GENERAL NOTES:

1. The area within Fain Fine Arts that will be affected are the existing:
   a. Drawing Studio C116
   b. Storage C116A
   c. Film Processing C115 H
   d. Servers C115I will remain as is with no work in this room.
   e. Dark Rooms C115 J-N
   f. TV Studio C120E
   g. Electronics C102A
   h. Avid A (Finishes only, walls & door to remain)
   i. Sound Editing C102B
   j. Control Booth C102C
   k. Editing Bay C102D
   l. Secretary C104 - Limited to Door Only
   m. Corridor 1CORR4 - Limited to Door Only

2. The renovations will be completed utilizing a General Contractor - bid with a standard Competitive Sealed Proposal for the GMP. HPA will specify to the GC that the project is to be constructed over the summer months, starting May 15, 2017 (Note: the Drawing Studio will not be available until May 19, 2017) and to be substantially completed by August 15, 2017 with all punch list items completed no later than August 21, 2017.

3. The renovations will take into consideration the modifications required by the State Fire Marshall that are being completed under a separate contract, and incorporate the changes in these areas that will also be required to meet compliance for that project, such as the door into Secretary C104, and the corridor length going into Drawing Studio C116.

4. In the Existing Drawing Studio area that will become a Music Practice area and instrument storage area: The Dark Rooms will be removed completely and Music Practice Rooms which will be sound treated - floors, walls and ceilings and mechanical/ electrical systems additionally the doors will be sound treated and provided with vision panels. In Studio C116 the Cabinetry will be removed from the south wall - the Owner will relocate the flat-file filing cabinets to a new location, the owner will install purchased practice room units along the south wall. The sink on the south west corner of the room will carefully be removed and scheduled for relocation and re-use in the new drawing studio next door. The Storage room C116A will have its ceiling, door, flooring and cabinetry removed, and a new lay in sound absorbing ceiling will be installed, and the room will be treated with additional sound insulating wall treatment on the interior walls and carpeting on the floor. The door be replaced with a new door, with a vision panel and weather stripping to reduce sound transition in the existing frame. In the new Instrument Storage Lounge C116, the existing ceiling will be painted, floor stripped polished and cleaned - leaving exposed concrete, the walls will be painted, and minor modifications will be done to the lighting to allow for the new practice rooms. On the south wall of 116 a new door with a vision panel will be added reducing the length of the corridor entering the new room. The Server Room C115I will remain as is, no changes will be made in this room.

5. The Existing TV Studio will be cleared of all electronic sound and recording equipment by the owner prior to the GC completing demolition on the remaining elements in this room. The floor will be stripped polished and cleaned - leaving exposed concrete, the walls and painting the ceiling - no new ceiling will be installed, existing lights and lighting systems will remain. The wall between the studio and sound booth will remain be cleaned of all acoustical treatment and finishes over the drywall the walls will be textured and painted. The existing sink from the previous studio will be relocated in this area, according to original drawings when the building was built, there was plumbing along the south wall, we will investigate this and attempt to locate to re-install the sink in that location.

6. The Electronics, Control Booth, Editing and Sound Editing areas will be cleared of all electronic sound and recording equipment by the owner prior to the GC completing demolition on the remaining elements in this room. In both Electronics area, Editing areas and control areas and AVID A room, the floor will be stripped polished and cleaned - leaving exposed concrete, the wall between the studio and sound booth will remain be cleaned of all acoustical treatment and finishes over the drywall the walls will be textured and painted. All acoustical treatment will be removed. The ceilings will be removed in this area and new will be installed. The lighting will be removed in this area and new LED dimmable lighting will be installed. Note: in AVID A the walls, and door are to remain, only the ceiling and finishes are to be removed and prepared for new finishes. On the south wall of the new studio C102B a door will be installed into the Secretary's office C104

SHEET INDEX

ARCHITECTURAL

NO.	SHEET NAME
A100	AREA OF WORK FLOOR PLAN
AD101	ARCHITECTURAL DEMOLITION
A101	FLOOR PLAN
A301	WALL SECTIONS, OPENINGS AND DETAILS AND REFLECTED CEILING

PLUMBING

NO.	SHEET NAME
P001	PLUMBING SCHEDULES AND DETAILS
PD101	PLUMBING DEMOLITION
P201	FLOOR PLAN - PLUMBING

MECHANICAL

NO.	SHEET NAME
M001	MECHANICAL DETAILS AND SCHEDULES
MD101	MECHANICAL DEMOLITION
M201	MECHANICAL FLOOR PLAN
M901	AIR DISTRIBUTION SCHEDULE

ELECTRICAL

NO.	SHEET NAME
E001	ELECTRICAL SCHEDULES AND DETAILS
ED101	ELECTRICAL DEMOLITION
E101	FLOOR PLAN - POWER AND LIGHTING

GLENDA G. RAMSEY #15203
EXPIRES: 25 AUGUST 2017
DATE SIGNED: 2-27-17

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WICHITA FALLS, TEXAS

RENOVATIONS TO FAIN FINE ARTS BUILDING

MIDWESTERN STATE UNIVERSITY

RENOVATIONS TO FAIN FINE ARTS BUILDING
MIDWESTERN STATE UNIVERSITY

3410 TAFT BOULEVARD

GENERAL NOTES:

1. THE PURPOSE OF THIS PROJECT IS TO ADDRESS CLASSROOMS DURING THE SUMMER MONTHS THAT CAN NOT BE DISTURBED IN THE FALL SEMESTER.
2. THIS IS A PORTION OF RENOVATIONS THAT ARE SCHEDULED FOR THIS BUILDING. ALL OTHER ADA AND CODE COMPLIANCE ISSUES WILL BE ADDRESSED IN A PROJECT ISSUED LATER THIS SUMMER OF 2017.

BUILDING CODE SUMMARY

FACILITY NAME	RENOVATION TO EXISTING CLASSROOMS
BUILDING CODE/YEAR	IBC 2009
CODE OFFICIAL/PHONE NUMBER	N/A
OCCUPANCY	EDUCATION
BUILDING SQ. FT. AFFECTED AREAS	3,480 SQ FT.
SQ. FT. INCREASE/SECTION	N/A
BUILDING HT.	N/A
CONSTRUCTION TYPE	TYPE II-B
OCCUPANT LOAD	N/A

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DRAWN BY: CWF

DATE: 03 FEBRUARY 2016

SET NUMBER

REVISIONS

NO.	DESCRIPTION	DATE

16782.01

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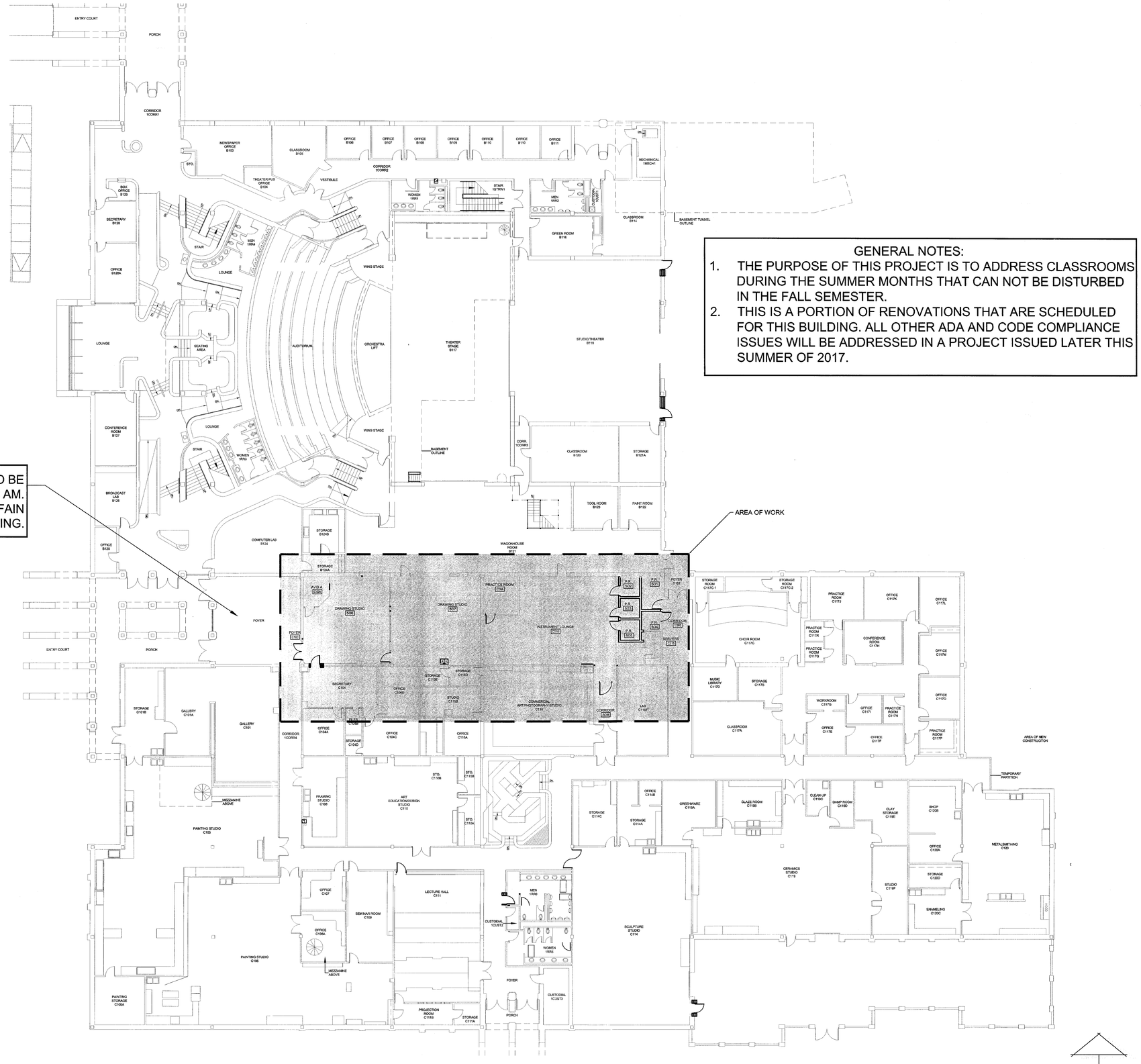

PRE CONSTRUCTION MEETING TO BE HELD ON MARCH 21, 2017 @ 10:00 AM. GATHER AT FOYER OF FAIN FINE ARTS "C" BUILDING.

GENERAL NOTES:

1. THE PURPOSE OF THIS PROJECT IS TO ADDRESS CLASSROOMS DURING THE SUMMER MONTHS THAT CAN NOT BE DISTURBED IN THE FALL SEMESTER.
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FLOOR PLAN - KEY PLAN

SCALE: 1/16"=1'-0"

GLENDA G. RAMSEY #15203
EXPIRES: 25 AUGUST 2017
DATE SIGNED: 2-27-17

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RENOVATIONS TO FAIN FINE ARTS BUILDING

MIDWESTERN STATE UNIVERSITY

3410 TAFT BOULEVARD

WICHITA FALLS, TEXAS

DRAWN BY: CWF

DATE: 03 FEBRUARY 2016

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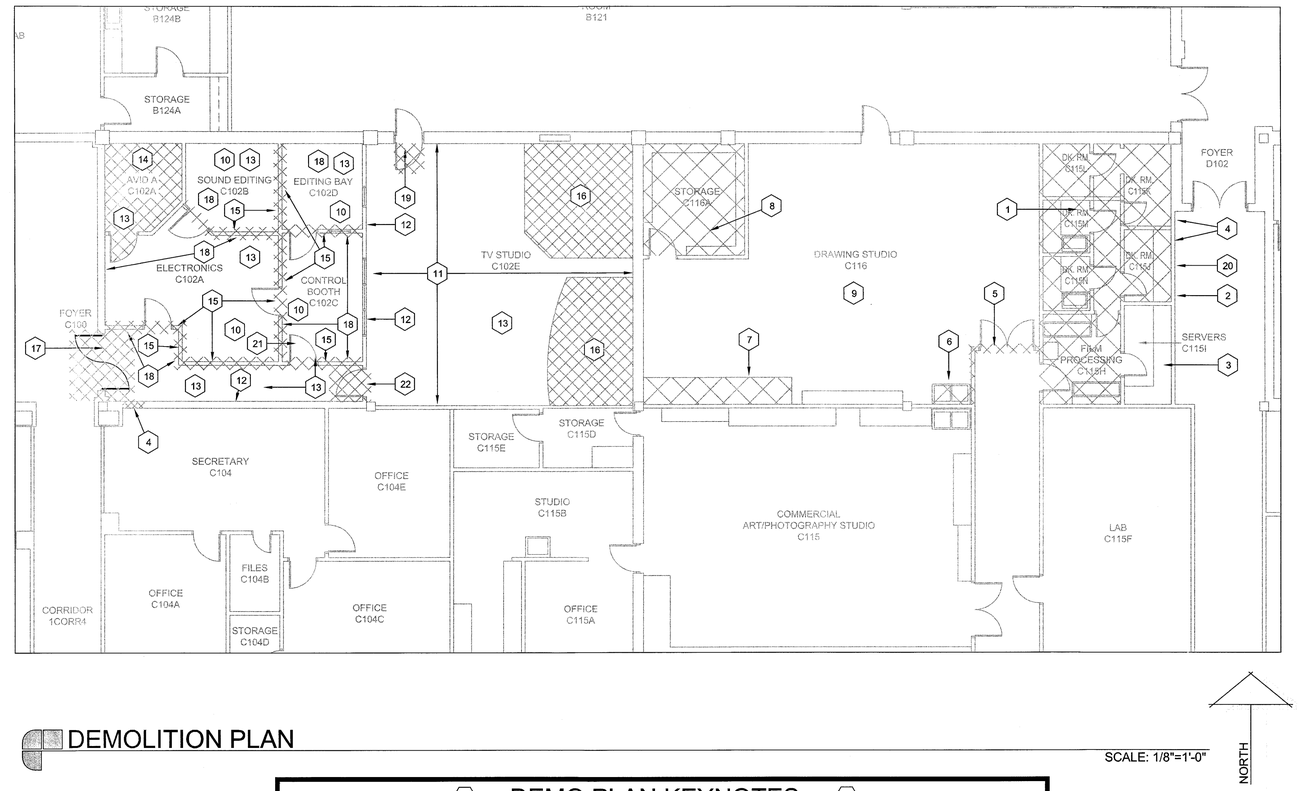

DEMOLITION PLAN

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

DEMO PLAN KEYNOTES

1. REMOVE COMPLETELY EXISTING DARK ROOMS AND ALL ASSOCIATED COMPONENTS. REMOVE WALLS, CEILINGS, DOORS, CABINETRY AND FLOORING. REMOVE ALL MECHANICAL AND ELECTRICAL SYSTEMS AS DESIGNATED IN MEP SHEETS. CLEAN AREA AND PREPARE FOR NEW CONSTRUCTION.
2. THIS SIDE OF CORRIDOR WALL SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
3. EXISTING SERVER ROOM TO REMAIN - PROTECT FROM DAMAGE DURING CONSTRUCTION.
4. REMOVE PORTION OF EXISTING WALL AS NEEDED TO INSTALL NEW DOOR AS SCHEDULED. REFER TO FLOOR PLAN AND OPENING DETAILS. SAVE EXISTING WALL BASE FOR RE INSTALLATION AFTER NEW DOORS ARE INSTALLED.
5. REMOVE EXISTING DOUBLE DOORS AND PORTION OF WALL BETWEEN CORRIDOR AND EXISTING DRAWING STUDIO.
6. CAREFULLY REMOVE SINK AND ASSOCIATED COMPONENTS AND PREPARE FOR RE INSTALLATION. IF ALTERNATE #1 IS ACCEPTED THE SINK SHALL BE RE INSTALLED IN NEW DRAWING STUDIO. IF ALTERNATE IS NOT ACCEPTED SINK SHALL BE DELIVERED TO OWNER. REFER TO MEP FOR DETAILS.
7. EXISTING FLAT FILE CABINETS TO BE RE LOCATED BY OWNER.
8. IN THE EXISTING STORAGE ROOM ALL FINISHES SHALL BE REMOVED. REMOVE CEILING, DOOR, CABINETRY AND SHELVING, AND FLOORING. CLEAN AND PREPARE AREA FOR NEW FINISHES.
9. STRIP AND CLEAN EXISTING CONCRETE FLOORS AND PREPARE TO BE POLISHED.
10. ALL EQUIPMENT IN THE TV STUDIO AND SOUND STUDIOS SHALL BE REMOVED BY OWNER PRIOR TO DEMOLITION. REMOVE ALL BUILT IN MILLWORK. REFER TO MEP FOR REMOVAL OF EXISTING POWER AND SOUND LINES.
11. IN THE EXISTING TV STUDIO THE CEILING AND WALLS ARE TO BE PATCHED AND PAINTED. CLEAN ALL SURFACES AND REMOVE ALL LOOSE MATERIALS FROM WALLS AND CEILINGS. EXISTING LIGHTS, CEILINGS AND WALLS ARE TO REMAIN. .
12. THIS WALL AND GLASS TO REMAIN. ALL ACOUSTICAL MATERIAL ON THE WALL IS TO BE REMOVED AND THE WALL SHALL BE PREPARED FOR NEW TEXTURE AND PAINT.
13. FLOORS IN THIS AREA SHALL BE STRIPPED BARE AND CLEANED AND PREPARED FOR POLISHING.
14. THE WALLS IN AVID A ROOM SHALL REMAIN. THESE WALLS SHALL BE STRIPPED OF ACOUSTICAL MATERIAL AND FLOORING AND THE CEILING AND LIGHTS SHALL BE REMOVED. REFER TO MEP FOR DETAILS.
15. REMOVE THIS WALL AND ALL ASSOCIATED COMPONENTS. REFER TO MEP FOR DEMOLITION OF POWER, DATA, AND LIGHTING.
16. REMOVE THE EXISTING STAGE AND ALL ASSOCIATED COMPONENTS. CLEAN AND STRIP FLOOR UNDERNEATH AND PREPARE FOR POLISHING.
17. REMOVE DOORS AND ALL ASSOCIATED HARDWARE AND FRAMES AND PREPARE SPACE FOR INSTALLATION OF NEW DOUBLE DOORS AS SCHEDULED.
18. REMOVE ALL CEILING, LIGHTING AND ASSOCIATED COMPONENTS IN THESE AREAS. REFER TO MEP FOR DEMOLITION OF LIGHTING AND POWER IN THESE AREAS.
19. REMOVE EXISTING INTERIOR DOOR AND FILL AND PAINT FRAME. REMOVE THRESHOLD TO BE RE INSTALLED UNDER REMAINING DOOR WOOD SHOP SIDE OF WALL.
20. EXISTING VENDING MACHINES SHALL BE PROTECTED DURING CONSTRUCTION.
21. EXISTING DOOR TO BE REMOVED AND RE LOCATED TO EXISTING FRAME LOCATION IN ADJACENT WALL. SEE DOOR NO. 9 ON A101 FOR NEW LOCATION AND DETAILS.
22. EXISTING DOOR TO BE REMOVED AND FRAME TO BE PREPARED TO RECEIVE NEW HARDWARE.

REGISTERED ARCHITECT GLENDA G. RAMSEY 15203 STATE OF TEXAS

GLENDA G. RAMSEY #15203
EXPIRES: 25 AUGUST 2017
DATE SIGNED: 2-27-17

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RENOVATIONS TO FAIN FINE ARTS BUILDING

MIDWESTERN STATE UNIVERSITY

3410 TAFT BOULEVARD

WICHITA FALLS, TEXAS

DRAWN BY: CWF

DATE: 03 FEBRUARY 2016

REVISIONS

NO.	DESCRIPTION	DATE

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AD101

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FLOOR PLAN LEGEND

INTERIOR ELEV. SYMBOL — A401-01 — DETAIL NUMBER / SHEET NUMBER

SECTION CUT SYMBOL — A???-??

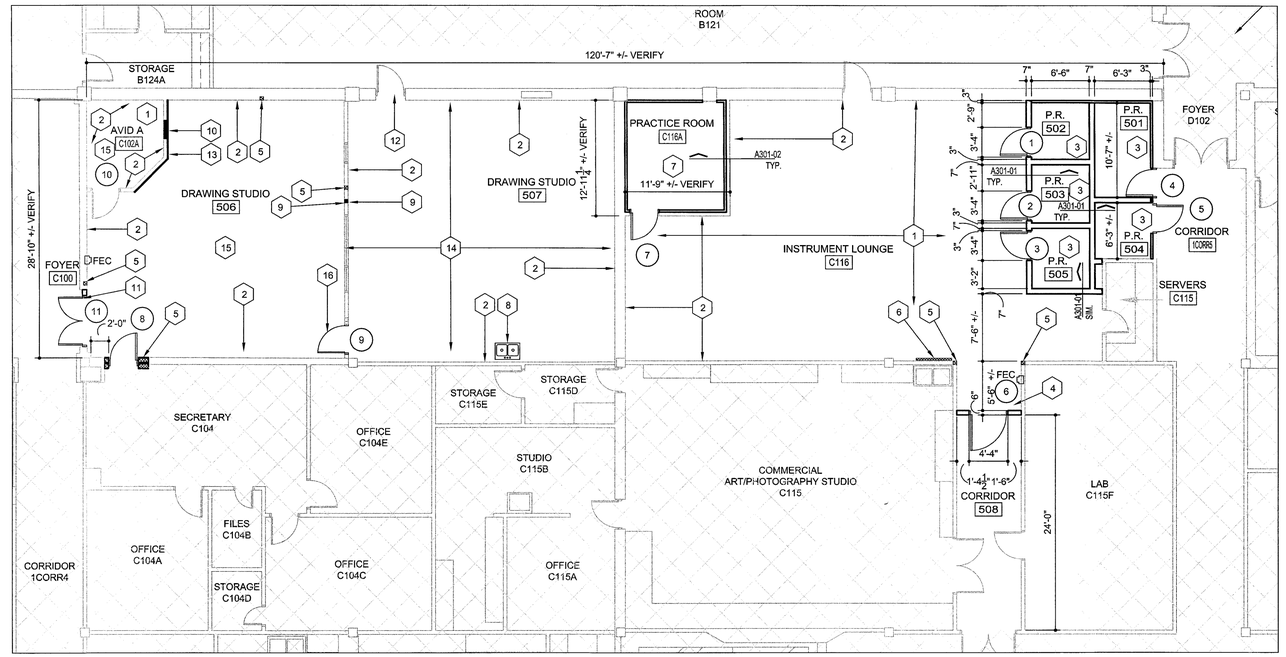
OPNG. KEY — 1 — OPNG. #

KEYNOTE — 1

NEW ACOUSTICAL WALL

NEW ACOUSTICAL TREATMENT

NEW PARTITION WALL



FLOOR PLAN

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

NORTH

FLOOR PLAN KEYNOTES

1. IN THESE AREAS THE FLOOR SHALL BE POLISHED AND SEALED - COORDINATE W/ ARCHITECT. THE WALLS IN THIS AREA SHALL BE PAINTED AS SPEC. THE CEILING AND ALL EXPOSED PIPING, STRUCTURE, INSULATION AND DECK OF FLOOR ABOVE SHALL BE PAINTED AS SPEC.
2. PROVIDE NEW TEXTURE AND PAINT ON ALL WALL SURFACES AS SPEC.
3. THE AREAS SHOWN ON PLAN SHALL BE NEW PRACTICE ROOM. PROVIDE NEW FULLY SOUNDPROOF WALLS, DOORS AND CEILINGS. INSULATION IN WALLS SHALL BE FULL COMPACTED. PROVIDE NEW LIGHTING, POWER AND MECHANICAL AS SPEC. EXISTING CONCRETE FLOORS SHALL BE POLISHED AND SEALED AS SPEC. REFER TO MEP FOR LIGHTING, MECHANICAL AND POWER DETAILS.
4. PROVIDE NEW PARTITION WALL TO ACCOMMODATE NEW DOOR. THIS DOOR IS INSTALLED TO PROVIDE A CORRIDOR OF NO LONGER THAT 25' FOR EGRESS REQUIREMENTS. THIS WALL SHALL BE 3 5/8" STUD WALL INSULATED TEXTURE AND PAINT BOTH SIDES AS SPEC. PROVIDE BOX AND CONDUIT FOR NEW KEYPAD ENTRY AS SPEC. REFER TO MEP FOR DETAILS.
5. PROVIDE WALL REPAIR/PATCH AT ALL LOCATIONS WHERE EXISTING WALL WAS DISTURBED DURING DEMOLITION. TEXTURE AND PAINT AS SPEC.
6. PROVIDE WALL REPAIR WHERE SINK WAS REMOVED AND WALL WAS LEFT OPEN. CAP AND SEAL ALL PLUMBING AS SPEC. REFER TO MEP FOR DETAILS. TEXTURE AND PAINT AS SPEC.
7. THIS ROOM SHALL BE SOUND PROOFED. THERE SHALL BE PROVIDED NEW ACOUSTICAL SOUND TREATMENT ON WALLS CEILINGS AND DOORS AS SPEC. FULLY COMPACTED INSULATION IN WALLS. FLOORS SHALL BE POLISHED AND SEALED AS SPEC.
8. ALTERNATE #1 - EXISTING SINK SHALL BE RELOCATED FROM EXISTING DRAWING STUDIO AND MOVED TO NEW DRAWING STUDIO. REFER TO MEP FOR EXISTING PLUMBING AVAILABILITY.
9. PROVIDE NEW BOX AND CONDUIT FOR OWNER PROVIDED DATA / ETHERNET - REFER MEP FOR DETAILS.
10. APPROXIMATE LOCATION OF RELOCATED ELECTRICAL PANEL - REFER TO MEP FOR DETAILS.
11. NEW DOOR TO BE INSTALLED IN LOCATION OF EXISTING OPENING. VERIFY EXISTING CONDITION AND PROVIDE NEW OPENING AS SCHEDULED.
12. EXISTING THRESHOLD TO BE MOVED AND MOUNTED UNDER DOOR THAT WILL REMAIN - THE REMAINING DOOR WILL BE ON THE WOOD SHOP SIDE OF THE WALL.
13. ADD 2 LAYERS OF ½" GYP BD AS NECESSARY TO PROVIDE FLUSH MOUNT DEPTH FOR NEW ELECTRICAL PANEL - REFER TO MEP FOR PANEL DETAILS.
14. ROOM 507 SHALL HAVE ALL CEILING TILES, PIPING, AND STRUCTURE ASSOCIATED WITH CEILING CLEANED AND PAINTED AS SPEC.
15. ROOM 506 AND AVID A SHALL HAVE NEW CEILING AND LIGHTING AS SPEC. REFER TO MEP FOR ELECTRICAL AND LIGHTING DETAILS.
16. THIS DOOR IS RELOCATED FROM ADJACENT WALL. PROVIDE NEW HARDWARE FOR RELOCATED DOOR AS SPEC.

GENERAL NOTE - IN ALL SOUND PROOF ROOMS WHERE WALL CARPET WILL BE INSTALLED PROVIDE PAINT GRADE WOOD TRIM TO ALL EDGES OF WALL CARPET INCLUDING CROWN, BASE AND EDGE LOCATIONS - REFER TO FINISH SCHEDULE FOR WALL CARPET LOCATIONS - PAINT AS SPEC.

REGISTERED ARCHITECT GLENDA G. RAMSEY 15203 STATE OF TEXAS

GLENDA G. RAMSEY #15203
EXPIRES: 25 AUGUST 2017
DATE SIGNED: 2-27-17

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WICHITA FALLS, TEXAS

RENOVATIONS TO FAIN FINE ARTS BUILDING

MIDWESTERN STATE UNIVERSITY

3410 TAFT BOULEVARD

DRAWN BY: CWF

DATE: 03 FEBRUARY 2016

REVISIONS

NO.	DESCRIPTION	DATE

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A101

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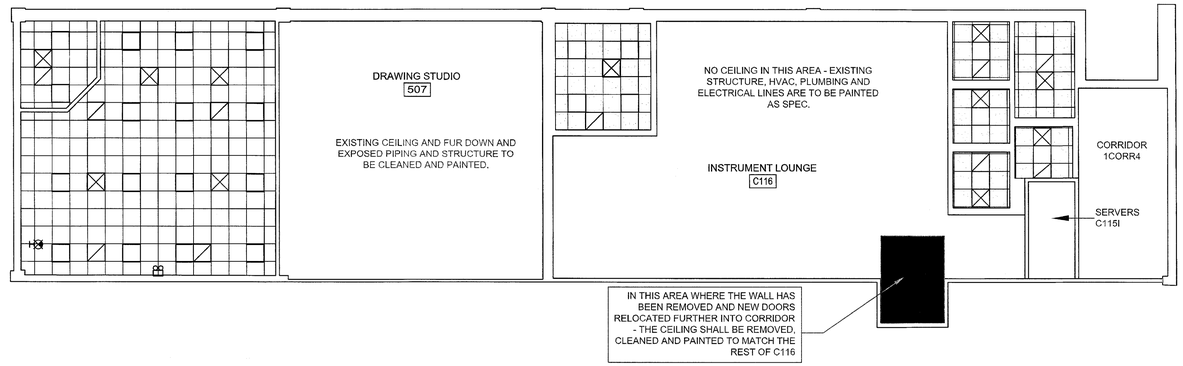


REFLECTED CEILING LEGEND

- LIGHT FIXTURES
- EXIT LIGHT
- NEW 2X2 LAY IN CEILING
- HIGH NRC ACOUSTICAL LAY IN CEILING
- MECHANICAL DIFFUSER
- MECHANICAL RETURN

NORTH

REFLECTED CEILING PLAN

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

OPENING SCHEDULE

NO.	TYPE	HEAD	JAMB HINGE	JAMB STRIKE	SILL	GL.*	LABEL	REMARKS
01	A	A301-03	A301-06	A301-06	---	2	---	R1
02	A	A301-03	A301-06	A301-06	---	2	---	R1
03	A	A301-03	A301-06	A301-06	---	2	---	R1
04	A	A301-05	A301-08	A301-08	---	2	---	R1
05	A	A301-05	A301-08	A301-08	---	2	---	R1
06	B	A301-04	A301-07	A301-07	---	1	---	---
07	A	A301-05	A301-08	A301-08	---	2	---	R1, R2
08	A	A301-05	A301-08	A301-08	---	1	---	R2
09	C	---	---	---	---	---	---	R3
10	C	---	---	---	---	---	---	R3
11	D	A301-05	A301-08	A301-08	---	1	---	R2

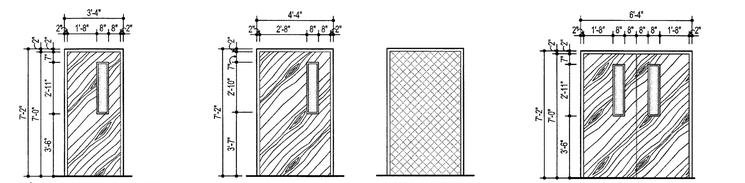
GLAZING TYPES

TYPE 1 GLAZING: 3/4" CLEAR TEMPERED GLASS
TYPE 2 GLAZING: 1" CLEAR INSULATED GLASS

REMARKS

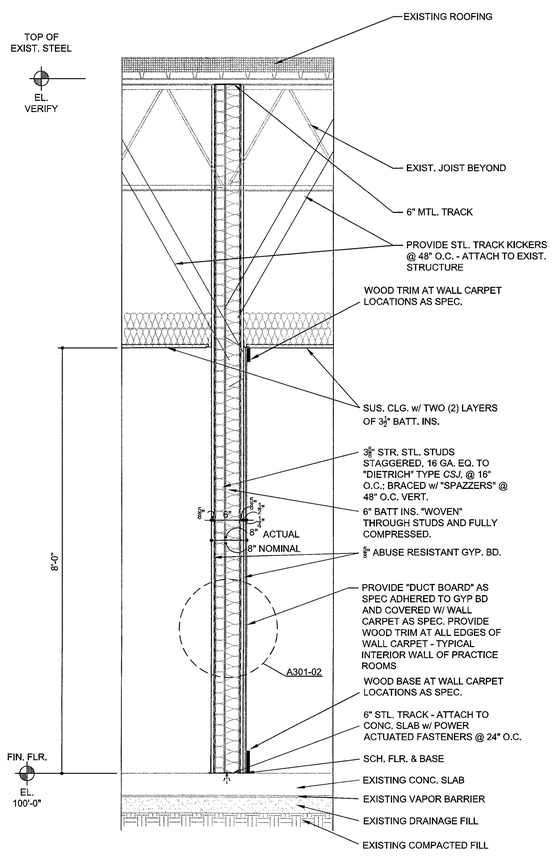
R1: THIS DOOR TO BE SOUNDPROOF AS SPEC.
R2: NEW DOOR TO BE INSTALLED IN EXISTING WALL - VERIFY EXISTING CONDITION
R3: EXSITING DOOR IN EXISTING FRAME - PAINT FRAME AS SPEC. VERIFY EXISTING CONDITION

OPENING SCHEDULE

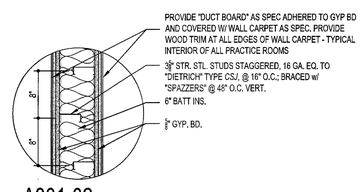


OPENING TYPES

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



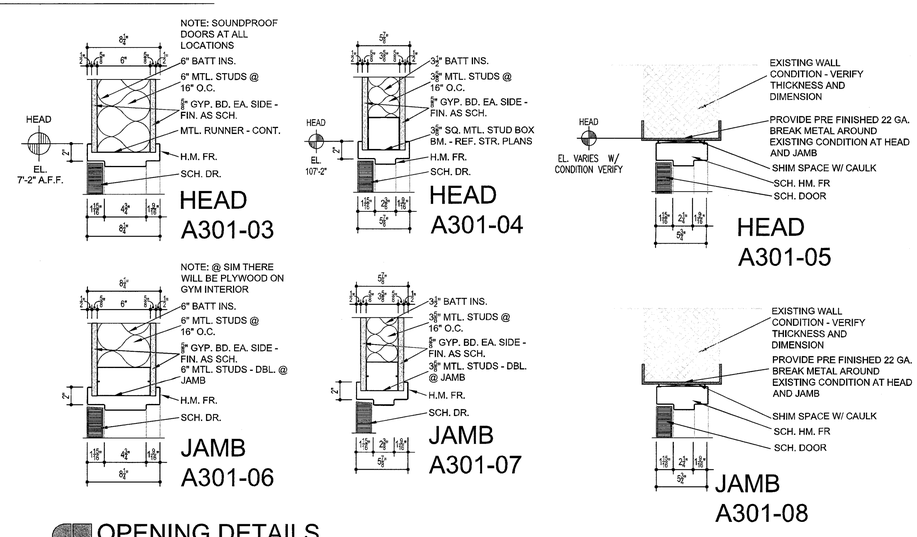
A301-01 TYPICAL ALL SOUND WALLS



A301-02
SCALE: 1" = 1'-0"

WALL SECTIONS - ACOUSTICAL WALLS

SCALE: 3/4"=1'-0"



OPENING DETAILS

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

GLENDA G. RAMSEY #15203
EXPIRES: 25 AUGUST 2017
DATE SIGNED: 2-27-17

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PLUMBING SYMBOL LEGEND

GRAPHIC SYMBOLS

N

DRAWING TITLE

1 SHEET — TOP TITLE / BOTTOM TITLE

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

SCALE OF FLOOR PLAN, SECTION OR DETAIL

DETAIL NO. AND SHEET NO.

AREA OF ENLARGED PLAN OR DETAIL

1 P3.01 — DETAIL NUMBER

SHEET NO. ON WHICH ENLARGED DETAIL IS DRAWN

SECTION NO.

A P5.01 — DIRECTION OF CUTTING PLANE

SHEET NO. ON WHICH THE SECTION IS DRAWN

PIPING DESIGNATIONS

4" — SAN — OR — 4"SAN

4" SAN

SYSTEM SERVICE ABBREVIATION

NOMINAL PIPE SIZE (IN INCHES)

SAN, V, SD, OSD, GW, SSD, CW, HW, HWR, A(0.5), G(0.5)

MISCELLANEOUS SYMBOLS

XXX-1	EQUIPMENT DESIGNATION
	SINGLE LINE PIPE BREAK
	DOUBLE LINE PIPE BREAK
	STANDARD BREAK
	KEYED NOTE
	REVISION DELTA
	POINT OF DISCONNECTION
	POINT OF CONNECTION (NEW TO EXISTING)
	NEW ITEMS (PIPING/EQUIPMENT)
	EXISTING ITEMS TO REMAIN
	EXISTING ITEMS TO BE DEMOLISHED
	LIMIT OF EXISTING ITEMS TO BE REMOVED
	NEW CONNECTION TO EXISTING ITEM
(N)	NEW ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(E)	EXISTING ITEM TO REMAIN (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(F)	FUTURE ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(R)	EXISTING ITEM TO BE RELOCATED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
(D)	EXISTING ITEM TO BE DEMOLISHED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)

PIPE & FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
		PIPE
		DIRECTION OF FLOW / SLOPE
		PIPING WITH INSULATION (WHEN SHOWN FOR CLARITY)
		WELDED JOINT
		SCREWED JOINT
		FLANGED JOINT
		UNION
		GROOVED END JOINT
		GENERIC FLEXIBLE COUPLING (REFER TO SPECIFICATIONS)
		GROOVED END ADAPTER FLANGE
		FLANGED COUPLING ADAPTER
		STUB END OR FLANGE ADAPTER W/ FLANGE RING
		BLIND FLANGE
		ELBOW, 45 DEGREE (LONG RADIUS UON)
		ELBOW, 90 DEGREE (LONG RADIUS UON)
		ELBOW, 90 DEGREE, CHANGE IN DIRECTION TOWARD VIEWER
		ELBOW, 90 DEGREE, CHANGE IN DIRECTION AWAY FROM VIEWER
		TEE FITTING
		TEE FITTING, BRANCH TOWARD VIEWER
		TEE FITTING, BRANCH AWAY FROM VIEWER
		LATERAL
		REDUCER - CONCENTRIC
		REDUCER - ECCENTRIC
		CAP
		ANCHOR
CO	CO	CLEANOUT PLUG / WALL CLEANOUT
		VENTURI FLOW METER
		FLOW ORIFICE PLATE
		STRAINER - "Y" TYPE WITH BLOW DOWN
		THERMOWELL WITH THERMOMETER
		PRESSURE GAUGE WITH GAUGE COCK

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING.
FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

PIPE & FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
		AQUASTAT
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		WATER METER
		PUMP, ARROW INDICATES FLOW

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING.
FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

VALVE SYMBOLS

DOUBLE LINE	SINGLE LINE	DESCRIPTION
		GATE VALVE
		SHUT-OFF VALVE IN VALVE BOX
		BUTTERFLY VALVE
		BALL VALVE
		DIAPHRAGM VALVE
		GLOBE VALVE
		PLUG VALVE
		GAS COCK
		CHECK VALVE
		BACKFLOW PREVENTER
		BACKWATER VALVE
		PRESSURE REDUCING VALVE
		BALANCING VALVE
		ANGLE VALVE
		TEMPERATURE AND PRESSURE RELIEF VALVE
		SOLENOID VALVE
		MOTOR OPERATED VALVE
		GAS PRESSURE REGULATOR

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING.
FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

EQUIPMENT SYMBOLS

FLOOR/HUB DRAIN	P-TRAP
FLOOR SINK	HOSE BIBB / FROST-PROOF HOSE BIBB
ROOF DRAIN / OVER-FLOW ROOF DRAIN	TRAP PRIMER
FLOOR CLEANOUT	WATER HAMMER ARRESTOR
CLEANOUT TO GRADE	

THIS IS A STANDARD LEGEND SHEET. SOME INFORMATION ON THIS SHEET MAY NOT NECESSARILY APPLY TO THIS PROJECT.

ABBREVIATIONS

A (0.5)	COMPRESSED AIR (WORKING PRESS.)	FCO	FLOOR CLEANOUT	PD	PRESSURE DROP
AAV	AIR ADMITTANCE VALVE	FCU	FAN COIL UNIT	POS	POSITIVE
ABV	ABOVE	FD	FLOOR DRAIN	PG	PRESSURE GAUGE
AC	ALTERNATING CURRENT	°F	FAHRENHEIT [DEGREES]	PH	PHASE
A/C	AIR CONDITIONING	FLA	FULL LOAD AMPS	PHC	PREHEAT COIL
AD	ACCESS DOOR, AREA DRAIN	FLG	FLANGE	PRV	PRESSURE REDUCING VALVE
AFF	ABOVE FINISHED FLOOR	FMS	FACILITY MANAGEMENT SYSTEM	PPM	PARTS PER MILLION
AHU	AIR HANDLING UNIT	FPM	FEET PER MINUTE	PLBG	PLUMBING
AI	ANALOG INPUT	FPS	FEET PER SECOND	PRESS	PRESSURE
ALT	ALTITUDE	FRP	FIBERGLASS REINFORCED PLASTIC	PS	PRESSURE SWITCH
AMB	AMBIENT	FS	FLOOR SINK	PSF	POUNDS PER SQUARE FOOT
AMP	AMPERE	FT	FOOT, FEET	PSI	POUNDS PER SQUARE INCH
AO	ANALOG OUTPUT	FT LB	FOOT-POUND	PSIG	POUNDS PER SQUARE INCH GAUGE
AP	ACCESS PANEL	FV	FLUSHOMETER VALVE	PVC	POLYVINYL CHLORIDE
APD	AIR PRESSURE DROP			PW	POTABLE WATER
APPROX	APPROXIMATE	G (0.5)	GAS (WORKING PRESSURE)		
AS	AIR SEPARATOR	GA	GAUGE, GAGE	QT	QUART
ASC	ABOVE SUSPENDED CEILING	GAL	GALLON	QTY	QUANTITY
AHJ	AUTHORITY HAVING JURISDICTION	GALV	GALVANIZED		
AVG	AVERAGE	GEN	GENERATOR	R	RELIEF, THERMAL RESISTANCE
AWG	AMERICAN WIRE GAUGE	GI	GREASE INTERCEPTOR	RA	RETURN AIR
		GLV	GLOBE VALVE	RD	ROOF DRAIN
B	BOILER	GPD	GALLONS PER DAY	RECT	RECTANGULAR
B&S	BELL & SPIGOT	GPH	GALLONS PER HOUR	RED	REDUCER
B/B	BACK TO BACK	GPM	GALLONS PER MINUTE	REF	REFERENCE
BAL	BALANCE	GTV	GATE VALVE	REFR	REFRIGERATION
BBR	BASE BOARD RADIATOR	GW	GREASE WASTE	RET	RETURN
BFC	BELOW FINISHED CEILING	GWH	GAS WATER HEATER	REQ	REQUIRED
BFG	BELOW FINISHED GRADE			REV	REVOLUTIONS
BFV	BUTTERFLY VALVE	HB	HOSE BIBB	RH	RELATIVE HUMIDITY
BFBP	BOILER FEED BOOSTER PUMP	HD	HEAD/HUB DRAIN	RHV	REHEAT VALVE
BFW	BOILER FEED WATER	HG	HEAT GAIN	RL	REFRIGERANT LIQUID
BLDG	BUILDING	HGT	HEIGHT	RPM	REVOLUTIONS PER MINUTE
BHP	BRAKE HORSEPOWER	HP	HORSEPOWER	RPS	REVOLUTIONS PER SECOND
BLW	BELOW	HR	HOUR	RPZ	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
BO	BLOWOFF	HVAC	HEATING, VENTILATION AND A/C		
BOD	BOTTOM OF DUCT	HW	HOT WATER (POTABLE)	RTU	ROOF TOP UNIT
BOP	BOTTOM OF PIPE	HWB	HOT WATER BOILER	RV	RELIEF VALVE
BOS	BOTTOM OF STEEL	HWC	HOT WATER COIL		
BTU	BRITISH THERMAL UNIT	HWCP	HOT WATER CIRCULATING PUMP	S	SECOND, SINK
BTUH	BRITISH THERMAL UNIT PER HOUR	HWP	HOT WATER PUMP	SA	SUPPLY AIR
BV	BALL VALVE	HWR	HOT WATER RETURN (POTABLE)	SAN	SANITARY
BYP	BYPASS	HWT	HOT WATER TANK	SCH	SCHEDULE
		HZ	HERTZ (FREQUENCY)	SD	STORM DRAIN
°C	CELSIUS [DEGREES]			SF	SQUARE FEET
C/C	COOLING COIL	I/O	INPUT/OUTPUT	SG	SPECIFIC GRAVITY, STEAM GAUGE
CAP	CAPACITY	ID	INSIDE DIAMETER	SH	SHOWER
CD	CONDENSATE DRAIN	IE	INVERT ELEVATION	SOLV	SOLENOID VALVE
CF	CHEMICAL FEED	IN WC	INCHES WATER COLUMN	SOV	SHUT OFF VALVE
CFM	CUBIC FEET PER MINUTE	INV	INVERT	SP	SUMP PUMP
CFS	CUBIC FEET PER SECOND	IP	IRON PIPE	SPEC	SPECIFICATION
CH	CHILLER	IPS	IRON PIPE SIZE, INCHES PER SECOND	SPS	STATIC PRESSURE SENSOR
CHW	CHILLED WATER	IPT	IRON PIPE THREADED	SQ	SQUARE
CIP	CAST IRON PIPE	IR	INFRARED	SSD	SUB-SOIL DRAIN
CKT	CIRCUIT	IW	INDIRECT WASTE	SSP	STAINLESS STEEL PIPE
CKV	CHECK VALVE			SST	STAINLESS STEEL
CL	CENTER LINE (℄)	K	KELVIN, THERMAL CONDUCTIVITY	STD	STANDARD
CONN	CONNECTION	KIP	THOUSAND POUNDS	STM	STEAM
CPD	CONDENSATE PUMP DISCHARGE	KIP FT	THOUSAND FOOT-POUNDS	STR	STRAINER
CPVC	CHLORONATED POLYVINYL CHLORIDE	KW	KILOWATT	SWP	STEAM WORKING PRESSURE
CRAC	COMPUTER ROOM A/C UNIT	KWh	KILOWATT HOUR	SUCT	SUCTION
CRP	CONDENSATE RETURN PUMP			SUP	SUPPLY
CT	COOLING TOWER	L	LAVATORY	SV	SAFETY VALVE
CU	CONDENSING UNIT	LB	POUNDS		
CU FT	CUBIC FEET	LF	LINEAR FEET	T	TEMPERATURE SENSOR
CU IN	CUBIC INCH	LG	LENGTH	T&P	TEMPERATURE AND PRESSURE
CUH	CABINET UNIT HEATER	LH	LATENT HEAT	TCV	TEMPERATURE CONTROL VALVE
Cv	COEFFICIENT - VALVE FLOW	LHG	LATENT HEAT GAIN	TD	TEMPERATURE DIFFERENCE
CW	COLD WATER (POTABLE)	LP	LOW PRESSURE	TEMP	TEMPERATURE
CWP	COLD WORKING PRESSURE	LT	LEAVING TEMPERATURE	TOP	TOP OF PIPE
CWR	COLD WATER RETURN (POTABLE)	LTHW	LOW TEMPERATURE HOT WATER	TRANS	TRANSFER
		LWT	LEAVING WATER TEMPERATURE	TSTAT	THERMOSTAT
D	DRAIN			TYP	TYPICAL
DC	DIRECT CURRENT	mA	MILLIAMPERES		
DCW	DOMESTIC COLD WATER	MAX	MAXIMUM	U or UR	URINAL
DDC	DIRECT DIGITAL CONTROL	MCA	MINIMUM CIRCUIT AMPACITY	U/G	UNDERGROUND
DEG	DEGREES [CELSIUS OR FAHRENHEIT]	MCC	MOTOR CONTROL CENTER	UH	UNIT HEATER
DF	DRINKING FOUNTAIN	MH	MANHOLE	UL	UNDERWRITERS LABATORY
DFU	DRAINAGE FIXTURE UNIT	MIN	MINIMUM	UON	UNLESS OTHERWISE NOTED
DIA	DIAMETER	MOCP	MAXIMUM OVERCURRENT PROTECTION		
DIP	DUCTILE IRON PIPE	MOV	MOTOR OPERATED VALVE	V	VENT/VOLTS
DOV	DRAIN OFF VALVE	MP	MEDIUM PRESSURE	VAC	VOLTS ALTERNATING CURRENT
DPS	DIFFERENTIAL PRESSURE SENSOR	MPT	MALE PIPE THREAD	VAR	VARIABLE
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	MS	MOP SINK	VDC	VOLTS DIRECT CURRENT
DS	DISCONNECT SWITCH	MU	MAKE-UP WATER	VEL	VELOCITY
DWV	DRAIN, WASTE & VENT			VERT	VERTICAL
		NA	NOT APPLICABLE	VFD	VARIABLE FREQUENCY DRIVE
EA	EXHAUST AIR	NC	NORMALLY CLOSED	VTR	VENT THROUGH ROOF
E/P	ELECTRIC PNEUMATIC	NFHB	NON-FREEZE HOSE BIBB		
EF	EXHAUST FAN	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	W	WATT
EFF	EFFICIENCY			WC	WATER CLOSET
EL	ELEVATION	NH	NO HUB	WCO	WALL CLEANOUT
ENT	ENTERING	NIC	NOT IN CONTRACT	WH	WATER HEATER, WALL HYDRANT
EQV	ELECTRONICALLY OPERATED VALVE	NO	NORMALLY OPEN, NUMBER	WL	WATER LINE
ES	EMERGENCY SHOWER	NPS	NOMINAL PIPE SIZE	WLD	WELDED
ET	EXPANSION TANK	NPW	NON-POTABLE WATER	WM	WATER METER
EVAP	EVAPORATOR	NRS	NON-RISING STEM	WNF	WELD NECK FLANGE
EWC	ELECTRIC WATER COOLER	NTS	NOT TO SCALE	WP	WATER PUMP, WEATHERPROOF
EW	EMERGENCY EYE WASH			WPD	WATER PRESSURE DROP
EXCH	EXCHANGER	OA	OUTSIDE AIR	WPR	WORKING PRESSURE DROP
EXH	EXHAUST	OD	OUTSIDE DIAMETER	WT	WEIGHT
EXP	EXPANSION	OSD	OVERFLOW STORM DRAIN		
		OS&Y	OUTSIDE SCREW AND YOKE	YD	YARD, YARD DRAIN
		OZ	OUNCE	YH	YARD HYDRANT
				YR	YEAR
		P	PUMP		
		P/E	PNEUMATIC ELECTRIC	Z	ZONE
		%	PERCENT		
		PC	PUMPED CONDENSATE		

PLUMBING GENERAL NOTES

1. THE PLUMBING CONTRACTOR SHALL VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT PRICING AND EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED. UTILITIES AND SERVICES INDICATED ARE TAKEN FROM VARIOUS SURVEYS, AS-BUILT DRAWINGS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORSEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES AND EXISTING CONDITIONS IN ROUTING, AS DIRECTED BY THE OWNER AND ARCHITECT/ENGINEER, MAY BE NECESSARY AND IT IS INTEDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED AS PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID, AND INCLUDE ANY DEVIATIONS IN THE PROPOSAL.
2. PROVIDE ISOLATION VALVES IN ALL BRANCH PIPING AND AT EQUIPMENT CONNECTIONS.
3. PROVIDE QUARTER TURN STOPS IN THE HOT AND COLD WATER SUPPLIES TO EACH PLUMBING FIXTURE.
4. PROVIDE ISOLATION VALVES IN THE HOT AND COLD WATER PIPING TO EACH GROUP OF PLUMBING FIXTURES.
5. PIPING CONNECTIONS TO ALL EQUIPMENT SHALL BE FABRICATED WITH THE ISOLATION VALVES, FLANGES AND/OR UNIONS POSITIONED TO ALLOW REMOVAL AND SERVICE OF THE COMPONENT PARTS.
6. ROUTE PIPING IN AN ORDERLY MANNER AND MAINTAIN PROPER GRADES. INSTALL TO CONSERVE HEADROOM AND TO CREATE MINIMUM INTERFERENCE WITH USE OF SPACE. ROUTE ALL PIPING PARALLEL TO BUILDING LINES UON. GROUP PIPING AT COMMON BOP ELEVATIONS WHENEVER PRACTICAL. PIPES LOCATED IN CONCEALED SPACES SHALL BE ROUTED CLOSE TO BUILDING STRUCTURE UON.
7. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE OR EQUIPMENT CONNECTED.
8. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
9. INSTALL VALVES AND EQUIPMENT IN ACCESSIBLE LOCATIONS. INSTALL ACCESS DOORS IN PARTITIONS OR CEILINGS WHERE VALVES AND EQUIPMENT WOULD OTHERWISE BE INACCESSIBLE.
10. WHEN SOCKET WELD OR SOLDER END VALVES ARE INSTALLED, SPECIAL CARE SHALL BE TAKEN TO AVOID OVERHEATING AND DAMAGING THE VALVE BODY, TRIM OR PACKING. DAMAGED VALVES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
11. IDENTIFY EACH PIPE WITH LABELING AS REQUIRED BY SPECIFICATIONS.
12. SLEEVE ALL PIPING THAT PENETRATES FIRE RATED WALLS, FLOORS AND PARTITIONS. PENETRATIONS SHALL BE SEALED WITH A U.L. LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THAT OF THE PENETRATED WALL, FLOOR OR PARTITION.
13. SLEEVE ALL PIPING THAT PENETRATES EXTERIOR BUILDING WALLS AND GRADE BEAMS. SEAL PENETRATIONS WATERTIGHT.
14. COORDINATE WITH OTHER TRADES BEFORE FABRICATION OR INSTALLATION OF ANY SYSTEMS.
15. EXISTING PIPING AND EQUIPMENT SHOWN ON THESE DRAWINGS INDICATES THE GENERAL LOCATION AND ROUTING. THE ACTUAL LOCATION SHALL BE DETERMINED BY THE CONTRACTOR WHO SHALL COORDINATE ALL WORK WITH ALL TRADES NECESSARY TO INSTALL NEW PIPING OR EQUIPMENT AS SHOWN ON THE DRAWING.
16. THESE DRAWINGS DO NOT NECESSARILY SHOW ALL OFFSETS OR ELEVATION DIFFERENCES WHICH MAY BE NECESSARY FOR THE COMPLETE INSTALLATION. THESE SHALL BE PROVIDED AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM AT NO ADDITIONAL COST TO THE CONTRACT.
17. COORDINATE ALL REMODEL WORK WITH NEW CONSTRUCTION AND OTHER TRADES.
18. NOTIFY AND COORDINATE WITH THE OWNER AT LEAST SEVEN DAYS PRIOR TO SHUTDOWN OF ANY BUILDING SERVICES OR EQUIPMENT. SHUTDOWN TIME SHALL BE KEPT TO A MINIMUM.
19. ANY ITEMS DAMAGED DURING DEMOLITION SHALL BE REPLACED WITH NEW MATERIALS TO MATCH EXISTING.
20. CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL SERVICE, PIPING OR OTHER BUILDING SERVICES AS REQUIRED TO KEEP OTHER AREAS IN OPERATION DURING REMODELING. NOTIFY OWNER PRIOR TO SHUT-DOWN FOR ANY TEMPORARY SERVICE REQUIREMENTS. ALL TEMPORARY WORK SHALL BE COMPLETELY REMOVED ONLY AFTER NEW SERVICES ARE COMPLETELY INSTALLED AND FUNCTIONAL.
21. ABANDONED PIPING SHALL BE REMOVED WHERE INDICATED ON THE DRAWINGS. PIPING REMAINING IN PLACE SHALL BE CAPPED, SEALED AIR TIGHT AT POINT(S) OF DEMOLITION, AND INSULATED TO MATCH EXISTING.
22. NEW HOLES THROUGH EXISTING FLOORS SHALL BE CORE DRILLED. ALL CORES SHALL BE X-RAYED PRIOR TO CORING.
23. THE OWNER SHALL HAVE THE OPTION TO DESIGNATE ANY MATERIALS REMOVED OR DEMOLISHED DURING THIS WORK AS "RECYCLABLE" AND SHALL HAVE FINAL DISPOSITION OVER THE DISPOSAL OF THESE MATERIALS. ALL MATERIALS REMOVED/DEMOLISHED BY THE CONTRACTOR FOR THIS JOB AND NOT RETAINED BY THE OWNER FOR RECYCLING OR OTHER PURPOSES SHALL BE DISPOSED OFF-SITE BY THE CONTRACTOR.
24. THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ANY EQUIPMENT DESIGNATED FOR REMOVAL. THE OWNER SHALL PROVIDE A LIST OF ITEMS THEY REQUIRE TO BE SALVAGED PRIOR TO THE START OF DEMOLITION. THE CONTRACTOR SHALL REMOVE THESE ITEMS USING REASONABLE CARE TO MINIMIZE DAMAGE.
25. ANY AND ALL WATER CONNECTIONS MADE FOR THE PURPOSE OF CLEANING TOOLS OR THE WORK AREA OR FOR ANY OTHER CONSTRUCTION-RELATED PURPOSES SHALL BE MADE ONLY TO DOMESTIC WATER HOSE BIBBS OR TO CONTRACTOR-SUPPLIED WATER SOURCES. APPROVED BACKFLOW PREVENTION DEVICES SHALL BE USED AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. CONNECTIONS SHALL NOT BE MADE TO FIRE WATER, CHILLED WATER, CONDENSER WATER, HEATING HOT WATER, DOMESTIC HOT WATER OR ANY OTHER TREATED WATER SOURCE UNLESS REQUIRED AS PART OF WORK ON THESE SYSTEMS.
26. EXCEPT WHERE REQUIRED AT EQUIPMENT NOZZLES, FLANGES SHALL BE RAISED FACE WELD-NECK.
27. INSTALL DIELECTRIC FITTINGS AT ALL FERROUS PIPE CONNECTIONS TO NON-FERROUS METALLIC PIPE OR EQUIPMENT.
28. PROVIDE CHROME PLATED, OR ARCHITECT APPROVED COLOR, ESCUTCHEON PLATES WHERE PIPES EXPOSED TO VIEW PENETRATE FINISHED WALLS, FLOORS AND CEILINGS. SPLIT-RING ESCUTCHEON PLATES SHALL NOT BE USED UON.
29. PROVIDE CAPPED DRAIN VALVES AT LOW POINTS OF PIPING SYSTEMS AND AT EQUIPMENT CONNECTIONS. PROVIDE HOSE BIBB CONNECTIONS WITH CAPS AT DRAIN VALVES WHICH DO NOT DISCHARGE DIRECTLY OVER OR ARE NOT PIPED DIRECTLY TO AN APPROPRIATE DRAIN.
30. PIPING OR EQUIPMENT CONNECTIONS OPENED BY DEMOLITION OR RENOVATION SHALL BE TEMPORARILY SEALED TO KEEP OUT FOREIGN MATTER UNTIL SUCH TIME AS RECONNECTIONS ARE MADE.
31. ALL PIPING SHALL BE SLOPED PER THE PLUMBING CODE AND THE AUTHORITY HAVING JURISDICTION.
32. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF EXISTING SANITARY PIPING TO WHICH NEW SEWER DRAINS ARE TO BE CONNECTED BEFORE INSTALLATION OF NEW SEWER LINE.
33. PROVIDE CLEANOUTS IN ACCORDANCE WITH THE PLUMBING CODE, NO MORE THAN 100 FT. APART, AT CHANGES IN DIRECTION GREATER THAN 45 DEGREES, AND AT THE BASE OF STORM, SOIL AND WASTE STACKS.
34. REFER TO ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE EXACT LOCATIONS, MOUNTING HEIGHTS AND DIMENSIONS.
35. ALL ADA COMPLIANT FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
36. INSTALL WATER HAMMER SHOCK ARRESTORS AT EACH BATTERY OF FIXTURES AND AS INDICATED ON RISER DIAGRAMS/ISOMETRICS. ARRESTORS SHALL BE FACTORY-FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. PROVIDE ACCESS PANELS FOR SERVICE AND MAINTENANCE.
37. DRAIN, WASTE, AND VENT PIPING LOCATED IN FIRE RATED WALL ASSEMBLIES AND RETURN AIR PLENUMS SHALL BE SERVICE WEIGHT CAST IRON WITH NO HUB FITTINGS.
38. UPON COMPLETION OF THE DOMESTIC WATER PIPING INSTALLATION, THE ENTIRE BUILDING'S HOT WATER RECIRCULATION SYSTEM SHALL BE CALIBRATED AND BALANCED TO PROVIDE SATISFACTORY OPERATION UNDER MINIMUM AND MAXIMUM EXPECTED FLOW CONDITIONS.

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2/22/2017

RENOVATIONS TO FAIN FINE ARTS BUILDING
MIDWESTERN STATE UNIVERSITY
3410 TAFT BOULEVARD
WICHITA FALLS, TEXAS

DRAWN BY:

DATE: 3 FEBRUARY 2017

REVISIONS

NO.	DESCRIPTION	DATE

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16782.01

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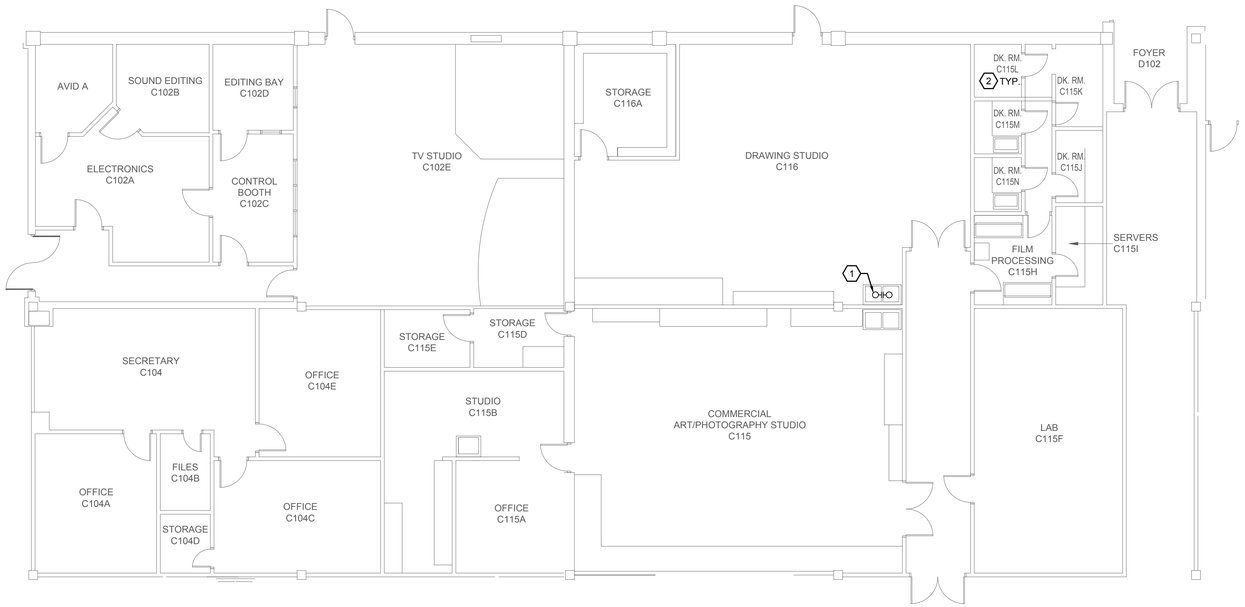
P001



1 PD101 PLUMBING DEMO PLAN

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

0 4' 8' 16'

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

KEY NOTES ⟨#⟩

(NOT ALL NOTES APPLY TO EACH SHEET)

1. CAP PLUMBING LINES AT CURRENT SINK LOCATION. EXISTING PLUMBING CONNECTIONS, FITTINGS, ETC. ARE TO BE REUSED AT NEW SINK LOCATION.

2. DISCONNECT AND CAP PLUMBING LINES AT CURRENT SINK LOCATIONS FOR DARK ROOMS.

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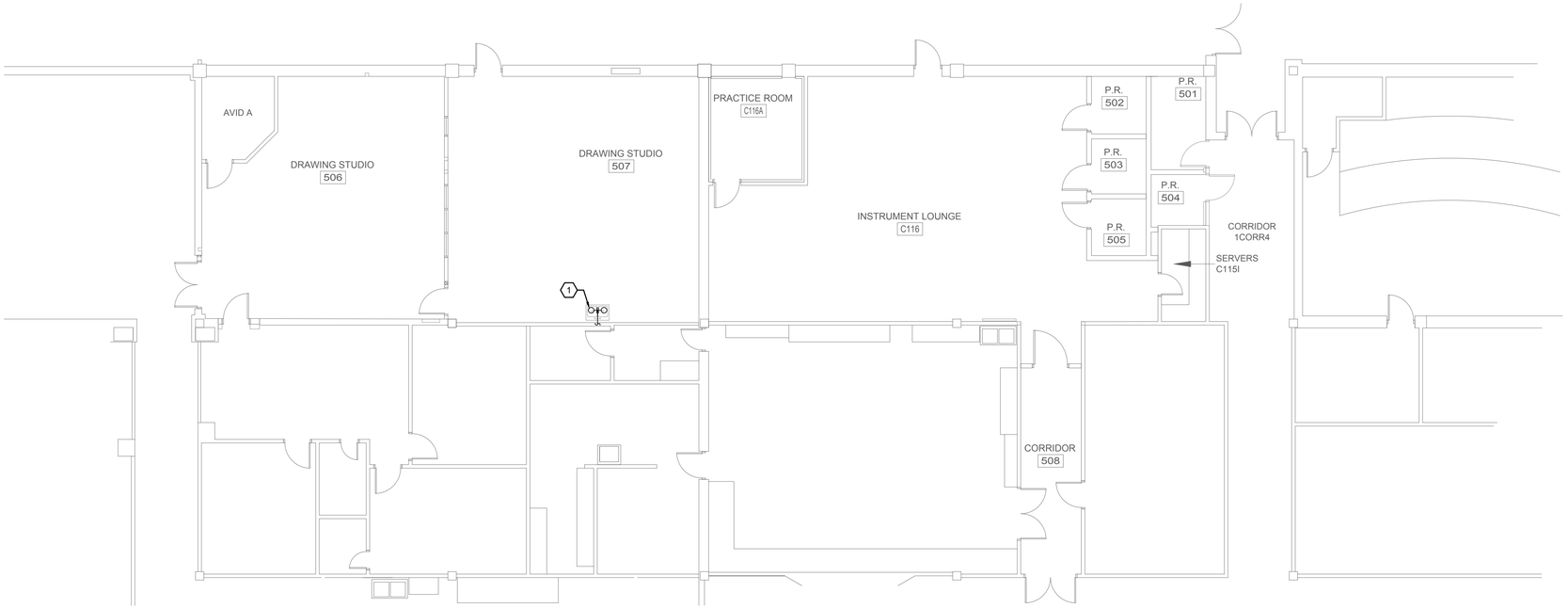

1 / P201 PLUMBING NEW FLOOR PLAN

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

0 4' 8' 16'

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

KEY NOTES ⟨#⟩

(NOT ALL NOTES APPLY TO EACH SHEET)

1. ALTERNATE NO. 1:
CONNECT PLUMBING LINES AND FITTINGS TO EXISTING PLUMBING ALONG THE SOUTH WALL AT NEW LOCATION. CONTRACTOR TO INVESTIGATE THE EXISTING PLUMBING SYSTEM AND VERIFY THE PLUMBING LINE LOCATIONS. ALL EXISTING PIPING AND FITTINGS TO BE REUSED AT NEW SINK LOCATION.

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MECHANICAL SYMBOL LEGEND

GRAPHIC SYMBOLS

- DRAWING TITLE — TOP TITLE / BOTTOM TITLE; SCALE: 1/8" = 1'-0"
- N (north arrow); 1 / SHEET
- SCALE OF FLOOR PLAN, SECTION OR DETAIL
- DETAIL NO. AND SHEET NO.
- AREA OF ENLARGED PLAN OR DETAIL
- DETAIL NUMBER
- 1 / M3.01 — SHEET NO. ON WHICH ENLARGED DETAIL IS DRAWN
- SECTION NO.
- A / M5.01 — DIRECTION OF CUTTING PLANE
- SHEET NO. ON WHICH THE SECTION IS DRAWN

MULTI-LINE KEY

HORIZONTAL RUN ON PLAN READ TOP TO BOTTOM

2" HWS
2" HWR
3" PCD(F) *
2" LPS
2" HPS
BOP 12'-6" AFF LOWER PIPE RACK
BOP 13'-6" AFF UPPER PIPE RACK
HWS
HWR
PCD(F) *
LPS
HPS

VERTICAL RUN ON PLAN READ LEFT TO RIGHT

HPS
LPS
PCD(F) *
2" HWR
2" HWS
HWR
HWS
BOP 12'-6" AFF LOWER PIPE RACK
2" HPS
2" LPS
3" PCD(F) *
BOP 13'-6" AFF UPPER PIPE RACK

* - (F) INDICATES FUTURE PIPING ON RACK

MISCELLANEOUS SYMBOLS

- XXX-1 — EQUIPMENT DESIGNATION
- SINGLE LINE PIPE/DUCTWORK BREAK
- DOUBLE LINE PIPE/ROUND DUCTWORK BREAK
- RECTANGULAR DUCT/STANDARD BREAK
- KEYED NOTE
- REVISION DELTA
- POINT OF DISCONNECTION
- POINT OF CONNECTION (NEW TO EXISTING)
- NEW ITEMS (PIPING/DUCTWORK/EQUIPMENT)
- EXISTING ITEMS TO REMAIN
- EXISTING ITEMS TO BE DEMOLISHED
- LIMIT OF EXISTING ITEMS TO BE REMOVED
- NEW CONNECTION TO EXISTING ITEM
- (N) — NEW ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
- (E) — EXISTING ITEM TO REMAIN (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
- (F) — FUTURE ITEM (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
- (R) — EXISTING ITEM TO BE RELOCATED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)
- (D) — EXISTING ITEM TO BE DEMOLISHED (NOTATION SHOWN AS NECESSARY FOR CLARIFICATION)

PIPE & FITTING SYMBOLS

DOUBLE LINE | SINGLE LINE | DESCRIPTION

- PIPE
- DIRECTION OF FLOW / SLOPE
- PIPING WITH INSULATION (WHEN SHOWN FOR CLARITY)
- WELDED JOINT
- SCREWED JOINT
- FLANGED JOINT
- UNION
- GROOVED END JOINT
- GENERIC FLEXIBLE COUPLING (REFER TO SPECIFICATIONS)
- GROOVED END ADAPTER FLANGE
- FLANGED COUPLING ADAPTER
- STUB END OR FLANGE ADAPTER W/ FLANGE RING
- BLIND FLANGE
- ELBOW, 45 DEGREE (LONG RADIUS UON)
- ELBOW, 90 DEGREE (LONG RADIUS UON)
- ELBOW, 90 DEGREE - CHANGE IN DIRECTION TOWARD VIEWER
- ELBOW, 90 DEGREE - CHANGE IN DIRECTION AWAY FROM VIEWER
- TEE FITTING
- TEE FITTING, BRANCH TOWARD VIEWER
- TEE FITTING, BRANCH AWAY FROM VIEWER
- LATERAL
- REDUCER - CONCENTRIC
- REDUCER - ECCENTRIC
- CAP
- ANCHOR
- CO — CLEANOUT
- THERMOWELL WITH THERMOMETER
- PRESSURE GAUGE WITH GAUGE COCK
- STRAINER - "Y" TYPE WITH BLOW DOWN
- S — AIR SEPARATOR
- M — WATER METER
- VENTURI FLOW METER
- FLOW ORIFICE PLATE
- F&T — STEAM TRAP, TYPE AS NOTED
  - IB = INVERTED BUCKET
  - F&T = FLOAT & THERMOSTATIC
  - TH = THERMODYNAMIC
  - BP = BALANCED PRESSURE
- PUMP, ARROW INDICATES FLOW

NOTE:
WELDED FITTINGS ARE SHOWN FOR DOUBLE LINE PIPING. FITTINGS WITH OTHER END CONDITIONS ARE SIMILAR.

VALVE SYMBOLS

DOUBLE LINE | SINGLE LINE | DESCRIPTION

- GATE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- DIAPHRAGM VALVE
- GLOBE VALVE
- PLUG VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE
- BALANCING VALVE
- PRESSURE RELIEF VALVE
- AUTOMATIC AIR VENT
- MANUAL AIR VENT

CONTROL VALVES

DOUBLE LINE | SINGLE LINE | DESCRIPTION

- TWO-WAY, TWO POSITION CONTROL VALVE
- S — TWO-WAY, TWO POSITION CONTROL VALVE W/ SOLENOID
- M — TWO-WAY, MODULATING CONTROL VALVE
- THREE-WAY, TWO POSITION CONTROL VALVE
- M — THREE-WAY, MODULATING CONTROL VALVE

CONTROL SYMBOLS

WALL MOUNTED DEVICES

- T — TEMPERATURE SENSOR/THERMOSTAT
- H — HUMIDITY SENSOR/HUMIDISTAT
- M — MOTION SENSOR
- R — OVERRIDE SWITCH
- CO2 — CARBON DIOXIDE SENSOR
- CO — CARBON MONOXIDE SENSOR
- VFD — VARIABLE FREQUENCY DRIVE

EQUIPMENT SYMBOLS

- ROOFTOP EXHAUST FAN (ROOF PLAN VIEW)
- ROOFTOP EXHAUST FAN (FLOOR PLAN VIEW)
- INLINE EXHAUST FAN (EF), AIR HANDLING UNIT (AHU), CONDENSING UNIT (CU)
- WALL LOUVER WITH POSITIVE OR NEGATIVE AIRFLOW
- UC — DOOR UNDERCUT (SPECIFY CFM IF REQUIRED)
- LD — DOOR LOUVER (SPECIFY CFM IF REQUIRED)

DUCTWORK SYMBOLS

DOUBLE LINE | SINGLE LINE | DESCRIPTION

- AxB — RECTANGULAR OR SQUARE DUCT, DIMENSIONS ARE IN INCHES, MIN. INSIDE CLEAR, A = WIDTH, B= HEIGHT
- A"Ø — ROUND DUCT DIMENSIONS ARE IN INCHES, MIN. INSIDE CLEAR, A = DIAMETER
- AxBØ — FLAT OVAL DUCT DIMENSIONS ARE IN INCHES, MIN. INSIDE CLEAR, A = WIDTH, B= HEIGHT
- R D — DUCTWORK RISE (R) OR DROP (D) RELATIVE TO DIRECTION OF AIRFLOW
- DIRECTION OF AIR FLOW
- SUPPLY AIR OR POSITIVE PRESSURE DUCTWORK, SECTION TOWARDS/AWAY VIEWER
- SUPPLY AIR OR POSITIVE PRESSURE DUCTWORK, AIRFLOW AWAY FROM VIEWER
- RETURN AIR OR NEGATIVE PRESSURE DUCTWORK, AIRFLOW TOWARDS VIEWER
- RETURN AIR OR NEGATIVE PRESSURE DUCTWORK, AIRFLOW AWAY FROM VIEWER
- EXHAUST AIR DUCTWORK, AIRFLOW TOWARDS VIEWER
- EXHAUST AIR DUCTWORK, AIRFLOW AWAY FROM VIEWER
- RIGID ROUND DUCTWORK, AIRFLOW TOWARDS VIEWER
- RIGID ROUND DUCTWORK, AIRFLOW AWAY FROM VIEWER
- TRANSITION - ECCENTRIC REDUCER
- TRANSITION - CONCENTRIC REDUCER
- TRANSITION - SQUARE TO ROUND
- 90° ELBOW WITH TURNING VANES (REQUIRED ON SUPPLY DUCTWORK)
- 90° ELBOW WITHOUT TURNING VANES (RETURN OR EXHAUST DUCTWORK ONLY)
- 45° ELBOW WITH TURNING VANES (REQUIRED ON SUPPLY DUCTWORK)
- 45° ELBOW WITHOUT TURNING VANES (RETURN OR EXHAUST DUCTWORK ONLY)
- W, R — RADIUS 90° ELBOW (R = 1.5W)
- W, R — RADIUS 45° ELBOW (R = 1.5W)
- A"Ø — SPIN-IN FITTING WITH FLEXIBLE DUCTWORK, DIMENSIONS ARE IN INCHES, MIN. INSIDE CLEAR, A = DIAMETER
- BRANCH TAKE-OFF WITH MVD
- CONICAL TAKE-OFF WITH MVD
- MANUAL VOLUME DAMPER
- FD — FIRE DAMPER
- FSD — FIRE/SMOKE DAMPER
- SD — SMOKE DAMPER
- BDD — BACKDRAFT DAMPER
- M — MOTORIZED DAMPER
- B — BAROMETRIC DAMPER
- S — SMOKE DETECTOR

DUCTWORK SYMBOLS

DOUBLE LINE | SINGLE LINE | DESCRIPTION

- SP — STATIC PRESSURE SENSOR
- T — TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- DPS — DIFFERENTIAL PRESSURE SAFETY SHUT-DOWN RELAY
- AF — AIRFLOW PROOF SWITCH
- ACCESS PANEL/CLEANOUT

AIR DISTRIBUTION

REFER TO SCHEDULE FOR ADDITIONAL INFORMATION

- SUPPLY AIR DIFFUSER
- RETURN AIR OR TRANSFER AIR GRILLE
- EXHAUST AIR GRILLE
- ROUND SUPPLY AIR DIFFUSER
- LINEAR SLOT DIFFUSER
- SIDEWALL REGISTER
- DUCT MOUNTED GRILLE
- S1 / 250 (TYP. 0F 2) — AIR DISTRIBUTION CALLOUT

THIS IS A STANDARD LEGEND SHEET. SOME INFORMATION ON THIS SHEET MAY NOT NECESSARILY APPLY TO THIS PROJECT.

ABBREVIATIONS

A (0.5)	COMPRESSED AIR (WORKING PRESS.)
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR, AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALT	ALTITUDE
AMB	AMBIENT
AMP	AMPERE
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
APPROX	APPROXIMATE
AS	AIR SEPARATOR
ASC	ABOVE SUSPENDED CEILING
AHJ	AUTHORITY HAVING JURISDICTION
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
B&S	BELL & SPIGOT
B/B	BACK TO BACK
BAL	BALANCE
BBR	BASE BOARD RADIATOR
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BFV	BUTTERFLY VALVE
BFBP	BOILER FEED BOOSTER PUMP
BFW	BOILER FEED WATER
BLDG	BUILDING
BHP	BRAKE HORSEPOWER
BLR	BOILER
BLW	BELOW
BO	BLOWOFF
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALL VALVE
BYP	BYPASS
°C	CELSIUS [DEGREES]
C/C	COOLING COIL
CAP	CAPACITY
CD	CONDENSATE DRAIN
CF	CHEMICAL FEED
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHILLER
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CHWPP	CHILLED WATER PRIMARY PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWSP	CHILLED WATER SECONDARY PUMP
CI	CAST IRON
CIP	CAST IRON PIPE
CKT	CIRCUIT
CKV	CHECK VALVE
CL	CENTER LINE (℄)
CONN	CONNECTION
CPD	CONDENSATE PUMP DISCHARGE
CRAC	COMPUTER ROOM A/C UNIT
CRP	CONDENSATE RETURN PUMP
CT	COOLING TOWER
CU	CONDENSING UNIT
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CUH	CABINET UNIT HEATER
Cv	COEFFICIENT - VALVE FLOW
CW	COLD WATER (POTABLE)
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
dB	DECIBEL
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREES [CELSIUS OR FAHRENHEIT]
DENS	DENSITY
DEWPT	DEW POINT TEMPERATURE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DOV	DRAIN OFF VALVE
DPS	DIFFERENTIAL PRESSURE SENSOR
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DS	DISCONNECT SWITCH
DWV	DRAIN, WASTE & VENT
EA	EXHAUST AIR
E/P	ELECTRIC PNEUMATIC
EAT	ENTERING AIR TEMPERATURE
ECON	ECONOMIZER
ECU	EVAPORATIVE COOLING UNIT
EDBT	ENTERING DRY BULB TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ENT	ENTERING
EOV	ELECTRONICALLY OPERATED VALVE
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EVAP	EVAPORATOR
EWBT	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXCH	EXCHANGER
EXH	EXHAUST
EXP	EXPANSION
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
°F	FAHRENHEIT [DEGREES]
FLA	FULL LOAD AMPS
FLG	FLANGE
FMS	FACILITY MANAGEMENT SYSTEM
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPB	FAN POWERED BOX
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT, FEET
FT LB	FOOT-POUND
GA	GAUGE, GAGE
GAL	GALLON
GALV	GALVANIZED
GEN	GENERATOR
GLV	GLOBE VALVE
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GTV	GATE VALVE
HC	HEATING COIL
HD	HEAD
HG	HEAT GAIN
HGT	HEIGHT
HP	HEAT PUMP, HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM (>100 PSI)
HR	HOUR
HS	HUMIDITY SENSOR
HSTAT	HUMIDISTAT
HVAC	HEATING, VENTILATION AND A/C
HW	HEATING WATER
HWB	HEATING WATER BOILER
HWC	HEATING WATER COIL
HWCP	HEATING WATER CIRCULATING PUMP
HWP	HEATING WATER PUMP
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HWT	HEATING WATER TANK
HZ	HERTZ (FREQUENCY)
I/O	INPUT/OUTPUT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN WC	INCHES WATER COLUMN
INV	INVERT
IP	IRON PIPE
IPS	IRON PIPE SIZE, INCHES PER SECOND
IPT	IRON PIPE THREADED
IR	INFRARED
IW	INDIRECT WASTE
K	KELVIN, THERMAL CONDUCTIVITY
KIP	THOUSAND POUNDS
KIP FT	THOUSAND FOOT-POUNDS
KW	KILOWATT
KWh	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LDBT	LEAVING DRY BULB TEMPERATURE
LF	LINEAR FEET
LG	LENGTH
LH	LATENT HEAT
LHG	LATENT HEAT GAIN
LP	LOW PRESSURE
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM (<15 PSI)
LRA	LOCKED ROTOR AMPS
LT	LEAVING TEMPERATURE
LTHW	LOW TEMPERATURE HOT WATER
LWBT	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
mA	MILLIAMPERES
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOV	MOTOR OPERATED VALVE
MP	MEDIUM PRESSURE
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM (16-99 PSI)
MPT	MALE PIPE THREAD
MU	MAKE-UP WATER
MVD	MANUAL VOLUME DAMPER
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NPS	NOMINAL PIPE SIZE
NR	NOISE REDUCTION
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
OZ	OUNCE
P	PUMP
P/E	PNEUMATIC ELECTRIC
%	PERCENT
PC	PUMPED CONDENSATE
PCC	PRECOOL COIL
PD	PRESSURE DROP
POS	POSITIVE
PR	PUMPED RETURN
PG	PRESSURE GAUGE
PH	PHASE
PHC	PREHEAT COIL
PRV	PRESSURE REDUCING VALVE
PPM	PARTS PER MILLION
PLBG	PLUMBING
PRESS	PRESSURE
PS	PRESSURE SWITCH
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PTAC	PACKAGED TERMINAL A/C
Q	TOTAL, TOTAL HEAT
QT	QUART
QTY	QUANTITY
R	RELIEF, THERMAL RESISTANCE
RA	RETURN AIR
RAC	ROOM AIR CONDITIONER
RECT	RECTANGULAR
REFR	REFRIGERATION
RET	RETURN
RED	REDUCER
REV	REVOLUTIONS
REF	REFERENCE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RHV	REHEAT VALVE
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RPS	REVOLUTIONS PER SECOND
RS	REFRIGERANT SUCTION
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
S	SECOND
SA	SUPPLY AIR
SAT	SATURATION
SC	SHADING COEFFICIENT
SEER	SEASONAL EER
SF	SQUARE FEET
SG	SPECIFIC GRAVITY, STEAM GAUGE
SH	SENSIBLE HEAT
SHG	SENSIBLE HEAT GAIN
SHGC	SOLAR HEAT GAIN COEFFICIENT
SHR	SENSIBLE HEAT RATIO
SOLV	SOLENOID VALVE
SOV	SHUT OFF VALVE
SP	STATIC PRESSURE, SUMP PUMP
SPEC	SPECIFICATION
SPLY	SUPPLY
SPS	STATIC PRESSURE SENSOR
SQ	SQUARE
SSP	STAINLESS STEEL PIPE
SST	STAINLESS STEEL
STD	STANDARD
STM	STEAM
STR	STRAINER
STWP	STEAM WORKING PRESSURE
SUCT	SUCTION
SUP	SUPPLY
SV	SAFETY VALVE
T	TEMPERATURE SENSOR
T&P	TEMPERATURE AND PRESSURE
TCV	TEMPERATURE CONTROL VALVE
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TOP	TOP OF PIPE
TRANS	TRANSFER
TSTAT	THERMOSTAT
U	HEAT TRANSFER COEFFICIENT
U/G	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VAR	VARIABLE
VAV	VARIABLE AIR VOLUME
VDC	VOLTS DIRECT CURRENT
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VP	VELOCITY PRESSURE
VRF	VARIABLE REFRIGERANT FLOW
VSD	VARIABLE SPEED DRIVE
W	WATT
WB	WET BULB
WBT	WET BULB TEMPERATURE
WC	WATER COLUMN
WG	WATER GAGE
WH	WATER HEATER
WL	WATER LINE
WLD	WELDED
WM	WATER METER
WNF	WELD NECK FLANGE
WP	WATER PUMP
WPD	WATER PRESSURE DROP
WPR	WORKING PRESSURE DROP
WSHP	WATER SOURCE HEAT PUMP
WSP	WORKING STEAM PRESSURE
WT	WEIGHT
YD	YARD, YARD DRAIN
YR	YEAR
Z	ZONE

MECHANICAL GENERAL NOTES

1. ISOLATION VALVES SHALL BE PROVIDED IN ALL BRANCH PIPING AND AT EQUIPMENT CONNECTIONS.
2. PIPING CONNECTIONS TO ALL EQUIPMENT SHALL BE FABRICATED WITH THE ISOLATION VALVES, FLANGES AND/OR UNIONS POSITIONED TO ALLOW REMOVAL AND SERVICE OF THE COMPONENT PARTS.
3. ROUTE PIPING IN AN ORDERLY MANNER AND MAINTAIN PROPER GRADES. INSTALL TO CONSERVE HEADROOM AND TO CREATE MINIMUM INTERFERENCE WITH USE OF SPACE. ROUTE ALL PIPING PARALLEL TO BUILDING LINES UON. GROUP PIPING AT COMMON BOP ELEVATIONS WHENEVER PRACTICAL. PIPES LOCATED IN CONCEALED SPACES SHALL BE ROUTED CLOSE TO BUILDING STRUCTURE UON.
4. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE OR EQUIPMENT CONNECTED.
5. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
6. INSTALL VALVES AND EQUIPMENT IN ACCESSIBLE LOCATIONS. INSTALL ACCESS DOORS IN PARTITIONS OR CEILINGS WHERE VALVES AND EQUIPMENT WOULD OTHERWISE BE INACCESSIBLE.
7. WHEN SOCKET WELD OR SOLDER END VALVES ARE INSTALLED, SPECIAL CARE SHALL BE TAKEN TO AVOID OVERHEATING AND DAMAGING THE VALVE BODY, TRIM OR PACKING. DAMAGED VALVES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
8. IDENTIFY EACH PIPE WITH LABELING AS REQUIRED BY SPECIFICATIONS.
9. SLEEVE ALL PIPING THAT PENETRATES FIRE RATED WALLS, FLOORS AND PARTITIONS. PENETRATIONS SHALL BE SEALED WITH A U.L. LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THAT OF THE PENETRATED WALL, FLOOR OR PARTITION.
10. SLEEVE ALL PIPING THAT PENETRATES EXTERIOR BUILDING WALLS AND GRADE BEAMS. SEAL PENETRATIONS WATERTIGHT.
11. COORDINATE WITH OTHER TRADES BEFORE FABRICATION OR INSTALLATION OF ANY SYSTEMS.
12. THESE DRAWINGS DO NOT NECESSARILY SHOW ALL OFFSETS OR ELEVATION DIFFERENCES WHICH MAY BE NECESSARY FOR THE COMPLETE INSTALLATION. THESE SHALL BE PROVIDED AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM AT NO ADDITIONAL COST TO THE CONTRACT.
13. ALL NEW DUCTWORK SHALL BE EXTERNALLY INSULATED PER THE SPECIFICATIONS.
14. ALL NEW REFRIGERANT PIPING SHALL BE INSULATED PER THE SPECIFICATIONS.
15. THE CONTRACTOR SHALL ADJUST AND BALANCE ALL MECHANICAL SYSTEMS TO DESIGN SETTINGS AS SHOWN AND SHALL RE-BALANCE TO RESTORE SETTINGS OF SYSTEMS TEMPORARILY ALTERED FOR THE PURPOSES OF COMPLETING THE WORK OF THIS PROJECT. CONTRACTOR SHALL PROVIDE TEST AND BALANCE REPORT TO THE CITY OF DALLAS.
16. NOTIFY AND COORDINATE WITH THE OWNER AT LEAST SEVEN DAYS PRIOR TO SHUTDOWN OF ANY BUILDING SERVICES OR EQUIPMENT. SHUTDOWN TIME SHALL BE KEPT TO A MINIMUM.
17. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF CEILING-MOUNTED HVAC DEVICES AND EQUIPMENT.
18. DUCT ROUTING CHANGES MADE BY THE CONTRACTOR FOR THE PURPOSE OF ACCOMMODATING FIELD CONDITIONS SHALL INCLUDE FIRE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS IN RATED PARTITIONS AS SHOWN IN ORIGINAL ROUTING ARRANGEMENTS.
19. FURNISH AND INSTALL ACCESS DOORS (AD) IN THE DUCTWORK IMMEDIATELY ADJACENT TO EACH FIRE DAMPER AND EACH FIRE/SMOKE DAMPER. PARTITIONS SHALL BE PROVIDED WITH ACCESS DOORS TO PROVIDE SERVICE AND ACCESS TO DAMPER ACCESS DOORS.
20. PROVIDE FIRE AND COMBINATION FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. FIRE, SMOKE, AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE UL LISTED, SHALL BEAR THE UL LABEL AND SHALL COMPLY WITH NFPA BULLETIN NO. 90A. FULLY-OPEN DAMPERS SHALL NOT HAVE ANY PROJECTIONS INTO THE AIRSTREAM.
21. ALL DUCT SIZES SHOWN HEREIN REPRESENT INSIDE CLEAR DIMENSIONS. EXTERNAL SHEET METAL DIMENSIONS OF DUCTWORK THAT IS SPECIFIED TO BE INTERNALLY LINED SHALL BE ADJUSTED BY THE CONTRACTOR TO ALLOW FOR THICKNESS OF LINING.
22. ANY AND ALL WATER CONNECTIONS MADE FOR THE PURPOSE OF CLEANING TOOLS OR THE WORK AREA OR FOR ANY OTHER CONSTRUCTION-RELATED PURPOSES SHALL BE MADE ONLY TO DOMESTIC WATER HOSE BIBBS OR TO CONTRACTOR-SUPPLIED WATER SOURCES. APPROVED BACKFLOW PREVENTION DEVICES SHALL BE USED AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. CONNECTIONS SHALL NOT BE MADE TO FIRE WATER, CHILLED WATER, CONDENSER WATER, HEATING HOT WATER, DOMESTIC HOT WATER OR ANY OTHER TREATED WATER SOURCE UNLESS REQUIRED AS PART OF WORK ON THESE SYSTEMS.
23. EXCEPT WHERE REQUIRED AT EQUIPMENT NOZZLES, FLANGES SHALL BE RAISED FACE WELD-NECK.
24. INSTALL DIELECTRIC FITTINGS AT ALL FERROUS PIPE CONNECTIONS TO NON-FERROUS METALLIC PIPE OR EQUIPMENT.
25. BULLHEAD TEES SHALL NOT BE USED TO JOIN CONVERGING (RETURN) FLOWS, REGARDLESS OF ARRANGEMENT SHOWN ON PLANS.
26. PROVIDE ESCUTCHEON PLATES WHERE PIPES EXPOSED TO VIEW PENETRATE FINISHED WALLS, FLOORS AND CEILINGS. SPLIT-RING ESCUTCHEON PLATES SHALL NOT BE USED UON.
27. PROVIDE CAPPED DRAIN VALVES AT LOW POINTS OF PIPING SYSTEMS AND AT EQUIPMENT CONNECTIONS. PROVIDE HOSE BIBB CONNECTIONS WITH CAPS AT DRAIN VALVES WHICH DO NOT DISCHARGE DIRECTLY OVER OR ARE NOT PIPED DIRECTLY TO AN APPROPRIATE DRAIN.
28. PIPING, DUCTWORK OR EQUIPMENT CONNECTIONS OPENED BY DEMOLITION OR RENOVATION SHALL BE TEMPORARILY SEALED TO KEEP OUT FOREIGN MATTER UNTIL SUCH TIME AS RECONNECTIONS ARE MADE.

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RENOVATIONS TO FAIN FINE ARTS BUILDING
MIDWESTERN STATE UNIVERSITY
3410 TAFT BOULEVARD
WICHITA FALLS, TEXAS

CEI CAMPOS ENGINEERING, Inc.
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Registration No. F-001731
CEI Project Number D17-1212.00

DRAWN BY:

DATE: 3 FEBRUARY 2017

REVISIONS

NO.	DESCRIPTION	DATE

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M001

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

KEY NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

1. DEMOLISH ALL EXISTING SA DIFFUSERS AND ASSOCIATED FLEXIBLE DUCT. REUSE EXISTING SA RUNOUTS FOR NEW SA DIFFUSERS. CAP ALL DUCT NOT BEING REUSED.

2. DEMOLISH EXISTING RA GRILLES TO BE REPLACED WITH NEW RA GRILLES.

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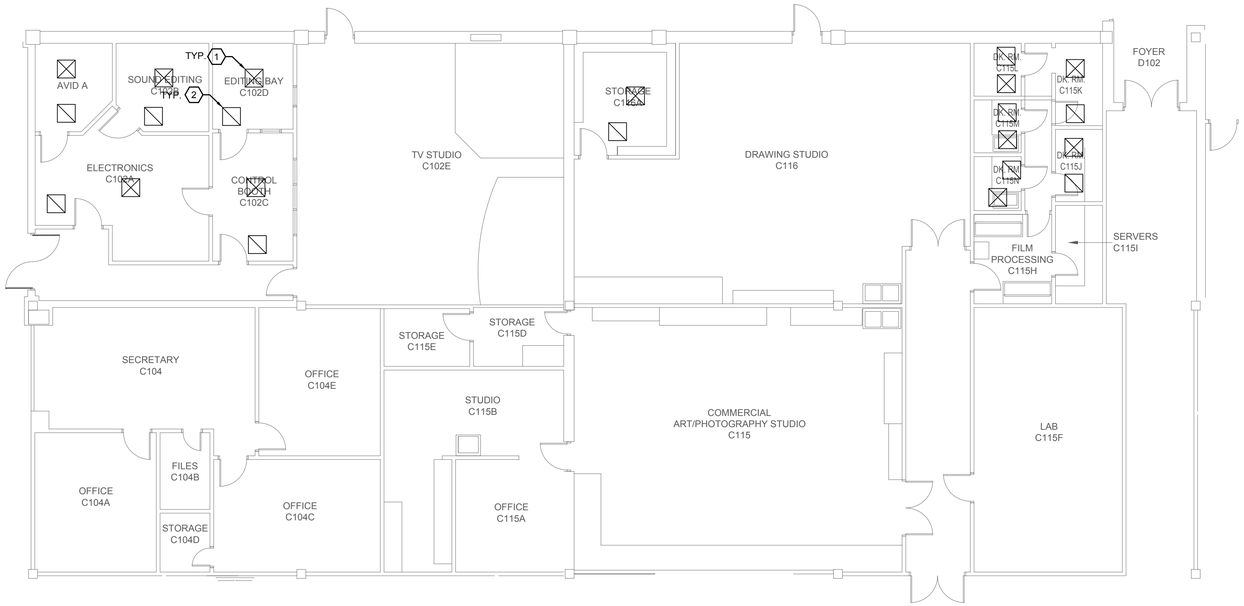
2/22/2017



1 MD101 MECHANICAL FIRST FLOOR - DEMO

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

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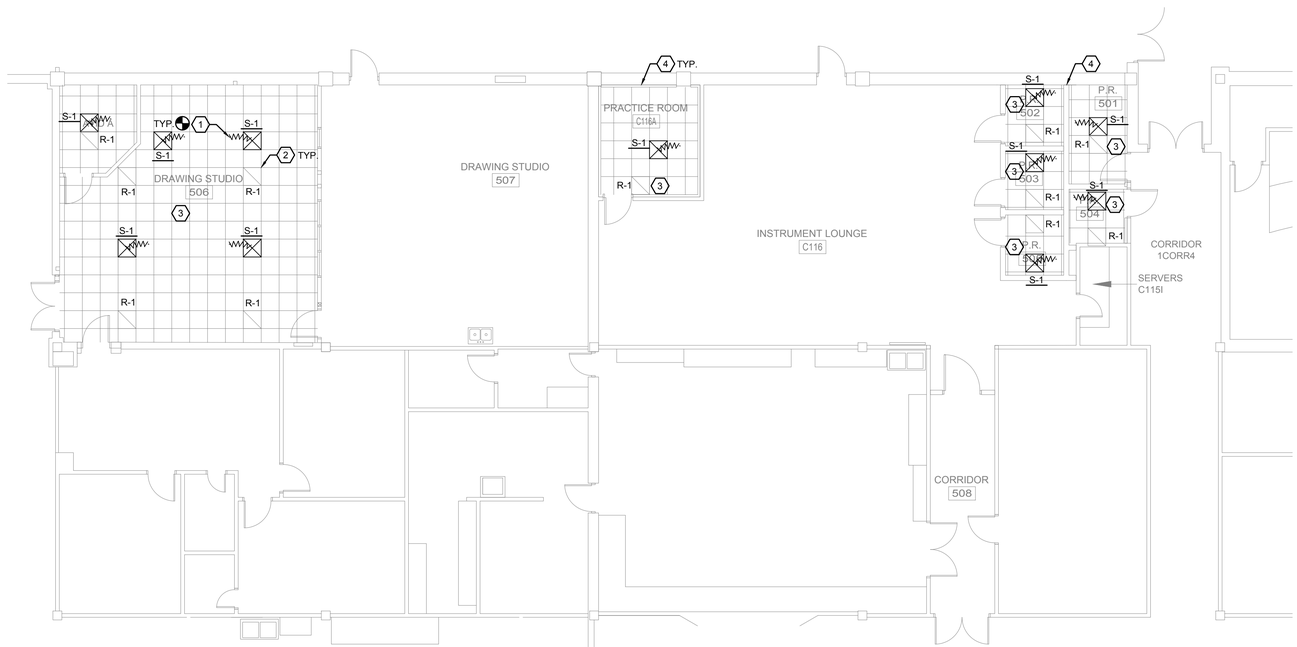
MD101



1 M201 MECHANICAL NEW FLOOR PLAN

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

GENERAL NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

A. REFER TO SYMBOL LEGEND AND GENERAL NOTES.

B. REFER TO SPECIFICATIONS.

C. SIZES SHOWN ARE AIR SIZE NOT DUCT SIZE.

KEY NOTES

(NOT ALL NOTES APPLY TO EACH SHEET)

1. CONNECT NEW FLEXIBLE DUCT TO EXISTING SA DUCTWORK. PROVIDE NEW SA DIFFUSER.
2. REPLACE EXISTING RA GRILLES WITH NEW 25RL RA GRILLES.
3. RELOCATE EXISTING THERMOSTATS TO NEW WALLS AS NEEDED TO ACCOMMODATE NEW ROOM LAYOUT.
4. ENSURE ALL PRACTICE ROOMS HAVE ACOUSTICALLY TREATED DUCTWORK.

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AIR DISTRIBUTION SCHEDULE

SYMBOL	DESCRIPTION	MODULE SIZE	MATERIAL	FINISH	NECK SIZE	DAMPER	BORDER FRAME TYPE	PATTERN	MAX. PRESS. DROP	MAX. N.C.	MANUF.	MODEL NUMBER	REMARKS
S1	SQUARE SUPPLY AIR CEILING DIFFUSER WITH THREE CONE, ONE PIECE CONSTRUCTION, NO CORNER JOINTS, REMOVABLE INNER CONES AND ROUND NECK DUCT CONNECTION. DAMPER SHALL BE OPERABLE FROM FACE OF DIFFUSER.	24 X 24	ALUMINUM	WHITE	SAME AS DUCT SIZE ON PLANS	NO	LAY-IN PANEL	SEE PLANS	0.10	30	TITUS	TMS	
R1	RETURN, INTAKE OR TRANSFER AIR GRILLE WITH 30 DEGREE FIXED DEFLECTION BLADES ON 1/2" CENTERS. BLADES ARE PARALLEL TO LONG DIMENSION. CORNERS SHALL BE WELDED. DAMPER SHALL BE OPERABLE FROM FACE OF GRILLE.	VARIES	STEEL	WHITE	SAME AS DUCT SIZE ON PLANS	NO	LAY-IN PANEL	SEE PLANS	0.10	30	TITUS	25RL	

REMARKS:

1. PROVIDE FILTER BACK STYLE TYPE GRILLE WITH 1" THICK FILTER.
2. PROVIDE RAPID MOUNT FRAME.

1 AIR DISTRIBUTION SCHEDULE

SCALE: NONE

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ELECTRICAL SYMBOLS

(ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.)

GENERAL

L1-10 — PANEL NAME - CIRCUIT NUMBER
WP — WEATHERPROOF WHILE-IN-USE COVER
* — ABOVE COUNTER
WALL

SYMBOL	DESCRIPTION
	JUNCTION BOX
*	DUPLEX RECEPTACLE. 18" AFF UNO. * INDICATES ABOVE COUNTER.
*	GFI DUPLEX RECEPTACLE. 18" AFF UNO. * INDICATES ABOVE COUNTER.
*	DOUBLE DUPLEX RECEPTACLE. 18" AFF UNO. * INDICATES ABOVE COUNTER.
	SPECIAL PURPOSE RECEPTACLE AS NOTED ON PLANS
W	TELECOMMUNICATIONS WALL MTD OUTLET (48" AFF, * INDICATES ABOVE COUNTER.) - JUNCTION BOX WITH MINIMUM 1" CONDUIT WITH PULL STRING TO ABOVE CEILING CAVITY.
	TELECOMMUNICATIONS/DATA WALL OUTLET (18" AFF UNO, * INDICATES ABOVE COUNTER.) - JUNCTION BOX WITH MINIMUM 1" CONDUIT WITH PULL STRING TO ABOVE CEILING CAVITY.
	MOTOR
30/3/1	NON-FUSED DISCONNECT SWITCH (AMPS/POLES/NEMA RATING)
30/3/25/3R	FUSED DISCONNECT SWITCH (AMPS/POLES/FUSE RATING/NEMA RATING)
30/3/25/3R/00	COMBINATION DISCONNECT SWITCH/MOTOR STARTER (AMPS/POLES/FUSE RATING/NEMA RATING/STARTER SIZE)
VFD	VARIABLE FREQUENCY DRIVE
	ELECTRICAL PANEL (SURFACE OR FLUSH MOUNTED AS NOTED ON PANEL SCHEDULE AND DRAWINGS)
	MISC. CONTROL PANEL (SURFACE OR FLUSH MOUNTED AS NOTED ON DRAWINGS)
T	TRANSFORMER
	PUSH BUTTON MTD AT 48" TO CENTER UNO
F	STROBE LIGHT
$M	MOTOR RATED SWITCH
F	PULL STATION

LIGHTING SYMBOL LEGEND

(ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.)

GENERAL

AB a
AB a

- CAPITAL LETTER DENOTES TYPE OF LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE
- LOWER CASE LETTER DENOTES SWITCHING
- NO HATCH INDICATES NORMAL POWER LIGHT FIXTURE
- HALF SOLID HATCH INDICATES FIXTURE WITH EMERGENCY BACK UP BATTERY

SYMBOL	DESCRIPTION
	2X4 LIGHT FIXTURE
	2X2 LIGHT FIXTURE
	1X4 LIGHT FIXTURE
	STRIP LIGHT FIXTURE
	DOWN LIGHT FIXTURE
	WALL MOUNT LIGHT FIXTURE
	EMERGENCY BATTERY FIXTURE
	CLG MTD EXIT LIGHT - SHADING INDICATES NUMBER OF FACES WITH ORIENTATION
	WALL MTD EXIT LIGHT - SHADING INDICATES NUMBER OF FACES WITH ORIENTATION

SWITCHING SYMBOL LEGEND

(ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.)

GENERAL

$a

- LOWER CASE LETTER DENOTES FIXTURE BEING CONTROLLED
- K - KEY OPERATED SWITCH
- 3 - THREE-WAY TOGGLE SWITCH
- T - TIMER SWITCH
- WP - WEATHERPROOF SWITCH

SYMBOL	DESCRIPTION
$	LINE VOLTAGE TOGGLE SWITCH - SPST
$D, a	0-10V DIMMER SWITCH AS NOTED
OS	CLG MTD OCCUPANCY SENSOR
$OS	LINE VOLTAGE WALL MTD OCCUPANCY SENSOR/SWITCH
VS	CLG MTD VACANCY SENSOR
$VS	LINE VOLTAGE WALL MTD VACANCY SENSOR/SWITCH

GENERAL NOTES - EXISTING CONDITIONS

1. EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS.

2. VISIT THE SITE PRIOR TO BID AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.

3. NOTIFY THE ENGINEER WHERE EXISTING CONDITIONS ARE IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THE CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT. PROVIDE ADDITIONAL LABOR AND MATERIALS DURING CONSTRUCTION AS NECESSARY TO:

   A. ACCOMMODATE EXISTING CONDITIONS FOR THE INSTALLATION OF NEW WORK.

   B. REPAIR OR REWORK EXISTING SYSTEMS TO REMAIN SO THEY COMPLY WITH THE MINIMUM CODES. PROVIDE A COMPLETE, CODE COMPLIANT AND OPERABLE SYSTEMS AT NO ADDITIONAL COST TO THE OWNER.

2. WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, TAKE EXTREME CARE TO PREVENT DAMAGE DURING REMOVAL AND REINSTALLATION. WHERE DAMAGE OCCURS, REPLACE OR REPAIR THE EQUIPMENT TO THE SATISFACTION OF THE ARCHITECT, AT NO ADDITIONAL COST TO THE OWNER. THOROUGHLY CLEAN, RE-LAMP AND, IF REQUIRED, PAINT ALL ITEMS BEFORE INSTALLING AT THEIR NEW LOCATION. PATCH AND PAINT AREAS AFFECTED BY WORK UNDER THIS CONTRACT TO MATCH ADJACENT WALL OR CEILING FINISH.

3. EXCEPT AS OTHERWISE NOTED, ALL EXISTING ELECTRICAL WORK WHICH WILL NOT BE RENDERED OBSOLETE AND WHICH MAY BE DISTURBED DUE TO ANY CHANGES REQUIRED UNDER THIS CONTRACT SHALL BE RESTORED TO ITS ORIGINAL OPERATING CONDITION. OTHER WORK OR MATERIAL RENDERED OBSOLETE BY THE WORK IN THIS PROJECT SHALL BE COMPLETELY REMOVED. JUNCTION BOXES RECESSED IN WALLS NOT TO BE REUSED SHALL BE PROVIDED WITH BLANK COVERPLATES. ANY CONDUITS STUBBED OUT OF MASONRY SURFACE SHALL BE CUT INTO SURFACE AND PATCHED.

4. WHERE EXISTING ELECTRICAL WORK INTERFERES WITH NEW WORK AND WHERE SUCH INSTALLATIONS ARE TO REMAIN IN USE, THE INSTALLATIONS SHALL BE DISCONNECTED AND RELOCATED AND/OR RECONNECTED TO COORDINATE WITH THE WORK INDICATED ON THE CONTRACT DOCUMENTS AND AS SPECIFIED.

5. ALL EQUIPMENT INDICATED TO REMAIN IN PLACE SHALL REMAIN IN NORMAL OPERATION AT ALL TIMES DURING CONSTRUCTION. IF ANY BRANCH CIRCUIT WIRING FEEDING THIS EQUIPMENT IS DAMAGED DURING CONSTRUCTION, REPLACE WITH NEW BRANCH CIRCUIT WIRING OF THE SAME SIZE AND TYPE AS EXISTING AT NOT COST TO OWNER.

6. UPDATE EXISTING PANELBOARD SCHEDULES TO REFLECT ALL CHANGES MADE DURING THE PROJECT.
7. REMOVE EXISTING POWER, LIGHTING, SYSTEMS MATERIALS AND EQUIPMENT WHICH ARE MADE OBSOLETE OR WHICH INTERFERE WITH THE CONSTRUCTION OF THE PROJECT.

8. REINSTALL ANY SUCH POWER, LIGHTING, SYSTEMS, MATERIALS AND EQUIPMENT WHICH ARE REQUIRED TO REMAIN ACTIVE FOR THE FACILITY TO BE FULLY FUNCTIONAL.

9. ALL RECEPTACLES, DEVICES, LIGHTING, SYSTEMS AND EQUIPMENT NOT SHOWN, AND IN AREAS OUTSIDE OF REMODELING SHALL REMAIN ACTIVE UNLESS OTHERWISE NOTED. FURNISH AND INSTALL ACCESSIBLE JUNCTION BOXES AND REWORK EXISTING CIRCUITS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO RECEPTACLES, DEVICES, LIGHTING, SYSTEMS AND EQUIPMENT.

10. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.

11. WHERE INSTALLING NEW CIRCUIT BREAKERS IN EXISTING PANELBOARDS. PROVIDE SAME MANUFACTURER TYPE, STYLE AND A.I.C. RATING AS EXISTING CIRCUIT BREAKERS IN THE EXISTING PANELBOARD.

12. ALL CONDUIT AND WIRE REMOVED SHALL BE TAKEN BACK TO THE SOURCE OF SUPPLY.

GENERAL NOTES - ELECTRICAL

1. ELECTRICAL WORK, AT A MINIMUM, SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF NFPA 99, NEC ART 517, AND LOCAL ORDINANCES.

2. THE WORK SHALL BE PERFORMED BY AN ELECTRICAL CONTRACTOR LICENSED IN THE STATE OF TEXAS.

3. ELECTRICAL LAYOUT DRAWINGS ARE PARTIALLY DIAGRAMMATIC. INSTALL ELECTRICAL SYSTEMS WITHOUT INTERFERING WITH DUCTS, PIPES, STRUCTURAL STEEL OR OTHER SYSTEMS. LOCATE LIGHTING FIXTURES IN SYMMETRICAL PATTERNS AND IN PROPER ALIGNMENT WITH BUILDING FEATURES EXCEPT WHERE DIMENSIONED ON THE DRAWINGS OR LOCATED ON THE REFLECTED CEILING PLANS.

4. ALL WORK SHALL BE PERFORMED IN SUCH A MANNER TO CREATE MINIMAL POWER OUTAGES FOR THE OWNER. ALL SUCH OUTAGES SHALL BE CAREFULLY COORDINATED WITH THE OWNER SO THAT POWER TO ESSENTIAL SERVICES CAN BE MAINTAINED.

5. PROVIDE ADDITIONAL SUPPORTS FOR SWITCHES, STARTERS, RACEWAYS AND OTHER ELECTRICAL EQUIPMENT WHEREVER THE BUILDING STRUCTURE IS NOT SUITABLE FOR DIRECT MOUNTING.

6. SYMBOLS IN THE LEGEND ARE APPLICABLE GENERALLY. FOR EXACT REQUIREMENTS, REFER TO THE SCHEDULES, LAYOUTS, DETAILS AND TO THE SPECIFICATIONS. THE APPEARANCE OF A PARTICULAR SYMBOL IN THE LEGEND DOES NOT NECESSARILY IMPLY THAT THE ITEM IS INCLUDED IN THE CONTRACT.

7. MOUNT GROUPED DEVICES IN A SINGLE CONTINUOUS GANG BOX. USE PARTITIONS WHERE VOLTAGE BETWEEN EXPOSED LIVE PARTS OF ADJACENT SWITCHES MAY EXCEED 300 VOLTS.

8. SEAL CONDUITS THAT ENTER CONDITIONED AREAS FROM NON-CONDITIONED AREAS TO FORM A TIGHT SEAL.

9. ALL CONDUIT TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS (I.E. EXPOSED STRUCTURAL CEILINGS, BUILDING EXTERIOR WALLS). CONCEAL ALL CONDUITS ABOVE CEILINGS OR WITHIN WALLS AND COUNTERS.

10. ALL NEW DEVICES TO BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED OTHERWISE.

11. WHEN TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.

12. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE.

13. THE FLOOR, WALLS OR CEILING THAT REQUIRE TO BE MODIFIED TO INSTALL NEW DEVICES SHALL BE REPAIRED/PATCHED TO MATCH THE SURROUNDING AREA.

14. VERIFY EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.

15. CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE.

16. LAMPS, BALLASTS AND OTHER MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH ALL DEP AND EPA GUIDELINES.

17. THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT ALL MATERIALS WERE RECYCLED OR DISPOSED OF PROPERLY PER THE GUIDE LINE NOTED ABOVE.

18. PANEL SCHEDULES INDICATE CIRCUIT DESIGNATIONS ONLY. CONTRACTOR TO PROVIDE MATERIALS AS REQUIRED WHEN NEUTRALS ARE SHARED TO COMPLY WITH NEC REQUIREMENTS. ALL SINGLE PHASE MULTIWIRE BRANCH CIRCUITS SHALL BE FED VIA A TWO POLE BREAKER OR TWO SINGLE POLE BREAKERS WITH AN IDENTIFIED HANDLE TIE. ALL THREE PHASE MULTIWIRE BRANCH CIRCUITS SHALL BE FED VIA A THREE POLE BREAKER OR THREE SINGLE POLE BREAKERS WITH AN IDENTIFIED HANDLE TIE.

19. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED BY PHASE OR LINE AND SYSTEM AT ALL TERMINATION, CONNECTION AND SPLICE POINTS. THIS IDENTIFICATION METHOD SHALL BE DOCUMENTED IN A MANNER THAT IS READILY AVAILABLE OR SHALL BE PERMANENTLY POSTED AT EACH BRANCH CIRCUIT PANELBOARD OR SIMILAR DISTRIBUTION EQUIPMENT (PER NEC 210).

THE VOLTAGES INDICATED SHALL BE MARKED AS FOLLOWS:

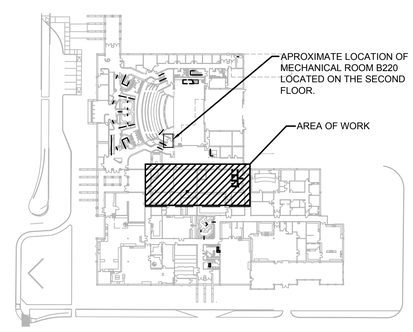
480/277V WIRING	208/120V WIRING
PHASE A - BROWN	PHASE A - BLACK
PHASE B - ORANGE	PHASE B - RED
PHASE C - YELLOW	PHASE C - BLUE
NEUTRAL - GRAY	NEUTRAL - WHITE
GROUND - GREEN WITH YELLOW STRIPE	GROUND - GREEN

20. CONDUCTORS SHALL BE THHN UNLESS OTHERWISE NOTED.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP TYPE	LAMP COLOR TEMP	LAMP CRI	MOUNTING	ELECTRICAL VOLTS	ELECTRICAL VA	MANUFACTURER	CATALOG NUMBER	NOTES
A1	2X2 LENSED LED TROFFER	LED	5000K	90	RECESSED GRID	UNV	76	HEW	50G-S22-L82-850-F-AF12125-DIM-UNV	
B1	4' LED STRIP LIGHT	LED	5000K	90	SUSPENDED	UNV	52	HEW	80-4-L63/850-DIM-UNV	
X1	STANDARD LED EXIT SIGN	LED	N/A	N/A	SURFACE	UNV	10	HEW	EXIT-R-EM-WHT-SDT	1,2
E1	INTERIOR EMERGENCY WALL PACK	LED	N/A	N/A	SURFACE	UNV	10	HEW	EMER/LED-WHT-SDT	

NOTES:
1. VERIFY MOUNTING, NUMBER OF FACES AND ARROW CONFIGURATION WITH PLANS PRIOR TO ORDERING FIXTURES.
2. VERIFY MOUNTING HEIGHT AND ORIENTATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.



1 E001 KEY PLAN
SCALE: NTS

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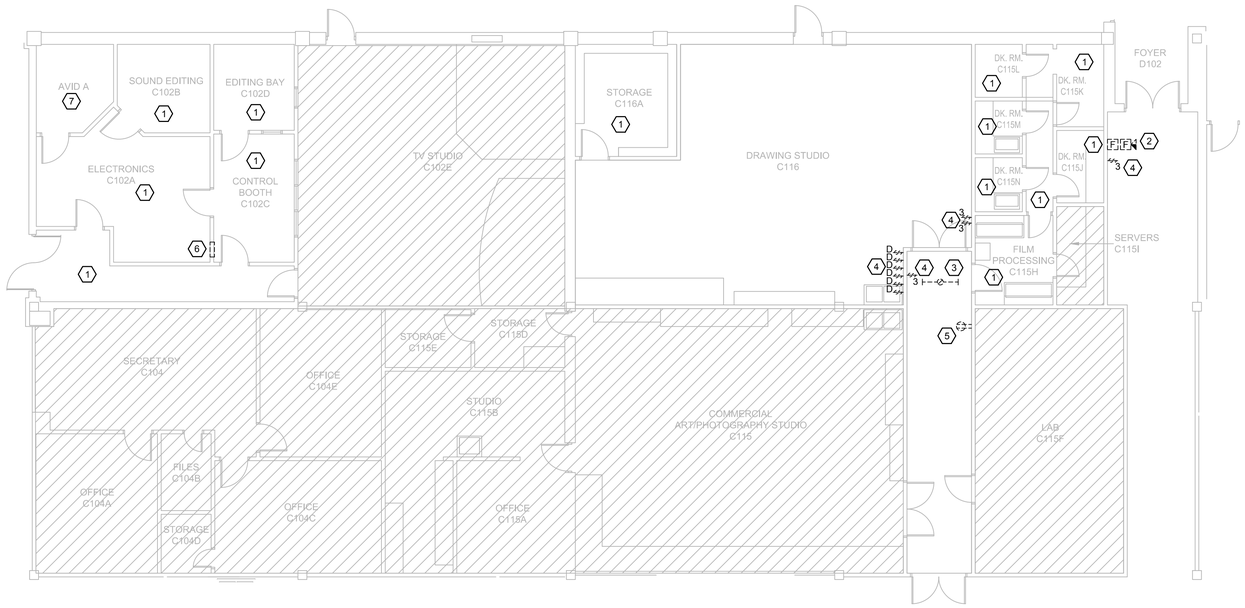

1 ED101 ELECTRICAL DEMOLITION PLAN

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

SHEET NOTES

1. REFER TO SYMBOL LEGEND AND GENERAL NOTES.
2. CONTRACTOR SHALL VISIT PROJECT SITE AND VERIFY EXISTING CONDITIONS PRIOR TO BID.
3. BEFORE DEMOLITION OF ANY FIRE ALARM DEVICES OR WIRING, VERIFY ALL CIRCUITS THAT ARE BEING SERVED OUTSIDE PROJECT SCOPE AREA. VERIFY WITH OWNER BEFORE DISRUPTING ANY SERVICES AFFECTED OUTSIDE PROJECT SCOPE AREA. ANY EXISTING DEVICES OR LIFE SAFETY SYSTEMS THAT ARE DISRUPTED BY DEMOLITION SHALL BE RESTORED TO OPERATION IMMEDIATELY OR WITH IN TIME AGREED UP ON WITH OWNER AND AHJ.
4. WHERE EXISTING EQUIPMENT OR MATERIALS ARE REMOVED OR CHANGED, ALL BRANCH CONDUITS, WHICH NO LONGER ARE IN SERVICE, SHALL BE REMOVED AS DIRECTED BY THE ARCHITECT. IF, IN THE COURSE OF THE WORK, OUTLETS ARE COVERED UP OR OTHERWISE RENDERED INACCESSIBLE, ALL WIRING TO SAME SHALL BE REMOVED TO THE SOURCE. IF A CIRCUIT THAT MUST REMAIN IN SERVICE IS INTERRUPTED THEREBY, IT SHALL BE RECONNECTED BY THE MOST INCONSPICUOUS MEANS SO AS TO REMAIN OPERATIONAL, WITH THE SAME CAPACITY AS BEFORE. ALL BUILDING SURFACES DAMAGED, AND OPENINGS LEFT BY REMOVAL OF BOXES, PIPING OR OTHER EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR. ALL HOLES LEFT IN JUNCTION BOXES, SWITCHES, PANELS, ETC. SHALL BE CLOSED.
5. REMOVE EXISTING SYSTEMS, MATERIALS AND EQUIPMENT WHICH ARE MADE OBSOLETE OR WHICH INTERFERE WITH THE CONSTRUCTION OF THE PROJECT. REINSTALL ANY SUCH SYSTEMS, MATERIALS AND EQUIPMENT WHICH IS REQUIRED TO COMPLETE THE PROJECT.
6. REMOVE EXISTING WORK AS INDICATED ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION.
7. ALL EQUIPMENT REMOVED THAT IS NOT BEING REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED.
8. WHERE EXISTING RACEWAYS THAT ARE NOT TO BE REUSED INTERFERE WITH NEW WORK, THESE RACEWAYS SHALL BE REMOVED BACK TO THE NEAREST ACTIVE JUNCTION BOX OR ACTIVE PULL BOX AND THE OPENINGS BLANKED.
9. MAINTAIN CONTINUITY OF BRANCH CIRCUITS SERVING MULTIPLE ITEMS OF WHICH ONE OR MORE ARE BEING DEMOLISHED. CONDUCTORS AND CONDUITS FOR THOSE ITEMS BEING DEMOLISHED SHALL BE REMOVED AS FAR AS PRACTICAL.
10. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT NOT REUSED OR NOT NECESSARY FOR THE COMPLETION OF THIS PROJECT.
11. COORDINATE ALL DEMOLITION WORK WITH ALL TRADES.
12. PROVIDE CORE DRILLING AND FIRE STOPPING AT ALL CONDUIT PENETRATIONS THROUGH EXISTING FLOOR SLABS AND WALLS TO MAINTAIN A 2-HOUR FIRE RATING. USE UL LISTED METHODS AND MATERIALS.
13. REPAIR AS REQUIRED THE CEILINGS, WALLS AND FLOORS TO MATCH THE SURROUNDING AREAS WHERE ITEMS ARE TO BE REMOVED AND NOT REPLACED.
14. THE CONTRACTOR SHALL COORDINATE BETWEEN THE ARCHITECTURAL AND MECHANICAL DEMOLITION PLANS TO ENSURE ALL DEMOLITION IS COMPLETE.

KEY NOTES ⟨#⟩

1. WITHIN SPACE INDICATED, REMOVE COMPLETELY ALL ASSOCIATED ELECTRICAL COMPONENTS. REMOVE ALL WIRING DEVICES, SWITCHES, LIGHTS, ETC. ENSURE THAT DEVICES UPSTREAM/DOWNSTREAM ARE NOT COMPROMISED. IF SO RECONNECT THEM TO MAINTAIN CURRENT WORKING STATUS. RETAIN CIRCUITS IN THE AREA FOR RE-USE IN NEW WORK.
2. RELOCATE EXISTING FIRE ALARM DEVICE TO ACCOMMODATE THE NEW DOORWAY. FIELD VERIFY NEW LOCATION WITH MSU FIRE MARSHALL.
3. REMOVE EXISTING LIGHT FIXTURE TO ACCOMMODATE RELOCATION OF DOOR IN HALLWAY.
4. RELOCATE EXISTING THREE-WAY SWITCH TO ACCOMMODATE RELOCATION OF DOOR IN HALLWAY. SEE E101 FOR NEW LOCATION.
5. REMOVE EXISTING RECEPTACLE TO ACCOMMODATE RELOCATION OF DOOR IN HALLWAY.
6. REMOVE EXISTING PANEL. PROVIDE JUNCTION BOX TO CAPTURE ALL EXISTING TO REMAIN CIRCUITS AND REROUTE THESE TO NEW PANEL LOCATION. REFER TO E101 FOR NEW LOCATION.
7. REMOVE ALL LIGHTS IN THIS ROOM. RETAIN CIRCUIT FOR REUSE. THE WALLS REMAIN IN THIS ROOM BUT THE WIRING DEVICES WILL NEED TO BE REWORKED TO BE FLUSH WITH NEW WALL TREATMENT.

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2/22/2017

RENOVATIONS TO FAIN FINE ARTS BUILDING

MIDWESTERN STATE UNIVERSITY

3410 TAFT BOULEVARD
WICHITA FALLS, TEXAS

DRAWN BY:

DATE: 3 FEBRUARY 2017

REVISIONS

NO.	DESCRIPTION	DATE

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16782.01

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ED101

KEY NOTES (#)

1. CONNECT NEW RECEPTACLE TO CIRCUIT FEEDING DEVICES IN THIS ROOM ORIGINALLY.
2. RELOCATE EXISTING FIRE ALARM DEVICE TO ACCOMMODATE THE NEW DOORWAY. FIELD VERIFY NEW LOCATION WITH MSU FIRE MARSHALL.
3. PROVIDE JUNCTION BOX FOR DATA/ETHERNET CONNECTION (BY OWNER). PROVIDE 3/4" CONDUIT FROM BOX TO ABOVE CEILING.
4. CONNECT TO EXISTING LIGHTING CIRCUIT AND CONTROLS IN ROOM.
5. RELOCATE AND RECONNECT LIGHT SWITCHES IN NEW LOCATION SHOWN.
6. PROVIDE NEW PANEL BOARD AND FEEDER. PROVIDE A 120/208V, 3 PHASE, 4 WIRE, 100A MAIN CIRCUIT BREAKER, 30 POLE PANEL TO REPLACE THE PANEL REMOVED ON SHEET ED101. REROUTE ALL EXISTING TO REMAIN BRANCH CIRCUITS CIRCUITS FED FROM THIS PANEL TO THIS NEW LOCATION. LABEL PANEL "LC". REFER TO DETAIL 3/E101 FOR ADDITIONAL INFORMATION.
7. CONTRACTOR SHALL PERFORM THE FOLLOWING FIELD INSPECTION AND PROVIDE TO THE OWNER A REPORT OF THE CONDITIONS;
   - 7.1. FIELD VERIFY THAT THE FEEDER AND CIRCUIT BREAKER FEEDING THE TRANSFORMER IS PROPERLY SIZED PER THE NEC
   - 7.2. THAT THE TRANSFORMER IS PROPERLY GROUNDED.
   - 7.3. FIELD VERIFY THAT THE FEEDER AND CIRCUIT BREAKER ON THE SECONDARY SIDE OF THE TRANSFORMER IS PROPERLY SIZED PER THE NEC

SHEET NOTES

1. REFER TO SYMBOL LEGEND AND GENERAL NOTES.
2. REFER TO LIGHT FIXTURE SCHEDULE.
3. REFER TO ARCHITECTURAL DRAWINGS TO COORDINATE EXACT LOCATIONS OF CEILING AND WALL MOUNTED LIGHT FIXTURES. ALL CEILING MOUNTED LIGHT FIXTURES SHALL BE INSTALLED PER ARCHITECTURAL DIMENSIONED DRAWINGS. IF A LOCATION FOR A LIGHT FIXTURE IS NOT SHOWN ON THE DRAWINGS, VERIFY WITH ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS SHALL APPLY TO ALL CEILING TYPES IN ALL AREAS. DO NOT SCALE OR DIMENSION LIGHT FIXTURE LOCATIONS FROM THESE DRAWINGS.
4. ALL LIGHTING CIRCUITS SHALL CONSIST OF A HOT, NEUTRAL, SWITCH-LEGS (AS REQ), & EQUIPMENT GROUND UNLESS OTHERWISE NOTED. USE COPPER WIRING.
5. PROVIDE AN ADDITIONAL UNSWITCHED HOT CONDUCTOR TO BATTERY PACK OF DESIGNATED EMERGENCY EGRESS LIGHT FIXTURE. CONNECT SUCH THAT THE FIXTURE IS CONTROLLED VIA LOCAL SWITCHING (AS INDICATED) WHEN UTILITY POWER IS AVAILABLE AND IMMEDIATELY TRANSFERS TO EMERGENCY OPERATION UPON LOSS OF UTILITY POWER.
6. PROVIDE SEALANT AROUND ALL ELECTRICAL BOXES AND CONDUIT PENETRATIONS TO MINIMIZE SOUND TRANSMISSION.

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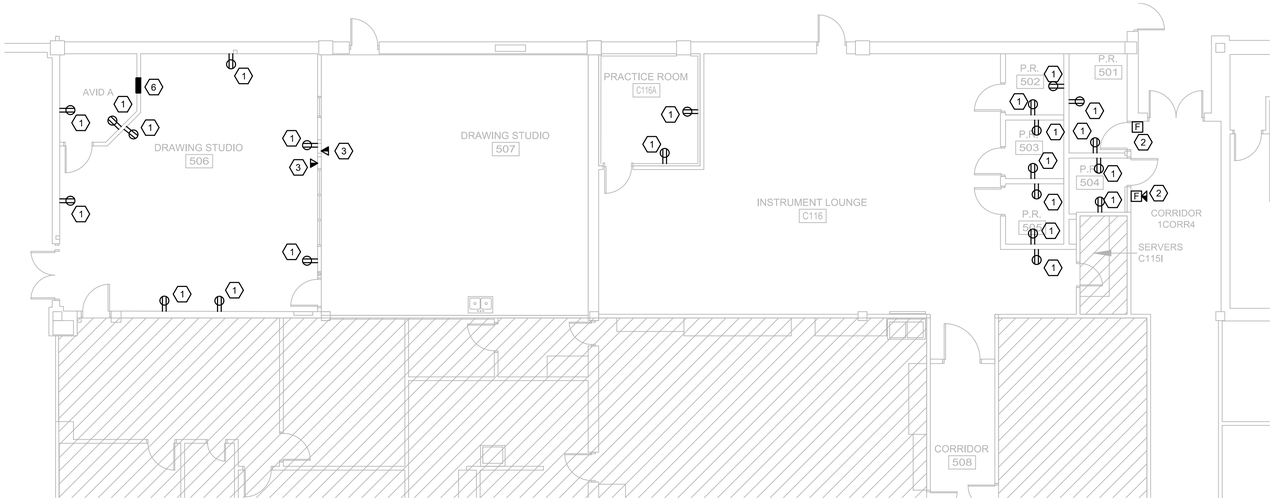
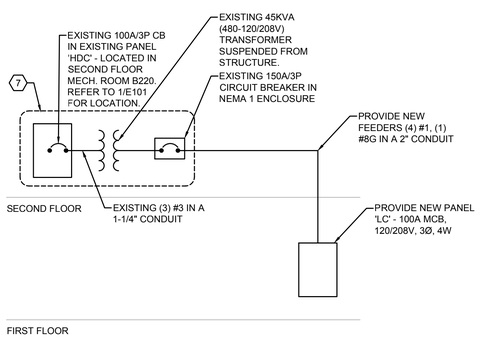
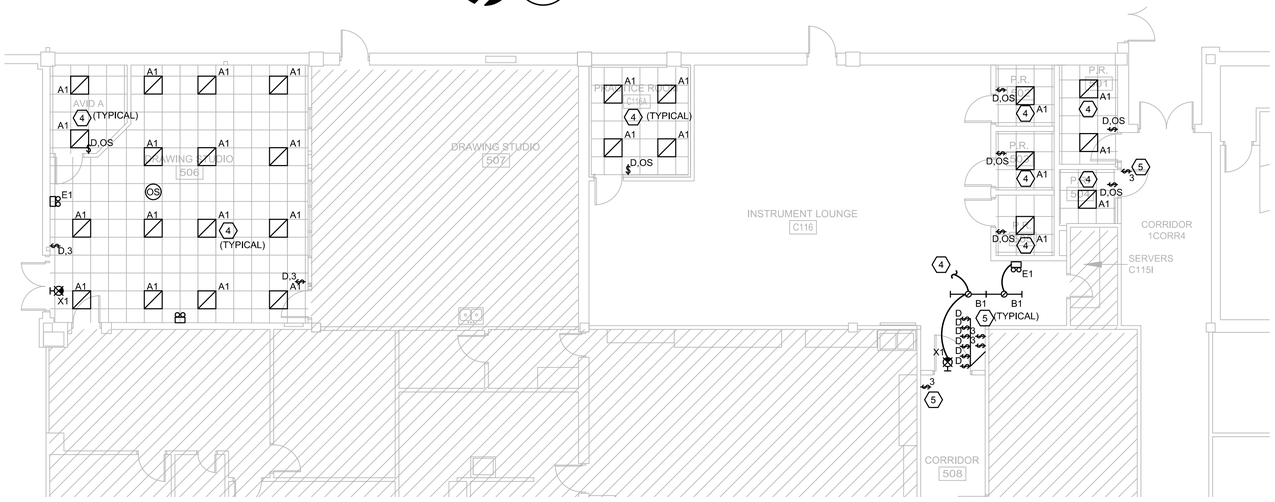
2/22/2017



2 E101 ELECTRICALPOWER PLAN
SCALE: 1/8" = 1'-0"



3 E101 PARTIAL ELECTRICAL RISER DIAGRAM
SCALE: N.T.S.



1 E101 ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

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