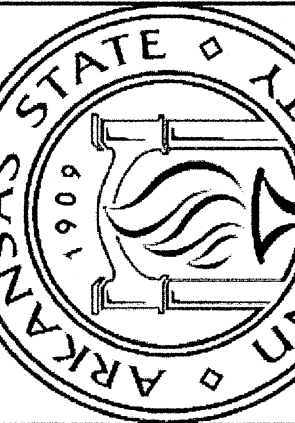
Large scale culture facility floor plan - power

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

OCTOBER 1, 2003

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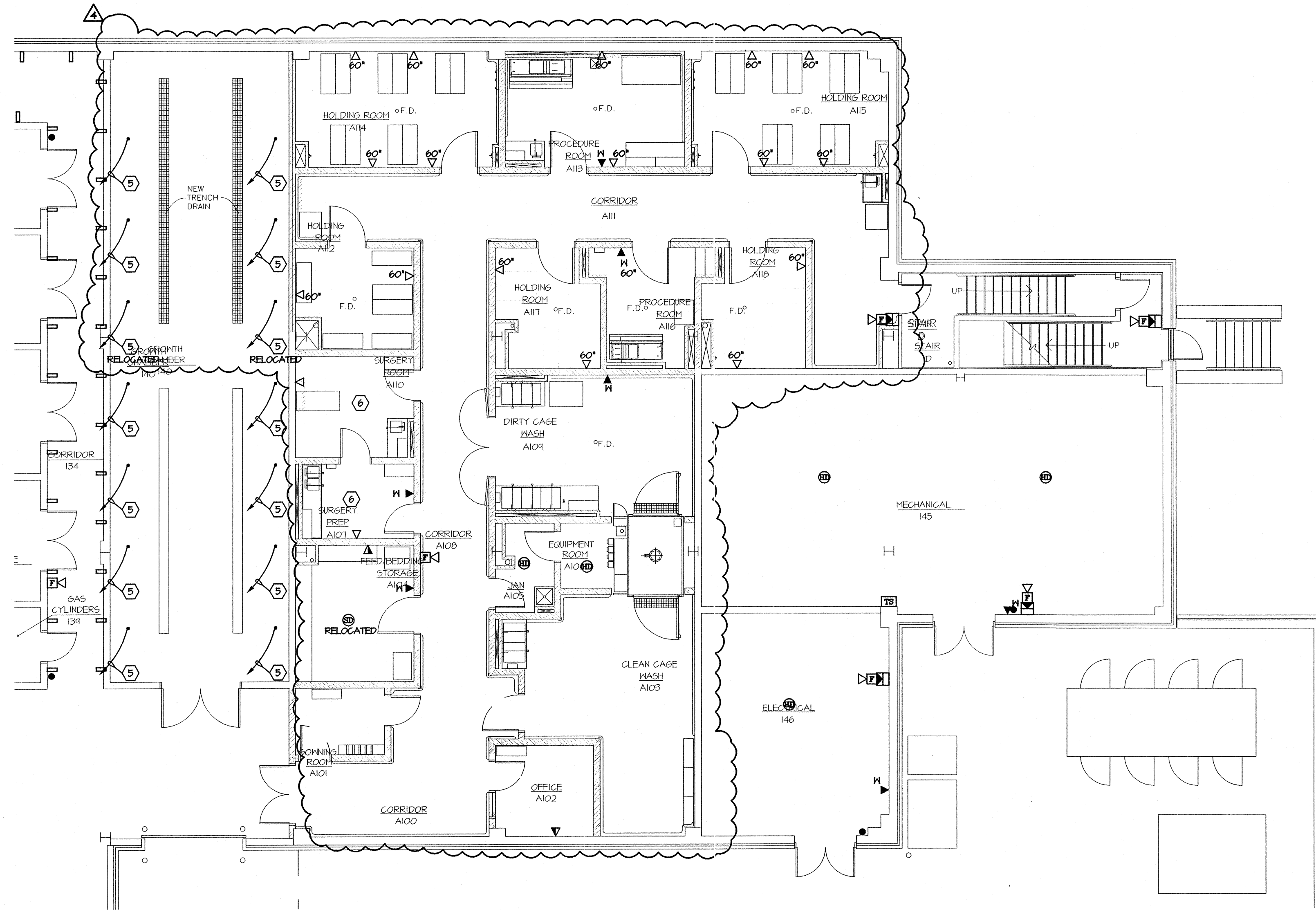


LARGE SCALE
CULTURE FACILITY
FLOOR PLAN

Commission Num
10301

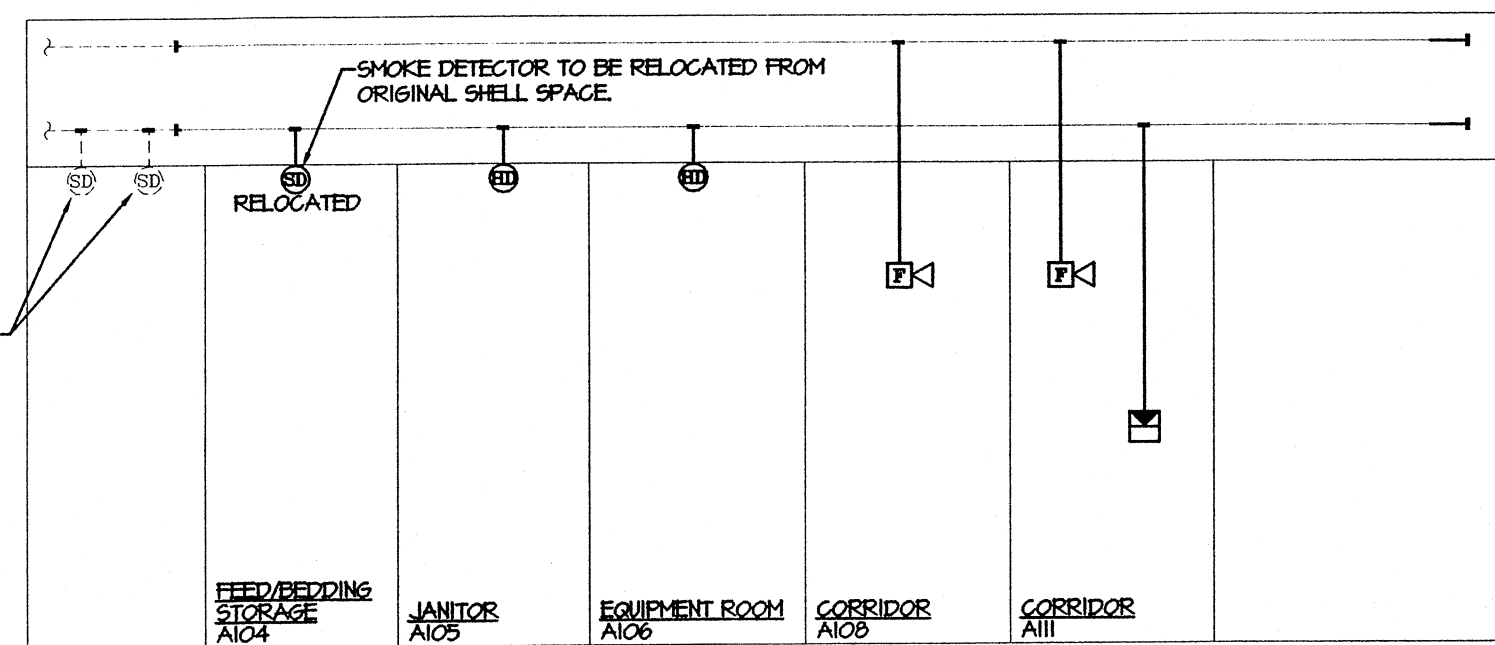
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Date: October 1, 2003



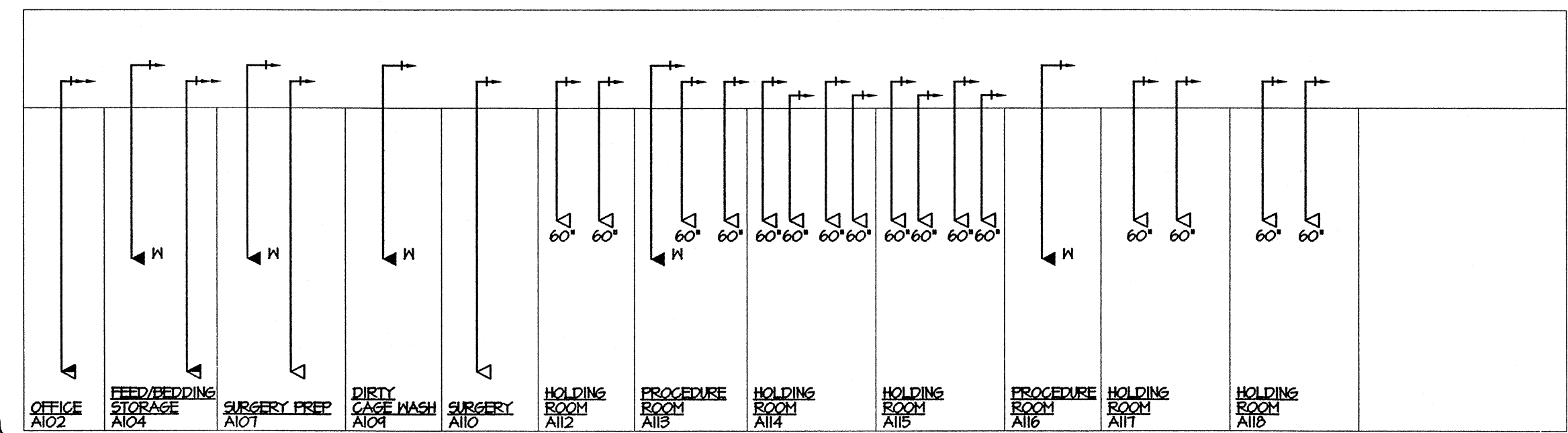
KEYED ELECTRICAL NOTES

1. ROUTE 3/4" CONDUIT WITH DEDICATED PHONE LINE TO TELEPHONE TERMINAL BOARD FOR ELEVATOR CAB PHONES.
2. DEVICES SHALL MOUNTED AT 6'-0" ABOVE ELEVATOR PIT FLOOR.
3. DATA OUTLET IN SINGLE GANG BOX ABOVE CEILING FOR FUTURE WIRELESS, NETWORK, ACCESS EQUIPMENT. VERIFY EXACT LOCATION WITH CHRIS COCKRELL OF ASU IT DEPARTMENT.
4. PROVIDE SEPARATE CABLE MANAGEMENT HOOKS IN CORRIDORS FOR TELEPHONE, DATA, AND FIRE ALARM WIRING.
5. ROUTE 3/4" CONDUIT TO ABOVE ACCESSIBLE LAY-IN CEILING AT DOUBLE DOOR #55 IN CORRIDOR #112. PROVIDE PULL STRING FOR FUTURE CABLE BY OTHERS.
6. ALL CONDUIT ENTERING SURGERY ROOM ARE TO BE SEALED. PROVIDE AND INSTALL SEAL FITTINGS W/ SEALING COMPOUND.



2. PARTIAL FIRE ALARM SYSTEM RISER DIAGRAM - LARGE SCALE CULTURE FACILITY

NTS

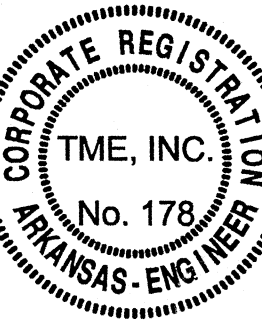


3. PARTIAL TELEPHONE/COMPUTER SYSTEM RISER DIAGRAM - LARGE SCALE CULTURE FACILITY

NTS

RISER NOTES:

1. SYSTEM CABLES TO BE INSTALLED ON SYSTEM CABLE SUPPORTS AS DETAILED ON ORIGINAL BIOSCIENCES/BIO TECHNOLOGY BUILDING
2. SYSTEM CONDUITS ARE TO BE INSTALLED AS HIGH AS POSSIBLE ABOVE CORRIDOR CEILINGS AND TO EITHER SIDE OF CORRIDOR. STUB TO WITHIN 2 FT. OF A CABLE SUPPORT.
3. PROVIDE PLASTIC BUSHING ON EACH CONDUIT TERMINATION.
4. PROVIDE PULLCORD IN EACH EMPTY CONDUIT.
5. ALL CABLING SHALL BE PLENUM RATED CABLE.



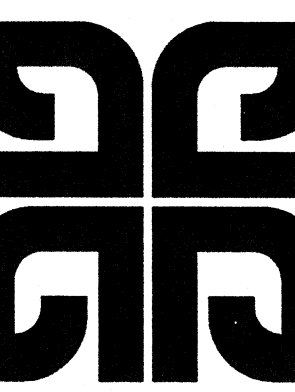
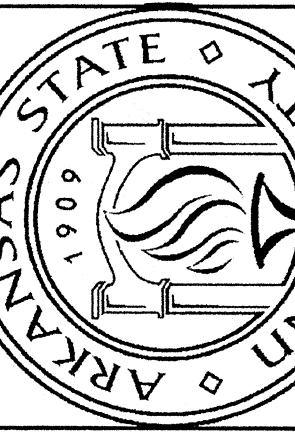
OCTOBER 1, 2005

n large scale culture facility floor plan - systems

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

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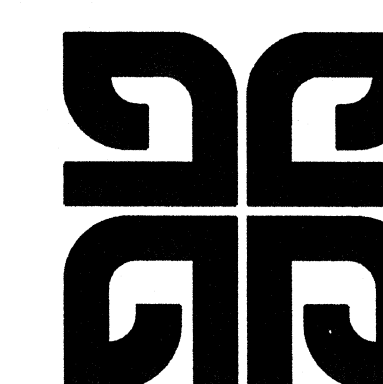
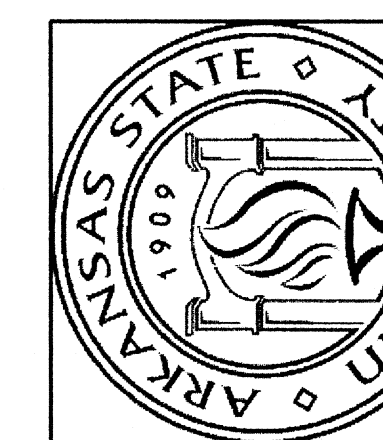


LARGE SCALE CULTURE FACILITY FLOOR PLAN

Commission Number 10301

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Date: October 1, 2005



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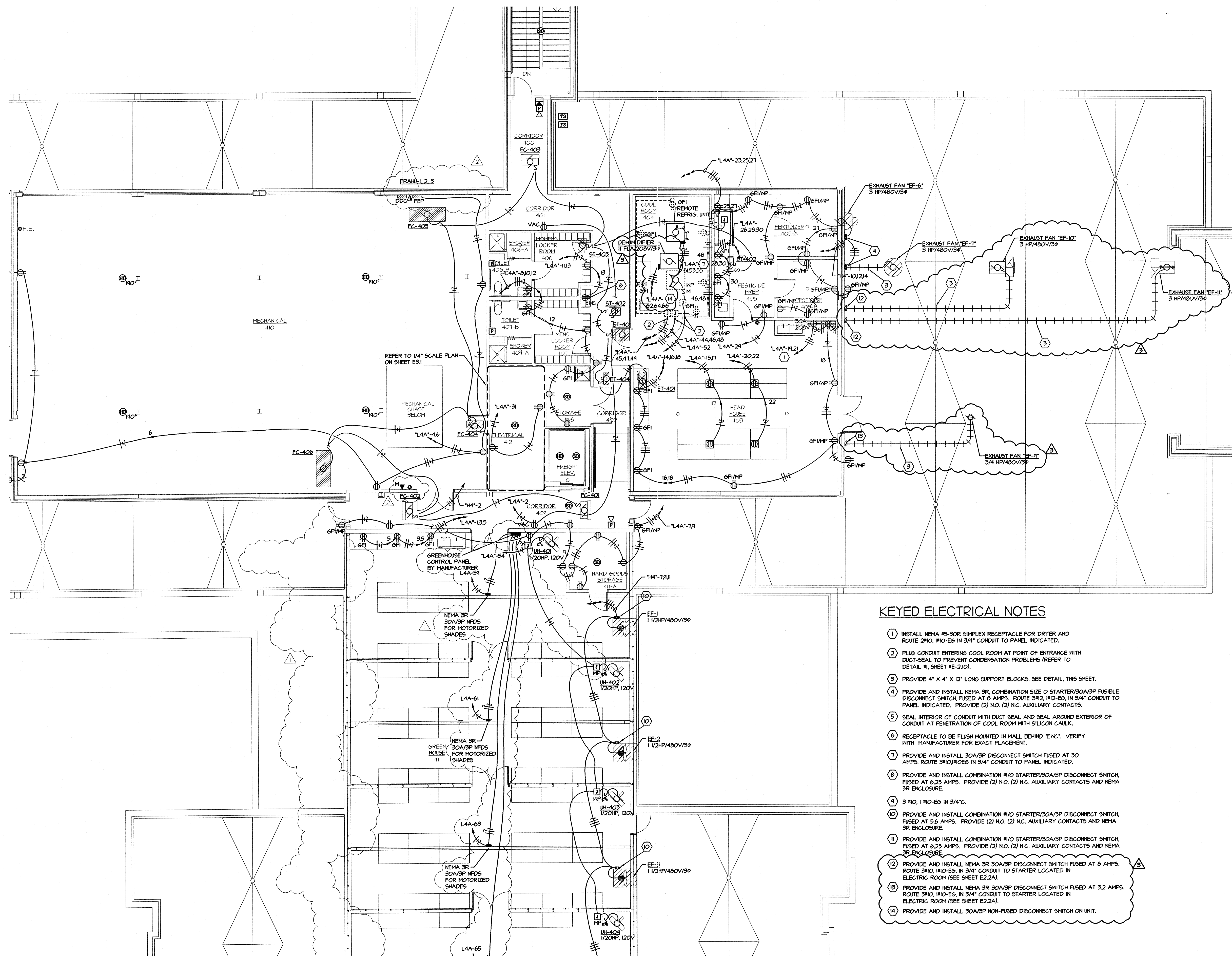


PARTIAL ROOF P
POWER

Commission Num
10301

E2.11

Date: October 1, 2



KEYED ELECTRICAL NOTES

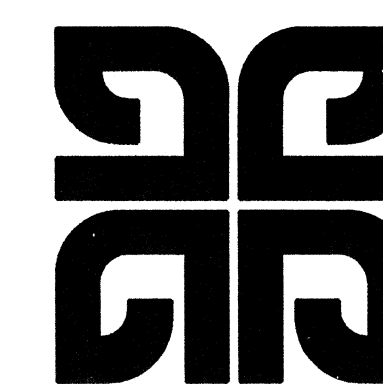
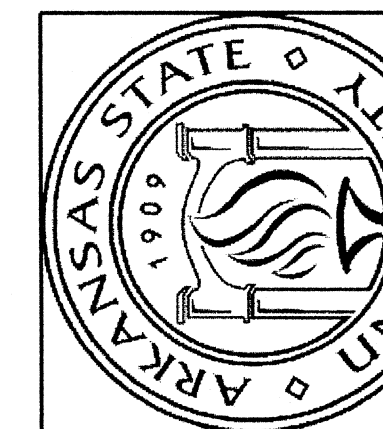
1. INSTALL NEMA #5-30R SIMPLEX RECEPTACLE FOR DRYER AND ROUTE 2#10, #10-EG IN 3/4" CONDUIT TO PANEL INDICATED.
2. PLUS CONDUIT ENTERING COOL ROOM AT POINT OF ENTRANCE WITH DUCT-SEAL TO PREVENT CONDENSATION PROBLEMS (REFER TO DETAIL #1, SHEET #E-2.10).
3. PROVIDE 4" X 4" X 12" LONG SUPPORT BLOCKS. SEE DETAIL, THIS SHEET.
4. PROVIDE AND INSTALL NEMA 3R COMBINATION SIZE 0 STARTER/30A/3P FUSIBLE DISCONNECT SWITCH, FUSED AT 6 AMPS. ROUTE 3#12, #12-EG, IN 3/4" CONDUIT TO PANEL INDICATED. PROVIDE (2) N.O. (2) N.C. AUXILIARY CONTACTS.
5. SEAL INTERIOR OF CONDUIT WITH DUCT SEAL AND SEAL AROUND EXTERIOR OF CONDUIT AT PENETRATION OF COOL ROOM WITH SILICON CAULK.
6. RECEPTACLE TO BE FLUSH MOUNTED IN WALL BEHIND "ENC". VERIFY WITH MANUFACTURER FOR EXACT PLACEMENT.
7. PROVIDE AND INSTALL 30A/3P DISCONNECT SWITCH FUSED AT 30 AMPS. ROUTE 3#10, #10-EG IN 3/4" CONDUIT TO PANEL INDICATED.
8. PROVIDE AND INSTALL COMBINATION #1/0 STARTER/30A/3P DISCONNECT SWITCH, FUSED AT 6.25 AMPS. PROVIDE (2) N.O. (2) N.C. AUXILIARY CONTACTS AND NEMA 3R ENCLOSURE.
9. 3 #10, 1 #10-EG IN 3/4".
10. PROVIDE AND INSTALL COMBINATION #1/0 STARTER/30A/3P DISCONNECT SWITCH, FUSED AT 5.6 AMPS. PROVIDE (2) N.O. (2) N.C. AUXILIARY CONTACTS AND NEMA 3R ENCLOSURE.
11. PROVIDE AND INSTALL COMBINATION #1/0 STARTER/30A/3P DISCONNECT SWITCH, FUSED AT 6.25 AMPS. PROVIDE (2) N.O. (2) N.C. AUXILIARY CONTACTS AND NEMA 3R ENCLOSURE.
12. PROVIDE AND INSTALL NEMA 3R 30A/3P DISCONNECT SWITCH FUSED AT 6 AMPS. ROUTE 3#10, #10-EG, IN 3/4" CONDUIT TO STARTER LOCATED IN ELECTRIC ROOM (SEE SHEET E2.2A).
13. PROVIDE AND INSTALL NEMA 3R 30A/3P DISCONNECT SWITCH FUSED AT 3.2 AMPS. ROUTE 3#10, #10-EG, IN 3/4" CONDUIT TO STARTER LOCATED IN ELECTRIC ROOM (SEE SHEET E2.2A).
14. PROVIDE AND INSTALL 30A/3P NON-FUSED DISCONNECT SWITCH ON UNIT.

n partial roof plan -
power

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

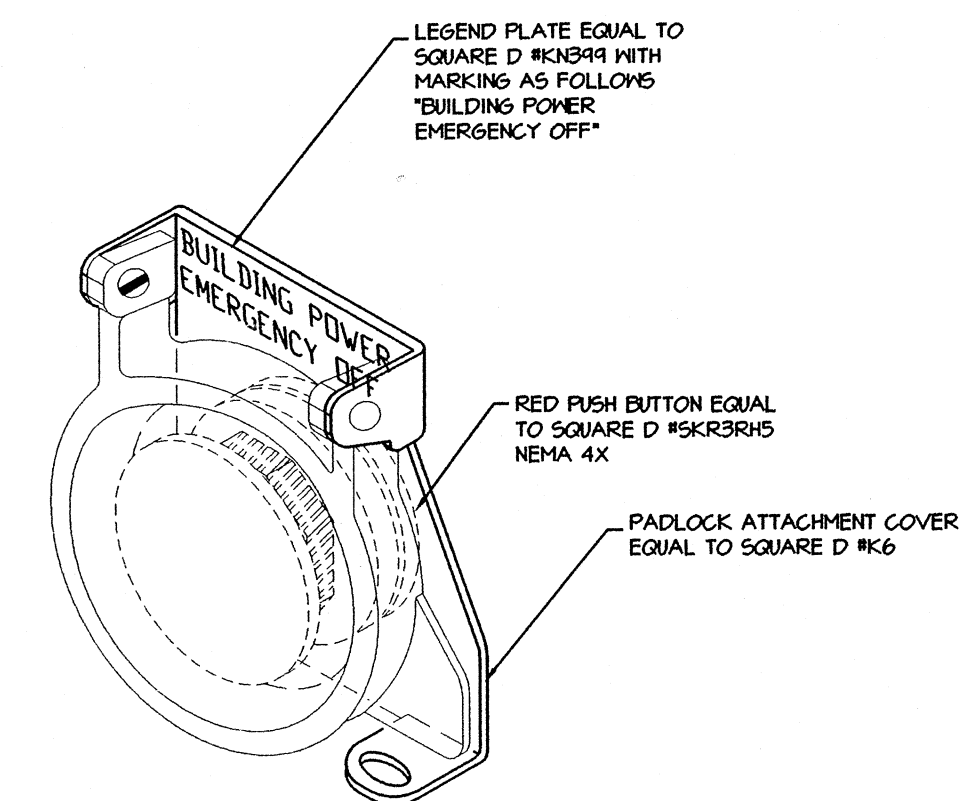
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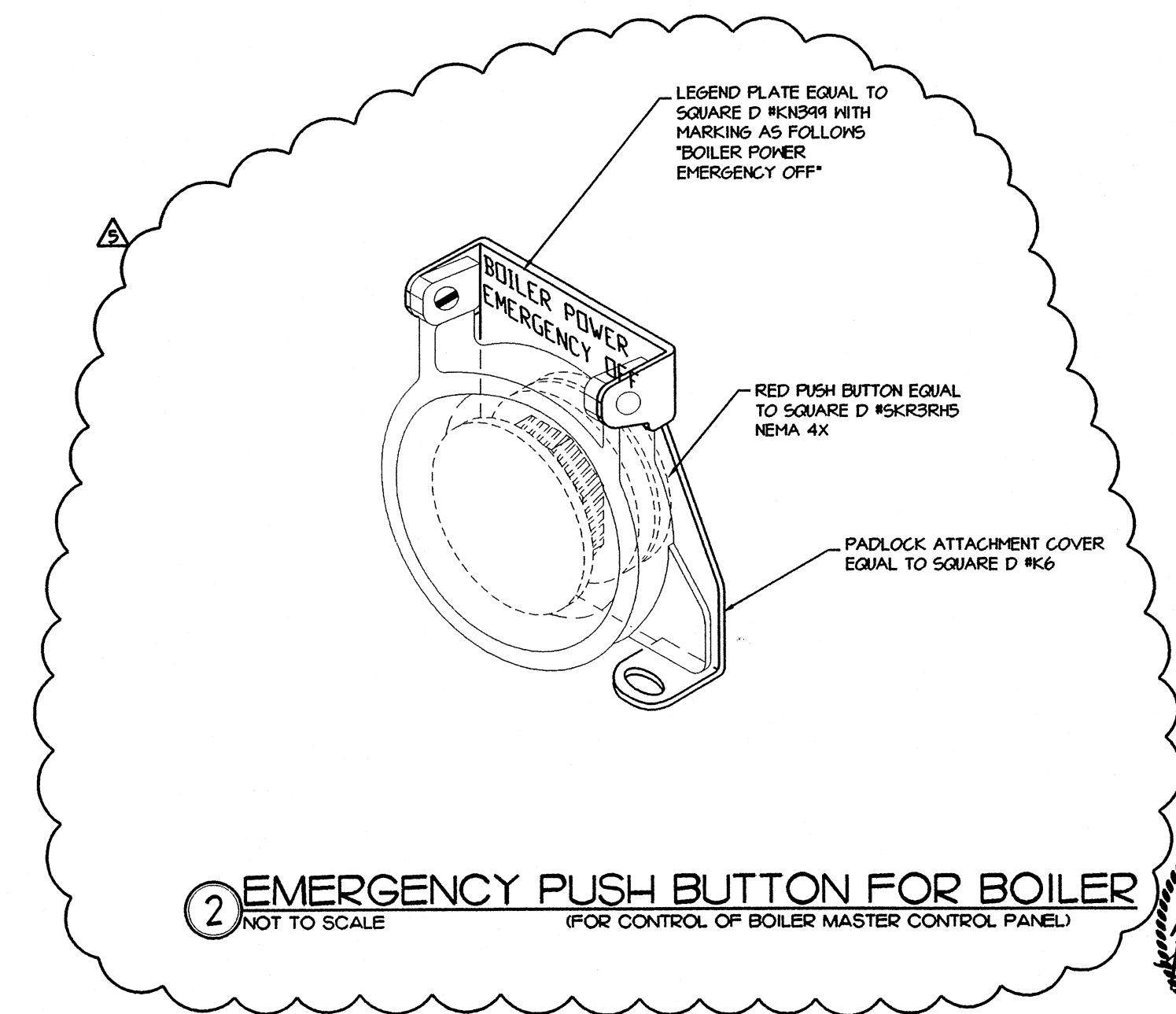


KEYED ELECTRICAL NOTES

- ROUTE 3-#6, 1-#10E6 IN 3/4" CONDUIT TO PANEL INDICATED.
- INSTALL COMBINATION #10 STARTER/30A/3P DISCONNECT FUSED AT 11 AMPS. CONNECT TO UNIT WITH METALLIC FLEX.
- INSTALL 30 AMP/3P DISCONNECT SWITCH FUSED AT 11 AMPS. CONNECT UNIT WITH METALLIC FLEX.
- PROVIDE (2) SEPARATE SERVICES FOR FIRE PUMP CONTROLLER SERVICE #1 (EMERGENCY) ROUTE TO 70 AMP/3P BREAKER AT EMERGENCY GENERATOR. SERVICE #2 (NORMAL POWER) ROUTE TO LOAD SIDE TERMINALS OF PAD MOUNTED TRANSFORMER. BOTH SERVICES TO BE ENCASED IN CONCRETE.
- INSTALL COMBINATION #10 STARTER/30A/3P DISCONNECT SWITCH FUSED AT 15 AMPS. CONNECT TO UNIT WITH METALLIC FLEX.
- INSTALL COMBINATION #10 STARTER/30A/3P DISCONNECT SWITCH FUSED AT 8 AMPS. CONNECT TO UNIT WITH METALLIC FLEX.
- PROVIDE COMBINATION #10 STARTER/30A/3P NON-FUSED DISCONNECT SWITCH WITH "NOA" SWITCH OVERLOAD RELAY, PILOT LIGHTS (1 GREEN, 1 RED) AND (2) N.C. AUXILIARY CONTACTS.
- PROVIDE AND INSTALL SQUARE "D" #5K3R3H5 PUSH BUTTON ON STAINLESS STEEL COVER MOUNTED IN WATER-TIGHT, SURFACE MOUNTED TYPE "FS" BOX AT 48" A.F.G. PROVIDE SQUARE "D" #K6 PAD LOCK COVER (WITH MASTER LOCK) AND SQUARE "D" #K6949 LEGEND PLATE (REFER TO APPROPRIATE DETAIL FOR ADDITIONAL REQUIREMENTS) THIS SHEET.
- 3/4" CONDUIT TO BOILER MASTER CONTROL PANEL FOR INTERLOCK WIRING FOR BOILER EMERGENCY SHUT-DOWN.
- CONTRACTOR TO CHANGE VOLTAGE CONNECTIONS FROM 230V TO 480V/3P IN BOILER.
- PROVIDE COMBINATION #10 STARTER/30A/3P DISCONNECT SWITCH (FUSED AT 6.25 AMPS). PROVIDE H-O-A SWITCH OVERLOAD RELAY, PILOT LIGHTS (1 RED, 1 GREEN), AND (2) N.C. AUXILIARY CONTACTS.
- REMOVE EXISTING 15A/3P BREAKER ON CIRCUIT MADE SPARE BY REMOVAL OF HOUSE PUMP AND INSTALL 20A/3P BREAKER.



1 EMERGENCY PUSH BUTTON FOR SHUNT TRIP MAIN
NOT TO SCALE



2 EMERGENCY PUSH BUTTON FOR BOILER
(FOR CONTROL OF BOILER MASTER CONTROL PANEL)
NOT TO SCALE

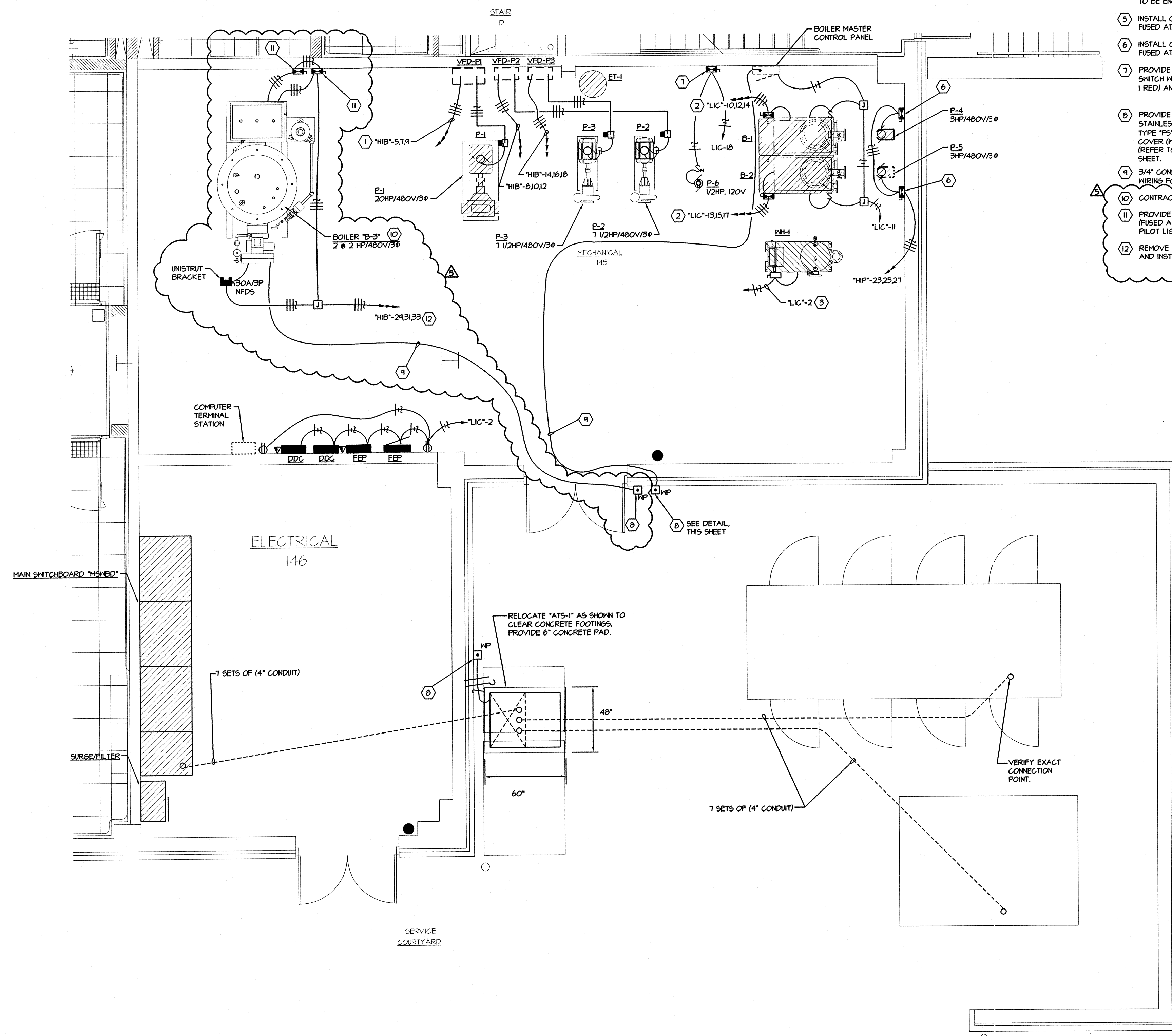


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first floor mechanical room floor plan - power

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

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PANELBOARD: "H1B"			VOLTAGE: 480Y277V		CU BUS RATING: 225A		MAIN: LUGS ONLY		TOTAL CONNECTED VA: 118,183		
LOCATION: 1ST FLOOR ELEC RM			MFG AND TYPE: SQUARE D		EQUIP. GRD. CU BUS: YES		ISOL. GRD. CU BUS: NO		TOTAL AØ: 40,358		
MOUNTING: SURFACE			ENCLOSURE: NEMA 1		MINIMUM A.I.C. RATING: 65,000		FED FROM: MSWBD		TOTAL BØ: 39,616		
									TOTAL CØ: 38,209		
LOAD (VA)			SERVES			P/T			LOAD (VA)		
AØ	BØ	CØ				P/T	CIR. NO.	CIR. NO.			
3330			LTS-140,145,146,DOCK,UNFINISHED			1/20	1	2	LTS-SOUTHEAST FACADE		
	3360		LTS-141,134,133			1/20	3	4	LTS-NORTHWEST/NORTHEAST FACADE		
	7482		PUMP "P-1" - 145			3	5	6	LTS-SOUTHEAST FACADE		
7482			-			-	60	9	PUMP "P-2" - 145		
	7482		-			2	11	12	-		
	3120		PARKING LOT LTS			20	13	14	PUMP "P-3" - 145		
3120			-			2	15	16	-		
	1680		PARKING LOT LTS			20	17	18	-		
	1680		-			1/20	19	20	ST BOXES		
2813			BLDG FLOODS			1/20	21	22	LIGHTING CONTACTOR LC - 1		
	1808		FC-101,102,103,104,105,106,107,110			3	23	24	HP-1 - 145		
	2660		P4, P5 - 145			-	25	26	-		
2660			-			20	27	28	-		
	2660		-			3	29	30	GENERATOR BLOCK HTR		
	3270		BOILER "B-3"			31	32	32	GENERATOR CONTROL/FUEL PUMP		
3270			-			20	33	34	CAGE/RACK WASHER		
	3270		-			35	35	36	-		
	2328		EXHAUST FANS "EF-9", "EF-10", "EF-11"			3	37	38	-		
2328			8.4 FLA			39	40	40	LIGHTS-102,103,105,106,116,117,118		
	2328		-			20	41	42	LIGHTS-101,104,1017,110,112,114,113		
			-						2314		

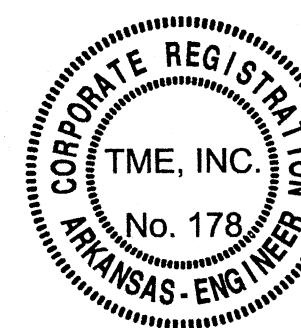
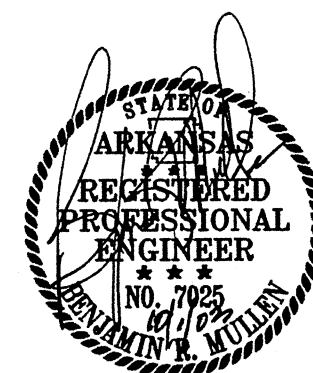
DELETE 70A/3P BREAKER ON CCT #37,39,41 (RE-FEED TRANSFORMER "L1C" FORM "MSWBD")
 REVISE INTERRUPTING CAPACITY ON PANEL AND LOADING

PANELBOARD: "L1C" SECTION #1			VOLTAGE: 208Y120V		CU BUS RATING: 400		MAIN: 400A/3P MCB FEED THRU LUGS		TOTAL CONNECTED (KVA): 35,988 - 77,400 - SECTION #1					
LOCATION: 1ST FLOOR ELEC RM			MFG AND TYPE: SQUARE D		EQUIP. GRD. CU BUS: YES		ISOL. GRD. CU BUS: YES		TOTAL AØ: 11,420					
MOUNTING: SURFACE					ENCLOSURE: NEMA 1		MINIMUM A.I.C. RATING: 22,000		FED FROM: PANEL "MSWBD" XFMR/"L1C"		TOTAL BØ: 12,788			
											TOTAL CØ: 11,780			
LOAD (VA)			SERVES			P/T			SERVES			LOAD (VA)		
AØ	BØ	CØ										AØ	BØ	CØ
900			RECEPTS-146			1/20 1 2 1/20			"WH-1" - 145			720		
	800		SECURITY GATE			1/20 3 4 1/20			RECEPTS - 146				900	
		800	" " " "			1/20 5 6 1/20			SECURITY GATE					800
800			SECURITY GATE			1/20 7 8 1/20			" " " "			800		
	800		" " " "			1/20 9 10 3			B-1 - 145				720	
		600	BOILER CONTROLS			1/20 11 12			" " " "			720		720
720			B-2 - 145			3 13 14 20			" " " "			720		
	720		" " " "			15 16 1/20			UH - 101,102,103,104				560	
		720	" " " "			17 18 1/20			P6 - 145					1176
600			RECEPTS			1/20 19 20 1/20			SECURITY GATE			800		
	1080		RECEPTS-A111, A112, A114			1/20 21 22 1/20			SECURITY GATE				800	
		900	RECEPTS-A111			1/20 23 24 1/20			RECEPTS-A100, A102					720
900			RECEPTS-A113, A114			1/20 25 26 1/20			RECEPTS-A102, A103, A106			900		
	900		RECEPTS-A113, A117			1/20 27 28 1/20			RECEPTS-A101, A104				1080	
		1080	RECEPTS-A109, A117			1/20 29 30 1/20			RECEPTS-A104, A107					1200
1080			RECEPTS-A117, A118			1/20 31 32 1/20			RECEPTS-A110, A112			1080		
	900		RECEPTS-A115			1/20 33 34 1/20			BIO-CABINET - A116				1764	
		1000	RECEPTS-A111			1/20 35 36 1/20			DRYER - A110					300
800			RECEPTS-A111			1/20 37 38 1/20			FUTURE CAMERAS & RECORDERS			600		
	1764		BIO-CABINET - A113			1/20 39 40 1/20			SPARE					
		1764	BIO-CABINET - A113			1/20 41 42 1/20			SPARE					

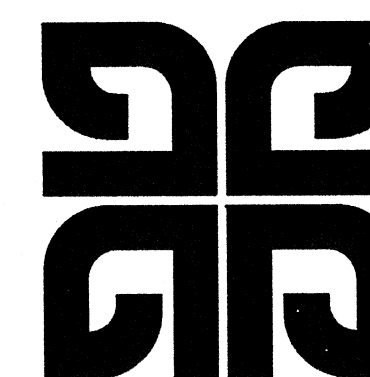
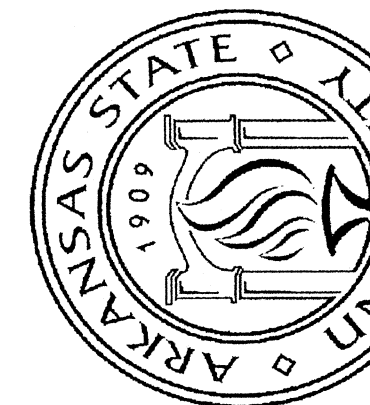
REVISE PANEL "L1C" SECTION #1 RATING AND MAIN CIRCUIT BREAKER SIZE.
 ADD PANEL "L1C" SECTION #2 LOADING.

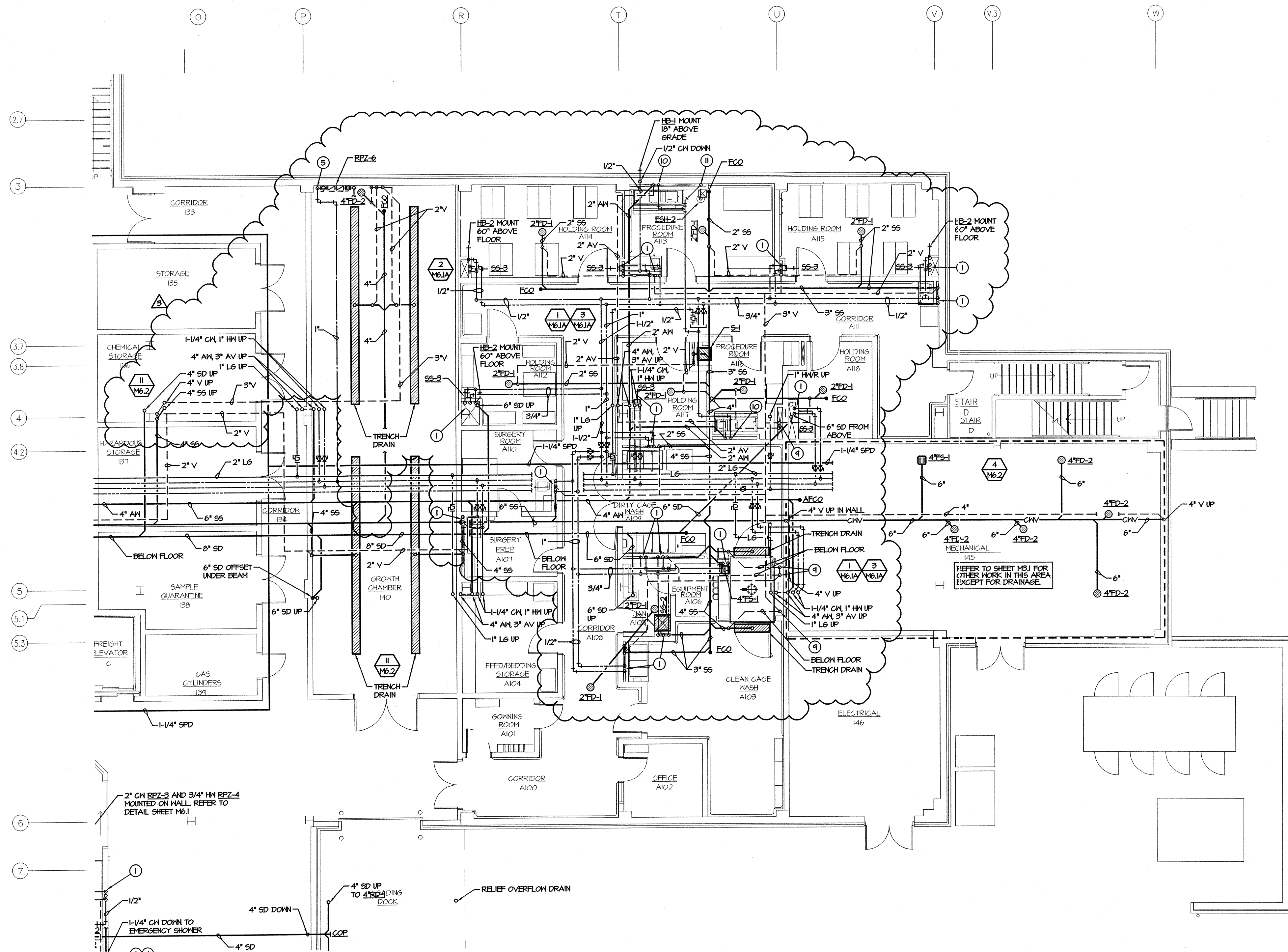
PANELBOARD: "L1C" SECTION #2			VOLTAGE: 208Y120V/3Ø		CU BUS RATING: 225A		MAIN: -		TOTAL CONNECTED VA: 72,240		
LOCATION: ELEC RM 146			MFG AND TYPE: SQUARE D NQOD		EQUIP. GRD. CU BUS: YES		ISOL. GRD. CU BUS: NO		TOTAL AØ: 22,512		
MOUNTING: SURFACE			ENCLOSURE: NEMA 1		MINIMUM A.I.C. RATING: 10,000		FED FROM: -		TOTAL BØ: 24,864		
									TOTAL CØ: 24,864		
LOAD (VA)			SERVES				LOAD (VA)				
AØ	BØ	CØ	P/T	CIR. NO.	P/T	CIR. NO.	SERVES	AØ	BØ	CØ	
1608			3	43	44	3	GROWTH CHAMBER #6	1608			
	1776			45	46	-	-		1776		
		1776	20	47	48	20	-			1776	
1608			3	49	50	3	GROWTH CHAMBER #7	1608			
	1776			51	52	-	-		1776		
		1776	20	53	54	20	-			1776	
1608			3	55	56	3	GROWTH CHAMBER #8	1608			
	1776			57	58	-	-		1776		
		1776	20	59	60	20	-			1776	
1608			3	61	62	3	GROWTH CHAMBER #9	1608			
	1776			63	64	-	-		1776		
		1776	20	65	66	20	-			1776	
1608			3	67	68	3	GROWTH CHAMBER #10	1608			
	1776			69	70	-	-		1776		
		1776	20	71	72	20	-			1776	
1608			3	73	74	3	FUTURE CHAMBER	1608			
	1776			75	76	-	-		1776		
		1776	20	77	78	20	-			1776	
1608			3	79	80	3	FUTURE CHAMBER	1608			
	1776			81	82	-	-		1776		
		1776	20	83	84	20	-			1776	

PANELBOARD: "L4A" SECTION #2			VOLTAGE: 208Y120V	CU BUS RATING: 225A	MAIN: LUGS ONLY	TOTAL CONNECTED VA: 35,308					
LOCATION: FOURTH FLOOR ELEC RM			MFG AND TYPE: SQUARE D	EQUIP. GRD. CU BUS: YES	ISOL. GRD. CU BUS: YES	TOTAL AØ: 11,724					
MOUNTING: SURFACE			ENCLOSURE: NEMA 1	MINIMUM A.I.C. RATING: 10,000	FED FROM: "L4A" SECT. #1	TOTAL BØ: 11,824					
						TOTAL CØ: 11,760					
LOAD (VA)			SERVES			LOAD (VA)					
AØ	BØ	CØ		P/T	CIR. NO.	CIR. NO.	P/T		AØ	BØ	CØ
800			LTS - 404	1/20	43	44	1/20	RECEPTS - 404	1000		
	1000		RECEPTS - 404	1/20	45	46	1/20	RECEPTS - 404		1000	
		1000	RECEPTS - 404	1/20	47	48	1/20	RECEPTS - 404			1000
1000			RECEPTS - 404	1/20	49	50	1/20	RECEPTS - 412	900		
	2400		COOL RM COND UNIT	3	51	52	1/20	COOL RM FAN DOOR HTR		1200	
		2400	" " " "		53	54	1/20	UH - 401,402,403,404			560
2400			" " " "	30	55	56	1/20	LTS/RECEPTS - ERAHU - 3	1400		
	600		LTS - ERAHU-1,2,3 PLENUM	1/20	57	58	1/20	" " " " - ERAHU - 2		1400	
		1176	GREENHOUSE	1/20	59	60	1/20	" " " " - ERAHU - 1			1400
1176			" " " "	1/20	61	62	3	COLD ROOM DEHUMIDIFIER	3048		
	1176		" " " "	1/20	63	64		-		3048	
		1176	" " " "	1/20	65	66	20	-			3048
			SPARE	1/20	67	68	1/20	SPARE			
			SPARE	1/20	69	70	1/20	SPARE			
			SPARE	1/20	71	72	1/20	SPARE			
			SPACE		73	74		SPACE			
					75	76					
					77	78					
					79	80					
					81	82					
					83	84					



OCTOBER 1, 2003





first floor plan - plumbing

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

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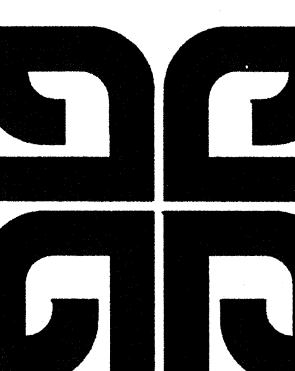
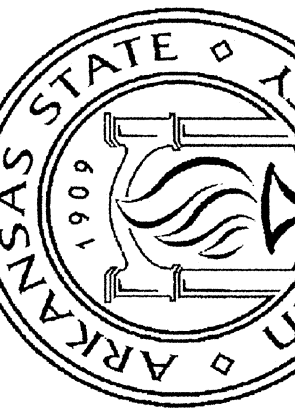
**FIRST FLOOR
PLAN -
PLUMBING**

Commission Num
10301

M2.1

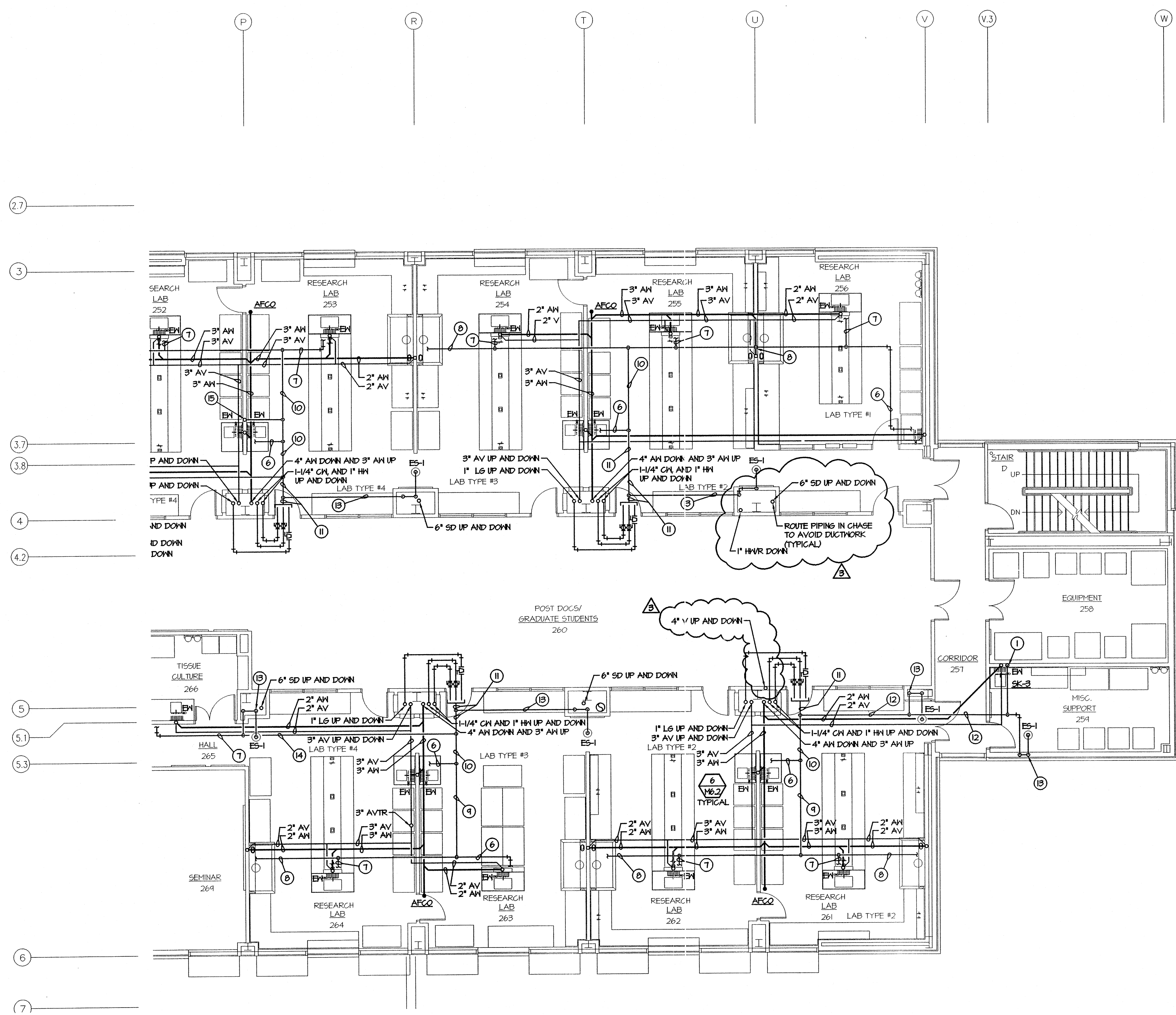
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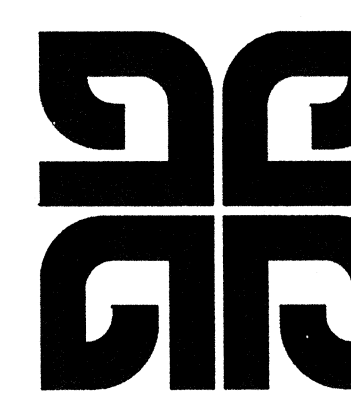
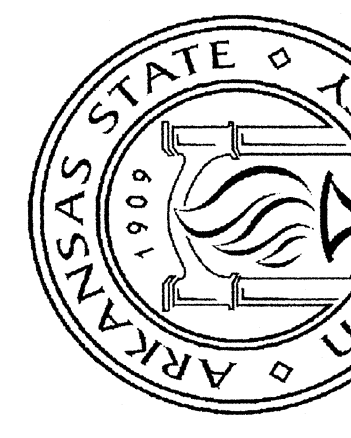
n second floor plan - plumbing

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

OCTOBER 1, 2003

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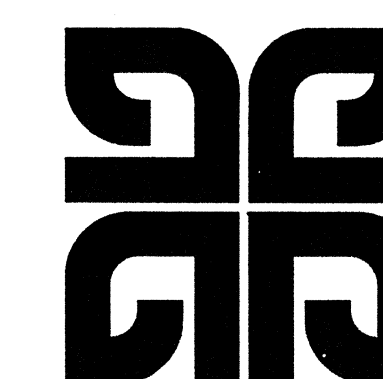
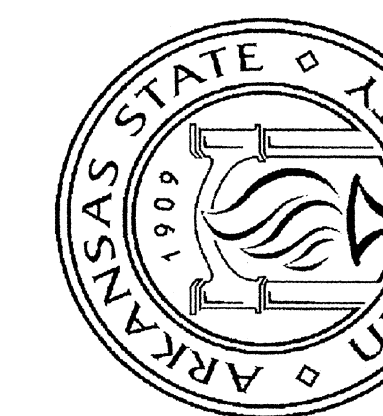


**SECOND FLOOR
 PLAN -
 PLUMBING**

Commission Number
 10301

M2.2

Date: October 1, 2003



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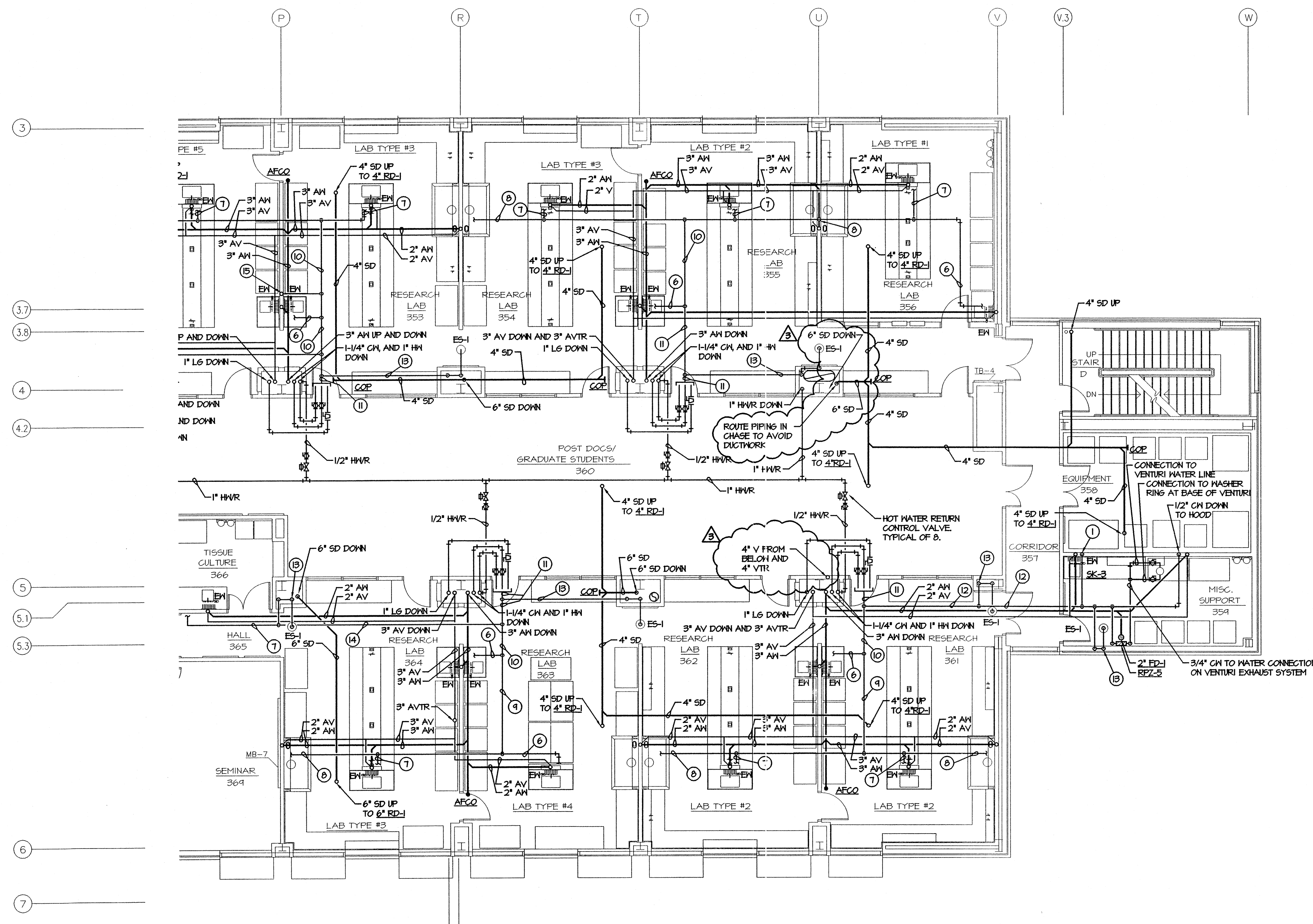


THIRD FLOOR
PLAN -
PLUMBING

Commission Num
10301

M2.3

Date: October 1, 2

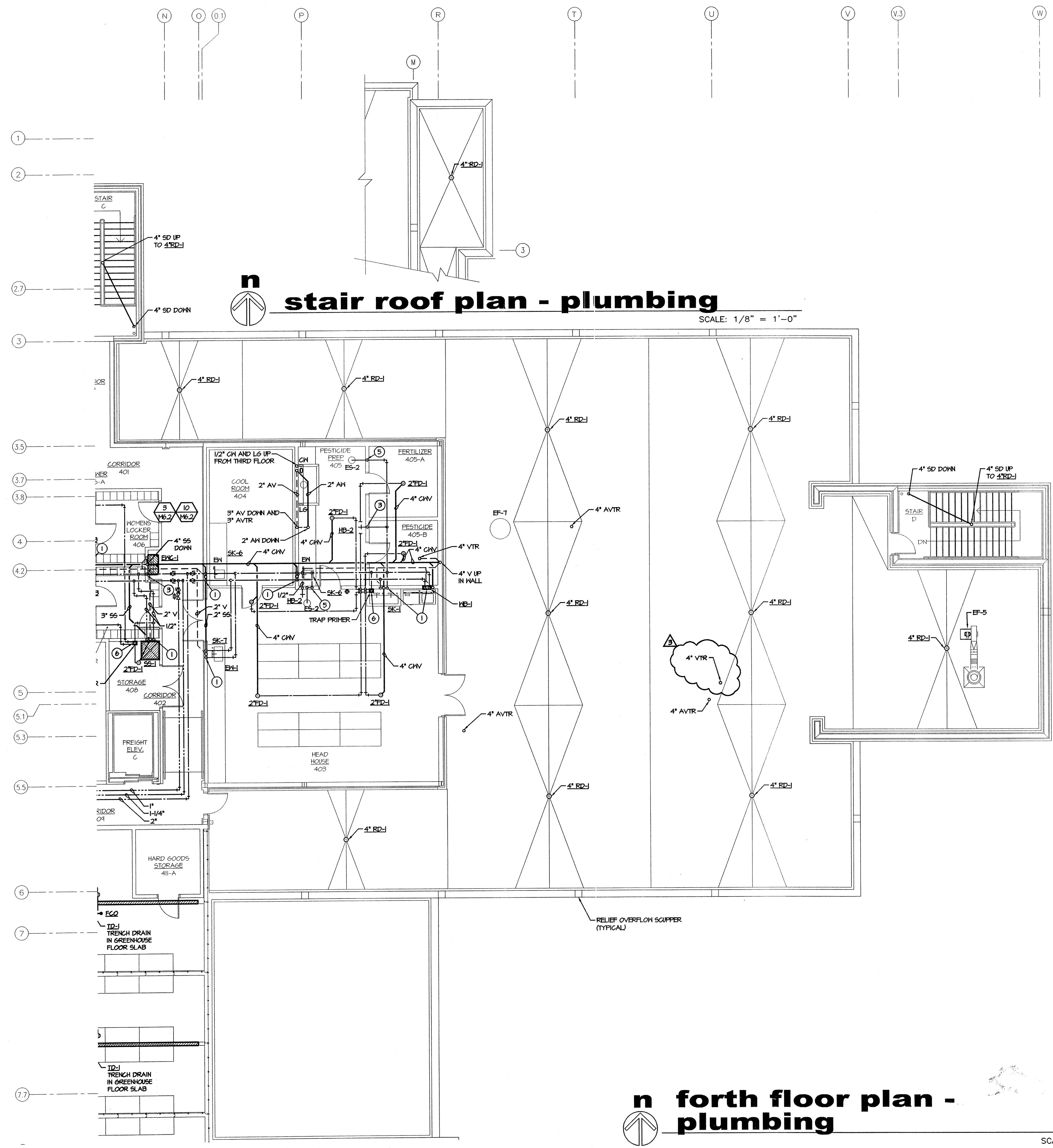


third floor plan -
plumbing

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

OCTOBER 1, 2008

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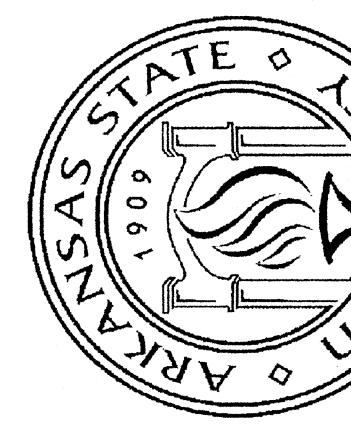


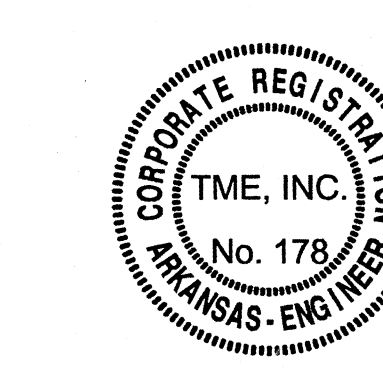
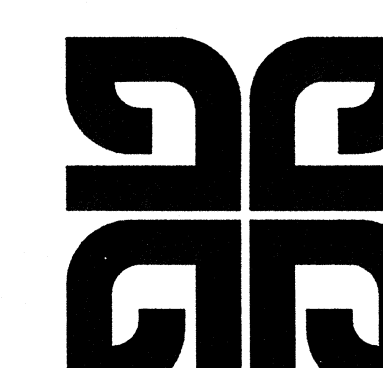
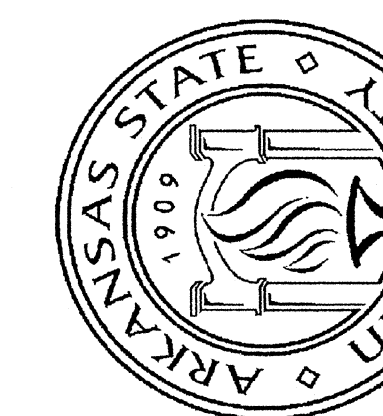
stair roof plan - plumbing

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

forth floor plan - plumbing

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





OCTOBER 1, 2009

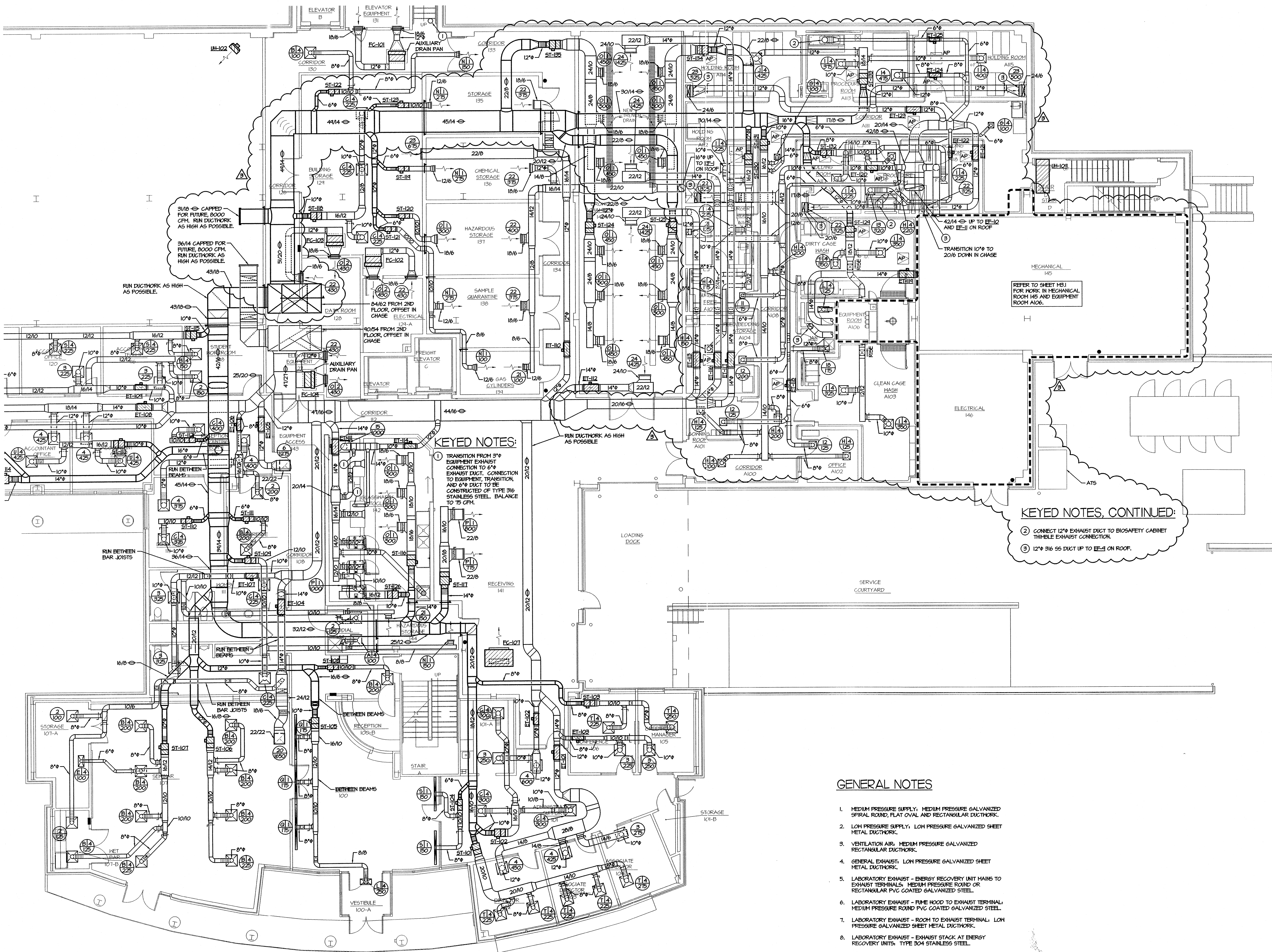
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GENERAL NOTES

1. MEDIUM PRESSURE SUPPLY: MEDIUM PRESSURE GALVANIZED SPIRAL ROUND, FLAT OVAL AND RECTANGULAR DUCTWORK.
2. LOW PRESSURE SUPPLY: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
3. VENTILATION AIR: MEDIUM PRESSURE GALVANIZED RECTANGULAR DUCTWORK.
4. GENERAL EXHAUST: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
5. LABORATORY EXHAUST - ENERGY RECOVERY UNIT MAINS TO EXHAUST TERMINALS: MEDIUM PRESSURE ROUND OR RECTANGULAR PVC COATED GALVANIZED STEEL.
6. LABORATORY EXHAUST - FUME HOOD TO EXHAUST TERMINAL: MEDIUM PRESSURE ROUND PVC COATED GALVANIZED STEEL.
7. LABORATORY EXHAUST - ROOM TO EXHAUST TERMINAL: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
8. LABORATORY EXHAUST - EXHAUST STACK AT ENERGY RECOVERY UNITS: TYPE 304 STAINLESS STEEL.

first floor plan - HVAC ductwork

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

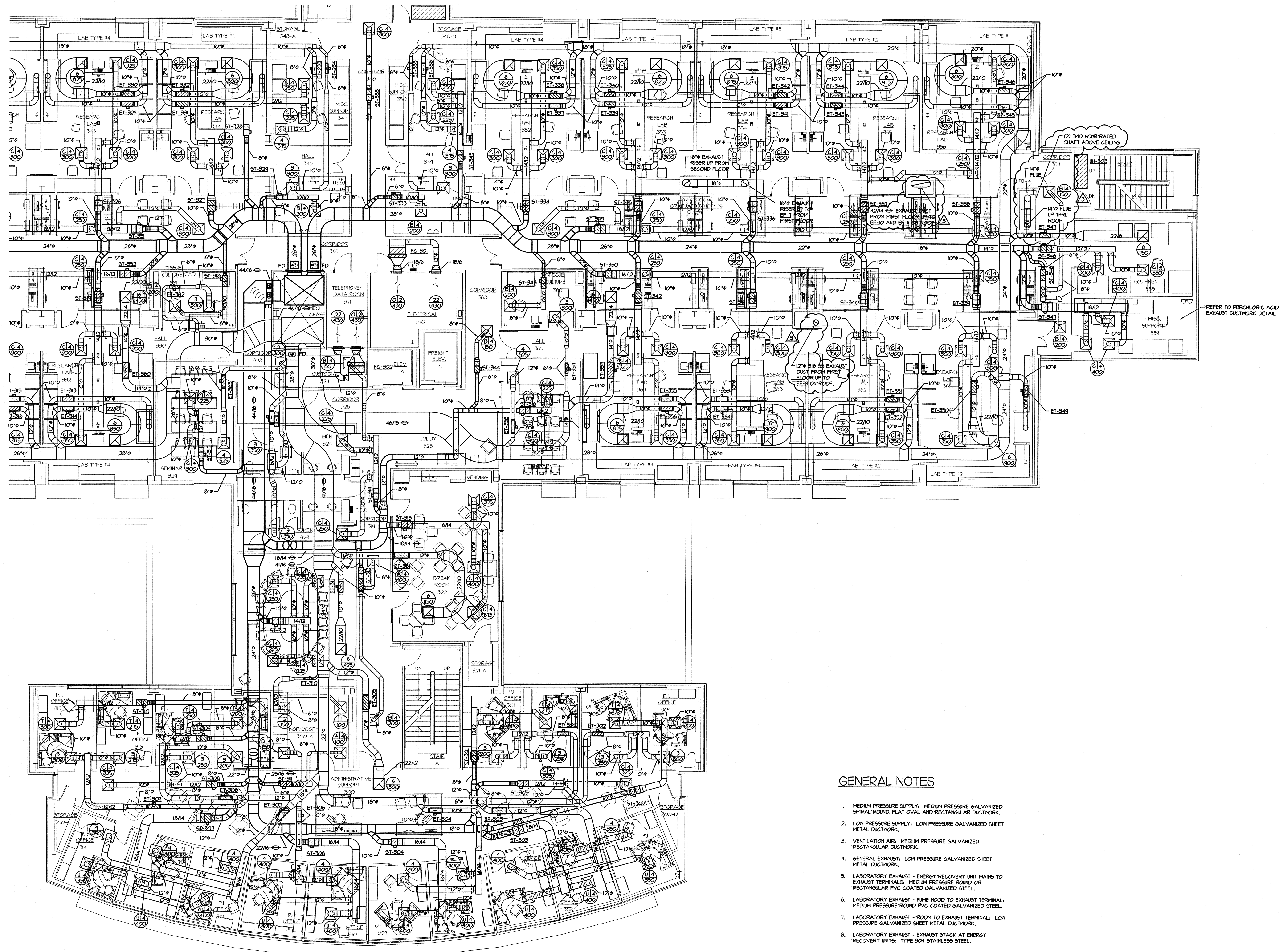


KEYED NOTES:

1. TRANSITION FROM 3\"/>

KEYED NOTES, CONTINUED:

2. CONNECT 12\"/>
3. 12\"/>



GENERAL NOTES

1. MEDIUM PRESSURE SUPPLY: MEDIUM PRESSURE GALVANIZED SPIRAL ROUND, FLAT OVAL AND RECTANGULAR DUCTWORK.
2. LOW PRESSURE SUPPLY: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
3. VENTILATION AIR: MEDIUM PRESSURE GALVANIZED RECTANGULAR DUCTWORK.
4. GENERAL EXHAUST: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
5. LABORATORY EXHAUST - ENERGY RECOVERY UNIT MAINS TO EXHAUST TERMINALS: MEDIUM PRESSURE ROUND OR RECTANGULAR PVC COATED GALVANIZED STEEL.
6. LABORATORY EXHAUST - FUME HOOD TO EXHAUST TERMINAL: MEDIUM PRESSURE ROUND PVC COATED GALVANIZED STEEL.
7. LABORATORY EXHAUST - ROOM TO EXHAUST TERMINAL: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
8. LABORATORY EXHAUST - EXHAUST STACK AT ENERGY RECOVERY UNITS: TYPE 304 STAINLESS STEEL.



THIRD FLOOR
PLAN - HVAC
DUCTWORK

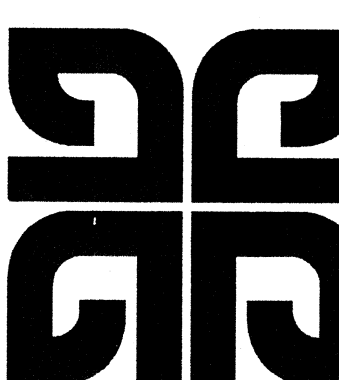
OCTOBER 1, 2003

n third floor plan - HVAC ductwork

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

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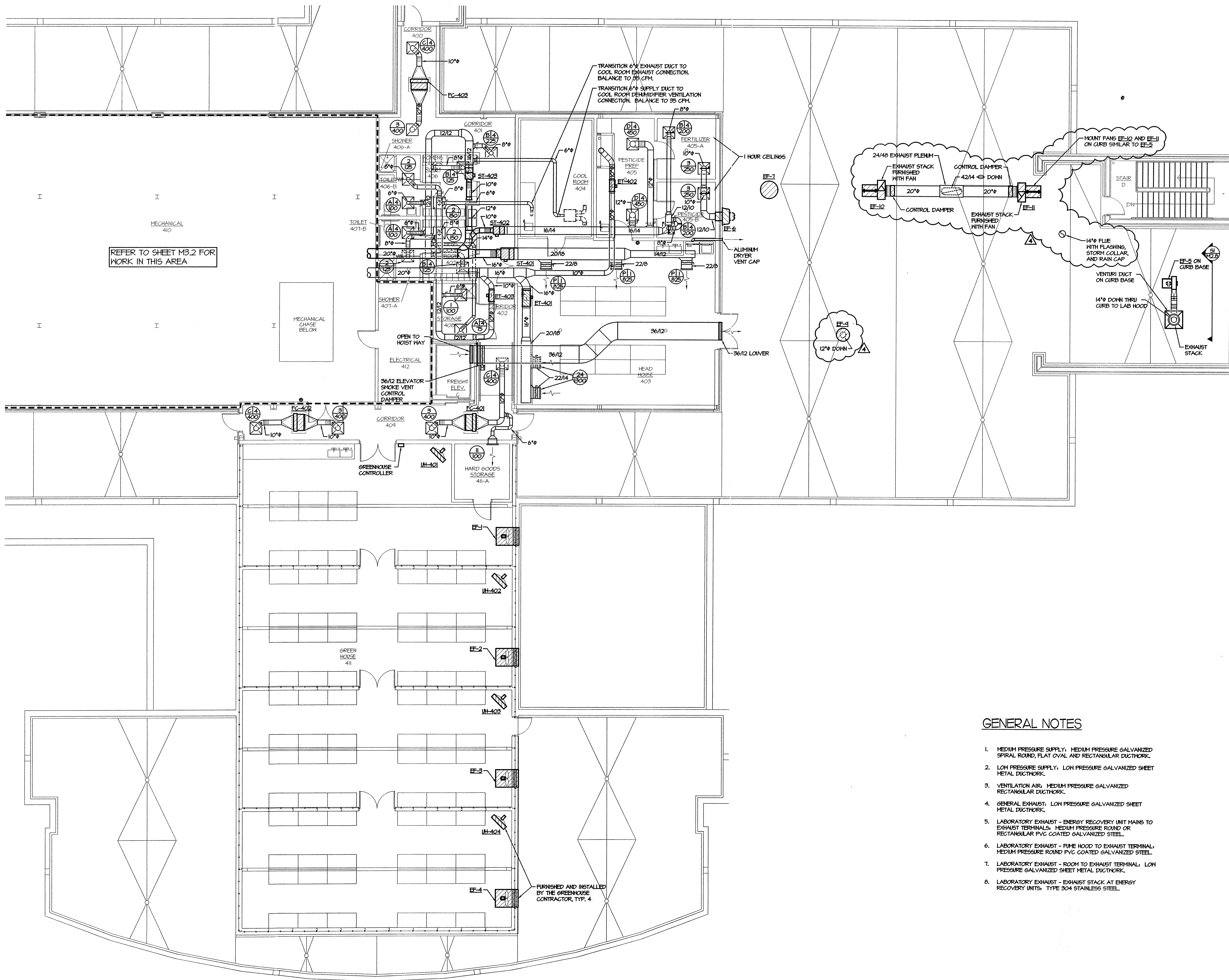


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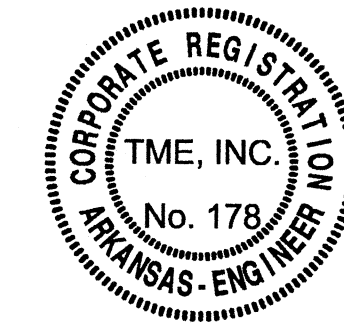
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Date: October 1, 2003



GENERAL NOTES

1. MEDIUM PRESSURE SUPPLY: MEDIUM PRESSURE GALVANIZED SPIRAL ROUND, FLAT OVAL AND RECTANGULAR DUCTWORK.
2. LOW PRESSURE SUPPLY: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
3. VENTILATION AIR: MEDIUM PRESSURE GALVANIZED RECTANGULAR DUCTWORK.
4. GENERAL EXHAUST: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
5. LABORATORY EXHAUST - ENERGY RECOVERY UNIT MAINS TO EXHAUST TERMINALS: MEDIUM PRESSURE ROUND OR RECTANGULAR PVC COATED GALVANIZED STEEL.
6. LABORATORY EXHAUST - FINE HOOD TO EXHAUST TERMINAL: MEDIUM PRESSURE ROUND PVC COATED GALVANIZED STEEL.
7. LABORATORY EXHAUST - ROOM TO EXHAUST TERMINAL: LOW PRESSURE GALVANIZED SHEET METAL DUCTWORK.
8. LABORATORY EXHAUST - EXHAUST STACK AT ENERGY RECOVERY UNITS: TYPE 304 STAINLESS STEEL.



OCTOBER 1, 2008

FOURTH FLOOR
PLAN - HVAC
DUCTWORK

n fourth floor plan - HVAC ductwork

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

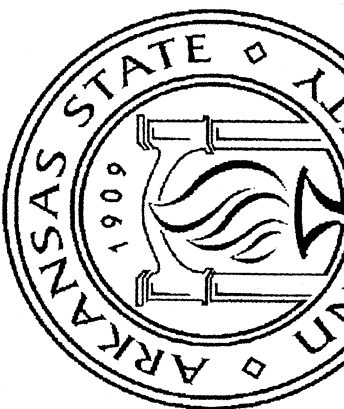
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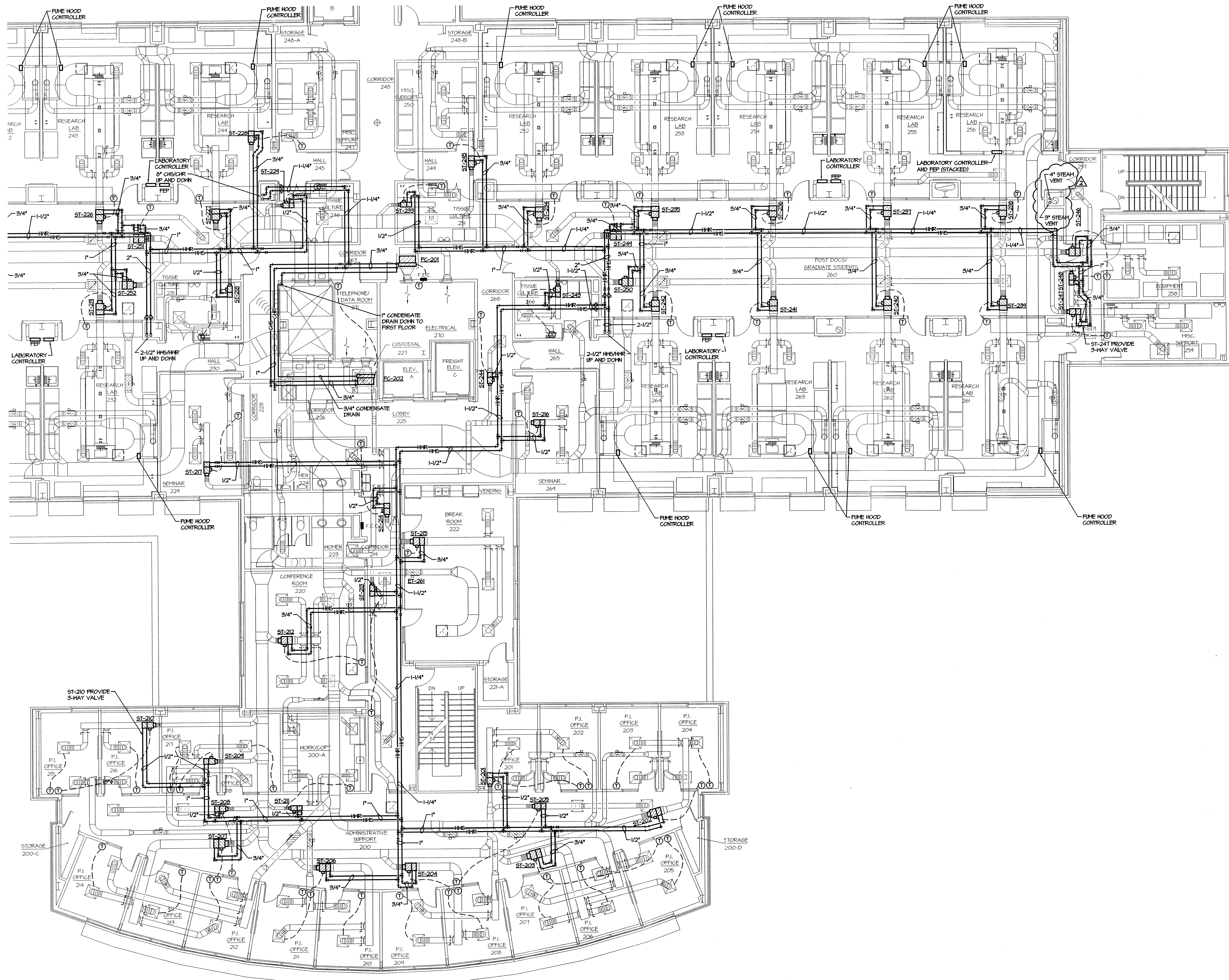
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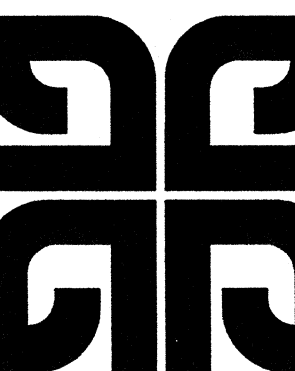
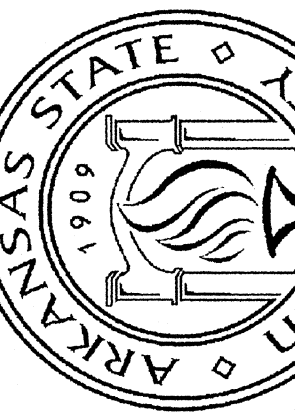
**n second floor plan - HVAC
piping**

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

TVE Consulting Engineers
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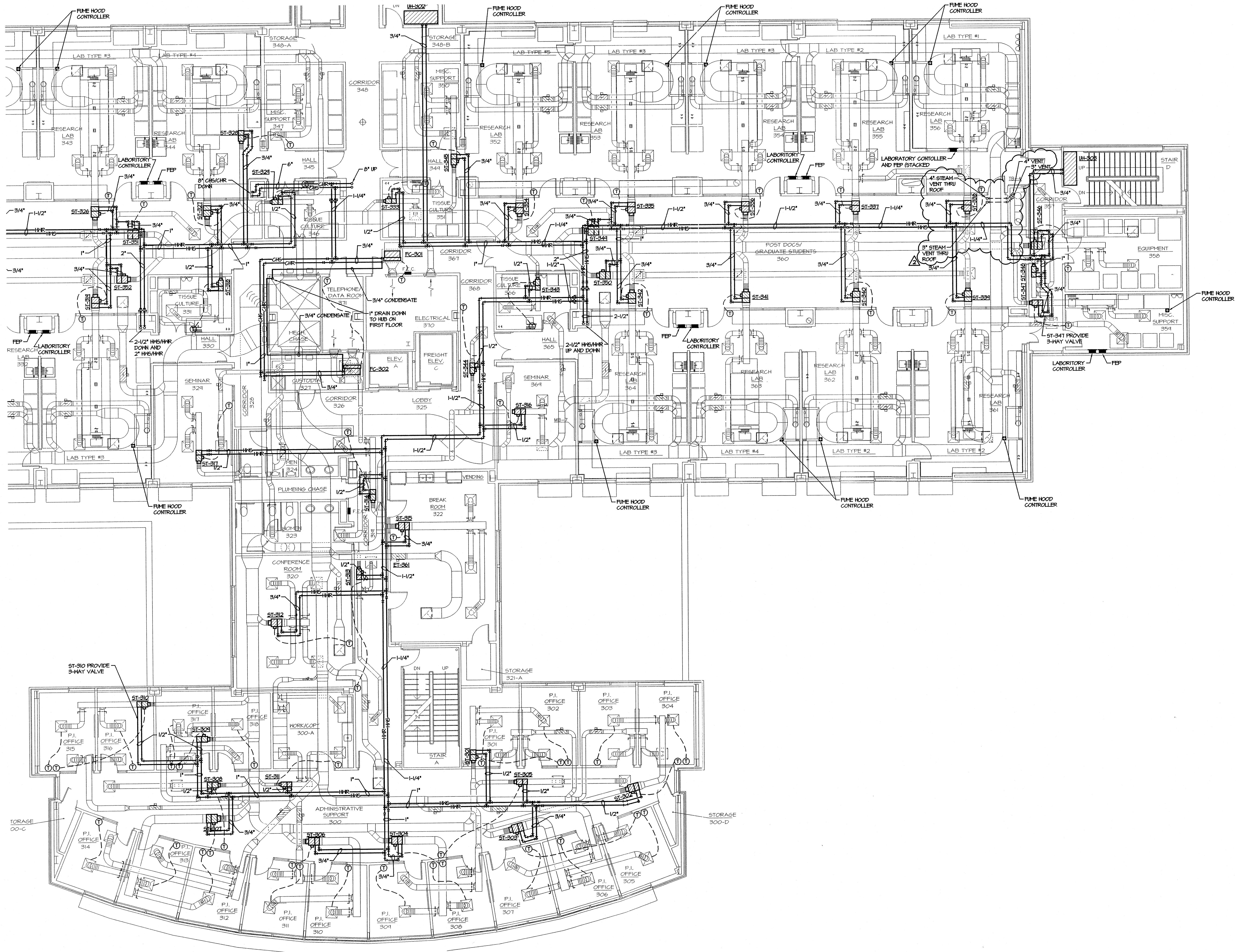


**SECOND FLOOR
PLAN - HVAC
PIPING**

Commission Number
10301

M2.10

Date: October 1, 2009



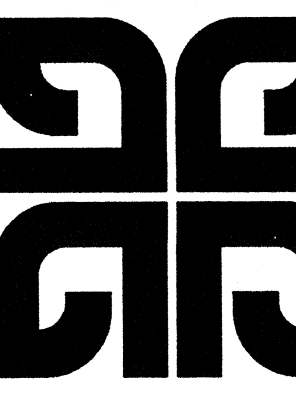
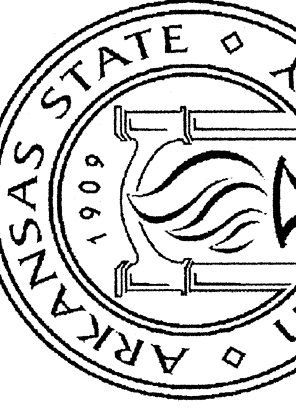
third floor plan - HVAC piping

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

TVE Consulting Engineers
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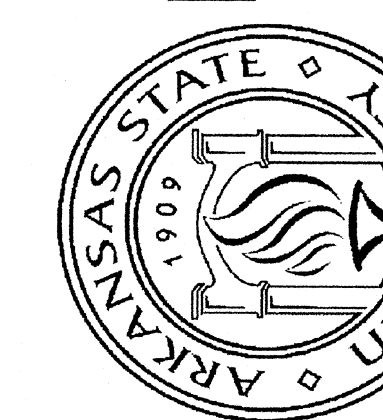


**THIRD FLOOR
 PLAN - HVAC
 PIPING**

Commission Number
 10301

M2.1

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FIRST FLOOR
MECHANICAL
ROOM PLAN

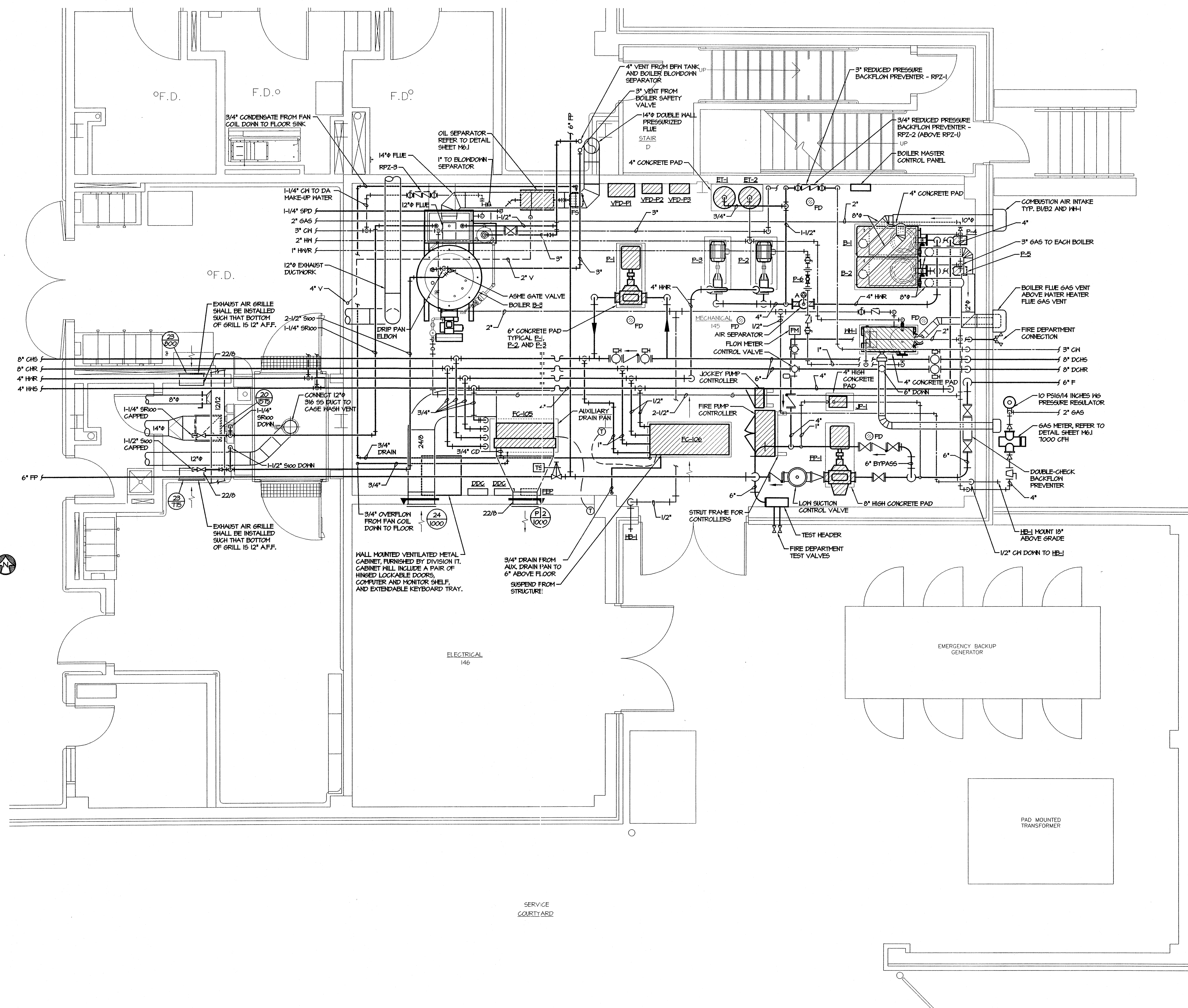
Commission Num
10301

M3.1

Date: October 1, 2

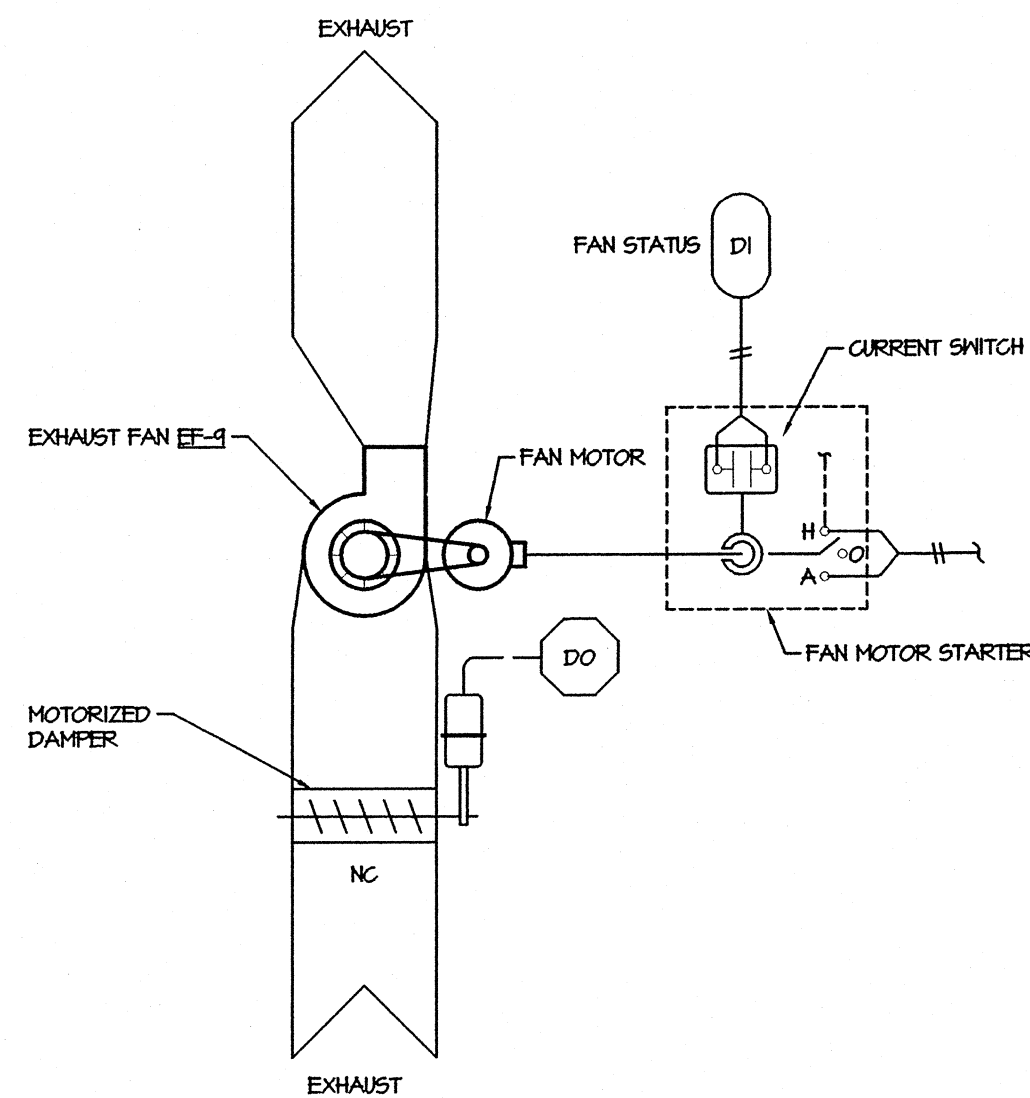
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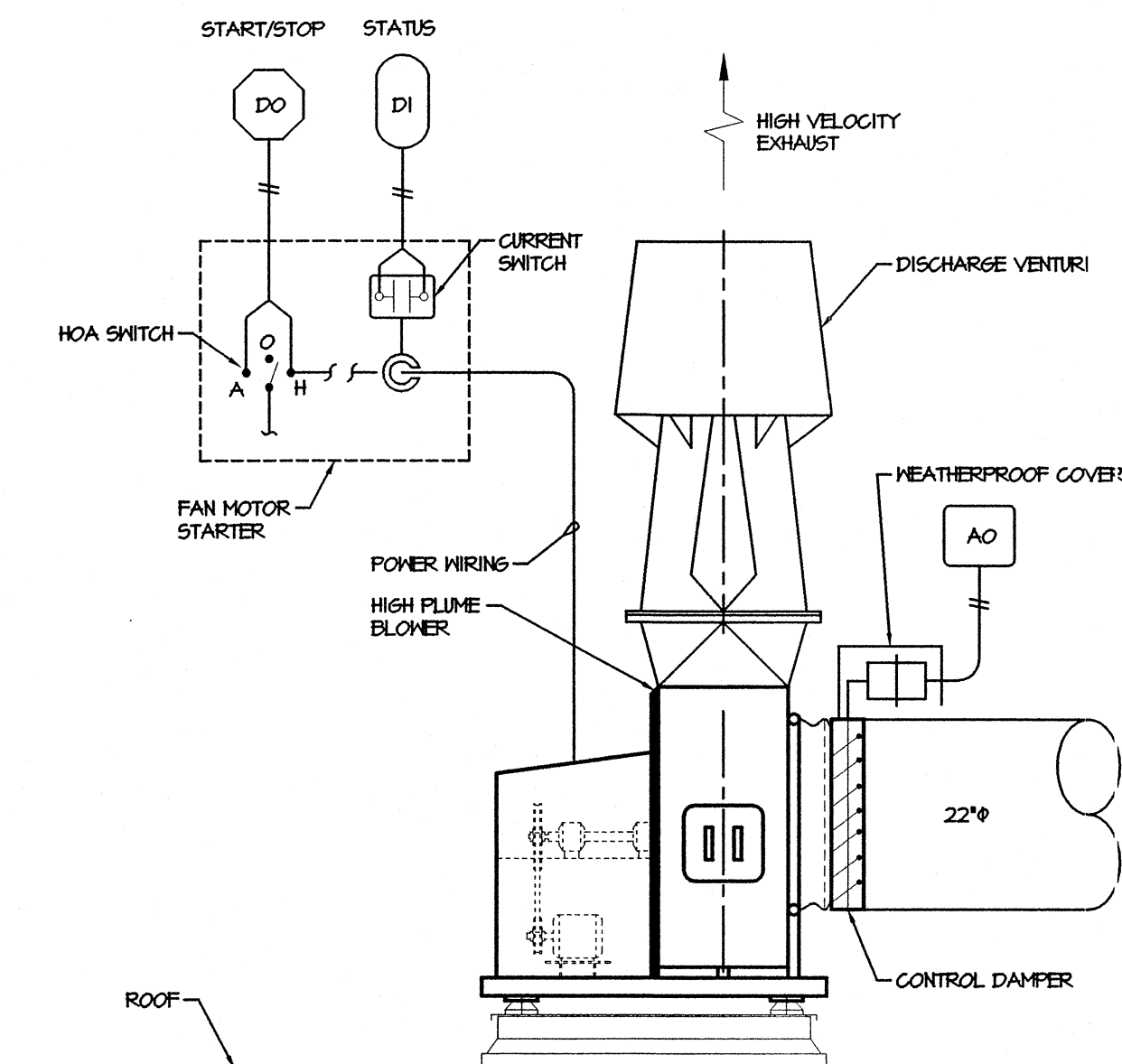


2 PARTIAL PLAN AT CAGE WASH
SCALE 1/4"=1'-0"

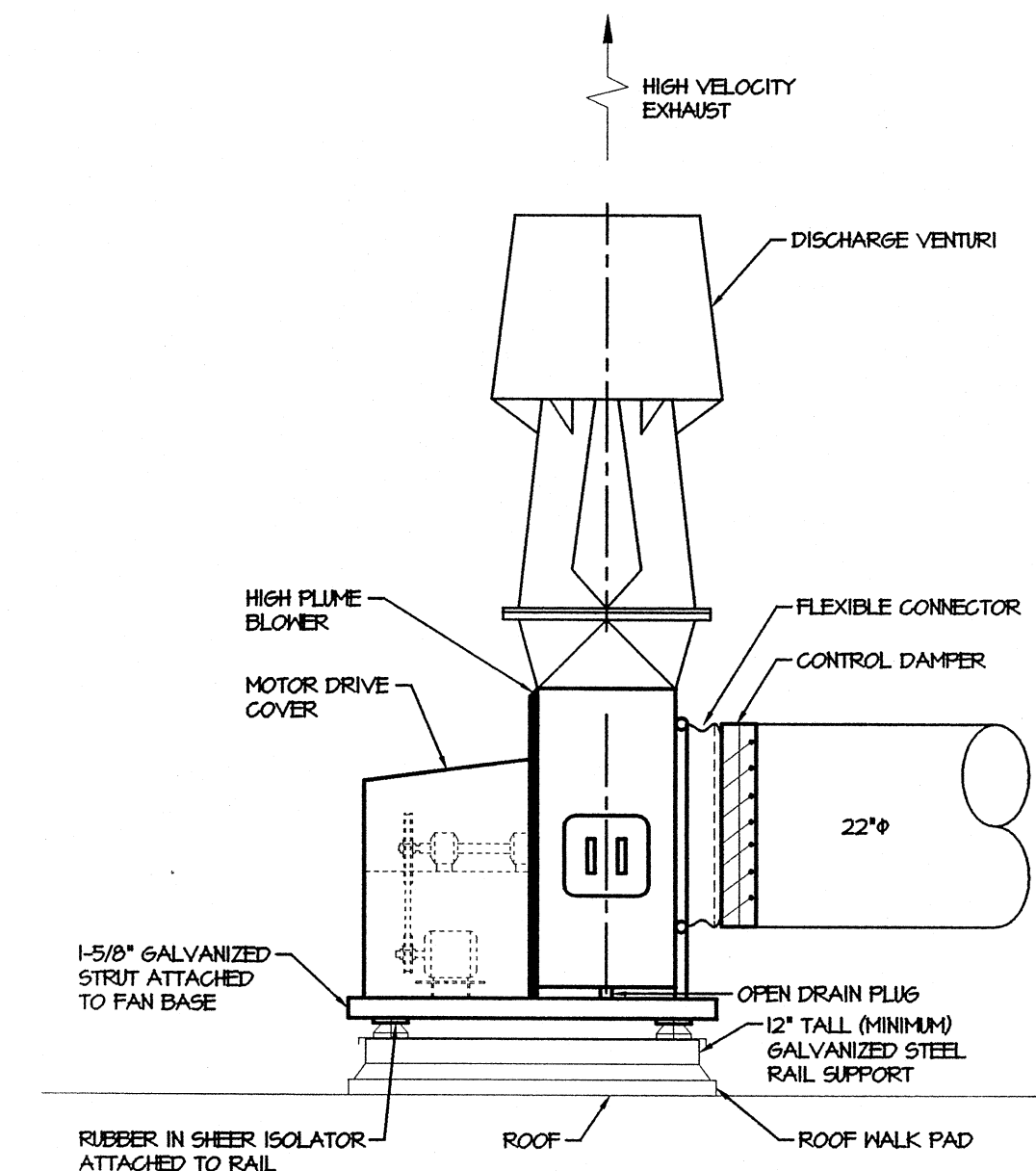
1 FIRST FLOOR MECHANICAL ROOM PLAN
SCALE 1/4"=1'-0"



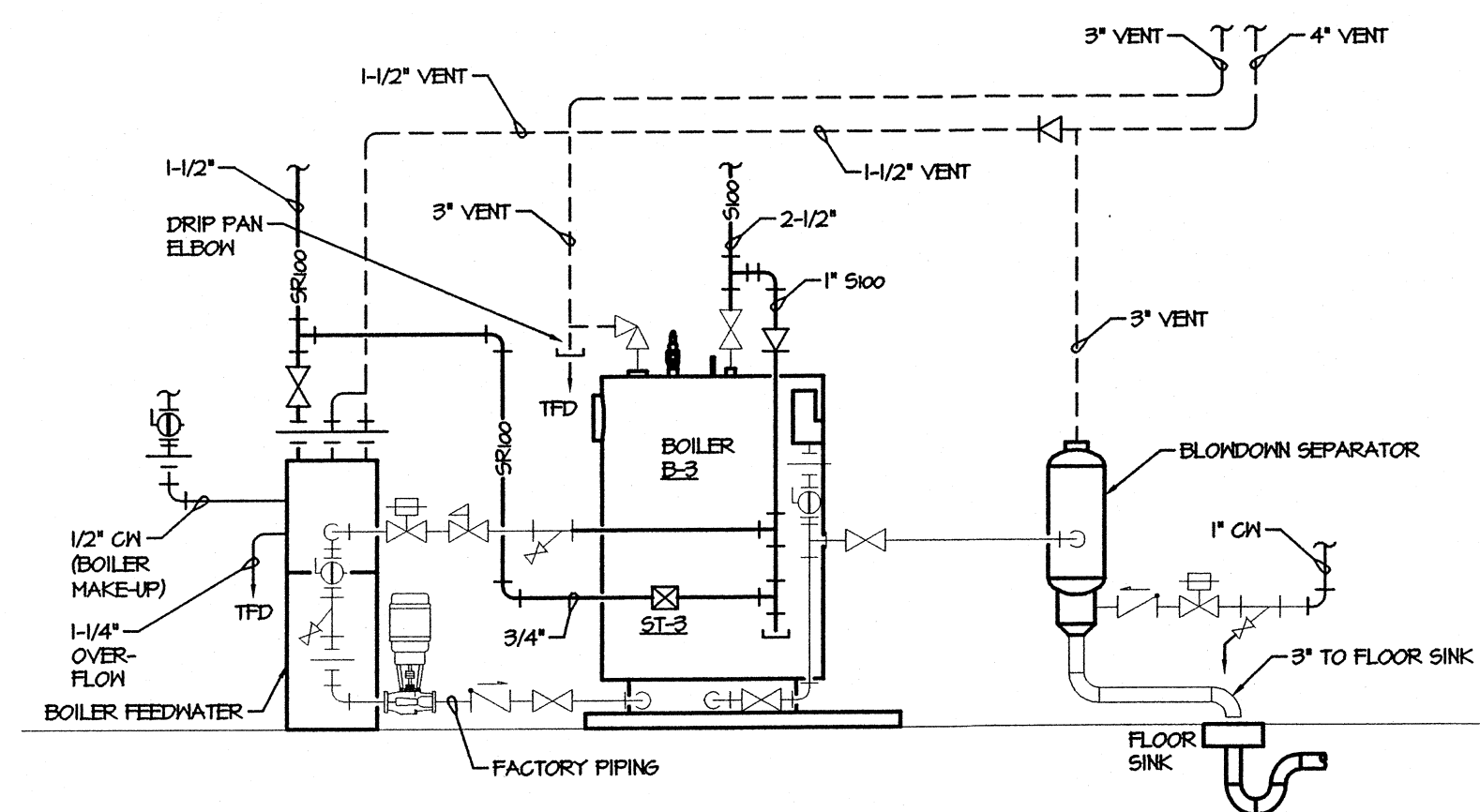
10 EXHAUST FAN (EF-9) CONTROL DIAGRAM
NOT TO SCALE



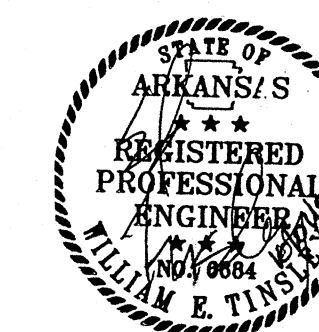
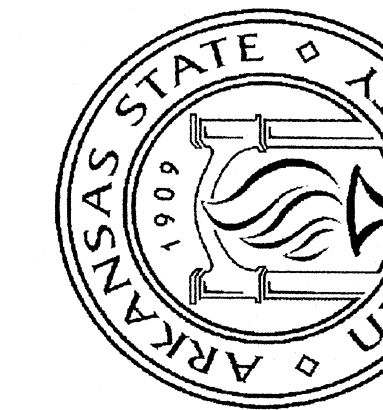
11 EXHAUST FAN CONTROL DIAGRAM (EF-10 & EF-11)
NOT TO SCALE



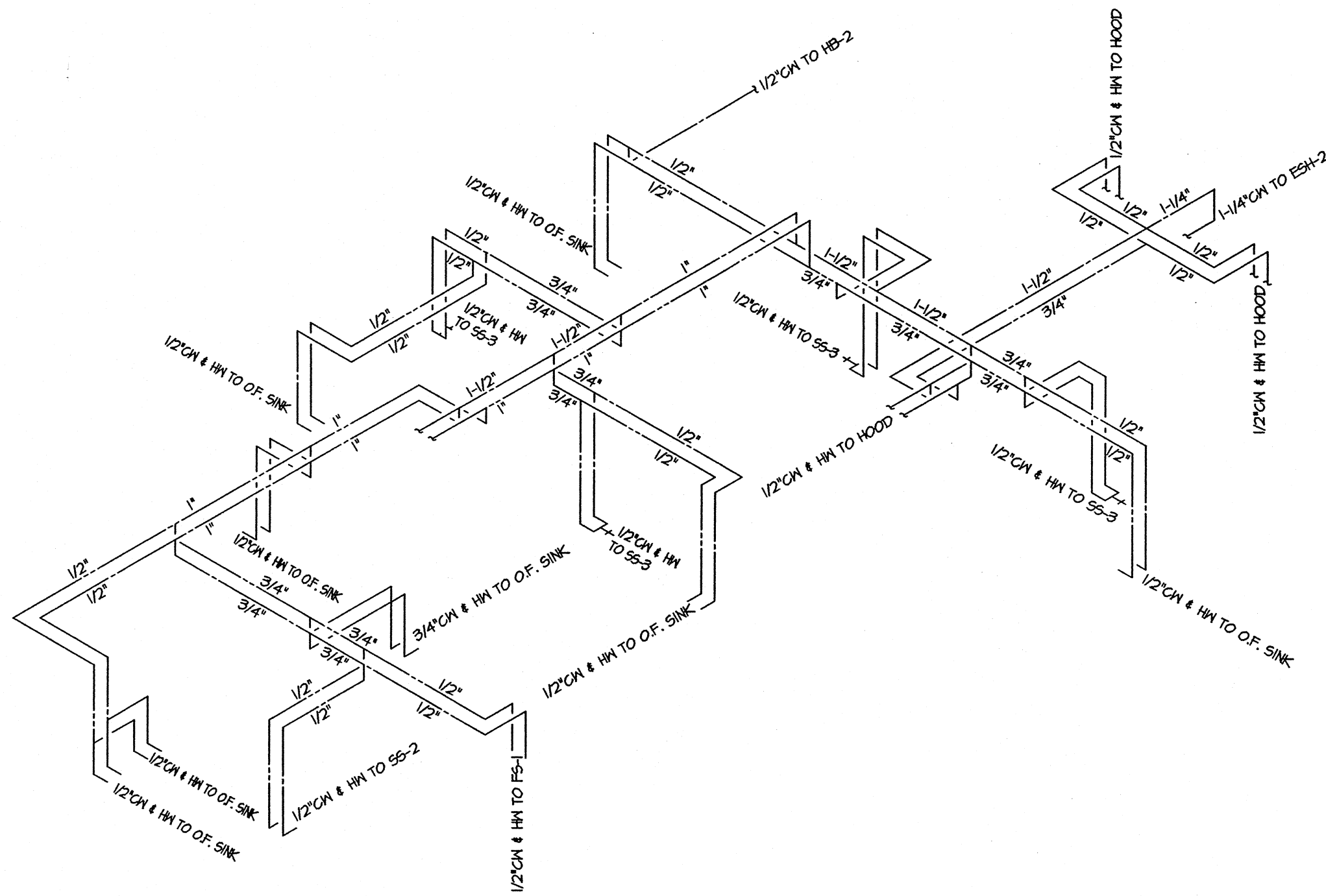
12 EXHAUST FAN DETAIL (EF-10 & EF-11)
NOT TO SCALE



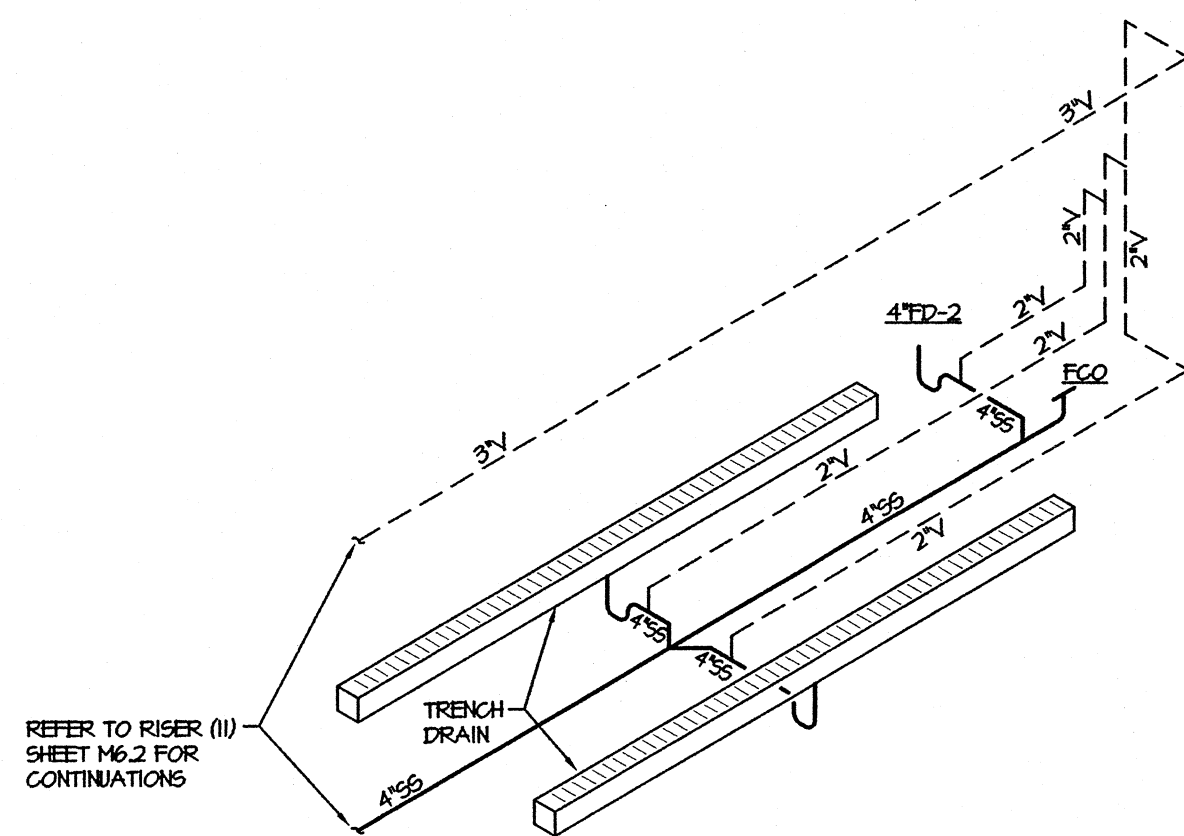
13 BOILER B-3 FLOW DIAGRAM
NOT TO SCALE



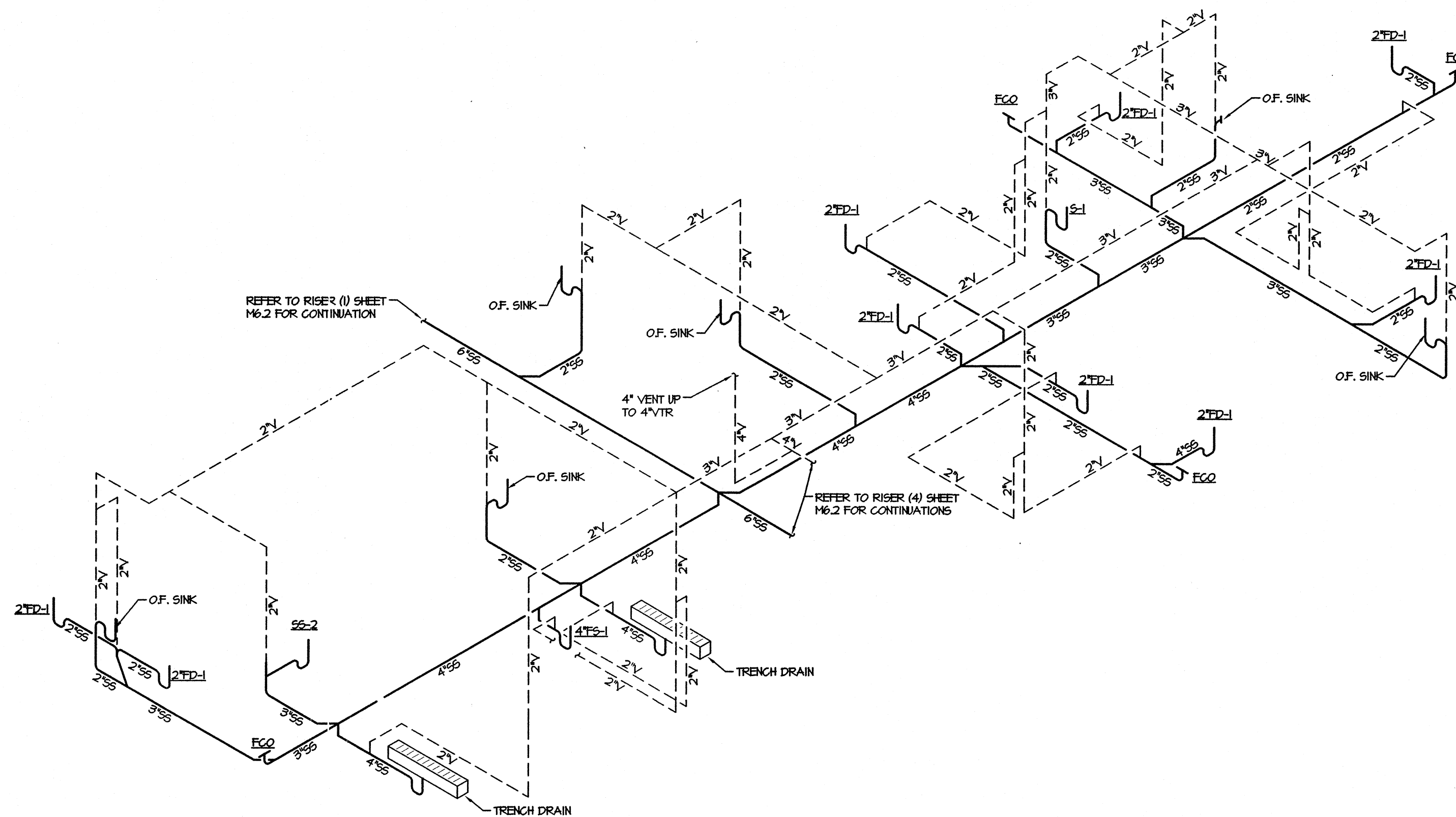
OCTOBER 1, 2008



1 domestic water riser
SCALE: NONE



2 plumbing riser
SCALE: NONE



3 plumbing riser
SCALE: NONE



PLUMBING
RISER
DIAGRAMS

Commission Number
10901

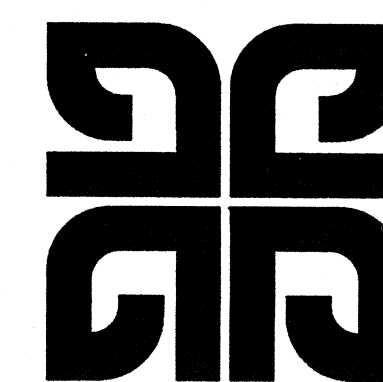
M6.2

Date: October 1, 2003

OCTOBER 1, 2003

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SINGLE DUCT SUPPLY AIR TERMINALS WITH HOT WATER REHEAT COILS (FIRST FLOOR)										HEATING WATER COIL										REMARKS
DESIGNATION	SERVES	REFERENCE PRODUCT	INLET SIZE (INCHES)	OCCUPIED MAX. AIRFLOW (CFM)	OCCUPIED MIN. AIRFLOW (CFM)	UNOCCUPIED AIRFLOW (CFM)	TERMINAL 1 PRESSURE DROP (INCHES H ₂ O)	HEATING COIL 2 PRESSURE DROP (INCHES H ₂ O)	TOTAL 3 PRESSURE DROP (INCHES H ₂ O)	AIR FLOW (CFM)	ROOM	EAT °F.	LAT °F.	HEATING COIL 4 PRESSURE DROP (INCHES H ₂ O)	ENT °F.	LINT °F.	GPM	HPD (FEET)	MEH	
ST-101	ASSOCIATE DIRECTOR 102, 103, 104	TUTTLE & BAILEY SDV	12"φ	1175	600	0	0.01	0.21	0.22	600	2	55	107	0.06	160	125	2	0.21	33.6	
ST-102	ADMINISTRATION SUPPORT 101, 101A	TUTTLE & BAILEY SDV	10"φ	900	450	0	0.02	0.23	0.25	450	2	55	111	0.07	160	132	2	0.61	21.2	
ST-103	GREENHOUSE MANAGER 105, 106	TUTTLE & BAILEY SDV	8"φ	475	250	0	0.02	0.18	0.20	250	2	55	108	0.06	160	130	1	0.15	14.2	
ST-104	LOBBY 100	TUTTLE & BAILEY SDV	6"φ	300	150	0	0.08	0.11	0.14	150	2	55	116	0.03	160	134	1	0.12	10.0	
ST-105	LOBBY 100, 100A	TUTTLE & BAILEY SDV	10"φ	775	400	0	0.02	0.17	0.19	400	2	55	114	0.05	160	134	2	0.61	25.3	
ST-106	SEMINAR 107	TUTTLE & BAILEY SDV	10"φ	825	425	0	0.02	0.19	0.21	425	2	55	112	0.06	160	133	2	0.61	26.2	
ST-107	SEMINAR 107, 107-A, 107-B	TUTTLE & BAILEY SDV	10"φ	1050	525	0	0.03	0.30	0.33	525	2	55	107	0.04	160	124	2	0.61	24.7	
ST-108	RECEPTION 100B, 108	TUTTLE & BAILEY SDV	6"φ	200	200	0	0.04	0.05	0.04	200	2	55	110	0.05	160	135	1	0.12	11.8	
ST-109	CUSTODIAL 104, 110, 111, 144	TUTTLE & BAILEY SDV	10"φ	700	700	450	0.02	0.14	0.16	700	2	55	105	0.14	160	134	3	1.42	38.0	
ST-110	DIRECTOR 115	TUTTLE & BAILEY SDV	8"φ	375	200	0	0.01	0.12	0.13	200	2	55	113	0.04	160	134	1	0.13	12.5	
ST-111	CONFERENCE 114	TUTTLE & BAILEY SDV	6"φ	200	100	0	0.04	0.05	0.04	100	2	55	125	0.02	160	144	1	0.12	7.6	
ST-112	RECEPTION 113	TUTTLE & BAILEY SDV	8"φ	400	200	0	0.02	0.13	0.15	200	2	55	113	0.04	160	134	1	0.13	12.5	
ST-113	ACCOUNTANT OFFICE 121, 119	TUTTLE & BAILEY SDV	10"φ	850	450	0	0.02	0.20	0.22	450	2	55	111	0.07	160	132	2	0.61	27.2	
ST-114	ACCOUNTANT OFFICE 123, 124, 125	TUTTLE & BAILEY SDV	12"φ	1175	600	0	0.01	0.21	0.22	600	2	55	107	0.06	160	125	2	0.21	33.6	
ST-115	ACC. OFFICE 120, 116, 118, 122, 147	TUTTLE & BAILEY SDV	10"φ	1025	550	0	0.03	0.28	0.31	550	2	55	106	0.04	160	128	2	0.61	30.4	
ST-116	AUTOClave 142	TUTTLE & BAILEY SDV	12"φ	1500	800	0	0.01	0.33	0.34	800	2	55	105	0.11	160	130	3	0.60	43.5	
ST-117	RECEIVING 141	TUTTLE & BAILEY SDV	14"φ	1575	1575	0	0.01	0.23	0.24	1575	2	55	101	0.23	160	133	6	1.14	77.6	
ST-118	STORAGE 124	TUTTLE & BAILEY SDV	10"φ	675	350	0	0.01	0.14	0.15	350	2	55	117	0.04	160	136	2	0.61	23.3	
ST-119	CHEMICAL STORAGE 136	TUTTLE & BAILEY SDV	6"φ	275	250	50	0.07	0.04	0.16	250	2	55	105	0.08	160	132	1	0.12	13.4	
ST-120	HAZARDOUS STORAGE 137	TUTTLE & BAILEY SDV	6"φ	300	300	75	0.08	0.11	0.14	300	2	55	100	0.11	160	130	1	0.12	14.7	
ST-121	SAMPLE QUARANTINE 138, 139	TUTTLE & BAILEY SDV	8"φ	450	400	50	0.02	0.16	0.18	400	2	55	105	0.13	160	137	2	0.46	21.6	
ST-122	CORRIDOR 130, 133	TUTTLE & BAILEY SDV	6"φ	250	125	0	0.06	0.08	0.14	125	2	55	121	0.02	160	141	1	0.12	8.9	
ST-123	STORAGE 135	TUTTLE & BAILEY SDV	6"φ	275	150	0	0.07	0.04	0.16	150	2	55	116	0.03	160	134	1	0.12	10.0	
ST-124	GROWTH CHAMBER 140	TUTTLE & BAILEY SDV	12"φ	1400	700	150	0.01	0.24	0.30	700	2	55	108	0.08	160	132	3	0.60	40.3	
ST-125	GROWTH CHAMBER 140	TUTTLE & BAILEY SDV	12"φ	1400	700	150	0.01	0.24	0.30	700	2	55	108	0.08	160	132	3	0.60	40.3	
ST-126	EQUIPMENT ACCESS 143	TUTTLE & BAILEY SDV	10"φ	1000	500	150	0.03	0.27	0.30	500	2	55	108	0.08	160	130	2	0.61	28.9	
ST-127	DIRECTORS OFFICE 144	TUTTLE & BAILEY SDV	8"φ	500	250	0	0.02	0.20	0.22	250	2	55	108	0.06	160	130	1	0.13	14.2	
ST-128	SENIOR ACCOUNTANT OFFICE 148	TUTTLE & BAILEY SDV	6"φ	300	150	0	0.08	0.11	0.14	150	2	55	116	0.03	160	134	1	0.12	10.0	
ST-129	CL. CAGE WASH A103, A105, A104	TUTTLE & BAILEY SDV	12"φ	1500	1500	1500	0.01	0.33	0.34	1500	2	55	97	0.33	160	132	5	1.47	68.0	
ST-130	HOLD. ROOM A112, A110, A107, A104	TUTTLE & BAILEY SDV	10"φ	775	775	775	0.02	0.17	0.14	775	2	55	103	0.17	160	132	3	1.42	40.2	
ST-131	CORR. A100, A101, A102, A108, A111	TUTTLE & BAILEY SDV	10"φ	1050	1050	1050	0.03	0.30	0.33	1050	2	55	91	0.30	160	134	4	2.37	50.3	
ST-132	PROCEDURE ROOM A116, A117, A118	TUTTLE & BAILEY SDV	8"φ	670	670	670	0.04	0.33	0.37	675	2	55	98	0.33	160	138	3	0.94	31.1	
ST-133	PROCEDURE ROOM A113, A114, A115	TUTTLE & BAILEY SDV	12"φ	1200	1200	1200	0.01	0.22	0.23	1200	2	55	91	0.22	160	130	4	0.91	57.6	
ST-134	GROWTH CHAMBER 140	TUTTLE & BAILEY SDV	12"φ	1400	700	150	0.01	0.24	0.30	700	2	55	108	0.08	160	132	3	0.60	40.3	
ST-135	GROWTH CHAMBER 140	TUTTLE & BAILEY SDV	12"φ	1400	700	150	0.01	0.24	0.30	700	2	55	108	0.08	160	132	3	0.60	40.3	

- 1 DIFFERENCE IN STATIC PRESSURE FROM INLET TO DISCHARGE AT COOLING MAXIMUM AIR FLOW. DOES NOT INCLUDE HEATING COIL.
2 AIR PRESSURE DROP AT COOLING MAXIMUM FLOW.
3 TOTAL AIR PRESSURE LOSS THRU UNIT AT COOLING MAXIMUM AIR FLOW.
4 AIR PRESSURE DROP AT HEATING AIR FLOW.

EXHAUST AIR TERMINALS (FIRST FLOOR)											REFERENCE CONTROL DIAGRAM
DESIGNATION	SERVES	ASSOCIATED SUPPLY AIR TERMINAL	REFERENCE PRODUCT	INLET SIZE (INCHES)	MAX. OCCUPIED AIRFLOW (CFM)	MIN. OCCUPIED AIRFLOW (CFM)	UNOCCUPIED AIRFLOW (CFM)	PRESSURE 1 DROP (INCHES H ₂ O)	MATERIAL TYPE	APPLICATION	
ET-101	DIRECTOR 102, 103, 104	ST-101	TUTTLE & BAILEY RRV	12"φ	1175	600	0	0.04	GALV.	ROOM EXHAUST	---
ET-102	ADMINISTRATION SUPPORT 101, 101-A	ST-102	TUTTLE & BAILEY RRV	10"φ	900	450	0	0.16	GALV.	ROOM EXHAUST	---
ET-103	GREENHOUSE MANAGER 105, 106	ST-103	TUTTLE & BAILEY RRV	8"φ	475	250	0	0.04	GALV.	ROOM EXHAUST	---
ET-104	SEMINAR 107, 107-A, 107-B	ST-106, 107	TUTTLE & BAILEY RRV	16"φ	1875	450	0	0.06	GALV.	ROOM EXHAUST	---
ET-105	LOBBY 100, 108	ST-104, 105	TUTTLE & BAILEY RRV	12"φ	1075	550	0	0.08	GALV.	ROOM EXHAUST	---
ET-106	RECEPTION 113, 114, 115	ST-110, 111, 112	TUTTLE & BAILEY RRV	12"φ	975	500	0	0.07	GALV.	ROOM EXHAUST	---
ET-107	RESTROOMS 104, 110, 111, 144	ST-104	TUTTLE & BAILEY RRV	10"φ	900	400	650	0.16	GALV.	ROOM EXHAUST	---
ET-108	ACCOUNTANT OFFICE 121, 119, 123, 125	ST-113, 114	TUTTLE & BAILEY RRV	14"φ	1825	450	0	0.06	GALV.	ROOM EXHAUST	---
ET-109	ACCOUNT. OFF. 120, 116, 118, 122, 147	ST-115	TUTTLE & BAILEY RRV	10"φ	1025	550	0	0.11	GALV.	ROOM EXHAUST	---
ET-110	STORAGE 124, 135	ST-118, 123	TUTTLE & BAILEY RRV	12"φ	1050	600	100	0.08	GALV.	ROOM EXHAUST	---
ET-111	AUTOClave 142	ST-116	TUTTLE & BAILEY RRV	14"φ	1600	900	100	0.08	304 SS	ROOM EXHAUST	---
ET-112	GROWTH CHAMBER 140	ST-124	TUTTLE & BAILEY RRV	14"φ	1450	750	200	0.06	304 SS	ROOM EXHAUST	---
ET-113	GROWTH CHAMBER 140	ST-125	TUTTLE & BAILEY RRV	14"φ	1450	750	200	0.06	304 SS	ROOM EXHAUST	---
ET-114	EQUIP. ACCESS 143	ST-126	TUTTLE & BAILEY RRV	12"φ	1100	600	250	0.04	304 SS	ROOM EXHAUST	---
ET-115	DIRECTORS OFFICE 149, 148	ST-127, 128	TUTTLE & BAILEY RRV	10"φ	800	400	0	0.06	GALV.	ROOM EXHAUST	---
ET-116	GROWTH CHAMBER 140	ST-134	TUTTLE & BAILEY RRV	14"φ	1450	750	200	0.06	304 SS	ROOM EXHAUST	---
ET-117	GROWTH CHAMBER 140	ST-135	TUTTLE & BAILEY RRV	14"φ	1450	750	200	0.06	304 SS	ROOM EXHAUST	---
ET-118	GROWING ROOM A101, A102	ST-131	TUTTLE & BAILEY RRV	6"φ	250	250	250	0.06	GALV.	ROOM EXHAUST	---
ET-119	EQUIPMENT ROOM A106	ST-129	TUTTLE & BAILEY RRV	14"φ	1575	1175	1175	0.05	GALV.	ROOM EXHAUST	---
ET-120	SURGERY ROOM A101, A112, A104, A105, A107	ST-130	TUTTLE & BAILEY RRV	10"φ	900	400	900	0.04	GALV.	ROOM EXHAUST	---
ET-121	PROCEDURE ROOM A116, A117, A118	ST-132	TUTTLE & BAILEY RRV	12"φ	970	640	470	0.02	GALV.	ROOM EXHAUST	---
ET-122	PROCEDURE ROOM A116	ST-132	TUTTLE & BAILEY RRV	6"φ	330	0	0	0.10	GALV.	ROOM EXHAUST	---
ET-123	HOLDING ROOM A114, A115	ST-133	TUTTLE & BAILEY RRV	12"φ	1025	1025	1025	0.04	GALV.	ROOM EXHAUST	---
ET-124	PROCEDURE ROOM A113	ST-133	TUTTLE & BAILEY RRV	8"φ	475	145	475	0.05	GALV.	ROOM EXHAUST	---
ET-125	PROCEDURE ROOM A113	ST-133	TUTTLE & BAILEY RRV	6"φ	330	0	0	0.10	GALV.	ROOM EXHAUST	---

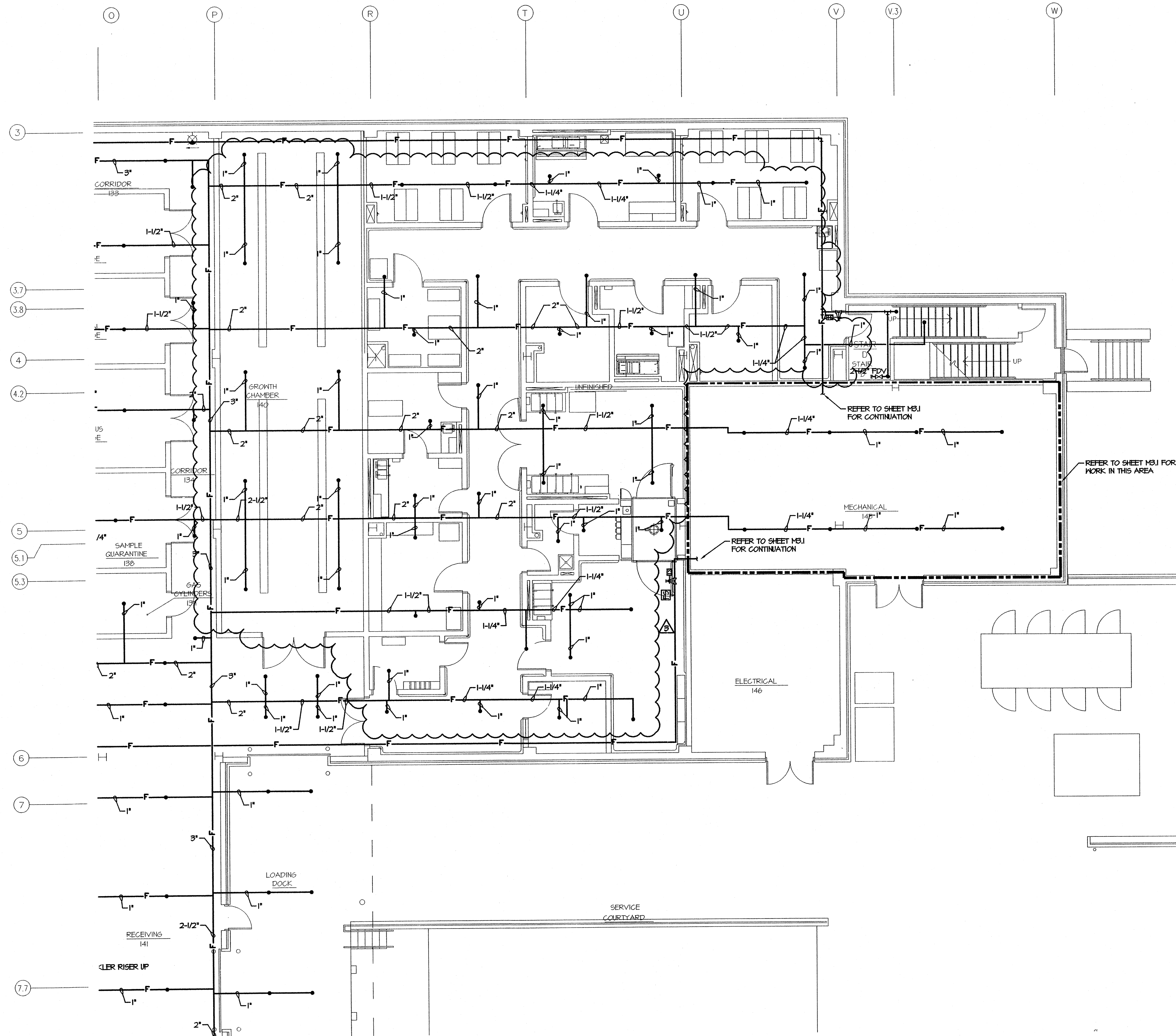
- 1 DIFFERENCE IN STATIC PRESSURE FROM INLET TO DISCHARGE AT MAXIMUM EXHAUST AIRFLOW

EXHAUST FANS											SPECIFIED IN SECTION 15600
DESIGNATION	REFERENCE PRODUCT	TYPE	SERVES	AIR FLOW RATE (CFM)	TOTAL STATIC PRESSURE (IN. WATER)	ROTATION (RPM)	DRIVE	GSA (S FEET)	MOTOR SIZE BHP	ELECTRICAL VOLTS / PHASE	REMARKS
EF-I	ACHIEVE PUMPDOWNER	UP-BLAST	EQUIPMENT ROOM A106	500	2.0	2864	BELT	67	0.68	3/4 460 3	
EF-10	PK PLASTICS AXI-JET-F 1825	CENTRIFUGAL	ET-118, 119, 120, 121, 122, 123, 124	2,600	2.5	1541	BELT	64	1.71	3 460 3	
EF-II	PK PLASTICS AXI-JET-F 1825	CENTRIFUGAL	ET-118, 119, 120, 121, 122, 123, 124	2,600	2.5	1541	BELT	64	1.71	3 460 3	

BOILERS - STEAM													ELECTRICAL					SPECIFIED IN SECTION 15600	
DESIGNATION	REFERENCE PRODUCT	LOCATION	TYPE	FUEL	CAPACITY (HP)	NAT. GAS INLET (INCH)	GAS PRESSURE (" WG.)	STEAM FLOW RATE (LBS/HR)	STEAM PRESSURE (PSIG)	FIRING TYPE	FLUE DIAMETER (IN.)	NUMBER OF PASSAGES	OPERATING HEIGHT (LBS)	FAN MOTOR (HP)	VOLTS/PHASE	CONTROLS (AMPS/VOLTS)	REMARKS		
B-3	HURST 4VT640150	MECH. 145	4-PASS VERTICAL	NAT. GAS	48	1606	14.0	1656	150	MODULATING 10:1	12	4	6400	1	480 / 3	5 / 120	ONE ELECTRICAL CIRCUIT		

BOILER FEED WATER						BOILER FEED PUMPS								SPECIFIED IN SECTION 15600	
DESIGNATION	REFERENCE PRODUCT	LOCATION	CAPACITY (LBM/R)	TANK DIAMETER (INCHES)	TANK LENGTH (INCHES)	STORAGE CAPACITY (GALS.)	FLOW RATE (GPM)	PUMP HEAD (FT. WATER)	MOTOR SIZE (HP)	PUMP SPEED (RPM)	NO. of STAGES	QUANTITY	VOLTS/PHASE	REMARKS	
B-3	HURST FMD-60150	MECH. 145	50	25	36	60	7	370	2	3450	1	2	480 / 3	ONE ELECTRICAL CIRCUIT	

STEAM TRAPS			
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**n first floor plan -
fire protection**

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

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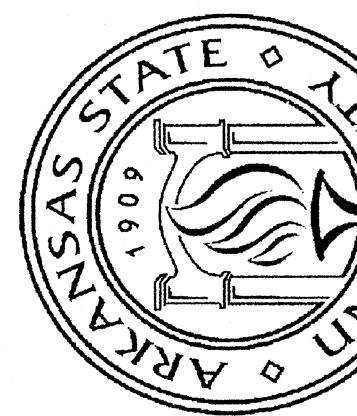
**FIRST FLOOR
PLAN -
FIRE PROTECTION**

Commission Number
10301

FP2.1

Date: October 1, 2003

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