STATE OF CONNECTICUT

NED LAMONT GOVERNOR

DEPARTMENT OF ADMINISTRATIVE SERVICES
JOSH GEBALLE
COMMISIONER

SOUTHERN CONNECTICUT STATE UNIVERSITY
JOE BERTOLINO
PRESIDENT

SOUTHERN CONNECTICUT STATE UNIVERSITY
LYMAN CENTER RENOVATIONS
BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
NEW HAVEN, CONNECTICUT

PROJECT NO. BI-RS-357-BP1

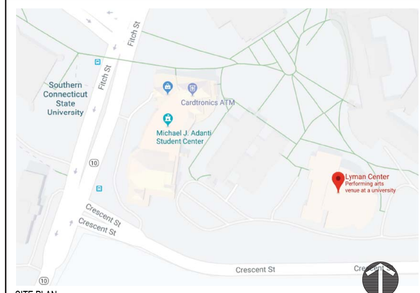
ENGINEER
RZ DESIGN ASSOCIATES, INC.
750 OLD MAIN STREET - SUITE 202
ROCKY HILL, CT 06067
860-436-4336

ARCHITECT
FRIAR ARCHITECTURE, INC.
21 TALCOTT NOTCH ROAD
FARMINGTON, CT 06032
(860)-678-1291

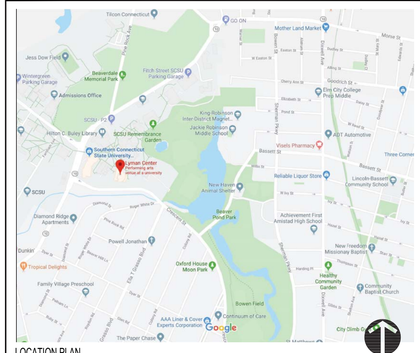
CONTRACT DRAWINGS

NO.	TITLE
	COVER SHEET
R1.1	REFERENCE SHEET / CODE INFORMATION
L1.1	SITE LOGISTICS PLAN
M0.00	ABBREVIATIONS, SYMBOLS & NOTES
M1.00	BASEMENT MECHANICAL PLAN
M1.01	GROUND FLOOR MECHANICAL PLAN
M1.02	ATTIC MECHANICAL PLAN
M1.03	ALTERNATE BASEMENT MECHANICAL PLAN
M2.00	CONTROL DIAGRAMS
M3.00	MECHANICAL DETAILS & SCHEDULES
E0.00	ABBREVIATIONS, SYMBOLS & NOTES
ED1.00	ATTIC ELECTRICAL DEMOLITION PLAN
E1.00	ATTIC ELECTRICAL PLAN

D.C.S BUILDING NUMBER 41824



SITE PLAN



LOCATION PLAN

APPROVALS

DEPT. OF ADMINISTRATIVE SERVICES DATE

AGENCY DATE

CONSTRUCTION NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
2. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION OF DIMENSIONS FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
3. CONTRACT DRAWINGS MAY VARY FROM ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL CORRECT DIMENSIONS OF ALL MATERIALS TO CARRY OUT THE INTENT OF THE CONTRACT DRAWINGS. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD BEFORE ORDERING ANY MATERIALS. CONTRACTOR SHALL NOTIFY ARCHITECT PROMPTLY OF ANY CRITICAL DISCREPANCIES BEFORE PROCEEDING WITH WORK.
4. ALL NEW WORK SHALL BE IMPLEMENTED SO AS TO PROVIDE A SMOOTH AND CONTINUOUS SURFACE WITH ALL EXISTING CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO ACHIEVE THIS REQUIREMENT, EVEN THOUGH PROCEDURES ARE NOT DETAILED FOR EACH SPECIFIC CONDITION OR COMBINATION OF CONDITIONS. QUALITY OF WORKMANSHIP, MATERIALS AND FINISHES SHALL BE EQUAL TO THE LEVEL ESTABLISHED FOR SIMILAR CONSTRUCTION, EXCEPT WHERE EXISTING APPEARANCE IS TO BE MATCHED TO ACHIEVE CONTINUITY.
5. CUTTING AND PATCHING SHALL BE THE RESPONSIBILITY OF THE TRADE WHOSE WORK RESULTS IN THE NEED FOR CUTTING AND PATCHING UNLESS A SPECIFIC CONTRACTOR IS CALLED OUT ON THE DRAWINGS. ALL HOLES LEFT BY REMOVING MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, ETC. SHALL BE PATCHED.
6. UNLESS OTHERWISE NOTED OR DIMENSIONED, NEW PARTITIONS SHALL BE CENTERED ON BUILDING COLUMN GRID OR WINDOW MULLIONS.
7. CONTRACTOR SHALL PROVIDE WOOD BLOCKING AT WALLS AS REQUIRED TO SUPPORT PIPING, CABINETS TV BRACKETS AND RELATED ITEMS.
8. ALL EGRESS DOORS SHALL BE NON-LOCKING IN DIRECTION OF TRAVEL.

DEMOLITION NOTES

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL NATIONAL, STATE, LOCAL CODES & ORDINANCES.
2. THE DEMOLITION PLANS ARE DIAGRAMMATIC AND INTENDED TO SHOW THE GENERAL EXTENT OF THE WORK ONLY. THE CONTRACTOR SHALL INCLUDE ALL DEMOLITION WORK REQUIRED TO ACCOMPLISH THE INTENT OF THE PLANS AND SPECIFICATIONS.
3. ALL DEMOLISHED ITEMS SHALL BE REMOVED FROM BUILDING / SITE UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FOR DELIVERY OF ITEMS NOTED TO REMAIN OWNERS PROPERTY. THE PROJECT SITE / BUILDING SHALL BE CLEANED OF DEBRIS ON A DAILY BASIS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING AND SUPPORT (TEMPORARY OR PERMANENT) FOR ALL PORTIONS OF CONSTRUCTION DURING DEMOLITION AND CONSTRUCTION.
5. ALL ABANDONED MECHANICAL / ELECTRICAL / PLUMBING LINES SHALL BE CAPPED OFF BEHIND FINISHES, UNLESS NOTED OTHERWISE. REFER TO MECHANICAL / ELECTRICAL / PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
6. CONTRACTOR SHALL SAWCUT ALL MASONRY OR CONCRETE OPENINGS INDICATED. MASONRY SHALL BE TOOTHED IN AND / OR RETURNED TO FINISHED OPENING.
7. ALL OPENINGS WHERE EXISTING CONSTRUCTION HAS BEEN REMOVED, AND WHICH ARE NOT NOTED TO REMAIN, SHALL BE FILLED AND / OR PATCHED TO MATCH THE ADJACENT EXISTING OR NEW FINISH, INCLUDING ANY FIRE RATINGS REQUIRED.
8. ALL AREAS OF FLOORS, WALLS AND CEILINGS DISTURBED BY DEMOLITION SHALL BE FILLED, PATCHED OR OTHERWISE REFINISHED TO MATCH EXISTING OR NEW FINISH AS DESIGNATED, INCLUDING ALL REQUIRED RATINGS.
9. CONTRACTOR MUST VERIFY LOCATIONS OF ALL EXISTING STRUCTURAL, MECHANICAL, PLUMBING & ELECTRICAL ELEMENTS PRIOR TO START OF DEMOLITION.

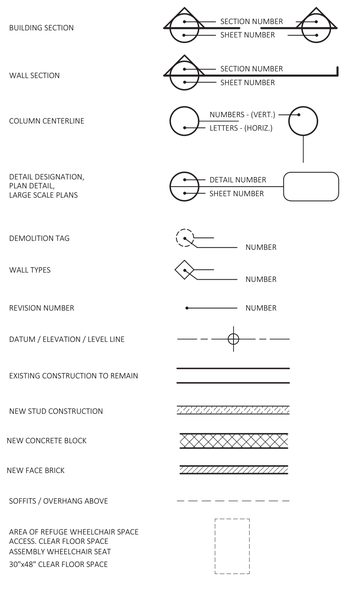
GENERAL NOTES

1. DIMENSION CRITERIA
   - A. FROM FACE OF METAL STUD TO FACE OF METAL STUD.
   - B. FROM FACE OF METAL STUD TO FACE OF CONCRETE MASONRY UNIT.
   - C. FROM FACE OF CONCRETE MASONRY UNIT TO FACE OF CONCRETE MASONRY UNIT.

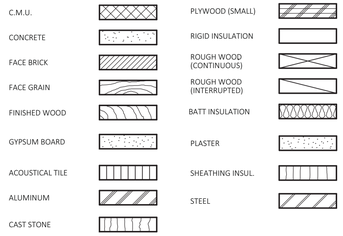
FIRESTOPPING NOTES:

ALL PENETRATION FIRESTOPPING IS REQUIRED FOR ALL BUILDING LEVELS PERTAINING TO THE WORK ASSOCIATED WITH THESE CONTRACT DOCUMENTS. REFER TO SPECIFICATION SECTION 078413 - PENETRATION FIRESTOPPING, ASSOCIATED NOTES & DRAWINGS FOR EXTENT OF WORK

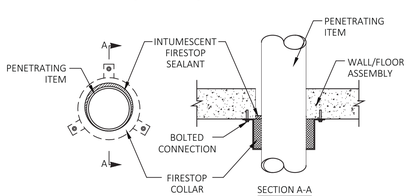
ARCHITECTURAL SYMBOLS



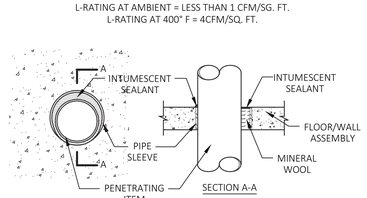
ARCHITECTURAL MATERIALS



F Rating - 3 Hr T Ratings - 0, 2 & 3 Hr (See Item 2)



F-RATING = 3 HR. T-RATING = 0 HR.
L-RATING AT AMBIENT = LESS THAN 1 CFM/SG. FT.
L-RATING AT 400° F = 4CFM/SQ. FT.



UL RATED DETAILS

CODE INFORMATION

CODES TO WHICH THIS PROJECT WAS DESIGNED:

THE INTERNATIONAL EXISTING BUILDING CODE (IEBC)
CLASSIFICATION OF WORK - Section 303, ALTERATION - LEVEL 1

Required Compliance with Chapter 5: Section 504, ALTERATION - LEVEL 2 of the International Existing Building Code (IEBC)

CURRENT 2018 STATE BUILDING CODE:

2015 International Building Code *	2015 International Residential Code *
2015 International Mechanical Code *	2015 International Existing Building Code *
2015 International Plumbing Code *	2009 Accessible and Usable Buildings and Facilities (ICC A117.1-2009)
2015 International Energy Conservation Code *	2017 National Electrical Code (NFPA 70) *
	2013 NFPA 13 - Installation of Sprinkler Systems

* With Connecticut Amendments and General Statute requirements

CODE INFORMATION

THE INTERNATIONAL EXISTING BUILDING CODE (IEBC)

CHAPTER 3: COMPLIANCE METHODS -

CHAPTER 3: Compliance Methods: Work Area Compliance Method per Section 301.1.2

CHAPTER 5: CLASSIFICATION OF WORK - Section 504 Alteration Level 2, 504.1 Scope. Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

504.2 Application - Level 2 Alterations shall comply with the provisions of Chapter 7: Alterations - Level 1 as well as the provisions of Chapter 8: Alterations - Level 2

CHAPTER 7: The Alteration must comply with Chapter 7, Alterations - Level 1: Section 701 General - In Particular Section 701.2 Conformance.

Section 702 Building Elements and Materials - In Particular Section 702.6 Materials and Methods, 702.6.1 International Fuel Gas Code,

Section 703 Fire Protection - Section 704.1, General

Section 707 Structural Section 707.1, General

Section 708 Energy Conservation Section 708.1, Minimum Requirements

801, 801.3, 803, 804, 804.2, 804.4, 805.3.3, 805.9, 808, 808.1, 808.2, 808.3.7, 808.3.4, 809, 809.1, 809.2, 811 811

CHAPTER 8: The Alteration must comply with Chapter 8, Alterations - Level 2: Section 801 General - In Particular Section 801.1 Scope, 801.2 Alteration Level 1 Compliance, 801.3 Compliance.

Section 803 Building Elements and Materials - In Particular Sections 803.1 Scope

Section 804 Fire Protection - In Particular Section 804.2. 4 Other Required Automatic Sprinkler Systems, 804.4 Fire Alarm and Detection,

Section 805 Means of Egress - In Particular Sections 805.1 Scope, 805.2 General, 805.3.3 Main Entrance - Group A, 805.9 Handrails, 805.9.1 Minimum Requirement, 805.7 Means of Egress Lighting, 805.8 Exit Signs

Section 808 Electrical - In Particular Section 808.1 New Installations, 808.2 Existing Installations, 808.3.4 Ground Fault Circuit Interruption, 808.3.7 Clearances for equipment ,

Section 809 Mechanical - In Particular Section 809.1 Reconfigured or Converted Spaces, 809.2 Altered Existing Systems

Section 811 Energy Conservation - In Particular Section 811.1 Minimum Requirements

By complying with the applicable requirements of Chapters 7 & Chapter 8 of the 2015 International Existing Building Code (IEBC) this alteration shall be considered in compliance.

EXISTING BUILDING INFORMATION

Date of Original Construction: 1968

Renovations: 1982 - Fire Code; 1995 - Lighting / HVAC; 2004 - Elec. Room Upgrades

1. GROUP CLASSIFICATION (Primary): A-1 ASSEMBLY
2. CONSTRUCTION TYPE
   - Actual Type Provided: 2B
   - New Construction: None
3. WORK AREA (WORK AREA) Existing Building Areas - HVAC / Electrical:
4. FIRE-RESISTANCE RATED REQUIREMENTS FOR BUILDING ELEMENTS (Table 601)

	2B	
Primary structural frame	0	Hr(s)
Bearing walls: Exterior	0	Hr(s) See Table 602
Bearing walls: Interior	0	Hr(s)
Nonbearing walls and partitions (Exterior)	-	Hr(s) See Table 602
Nonbearing walls and partitions (Interior)	0	Hr(s)
Floor Construction and associated secondary members	0	Hr(s)
Roof Construction and associated secondary members	0	Hr(s)

Refer to Table 601 for all footnotes

5. SPRINKLER PROTECTION: X Provided

ABBREVIATIONS

ABOVE FINISH FLOOR	A.F.F.	JOINT	JT.
ACOUSTIC TILE	A.C.T.	LAVATORY	LAV.
ALTERNATE	ALT.	LIGHTING	LTG.
ANGLE	L		
ARCHITECTURAL/ARCHITECT	ARCH.	MANUFACTURER	MFR.
AT	@	MASONRY	MAS.
		MASONRY OPENING	M.O.
BOARD	BD.	MATERIAL	MATL.
BOTTOM OF	B/O	MAXIMUM	MAX.
BUILDING	BLDG.	MECHANICAL	MECH.
		MINIMUM	MIN.
CEILING	CLG.	MISCELLANEOUS	MISC.
CENTER	CTR.		
CERAMIC FLOOR TILE	CT	ON CENTER	O.C.
CERAMIC TILE BASE	CTB		
CERAMIC WALL TILE	CWT	PAINT	P
CONTROL OR CONSTRUCTION JOINT	C.J.	PAINTED	PTD.
CONTINUOUS	CONT.	PLASTIC LAMINATE	P.LAM.
CORRIDOR	CORR.	PLYWOOD	PLYWD.
		PREFABRICATED	PREFAB.
DEMOLITION	DEMO.	POINT	PT.
DIMENSION	DIM.		
DOWN	DN.	RADIUS	RAD.
		REINFORCED / REINFORCING	REINF.
ELECTRIC / ELECTRICAL	ELEC.	REQUIRED	REQ'D.
ELEVATION	EL.	REVISION, REVISED	REV.
ELEVATOR	ELEV.	ROOM	RM.
EQUAL	EQ.		
EXISTING	EXIST.	SCHEDULE	SCHED.
EXPANSION JOINT	E.J.	SECTION	SECT.
EXPANSION	EXP.	SHEET	SHT.
EXPANSION JOINT	E.J.	SIMILAR	SIM.
		SPECIFICATIONS	SPEC.
FEET, FOOT	FT.	SQUARE FEET (FOOT)	S.F.
FINISH, FINISHED	FIN.	STAINLESS STEEL	ST. STL.
FIXTURE	FIXT.	STANDARD	STD.
FLOOR	FL.	STEEL	STL.
FLOOR DRAIN	FD.	STORAGE	STOR.
		STRUCTURAL	STRUCT.
GYPSUM BOARD	GYP.BD.	SOLID SURFACE	SS
		SUSPEND, SUSPENSION	SUSP.
HANDICAPPED	H.C.	SYSTEM	SYS.
HEIGHT	HGT.		
HOLLOW METAL	HM.	TO BE DETERMINED	TBD
HORIZONTAL	HORIZ.	TEMPERATURE/TEMPORARY	TEMP.
		TOP OF	T/O
INCH OR INCHES	IN. OR "	TYPICAL	TYP.
INFORMATION	INFO.		
INSULATION	INSUL.	UNDERWRITER'S LABORATORIES	U.L.
INTERIOR	INT.		
		VERIFY IN FIELD	V.I.F.
		VERTICAL	VERT.
		VINYL ASBESTOS TILE	V.A.T.
		VINYL COMPOSITION TILE	V.C.T.
		WATER CLOSET	W.C.
		WITH	W/

STATE OF CONNECTICUT · FRIAR ARCHITECTURE, INC. · NO. 113 · CORPORATE PRACTICE of ARCHITECTURE

STATE OF CONNECTICUT · JEFFREY WILLIAM FRIAR · No. 8870 · LICENSED ARCHITECT

drawing title: REFERENCE SHEET / CODE INFORMATION

professional seal

REVISIONS

mark	date	description
	11.11.19	SD SUBMISSION
	1.15.20	CD SUBMISSION
	3.17.20	REVISED CD SUBMISSION
	4.10.20	ISSUED FOR BID

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

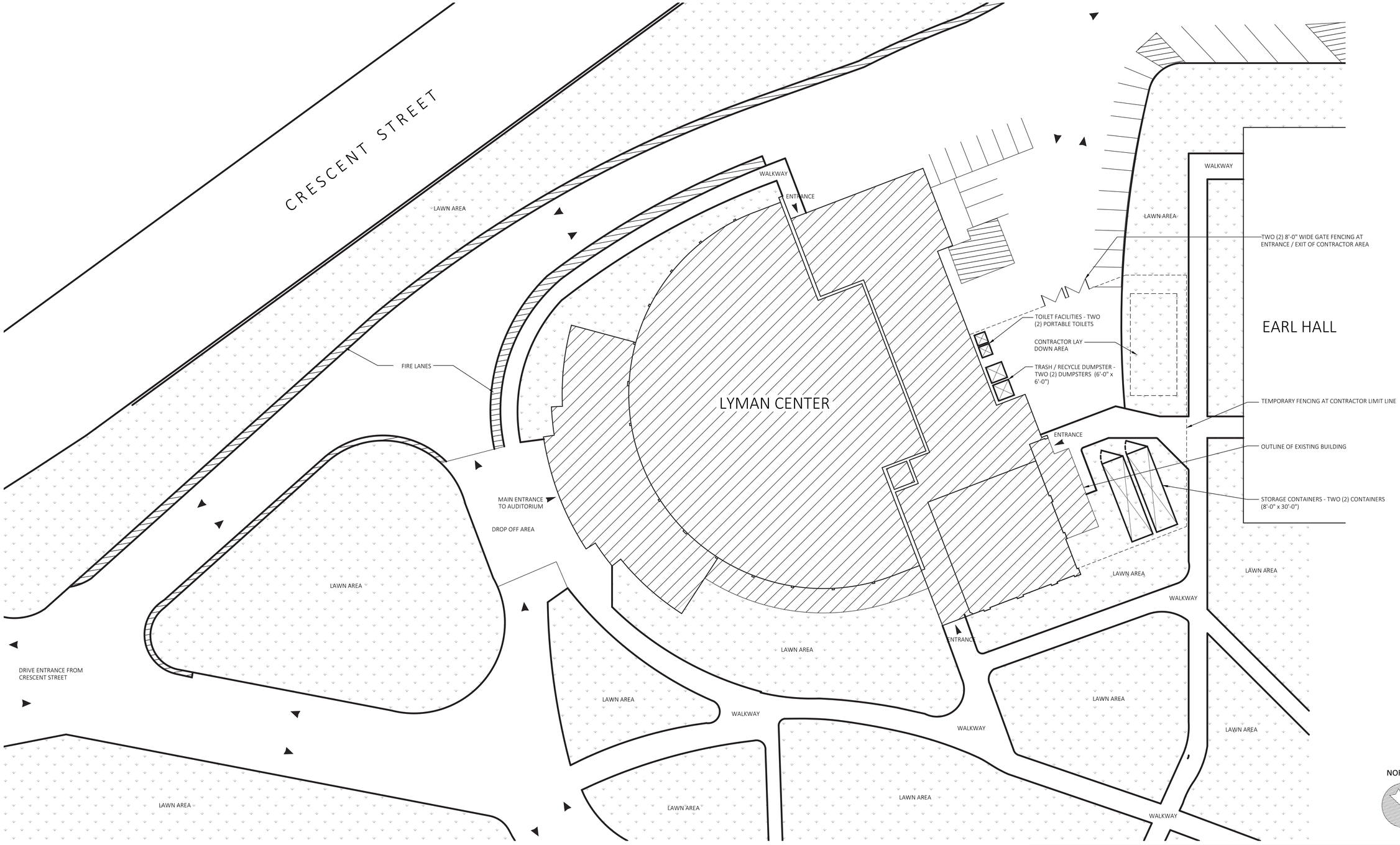
drawing prepared by
FRIAR ARCHITECTURE INC.
21 TALCOTT NOTCH ROAD
FARMINGTON, CONNECTICUT 06032

project
LYMAN CENTER
BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
Southern Connecticut State University
NEW HAVEN, CT 06515

CAD no.

project no.: BI-RS-357-BP1

date: 4.10.2020
scale: Not to Scale
drawn by: PEH
approved by: RWR
drawing no.: **R1.1**



SITE LOGISTICS PLAN

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

STATE OF CONNECTICUT WILLIAM ROACH No. 8870 LICENSED ARCHITECT

STATE OF CONNECTICUT FRIAR ARCHITECTURE INC. No. 113 CORPORATE PRACTICE of ARCHITECTURE

drawing title: SITE LOGISTICS PLAN

professional seal

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drawing prepared by
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BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
Southern Connecticut State University
NEW HAVEN, CT 06515

drawn by: JJM
approved by: RWR
drawing no.: L1.1

CAD no.
project no.: BI-RS-357-BP1

ABBREVIATIONS

a	48" ABOVE FINISHED FLOOR	FD	FIRE DAMPER	OD	OUTSIDE DIAMETER
A	GENERAL SERVICE COMPRESSED AIR	FD/SB	FIRE DAMPER WITH INTEGRAL SECURITY BARS	ORD	OVERFLOW ROOF DRAIN
A/AMP	AMPERE	FD	FLOOR DRAIN	ORWL	OVERFLOW RAIN WATER LEADER
AC	AIR COMPRESSOR	FDC	FIRE DEPARTMENT CONNECTION	P	POLE
AC	ALTERNATING CURRENT	FDV	FIRE DEPARTMENT VALVE	PCD	PUMPED CONDENSATE DRAIN (COOLING)
ACD	AUTOMATIC COOLING CONDENSATE PUMP	FHC	FIRE HOSE CABINET	PCR	PUMPED CONDENSATE RETURN (STEAM)
ACF	AIRFLOW CENTRIFUGAL FAN	FM	FLOW METER	PD	PRESSURE DROP
ACU	AIR CONDITIONING UNIT(S)	FMC	FLEXIBLE METALLIC TUBING	PE	PRIMARY ELECTRIC SERVICE
AD	ACCESS DOOR	FOB	FLAT ON BOTTOM	PF	POWER FACTOR
AD	AREA DRAIN	FOF	FUEL OIL FILL	PF	PROPELLER FAN
AF	ARC FAULT	FOR	FUEL OIL RETURN	PH / Ø	PHASE
AFF	ABOVE FINISHED FLOOR	FOS	FUEL OIL SUPPLY	PIV	POST INDICATOR VALVE
AFG	ABOVE FINISHED GRADE	FOT	FLAT ON TOP	PLEF	PLENUM FAN
AHU	AIR HANDLING UNIT	FOV	FUEL OIL VENT	PLUF	PLUG FAN
AIC	AMPS INTERRUPTING CURRENT	FP	FIRE PUMP	PNL	PANELBOARD
AMB	AMBIENT	FPM	FEET PER MINUTE	PRESS	PRESSURE
ANN	ANNUNCIATOR	FPS	FEET PER SECOND	PRV	PRESSURE REDUCING VALVE
APD	AIR PRESSURE DROP	FS	FLOOR SINK	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	FT	FOOT OR FEET	PT	POTENTIAL TRANSFORMER
ARV	AXIAL ROOF VENTILATOR	FVC	FIRE VALVE CABINET	PVC	POLYVINYL CHLORIDE
AS	AIR SEPARATOR	G	GAS	RA	RETURN AIR
ATC	AUTOMATIC TEMPERATURE CONTROL	GA	GAUGE	RAF	RETURN AIR FAN
ATS	AUTOMATIC TRANSFER SWITCH	GAL	GALLONS	RD	ROOF DRAIN
AV	ACID VENT (CHEMICAL)	GCC	GRAVITY COOLING CONDENSATE	REF	REFRIGERANT PIPING (MULTIPLE PIPES)
AVG	AVERAGE	GF	GROUND FAULT	REF	ROOF EXHAUST FAN
AVTR	ACID VENT THRU ROOF	GND	GROUND	REG	REGISTER
AW	ACID WASTE	GPH	GALLONS PER HOUR	RF	RELIEF FAN
AWG	AMERICAN WIRE GAUGE	GPM	GALLONS PER MINUTE	RGS	RIGID GALVANIZED STEEL CONDUIT
AWT	AVERAGE WATER TEMPERATURE	GR	GRAINS	RH	RELATIVE HUMIDITY
b	42" ABOVE FINISHED FLOOR	GRU	GREASE RECOVERY UNIT	RHC	REHEAT COIL
BDD	BACK DRAFT DAMPER	GW	GREASE WASTE	RHG	REFRIGERANT HOT GAS
BFW	BOILER FEED WATER	GWA	GREASE WASTE ABOVE GRADE	RL	RELOCATED
BHP	BRAKE HORSEPOWER	GWB	GREASE WASTE BURIED	RM	ROOM
BICF	BACKWARD INCLINED CENTRIFUGAL FAN	GWH	GAS WATER HEATER	RMS	ROOT MEAN SQUARED
BSMT	BASEMENT	H	HEIGHT	RO	REVERSE OSMOSIS WATER
BTUH	BRITISH THERMAL UNITS/HOUR	HC	HEATING COIL	RPD	REDUCED PRESSURE DEVICE
C	CONDUIT	H/C	HEATING/COOLING	RPM	REVOLUTIONS PER MINUTE
CB	CIRCUIT BREAKER	HD	HEAD	RTU	ROOF TOP UNIT
CV	COEFFICIENT, VALVE FLOW	HDCP	HANDICAP	RV	RADON VENT
CC	COOLING COIL	HP	HORSEPOWER	RWL	RAIN WATER LEADER
CER/CEG	CEILING EXHAUST REG./GRILLE	HPC	HIGH PRESSURE CONDENSATE	S	SOIL
CFM	CUBIC FEET PER MINUTE	HPG	HIGH PRESSURE GAS	S&R	SUPPLY AND RETURN
CFP	CHEMICAL FEED PUMPS	HPS	HIGH PRESSURE SODIUM	SA	SUPPLY AIR
CHWR	CHILLED WATER RETURN	HPS	HIGH PRESSURE STEAM	SAC	SHOP AIR COMPRESSOR
CHWS	CHILLED WATER SUPPLY	HR	HOUR(S)	SCC	SPRINKLER CONTROL CABINET
CHP	CONSOLE HEAT PUMP	HT	HEAT	SCP	STEAM CONDENSATE PUMP
CI	CAST IRON	HTHW	HIGH TEMPERATURE HOT WATER	SD	SMOKE DAMPER
CKT	CIRCUIT	HTHWR	HIGH TEMPERATURE HOT WATER RETURN	SE	SECONDARY ELECTRIC SERVICE
CLGWTR	COOLING WATER	HTHWS	HIGH TEMPERATURE HOT WATER SUPPLY	SEP	SEWAGE EJECTOR PUMP
CLPS	CLEAN LOW PRESSURE STEAM	HTR	HEATER	SG	STEAM GENERATOR
CLG	CEILING	HUM	HUMIDIFIER	SP	STANDPIPE
CMPS	CLEAN MEDIUM PRESSURE STEAM	HV	HEATING/VENTILATION UNIT	SP	STATIC PRESSURE
CMV	CEILING MOUNTED VENTILATOR	HW	HOT WATER	SP	SUMP PUMP
CO	CLEANOUT	HWR	HOT WATER RETURN	SPDT	SINGLE POLE DOUBLE THROW
CO2	CARBON DIOXIDE	HWRP	HOT WATER RETURN PUMP	SPEC	SPECIFICATION
COMP	COMPRESSOR	HWRR	HOT WATER REVERSE RETURN	SPK	SPRINKLER
COND	CONDENSER	HWS	HOT WATER SUPPLY	SPK/SP	COMBINED SPRINKLER/ STANDPIPE
CONV	CONVECTOR	HX	HEAT EXCHANGER	SPST	SINGLE POLE SINGLE THROW
CP	CONDENSATE PUMP	HZ	FREQUENCY (CYC, PER SEC.)	SQ	SQUARE
CPU	CENTRAL PROCESSING UNIT	ICF	IN-LINE CENTRIFUGAL FAN	SS	STAINLESS STEEL
CRU	COMPUTER ROOM UNIT	ID	INSIDE DIAMETER	ST	STORM
CRV	CENTRIFUGAL ROOF VENTILATOR	IEF	IN-LINE EXHAUST FAN	STD	STANDARD
CWR	CONDENSER WATER RETURN	IG	ISOLATED GROUND	SUCT	SUCTION
CWS	CONDENSER WATER SUPPLY	IN	INCHES	SWBD	SWITCHBOARD
CWV	CENTRIFUGAL WALL VENTILATOR	IN WG	INCHES OF WATER, GAUGE (PRESS.)	SW	SWITCH
CT	COOLING TOWER	IW	INDIRECT WASTE	SWH	STEAM WATER HEATER
CT	CURRENT TRANSFORMER	JB	JUNCTION BOX	TAF	TUBEAXIAL FAN
CU	CONDENSING UNIT	JP	JOCKEY PUMP	TAG	IDENTIFICATION OF EQUIPMENT
CU FT	CUBIC FEET	KEF	KITCHEN EXHAUST FAN	TD	TEMPERATURE DIFFERENCE
CUH	CABINET UNIT HEATER	KHWST	KITCHEN HOT WATER STORAGE TANK	TEL	TELECOMMUNICATIONS SERVICE
CV	CONSTANT VOLUME	KVA	KILOVOLT AMPERE	TEMP	TEMPERATURE
CW	COLD WATER	KW	KILOWATT	TMV	THERMOSTATIC MIXING VALVE
dB	DECIBEL	KWH	KITCHEN WATER HEATER	TP	TAMPERPROOF
D	DEPTH	L	LENGTH	TP	TRAP PRIMER
DB	DRY BULB TEMPERATURE	LA	LABORATORY COMPRESSED AIR	TS	TELEPHONE SERVICE
DC	DIRECT CURRENT	LAT	LEAVING AIR TEMPERATURE	TSP	TOTAL STATIC PRESSURE
DCV	DOUBLE CHECK VALVE	LAV	LAVATORY	TSTAT	THERMOSTAT
DE	DEIONIZED PROCESS WATER	LBS/HR	POUNDS PER HOUR	TV	TELEVISION
DEG or °	DEGREE	LF	LINEAR FEET	TVS	TRANSIENT VOLTAGE SUPPRESSOR
DET	DOMESTIC EXPANSION TANK (PLUMBING)	LG	LABORATORY GAS	TW	TEMPERED WATER
DI	DISTILLED WATER	LIQ	LIQUID	TWR	TEMPERED WATER RETURN
DIA or Ø	DIAMETER	LPC	LOW PRESSURE CONDENSATE	TX	TRANSFORMER
DN	DOWN	LPS	LOW PRESSURE STEAM	TYP	TYPICAL
DP	DIFFERENTIAL PRESSURE	LV	LABORATORY VACUUM	UF	UNFUSED
DSA	DUCT SOUND ATTENUATORS	LWT	LEAVING WATER TEMPERATURE	UH	UNIT HEATER
DWBP	DOMESTIC WATER BOOSTER PUMP	MA	MEDICAL COMPRESSED AIR	UPF	UPBLAST PROPELLER ROOF EXHAUST FAN
DWG	DRAWING	MA	MILLIAMPERE	UR	URINAL
DX	DIRECT EXPANSION	MA	MIXED AIR	USF	UTILITY SET FAN
EA	EXHAUST AIR	MAGP	MASTER ALARM GAS PANEL	V	VENT
EAT	ENTERING AIR TEMPERATURE	MAX	MAXIMUM	V	VOLTAGE
EBR	ELECTRIC BASEBOARD RADIATION	MBH	BTU PER HOUR (THOUSAND)	VA	VOLT AMPERE
EDR	EQUIVALENT DIRECT RADIATION	MC	METAL CLAD CABLE	VAC	VACUUM
EF	EXHAUST FAN	MCC	MOTOR CONTROL CENTER	VAF	VANEAXIAL FAN
EFF	EFFICIENCY	MD	MOTORIZED DAMPER	VAV	VARIABLE AIR VOLUME
EHC	ELECTRICAL HEATING CABLES	MECH	MECHANICAL	VD	VOLUME DAMPER
ELEC	ELECTRICAL	MFF	MIXED FLOW FAN	VEL	VELOCITY
ELEV	ELEVATOR	MFR	MANUFACTURER	VFC	VARIABLE FREQUENCY CONTROLLER
EM	EMERGENCY	MH	METAL HALIDE	VIF	VERIFY IN FIELD
EM/NL	EMERGENCY/NIGHT LIGHT WALK-THRU	MIN	MINIMUM	VOL	VOLUME
EMT	ELECTRIC METALLIC TUBING	MLO	MAIN LUGS ONLY	VTR	VENT THRU ROOF
ESP	EXTERNAL STATIC PRESSURE	MPC	MEDIUM PRESSURE CONDENSATE	W	WASTE
ET	EXPANSION TANK (HVAC)	MPS	MEDIUM PRESSURE STEAM	W	WATT
ETR	EXISTING TO REMAIN	MUAU	MAKE UP AIR UNIT	WB	WET BULB TEMPERATURE
ETP	ELECTRIC TRAP PRIMER	MV	MEDICAL VACUUM	WC	WATER CLOSET
EUH	ELECTRIC UNIT HEATER	N2	NITROGEN	WEF	WALL EXHAUST FAN
EVAP	EVAPORATOR	N2O	NITROUS OXIDE	WG	WIREGUARD
EWB	ENTERING WET BULB TEMPERATURE	N/A	NOT APPLICABLE	WH	WALL HYDRANT (HOSE BIBB)
EWC	ELECTRIC WATER COOLER	N.C.	NORMALLY CLOSED	WHA	WATER HAMMER ARRESTER
EWH	ELECTRIC WATER HEATER	NEC	NATIONAL ELECTRICAL CODE	WI	WIDTH
EWT	ENTERING WATER TEMPERATURE	NIC	NOT IN CONTRACT	WP	WEATHERPROOF
EXH	EXHAUST	NL	NIGHT LIGHT WALK-THRU	WPD	WATER PRESSURE DROP
EXP	EXPANSION	N.O.	NORMALLY OPEN	WTG	WALL TRANSFER GRILLE
F	FAHRENHEIT	NTS	NOT TO SCALE	WTR	WATER
FA	FIRE ALARM	O	OXYGEN	WV	WASTE AND VENT COMBINATION
FC	FOOT CANDLE	OA	OUTSIDE AIR	WWM	WELDED WIRE MESH
FCCF	FORWARD CURVE CENTRIFUGAL FAN			ZVB	MEDICAL GAS ZONE VALVE BOX
FCU	FAN COIL UNIT				

FITTINGS AND VALVES

	PIPE ANCHOR
	STRAINER OR STRAINER WITH BLOW-DOWN VALVE HOSE END, CAP AND CHAIN
	"P" TRAP
	PIPE TEE DOWN
	IN-LINE EXPANSION COMPENSATOR
	STEEL PENETRATION/PIPE SLEEVE
	PIPE ELBOW UP OR PIPE TEE UP
	PIPE ELBOW DOWN
	COMPANION FLANGE
	PIPE CAP OR CAPPED END OF PIPE
	UNION
	PIPE GUIDES
	PUMP
	WATER HAMMER ARRESTOR
	TAKEOFF FROM TOP OF MAIN PIPE
	TAKEOFF FROM BOTTOM OF MAIN PIPE
	DIRECTION OF FLUID FLOW
	VALVE ON RISER
	VALVE ON DROP
	AIR VENT
	PIPE DROP WITH VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	BALL VALVE
	CALIBRATED BALANCING VALVE
	SHUT-OFF VALVE (SEE SPECIFICATIONS FOR APPLICATION TYPE)
	BUTTERFLY VALVE
	CHECK VALVE
T	TEMPERATURE SENSOR WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
T	TEMPERATURE GAUGE WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
	THERMOMETER WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
P	PRESSURE GAUGE
	FLEXIBLE CONNECTOR

GENERAL SYMBOLS

	THICK, DARK SOLID LINES INDICATE NEW OR RELOCATED ITEMS OR NEW RACEWAY AND WIRING
	THIN, LIGHT LINES INDICATE EXISTING ITEMS OR RACEWAY TO REMAIN IN PLACE AND BE REUSED
	CROSS HATCHED LINES INDICATE EXISTING ITEMS TO BE REMOVED
POC	POINT OF NEW TO EXISTING CONNECTION, INCLUDING TRANSITIONS
POD	POINT OF DISCONNECT FOR ITEMS BEING REMOVED

HVAC SYMBOLS

	RECTANGULAR, FLAT OVAL OR ROUND AIR DUCT
	AIR DUCT WITH ACOUSTICAL LINING
	SUPPLY AIR DUCT UP
	SUPPLY AIR DUCT DOWN
	RETURN AIR DUCT UP
	RETURN AIR DUCT DOWN
	EXHAUST AIR DUCT UP
	EXHAUST AIR DUCT DOWN
	TURNING VANES
AD / AD	ACCESS DOOR
	FLEXIBLE DUCT CONNECTION
	CEILING SUPPLY DIFFUSERS
	CEILING RETURN / EXHAUST GRILLE
	HARD DUCTED DIFFUSER OR GRILLE WITH FULL SIZE BOTTOM TAKE-OFF
	DIRECTION OF SUPPLY OR OUTDOOR AIRFLOW
	DIRECTION OF RETURN OR EXHAUST AIRFLOW
	DOOR UNDERCUT
BDD	BACK DRAFT DAMPER
VD	VOLUME DAMPER
XXX	SUPPLY PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
XXX	RETURN PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
DM	MOTORIZED DAMPER
H	HUMIDIFIER TUBE/PANEL
DS	DUCT SMOKE DETECTOR WITH REMOTE INDICATING LIGHT AND TEST SWITCH
SP	DUCT STATIC PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SENSOR
VFC	VARIABLE FREQUENCY CONTROLLER
SA	DUCT SOUND ATTENUATOR
T	ROOM THERMOSTAT
C	CARBON DIOXIDE SENSOR
H	HUMIDISTAT
TS	DUCT MOUNTED TEMPERATURE SENSOR

DUCT SIZING

20x12	RECTANGULAR DUCT
20/12	FLAT OVAL DUCT
20"ø	ROUND DUCT

GENERAL NOTES

GENERAL

1. THE INTENT OF THESE DOCUMENTS IS FOR THE MECHANICAL TRADE TO FURNISH AND INSTALL COMPLETE MECHANICAL SYSTEMS. THE SPECIFIED SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, CALIBRATED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
2. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
3. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST.
4. REFER TO THE DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF VARIOUS EQUIPMENT. ALL SUCH EQUIPMENT AND EQUIPMENT COLORS AND FINISHES SHALL BE COORDINATED WITH THE ENGINEER; MOUNTING HEIGHTS SHALL BE APPROVED BY THE ENGINEER.
5. PERFORM ALL WORK IN COMPLIANCE WITH THE SPECIFICATIONS, APPLICABLE CODES, ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION; THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE; IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
6. INSTALL ALL EQUIPMENT IN ACCESSIBLE LOCATIONS.
7. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER; CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
8. PROVIDE THE REQUIRED/SPECIFIED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS. SEE SPECIFICATION SECTION 230500.
9. TEST AND BALANCE EXISTING AUDITORIUM AIR HANDLING UNIT AND NEW EXHAUST FANS. PROVIDE ADDITIONAL TESTS AS REQUIRED BY THE SPECIFICATIONS.
10. DO NOT INSTALL PIPING OR DUCTWORK OVER ELECTRICAL PANELS OR TRANSFORMERS.
11. PROVIDE ADDITIONAL TRANSITIONS AND OFFSETS IN ALL PIPING, DUCTWORK OR CONDUIT FOR COORDINATION WITH BUILDING STRUCTURE AND CONSTRUCTION.

RENOVATION

1. THIS PROJECT INVOLVES THE RENOVATION OF AN EXISTING FACILITY; BEFORE SUBMITTING THE BID, CONTRACTORS SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH THE PROJECT IS TO BE COMPLETED.
2. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY DEVICE, APPURTENANCE, PIPE, WIRE OR CONDUIT TO BE REMOVED. MEP EQUIPMENT, UNITS, AND SYSTEMS NOT BEING REUSED, SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED HANGERS, SUPPORTS, BASES, PADS, PIPES, DUCTS, CONDUITS, WIRES, INSULATION, AND CONTROLS BACK TO THE POINT OF ORIGIN.
3. EQUIPMENT, PIPING, OR CONDUIT SHALL NOT BE ABANDONED IN-PLACE UNLESS SPECIFICALLY SO NOTED.
4. PROPERLY DISPOSE OF DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES, REGULATIONS, AND DEEP STANDARDS; TURN OVER TO THE OWNER, EQUIPMENT SO INDICATED.
5. RELOCATE EXISTING EQUIPMENT, DEVICES, PIPING, WIRING, AND RELATED SYSTEMS AS REQUIRED FOR CONSTRUCTION PURPOSES. ALL EXISTING SYSTEMS SHALL BE FULLY OPERATIONAL, INCLUDING RECONNECTION TO SERVICES AND UPGRADED SYSTEMS. ALL RELOCATED EQUIPMENT SHALL BE PROTECTED DURING CONSTRUCTION.
6. PROVIDE TEMPORARY CONNECTIONS AND SYSTEM MODIFICATIONS AS REQUIRED FOR CONSTRUCTION AND PHASING PURPOSES.
7. INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHEN NECESSARY. COORDINATE WITH GENERAL CONTRACTOR FOR PHASING REQUIREMENTS.
8. ALL EXISTING EQUIPMENT, FIXTURES, AND DEVICES TO BE REMOVED AND RELOCATED SHALL BE FIELD VERIFIED FOR EXACT QUANTITY AND CONDITION; KEEP AN ACCURATE RECORD OF STORED EQUIPMENT AND ITS CONDITION.
9. RE-BALANCE NEW AND EXISTING MECHANICAL AND ELECTRICAL SYSTEMS ASSOCIATED WITH THE RENOVATION, INCLUDING RENOVATED AREAS AND AREAS AFFECTED BY SYSTEM MODIFICATIONS.
10. SYSTEMS REQUIRING TO REMAIN IN OPERATION DURING DEMOLITION AND RENOVATION SHALL BE CAREFULLY PROTECTED FROM DAMAGE AND CONTAMINATION BY THE CONSTRUCTION PROCESS.

drawing title: ABBREVIATIONS, SYMBOLS & NOTES

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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REVISIONS

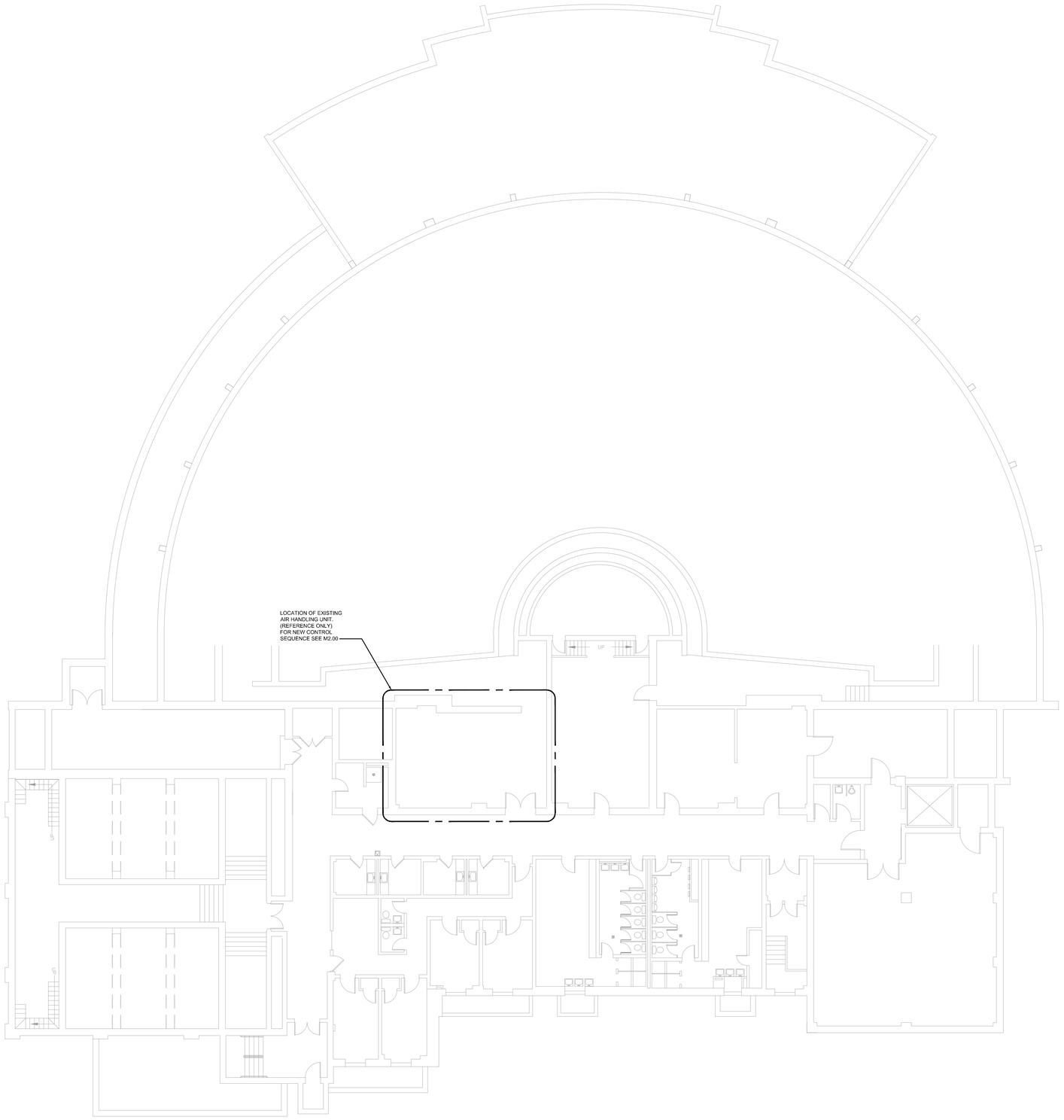
mark	date	description
	11.11.19	SD SUBMISSION
	1.15.20	CD SUBMISSION
	3.17.20	REVISED CD SUBMISSION
	4.10.20	ISSUED FOR BID

drawing prepared by
RZ DESIGN ASSOCIATES, INC.
750 OLD MAIN STREET SUITE 202
ROCKY HILL, CONNECTICUT 06067

project
LYMAN CENTER
BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
Southern Connecticut State University
NEW HAVEN, CT 06515

CAD no. xxxxxxxxxxxxx.dwg
project no. BI-RS-357-BP1

date 4.10.2020
scale NTS
drawn by WJC
approved by RWC
drawing no. M0.00



1 M1.00 BASEMENT MECHANICAL PLAN
SCALE: 3/32" = 1'-0"

drawing title
BASEMENT MECHANICAL PLAN

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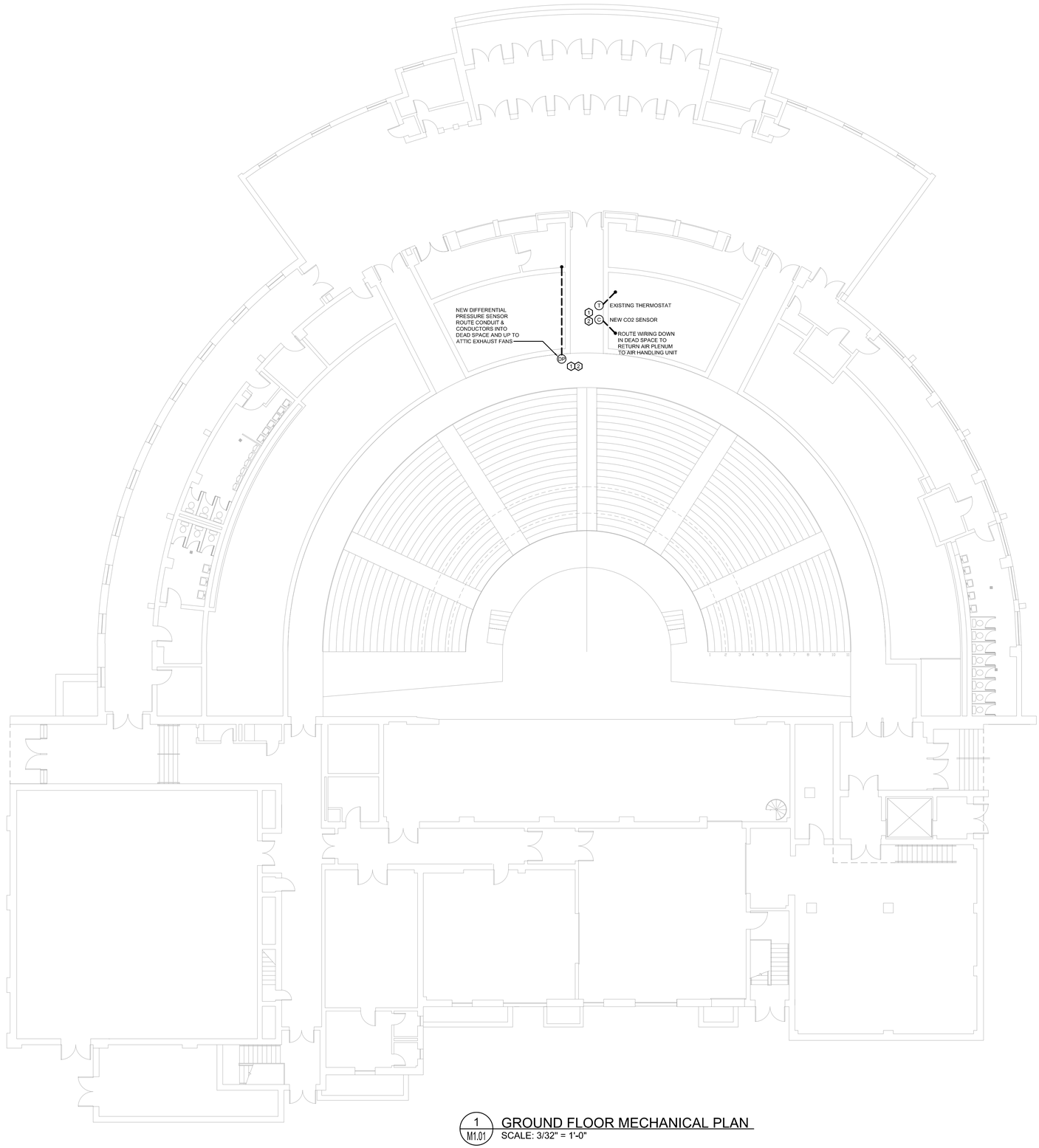

1 / M1.01 GROUND FLOOR MECHANICAL PLAN
SCALE: 3/32" = 1'-0"

NOTES:

1. SEE M2.00 FOR SEQUENCE OF CONTROLS FOR NEW AND EXISTING SENSORS.
2. MOUNT ALL CONTROL DEVICES 60" AFF

drawing title
GROUND FLOOR MECHANICAL PLAN

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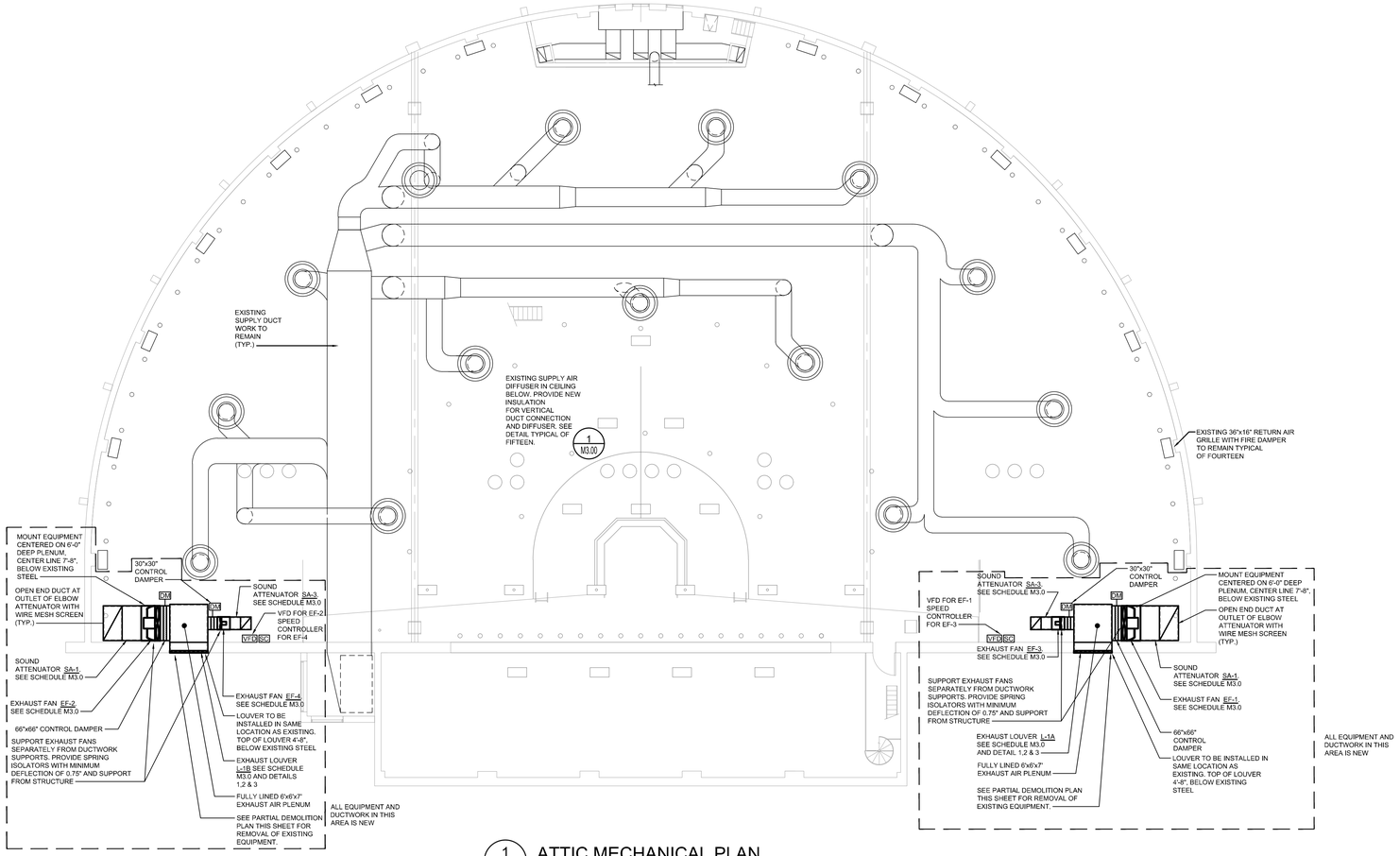
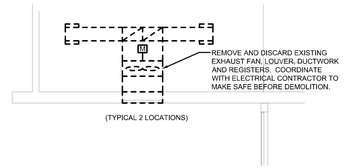


1 M1.02 ATTIC MECHANICAL PLAN
SCALE: 3/32" = 1'-0"



2 M1.02 PARTIAL DEMOLITION PLAN
SCALE: 3/32" = 1'-0"

drawing title
ATTIC MECHANICAL PLAN

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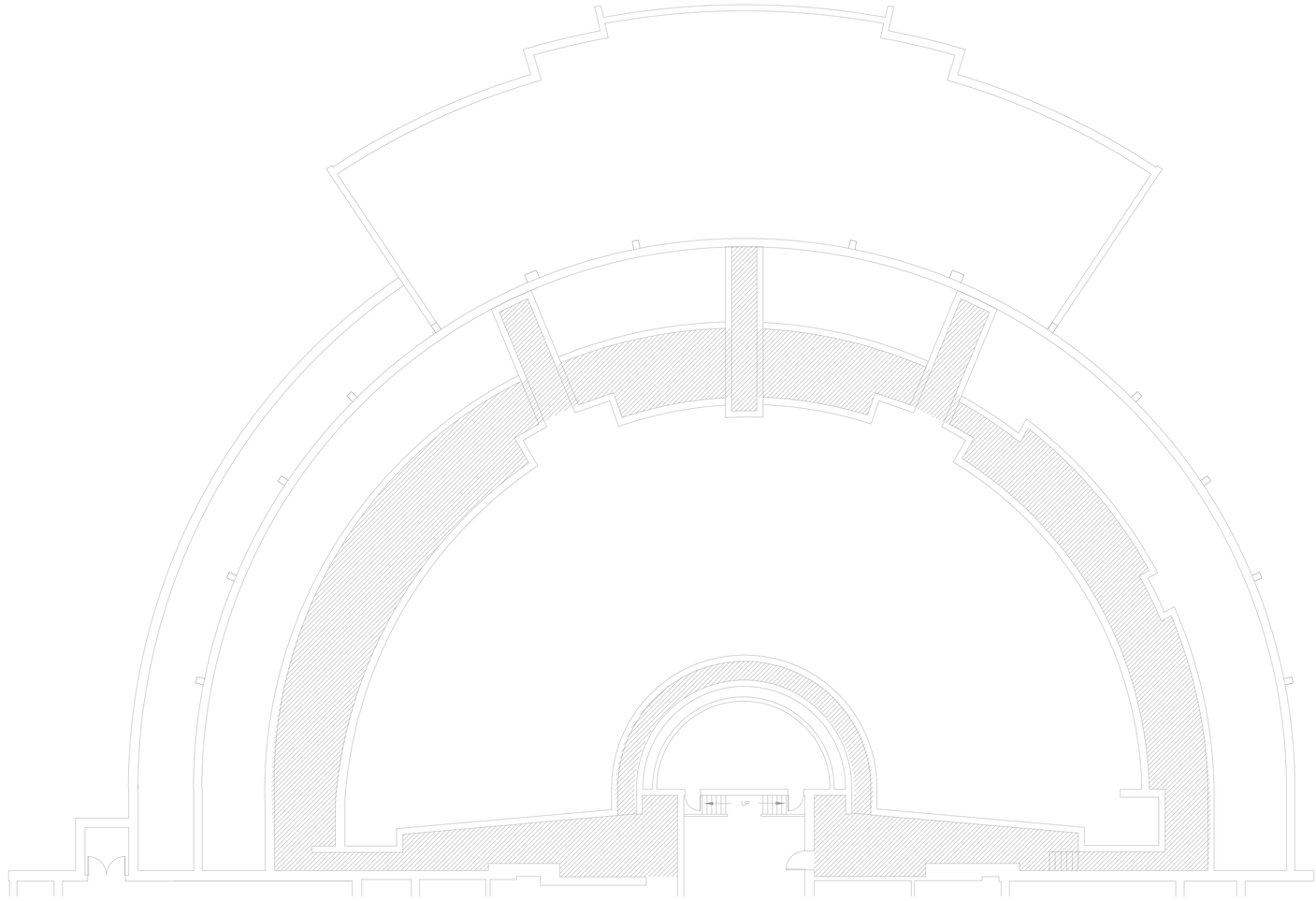

1 M1.03 ALTERNATE BASEMENT MECHANICAL PLAN
SCALE: 3/32" = 1'-0"

SPECIFICATION FOR RETURN AIR TUNNEL CLEANING

THE SCOPE OF WORK IS THE HATCHED AREA SHOWN ON THIS DRAWING. THIS AREA IS IN THE BASEMENT LEVEL OF THE AUDITORIUM AND IS A CONCRETE TUNNEL WITH AN AVERAGE HEIGHT OF 8'0". THE TOTAL ESTIMATED SURFACE AREA (FLOOR, CEILING AND WALLS) IS 13,600 SF.

THE TUNNEL IS USED AS A RETURN AIR PLENUM FOR THE AUDITORIUM HVAC SYSTEM.

WORK SCOPE SHALL EXCLUDE ANY HAZARDOUS MATERIAL REMOVAL, INCLUDING ASBESTOS, LEAD PAINT OR MOLD.

ALL BIDDING CONTRACTORS SHALL ATTEND A MANDATORY WALK THROUGH TO INVESTIGATE THE ACTUAL CONDITIONS OF THE TUNNEL. BID SHALL INCLUDE ALL WORK REQUIRED, INCLUDING COST OF WORKING IN CONFINED SPACES, IF APPLICABLE.

CLEANING SHALL CONSIST OF REMOVAL OF ALL DEBRIS, DUST AND DIRT FOUND ON THE TUNNEL SURFACES, INCLUDING WALLS, FLOORS AND ROOF. CLEANING WILL INCLUDE ALL RETURN AIR ENTRANCES FROM THE AUDITORIUM INTO THE TUNNEL.

CLEANING SHALL BE ACCOMPLISHED WITH COMPRESSED AIR AND/OR HEPA VACUUM CLEANERS. NO LIQUID SOLVENTS OR WATER SHALL BE USED. ALL DEBRIS, DUST AND DIRT SHALL BE IMMEDIATELY REMOVED FROM THE BUILDING AS CLEANING PROGRESSES.

ACCESS TO THE BASEMENT LEVEL WILL BE THROUGH THE ELEVATOR LOCATED ON THE SOUTH SIDE OF THE BUILDING. ALL AREAS OF TRAVEL FROM THE TUNNEL TO THE EXTERIOR OF THE BUILDING SHALL BE PROTECTED BY THIS CONTRACTOR WITH PLASTIC OR OTHER MEANS ACCEPTABLE TO THE UNIVERSITY.

CONTRACTOR SHALL PROVIDE DUMPSTERS PLACED IN PROXIMITY TO THE BUILDING IN AN AREA DIRECTED BY THE UNIVERSITY.

POWER FOR EQUIPMENT WILL BE PROVIDED BY THE UNIVERSITY. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY POWER FROM AN ELECTRIC PANEL DESIGNATED BY THE UNIVERSITY. EXTENSION CORDS FROM THE POWER SOURCE TO THE CLEANING EQUIPMENT WILL BE THE CONTRACTOR'S RESPONSIBILITY. COMPRESSED AIR, IF REQUIRED, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

MINIMAL LIGHTING EXISTS IN THE TUNNEL. ADDITIONAL LIGHTING IF REQUIRED TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

VENTILATION WILL BE PROVIDED BY THE UNIVERSITY THROUGH THE USE OF THE EXISTING AIR HANDLING UNIT, OPERATING AT A LOW ENOUGH SPEED TO PROVIDE VENTILATION WITHOUT INTERFERING WITH THE CLEANING PROCESS.

FILTER REPLACEMENT FOR THE AIR HANDLING UNIT DURING THE CLEANING PROCESS WILL BE THE RESPONSIBILITY OF THIS CONTRACT, AS WELL AS FINAL FILTER REPLACEMENT AFTER THE CLEANING WORK IS COMPLETE. FILTERS SHALL HAVE A MINIMUM MERV RATING OF 11.

AT THE END OF THE CLEANING PROCESS THE ENTIRE AIR HANDLING UNIT INCLUDING COILS, FANS AND CASING SHALL BE THOROUGHLY VACUUMED AND CLEANED OF RESIDUAL DUST AND DEBRIS BY THE CONTRACTOR.

CONTRACTOR'S BID SHALL INCLUDE FIRM PRICE AND ESTIMATED TIME FRAME TO ACCOMPLISH THE WORK SCOPE.

drawing title
ALTERNATE BASEMENT
MECHANICAL PLAN

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drawn by WJC
approved by RWC
drawing no. M1.03

CAD no. xxxxxxxxxxxx.dwg
project no. BI-RS-357-BP1

SEQUENCE OF OPERATION

Parameters

Maximum Occupancy: 1600
Total Square Footage: 17,500
Design CFM: 38,000
Minimum Outside Air: 1900 (5%)
Design Outside Air: 9000

Scheduling:

The Building Management System (BMS) shall determine through operator input the schedules of the following modes of operation:

1. Unoccupied.
2. Morning warm up
3. Occupied (three modes)

Unoccupied

1. Room thermostat set point to be 60F (adjustable).
2. Outside damper motor (DM1) fully closed.
3. Return air dampers (DM2 and DM3) fully open.
4. Attic exhaust fans (EF-1, EF-2, EF-3 & EF-4) off.
5. Damper motors (DM4, DM5, DM6 & DM7) on all attic exhaust fans closed.
6. Chilled water valve is closed.
7. If room thermostat calls for heat, supply air fan shall cycle on a minimum speed (30% adjustable).
8. On proof of air flow, hot water control valve shall modulate open to maintain set point of supply air temperature sensor (85F adjustable).
9. When room temperature reaches 2F above set point (adjustable), hot water valve will close, and supply fan shall cycle off.

Morning warm up

1. Room thermostat set point to be 70F (adjustable).
2. Outside damper motor (DM1) fully closed.
3. Return air dampers (DM2 and DM3) fully open.
4. Attic exhaust fans (EF-1, EF-2, EF-3 & EF-4) off.
5. Damper motors (DM4, DM5, DM6 & DM7) on all attic exhaust fans closed.
6. Chilled water valve is closed.
7. Supply air fan shall cycle on to maximum speed.
8. On proof of air flow, hot water control valve shall modulate open to maintain set point of supply air temperature sensor (85F adjustable).
9. When room temperature reaches 2F above set point (adjustable), system mode shall index to occupied.
10. BMS shall maintain a record of amount of time required for full morning warm-up to allow adjustment to timing of schedule.

Occupied (Outside temperature below 55F)

1. Room thermostat set point to be 70F.
2. Mixed air temperature sensor (TS3) will modulate outside air damper (DM1) from its minimum position (1900 CFM) and return air dampers (DM2 & DM-3) to maintain set point 55F (adjustable).
3. EF-1 & EF-2 will be off, and damper motors (DM5 & DM7) will be closed.
4. EF-3 & EF-4 will be on, and damper motors (DM4 & DM6) will be open.
5. Differential pressure sensor (DPS) shall maintain the auditorium at a positive pressure (set point 0.1" w.g. adjustable) by adjusting the speed of the EF-3 & EF-4 up from minimum position. Fans will operate in tandem, at the same speed.
6. Carbon dioxide sensor (CO2) in the auditorium shall override outside air damper position to maintain set point (100 ppm over outside ambient level, adjustable).
7. Supply air temperature sensor (TS4) shall modulate hot water control valve to maintain supply air temperature set point (55F, adjustable)
8. Chilled water control valve shall be closed.
9. Room thermostat shall modulate supply air fan variable frequency drive (VFD) from minimum position (30% adjustable) to maintain set point (70F, adjustable).
10. If supply air fan VFD is at minimum position, and room thermostat calls for heating, TS4 set point will incrementally reset upwards until room thermostat is satisfied, First level of reset is through adjustment of return and outside air dampers, maintaining minimum outside CFM and satisfying CO2 sensor set point. Second level of reset is modulation of the hot water control valve.
11. Freeze-stat (FS): If supply air temperature sensor falls below 40F, FS will open return air dampers, close outside air damper, and shut down supply air fan.

Occupied (Outside temperature between 55F & 60F (Economizer mode)

1. Room thermostat set point to be 70F.
2. Outside air damper (DM1) will be fully open and return air dampers (DM2 & DM3) will be fully closed to allow free cooling.
3. EF-1 & EF-2 will be on, and damper motors (DM5 & DM7) will be open.
4. Differential pressure sensor (dps) shall maintain the auditorium at a positive pressure (set point 0.1" w.g. adjustable) by adjusting the speed of the EF-1 & EF-2 up from minimum position. fans will operate in tandem, at the same speed.
5. EF-3 & EF-4 will be off, and damper motors (DM4 & DM6) will be closed.
6. Hot water control valve shall be closed.
7. Chilled water valve shall be closed.
8. Room thermostat shall modulate supply air fan variable frequency drive (VFD) from minimum position (30% adjustable) to maintain set point (70F, adjustable).
9. Temperature reset and mixed air temperature controls will be disabled during economizer operation.

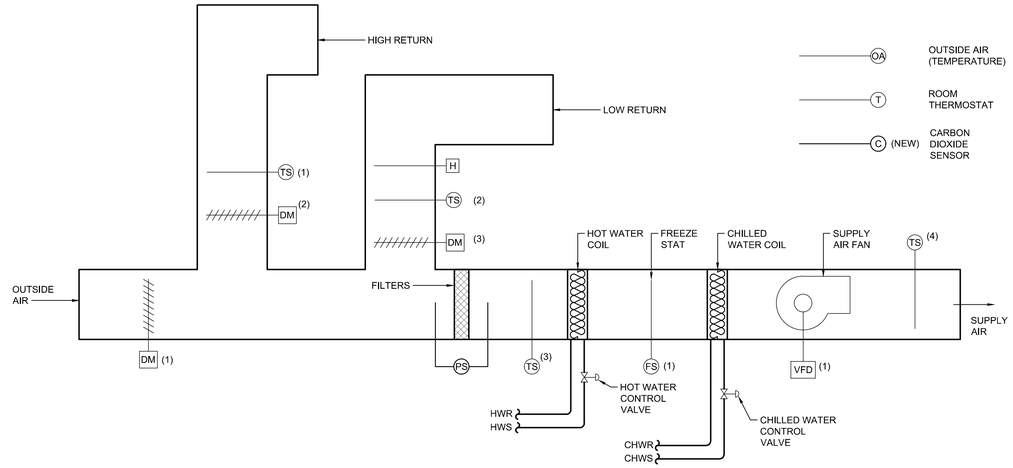
Occupied (Outside temperature above 60F)

1. Room thermostat set point to be 70F.
2. EF-1 & EF-2 will be off, and damper motors (DM5 & DM7) will be closed.
3. EF-3 & EF-4 will be on, and damper motors (DM4 & DM6) will be open.
4. Differential pressure sensor (DPS) shall maintain the auditorium at a positive pressure (set point 0.1" w.g. adjustable) by adjusting the speed of the EF-3 & EF-4 up from minimum position. Fans will operate in tandem, at the same speed.
5. Carbon dioxide sensor (CO2) in the auditorium shall modulate outside air damper position (DM1) open from minimum position to maintain set point (100 PPM over outside ambient level, adjustable).
6. Supply air temperature sensor (TS4) shall modulate chilled water control valve to maintain supply air temperature set point (55F, adjustable)
7. Hot water control valve shall be closed.
8. Room thermostat shall modulate supply air fan variable frequency drive (VFD) from minimum position (30% adjustable) to maintain set point (70F, adjustable).
9. If supply air fan VFD is at maximum position, and room thermostat calls for cooling, TS4 set point will incrementally reset downwards until room thermostat is satisfied.
10. Return air humidistat (H) shall override TS4 and incrementally open chilled water valve if relative humidity in the return ductwork exceeds set point (60% RH, adjustable). When relative humidity reaches 55% (adjustable,) control of chilled water valve shall revert back to TS4.

POINTS LIST

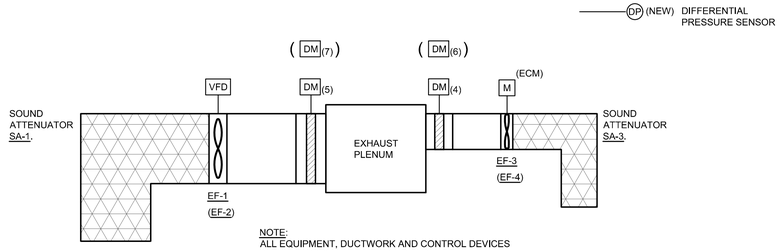
SYMBOL	DESCRIPTION	UNITS	FUNCTION
OA	OUTSIDE AIR TEMPERATURE	DEG F	MONITOR
DM1	OUTSIDE AIR DAMPER	% OPEN	MONITOR
DM2	RETURN AIR DAMPER	% OPEN	MONITOR
DM3	RETURN AIR DAMPER	% OPEN	MONITOR
TS1	RETURN AIR TEMPERATURE	DEG F	MONITOR
TS1	HIGH TEMPERATURE	ALARM-NORMAL	MONITOR
TS1	LOW TEMPERATURE	ALARM-NORMAL	MONITOR
TS2	RETURN AIR TEMPERATURE	DEG F	MONITOR
TS2	HIGH TEMPERATURE	ALARM-NORMAL	MONITOR
TS2	LOW TEMPERATURE	ALARM-NORMAL	MONITOR
H	RETURN AIR HUMIDISTAT SET POINT	% RH	CONTROL
H	RETURN AIR HUMIDITY	% RH	MONITOR
H	HIGH HUMIDITY	ALARM-NORMAL	MONITOR
PS	FILTER DIFFERENTIAL PRESSURE SENSOR	INCHES H20	MONITOR
PS	DIRTY FILTER ALARM	ALARM-NORMAL	MONITOR
TS3	MIXED AIR TEMPERATURE SET POINT	DEG F	CONTROL
TS3	MIXED AIR TEMPERATURE	DEG F	MONITOR
TS3	HIGH TEMPERATURE	ALARM-NORMAL	MONITOR
TS3	LOW TEMPERATURE	ALARM-NORMAL	MONITOR
	HOT WATER CONTROL VALVE	% OPEN	MONITOR
	HOT WATER SUPPLY TEMPERATURE	DEG F	MONITOR
	HOT WATER RETURN TEMPERATURE	DEG F	MONITOR
FS	FREEZESTAT	ALARM-NORMAL	MONITOR
	CHILLED WATER CONTROL VALVE	% OPEN	MONITOR
	CHILLED WATER SUPPLY TEMPERATURE	DEG F	MONITOR
	CHILLED WATER RETURN TEMPERATURE	DEG F	MONITOR
VFD1	SUPPLY FAN VARIABLE FREQUENCY DRIVE	HERTZ	MONITOR
TS4	SUPPLY AIR TEMPERATURE SET POINT	DEG F	CONTROL
TS4	SUPPLY AIR TEMPERATURE	DEG F	MONITOR
TS4	HIGH TEMPERATURE	ALARM-NORMAL	MONITOR
TS4	LOW TEMPERATURE	ALARM-NORMAL	MONITOR
T	ROOM TEMPERATURE SET POINT	DEG F	CONTROL
T	ROOM TEMPERATURE	DEG F	MONITOR
T	HIGH TEMPERATURE	ALARM-NORMAL	MONITOR
T	LOW TEMPERATURE	ALARM-NORMAL	MONITOR
EF-1	ATTIC EXHAUST FAN (ECONOMIZER)	ON-OFF-ALARM	MONITOR
EF-2	ATTIC EXHAUST FAN (ECONOMIZER)	ON-OFF-ALARM	MONITOR
EF-3	ATTIC EXHAUST FAN	ON-OFF-ALARM	MONITOR
EF-3	ATTIC EXHAUST FAN SPEED	HZ	MONITOR
EF-4	ATTIC EXHAUST FAN	ON-OFF-ALARM	MONITOR

SYMBOL	DESCRIPTION	UNITS	FUNCTION
EF-4	ATTIC EXHAUST SPEED	HZ	MONITOR
DM-3	EXHAUST DAMPER	OPEN-CLOSED-ALARM	MONITOR
DM-4	EXHAUST DAMPER	OPEN-CLOSED-ALARM	MONITOR
DM-5	EXHAUST DAMPER	OPEN-CLOSED-ALARM	MONITOR
DM-6	EXHAUST DAMPER	OPEN-CLOSED-ALARM	MONITOR
DPS	SPACE DIFFERENTIAL PRESSURE SET POINT	IN H20	CONTROL
DPS	SPACE DIFFERENTIAL PRESSURE	IN H20	MONITOR
C	CARBON DIOXIDE SENSOR SET POINT	PPM	CONTROL
C	CARBON DIOXIDE SET POINT	PPM	MONITOR
C	HIGH CARBON DIOXIDE	ALARM-NORMAL	MONITOR



NOTE:
ALL EQUIPMENT, DUCTWORK, COILS, PIPING AND CONTROL DEVICES IN THIS DIAGRAM ARE EXISTING, EXCEPT AS NOTED. DEVICES SHALL BE REWIRED (IF REQUIRED) AND REPROGRAMMED TO MEET THE SEQUENCE OF OPERATION DETAILED ON THIS SHEET.

1 / M2.00 CONTROL DIAGRAM AHU
NOT TO SCALE



NOTE:
ALL EQUIPMENT, DUCTWORK AND CONTROL DEVICES IN THIS DIAGRAM ARE NEW AND SHALL BE PROGRAMMED TO MEET THE SEQUENCE OF OPERATION DETAILED ON THIS SHEET.

2 / M2.00 CONTROL DIAGRAM EF-1 & EF-3 (EF-2 & EF-4 IDENTICAL)
NOT TO SCALE

drawing title
CONTROL DIAGRAMS

professional seal

REVISIONS

mark	date	description
	11.11.19	SD SUBMISSION
	1.15.20	CD SUBMISSION
	3.17.20	REVISED CD SUBMISSION
	4.10.20	ISSUED FOR BID

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
RZ DESIGN ASSOCIATES, INC.
750 OLD MAIN STREET SUITE 202
ROCKY HILL, CONNECTICUT 06067

date 4.10.2020
scale 1/4" = 1'-0"
drawn by WJC
approved by RWC
drawing no. M2.00

project
LYMAN CENTER
BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
Southern Connecticut State University
NEW HAVEN, CT 06515

CAD no. xxxxxxxxxxxx.dwg
project no. BI-RS-357-BP1

SILENCER SCHEDULE (VIBRO-ACOUSTICS)

TAG	QUANTITY	SYSTEM	TYPE (NOTE 1)	DIMENSIONS DUCT WIDTH, IN.	DUCT HEIGHT, IN.	C.LINE LENGTH IN.	AIRFLOW, CFM	VELOCITY, FPM (NOTE 2)	IDEAL DP IN.W.G. (NOTE 3)	MAX.DP W/SYS EFF IN.W.G. (NOTE 4)	MINIMUM DYNAMIC INSERTION LOSS, dB (NOTE 5) OCTAVE BAND CENTER FREQUENCY, HZ 63	125	250	500	1000	2000	4000	8000	BASIS OF DESIGN VIBRO-ACOUSTICS MODEL NUMBER	NOTES
SA-1 & SA-2	2		RED	66	66	84	18000	-595	0.04	0.07	6	14	21	34	37	36	29	25	RED-HV-F5	1-8
SA-3 & SA-4	2		RED	30	30	60	4500	-720	0.03	0.06	8	8	10	23	22	23	16	15	RED-UHV-F1	1-8

Notes:
1. TYPE RE - RECTANGULAR ELBOW D - DISSIPATIVE
2. VELOCITY SHOWN IS + (FORWARD FLOW) OR - (REVERSE FLOW) AS DEFINED BY ASTM E477-13.
3. IDEAL PRESSURE DROP AS DETERMINED PER ASTM E477-13 IN A NVLAP-ACCREDITED ACOUSTICAL LABORATORY.
4. PRESSURE DROP PER ASTM E477-13 PLUS SYSTEM EFFECTS FOR NEARBY DUCT ELEMENTS.
5. MINIMUM DYNAMIC INSERTION LOSS DETERMINED PER ASTM E477-13 IN A NVLAP-ACCREDITED ACOUSTICAL LABORATORY.
6. MAXIMUM SELF GENERATED NOISE DETERMINED PER ASTM E477-13 IN A NVLAP-ACCREDITED ACOUSTICAL LABORATORY.
7. NON-BASIS OF DESIGN SILENCER MANUFACTURER SHALL PROVIDE, FOR APPROVAL, PROFESSIONAL ENGINEER STAMPED PRESSURE DROP CALCULATIONS FOR ALL SYSTEMS WITH SILENCERS TO DEMONSTRATE THAT THE RESULTANT INSTALLED PRESSURE DROP WITH SYSTEM EFFECTS DOES NOT EXCEED SCHEDULED VALUES.
8. FOR NON BASIS OF DESIGN PRODUCT SUPPLIRD, CONTRACTOR IS FINANCIALLY RESPONSIBLE TO ENSURE NOISE CONTROL SOLUTION IS DELIVERED TO ACHIEVE SPECIFIED NC LEVEL IN SPACES.

LOUVER SCHEDULE

TAG	MFR	MODEL NUMBER	TYPE	NOMINAL SIZE W	H	D	MINIMUM FREE AREA (SQ FT)	REMARKS
L-1A, L-1B	RUSKIN	ELF445DXH	EXHAUST	72"	72"	4"	19.0	1,2

NOTES:

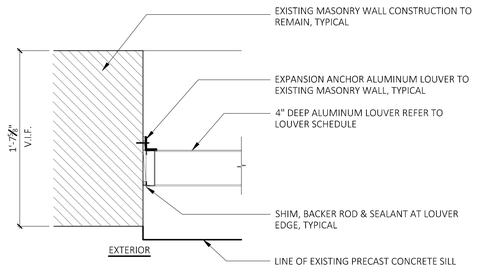
1. STATIONARY, DRAINABLE.
2. PROVIDE BIRDSCREEN.

FAN SCHEDULE

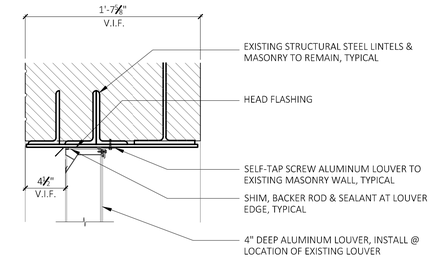
TAG	MFR	MODEL NUMBER	TYPE	CFM	SP (IN H20)	ELECTRICAL V	PH	HP	REMARKS
EF-1, EF-2	COOK	54EW416D06	PROPELLER	18000	0.5	208	3	3	1, 2, 3, 4, 5
EF-3, EF-4	COOK	24XW28D17VF	PROPELLER	4500	0.2	115	1	3/4	1, 2, 3, 4, 5

NOTES:

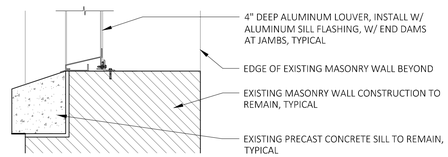
1. DISCONNECT NEMA 1 PRE-WIRE.
2. ACCESS DOOR-BOLT.
3. ALUMINUM WHEEL.
4. MOTOR SHAFT GROUNDING RING.
5. FAN SPEED TO BE CONTROLLED BY VFD'S FURNISHED AND INSTALLED BY ATC CONTRACTOR.
6. FAN SUPPLIED WITH ECM MOTOR. CONTROL OF ECM TO BE BY ATC CONTRACTOR.



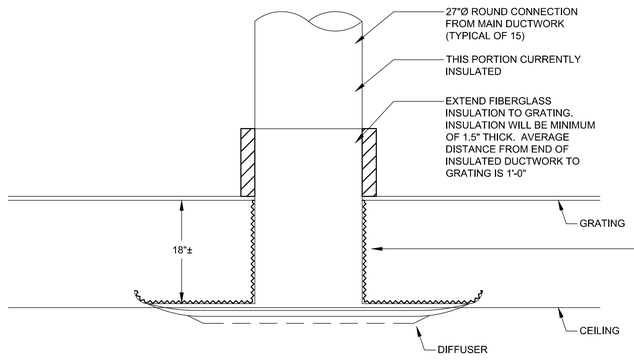
3 / M3.00 JAMB DETAIL
SCALE: 1-1/2" = 1'-0"



3 / M3.00 HEAD DETAIL
SCALE: 1-1/2" = 1'-0"



3 / M3.00 SILL DETAIL
SCALE: 1-1/2"=1'-0"



4 / M3.00 DUCT/DIFFUSER INSTALLATION DETAIL
SCALE: 1/8" = 1'-0"

PROVIDE A MINIMUM OF 3/4" (MINIMUM OF R5) THICK COATING OF CLOSED CELL FOAM INSULATION.
ACCEPTABLE MANUFACTURERS ARE:
KC SPRAY FOAM AND COATINGS
FOAM IT GREEN 602
TOUGH AND FOAM
CLEAN ALL METAL SURFACES OF MOISTURE, DUST AD OIL AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSULATION SHALL BE CLASS 1 - E84 FIRE RETARDANT. INSULATE ALL METAL SURFACES EXPOSED TO ATTIC. INSULATION SHALL BE APPLIED THROUGH OPENINGS IN THE EXISTING GRATING.

drawing title: MECHANICAL DETAILS AND SCHEDULES

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

professional seal

REVISIONS

mark	date	description
	11.11.19	SD SUBMISSION
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scale AS NOTED
drawn by WJC
approved by RWC
drawing no. M3.00

ELECTRICAL SYMBOL LIST

NOTE: ALL MOUNTING HEIGHTS GIVEN ARE TO CENTERLINE OF DEVICE UNLESS NOTED OTHERWISE.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PENDANT MOUNTED LIGHT FIXTURE	M/S	EMERGENCY SWITCH - MOUNT AT 48" A.F.F. - M=MASTER - S=SLAVE
	PENDANT MOUNTED LIGHT FIXTURE	J	JUNCTION BOX
	CEILING MOUNTED LIGHT FIXTURE	J TC	JUNCTION BOX WITH 120V POWER FOR TEMPERATURE CONTROLS
	WALL MOUNTED LIGHT FIXTURE		JUNCTION BOX FOR CATV OUTLET WITH 1 1/4" CONDUIT TO CEILING
	SURFACE MOUNTED LIGHT FIXTURE	M	MOTOR
	RECESSED DOWN LIGHT FIXTURE		NON-FUSED DISCONNECT SWITCH
	RECESSED 2'X4' LIGHT FIXTURE		FUSED DISCONNECT SWITCH
	RECESSED 2'X2' LIGHT FIXTURE		MAGNETIC MOTOR STARTER
	WALL MOUNTED FIXTURE		COMBINATION DISCONNECT SWITCH/MAGNETIC MOTOR STARTER
	LINEAR FIXTURE	WP	WEATHERPROOF NON-FUSED DISCONNECT SWITCH
	SINGLE FACE EXIT SIGN WITH BATTERY AND DIRECTIONAL ARROWS UNIVERSAL MOUNT		
	DOUBLE FACE EXIT SIGN WITH BATTERY AND DIRECTIONAL ARROWS UNIVIVERSAL MOUNT		BRANCH CIRCUIT WIRING
	EMERGENCY BATTERY UNIT WITH TWO DIRECTIONAL HEADS		BRANCH CIRCUIT FEEDER
	EMERGENCY REMOTE, WEATHERPROOF, WITH DOUBLE DIRECTIONAL HEADS		ELECTRICAL GROUND
			FLEXIBLE EQUIPMENT CONNECTION
S	SINGLE POLE TOGGLE SWITCH		FIXED/HARD - WIRED EQUIPMENT CONNECTION
S_3	THREE WAY TOGGLE SWITCH		
S_4	FOUR WAY TOGGLE SWITCH	TC	TIMECLOCK
S_K	SINGLE POLE KEYED TOGGLE SWITCH	C	CONTACTOR
S_{3K}	THREE WAY KEYED TOGGLE SWITCH MOUNT		SECURITY SYSTEM CAMERA
S_{4K}	FOUR WAY KEYED TOGGLE SWITCH MOUNT	DL	SECURITY SYSTEM DOOR LOCK
S_T	THERMAL OVERLOAD SWITCH - MOUNT AT FRACTIONAL HP MOTORS		SECURITY SYSTEM MOTION SENSOR
S_D	DIMMER SWITCH	CR	SECURITY SYSTEM CARD READER
S_{PS}	PROJECTION SCREEN SWITCH	DC	SECURITY SYSTEM DOOR CONTACT
S_{OC}	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH	KP	SECURITY SYSTEM KEY PAD
BZ	DOORBELL BUZZER/CHIME - MOUNT 7'-0" A.F.F.	FS	FLOW SWITCH
OS WS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR	TS	TAMPER SWITCH
PC	PHOTOCELL	PS	PRESSURE SWITCH
			WALL MOUNTED SPEAKER
E/G	EMERGENCY ELECTRIC/GAS SHUTOFF PUSHBUTTON OPERATOR		CEILING MOUNTED SPEAKER
	GROUNDED DUPLEX RECEPTACLE	IC	INTERCOM STATION
A	GROUNDED DUPLEX RECEPTACLE - MOUNT ABOVE COUNTER OR BACKSPLASH 42" A.F.F.		COMBINATION SPEAKER/CLOCK
C	GROUNDED DUPLEX RECEPTACLE - MOUNT AT CEILING		CLOCK
GFI	GROUNDED DUPLEX GFI RECEPTACLE		
WP	GROUNDED DUPLEX GFI RECEPTACLE "WEATHERPROOF WHILE IN-USE" COVER		
S	GROUNDED DUPLEX RECEPTACLE - STUB UP TO 24" A.F.F. ON 1" (MIN) RGS CONDUIT		
PM	VERTICAL PLUGMOLD WITH OUTLETS AT 12" O.C. - 5' LONG		
MW	GROUNDED GFI DUPLEX RECEPTACLE DEDICATED FOR MICROWAVE OVEN - VERIFY EXAC MOUNTING LOCATION		
	GROUNDED DOUBLE DUPLEX RECEPTACLE		
	GROUNDED 240V RECEPTACLE		
USB	GROUNDED GFI DUPLEX RECEPTACLE WITH INTERGRAL USB CHARGING PORT		
	GROUNDED SIMPLEX RECEPTACLE		
	SPECIAL PURPOSE RECEPTACLE - MATCH NEMA CONFIGURATION OF EQUIPMENT SERVED		
	FLOOR MOUNTED DEVICES AS LISTED ABOVE		
	RECESSED MOUNTED PANELBOARD		
	SURFACE MOUNTED PANELBOARD		
PP	COMBINATION POWER/TEL/DATA POLE		
	TELEPHONE/DATA OUTLETS		
WAP	WIRELESS ACCESS POINT (WAP - WIRLESS ACCESS POINT) INCLUDE CAT 5e CABLE		
	MANUAL FIRE ALARM PULL STATION - MOUNT AT 48" A.F.F.		
H	HEAT DETECTOR		
H 200°	HEAT DETECTOR 200°		
S	AREA SMOKE DETECTOR		
S_D	DUCT SMOKE DETECTOR		
S_{CO}	AREA COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR		
S_E	ELEVATOR RETURN SMOKE DETECTOR		
CO	FIRE ALARM CARBON MONOXIDE DETECTOR		
S_{RTS}	FIRE ALARM REMOTE TEST SWITCH		
M	MAGNETIC DOOR HOLDER		
	FIRE ALARM VISUAL ONLY INDICATING UNIT - MOUNT AT 6'-6" A.F.F.		
	FIRE ALARM SPEAKER/VISUAL INDICATING UNIT - MOUNT AT 6'-6" A.F.F.		
R	LIGHTING CONTROL RELAY		
O_{AOM}	FIRE ALARM ADDRESSABLE OUTPUT MODULE		
O_{AIM}	FIRE ALARM ADDRESSABLE INPUT MODULE		
S_{VC}	SPEAKER VOLUME CONTROL		
FACP	FIRE ALARM CONTROL PANEL		
FAA	FIRE ALARM REMOTE ANNUNCIATOR PANEL		
HGMP	HAZARDOUS GAS MONITOR PANEL FURNISHED BY DIV. 25, WIRED BY DIV. 26		
	EMERGENCY "CALL-FOR-AID" BUZZER/LIGHT - MOUNT AT 7'-6" A.F.F.		
S_A	EMERGENCY "CALL-FOR-AID" SWITCH - MOUNT 48" A.F.F. WITH PULL CORD TO 6" A.F.F.		

ELECTRICAL LEGEND NOTES:
1. ALL SYMBOLS MAY NOT BE USED.

ABBREVIATIONS

A	AMPERE	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	MAU	MAKE-UP AIR UNIT
AFG	ABOVE FINISHED GRADE	NL	NIGHT LIGHT
AFI	ARC FAULT CIRCUIT INTERRUPTER	NLE	NEW LOCATION OF EXISTING
AHU	AIR HANDLING UNIT	OHD	OVERHEAD DOOR ELECTRIC OPERATOR
C	CONDUIT	P	POLE
CB	CIRCUIT BREAKER	PE	PRIMARY ELECTRIC SERVICE
CKT	CIRCUIT	PH or Ø	PHASE
CUH	CABINET UNIT HEATER	PNL	PANEL
DAC	DOOR ACCESS CONTROLLER	PVC	POLYVINYL CHLORIDE CONDUIT
EBB	ELECTRIC BASEBOARD	RAP	REMOTE ANNUNCIATOR PANEL
EBU	EMERGENCY BATTERY UNIT	RGS	RIGID GALVANIZED STEEL CONDUIT
EF	EXHAUST FAN	RLE	RELOCATE EXISTING
EM	EMERGENCY POWERED	RTU	ROOFTOP UNIT
EMT	ELECTRICAL METALLIC TUBING	SE	SECONDARY ELECTRIC SERVICE
ETR	EXISTING TO REMAIN	T	TELEPHONE SERVICE
EWC	ELECTRIC WATER COOLER	TV	TELEVISION
EWH	ELECTRIC WATER HEATER	TX	TRANSFORMER
FA	FIRE ALARM	UNO	UNLESS NOTED OTHERWISE
FACP	FIRE ALARM CONTROL PANEL	W	WIRE
FMC	FLEXIBLE METALLIC TUBING	WAP	WIRELESS ACCESS POINT
GFI	GROUND FAULT INTERRUPTER	WP	WEATHER PROOF
IG	ISOLATED GROUND		
JB	JUNCTION BOX		
KVA	KILOVOLT-AMP		

ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT APPLICABLE CODES, ORDINANCES, THE REGULATORY AGENCIES HAVING JURISDICTION AND THE SPECIFICATIONS. THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE, IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
2. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED ELECTRICAL SYSTEM SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
3. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST, REFER TO DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND CONDUITS. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND CONDUITS INSTALLATION WITH ALL THE TRADES BEFORE COMMENCING WORK.
6. EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. WHEN EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING (GYP BOARD OR EQUIVALENT), OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. IF AN ACCESS DOOR IS REQUIRED, IT SHALL BE OF A RATING APPROPRIATE FOR THE WALL/CEILING IN WHICH IT IS TO BE INSTALLED. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ACCESS PANELS FOR ALL DEVICES, REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES OR OTHER APPURTENANCES.
7. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
8. THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY CONDUITS, FITTINGS, TRANSITIONS ETC. AS REQUIRED TO INSTALL CONDUITS AND EQUIPMENT, AND TO AVOID ANY CONFLICTS WITH OTHER TRADES AND THE BUILDING STRUCTURE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO COORDINATE WITH OTHER TRADES OR BECOME FULLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES.
9. DO NOT INSTALL ANY ELECTRICAL PANELS, TRANSFORMERS, SPECIAL EQUIPMENT, BELOW PIPING OR THROUGH MECHANICAL ROOMS, THAT ARE NOT ASSOCIATED WITH OR SERVE THE RESPECTIVE ROOMS. COORDINATE THE LOCATION OF MECHANICAL EQUIPMENT IN THE FIELD AND ADJUST AS NECESSARY.
10. ALL HOMERUNS SHALL BE 2#12, 1#12G., 3/4"C TO 20A-1P CIRCUIT BREAKER IN PANEL DESIGNATED UNLESS OTHERWISE NOTED.
11. ALL 120 VAC (277 VAC) CIRCUITS EXCEEDING 150' IN LENGTH SHALL BE INCREASED TO 2#10, 1#10G, 3/4" CONDUIT UNLESS OTHERWISE NOTED.
12. ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH SEPARATE NEUTRALS. USE OF COMMON NEUTRALS WILL NOT BE ALLOWED.
13. FIELD VERIFY WITH MANUFACTURER'S PROVIDED EXACT ELECTRICAL CHARACTERISTICS AND CONNECTION REQUIREMENTS OF ALL OPERATIONAL EQUIPMENT PRIOR TO MAKING ELECTRICAL POWER CONNECTION. FURNISH AND INSTALL SAFETY DISCONNECT AS REQUIRED BY NEC.
14. RECEPTACLES LOCATED WITHIN 6' OF A WATER SOURCE, OR OUTSIDE, AND WHERE REQUIRED BY CODE SHALL BE PROVIDED WITH GFCI PROTECTION, WHETHER INDICATED OR NOT.
15. EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH "CAST ALUMINUM" LOCKABLE COVERS RATED "WEATHER-PROOF WHILE IN USE", LOCKS SHALL BE KEYED ALIKE.
16. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED SLEEVES AND FIRE STOP FOR CONDUITS AND CABLES PENETRATING FIRE RATED WALLS AND FLOORS.
17. ELECTRICAL CONTRACTOR SHALL SEAL ALL CONDUITS PENETRATING EXTERIOR WALLS.
18. ALL WIRING SHALL BE IN CONDUIT, UNLESS OTHERWISE INDICATED. CONDUITS SHALL BE RUN CONCEALED IN NEW AND ABOVE CEILINGS.
19. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF EQUIPMENT WITH DIV. 21, 22 AND 23 PRIOR TO ROUGHING OR INSTALLING OUTLETS.
20. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER, ALL LOCATIONS OF EQUIPMENT BEING FURNISHED BY THE OWNER PRIOR TO ROUGHING OR INSTALLING OUTLETS.
21. FUTURE NOTE
22. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF DUCT SMOKE DETECTORS WITH DIV. 23. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED BY DIV. 23.
23. ALL FIRE ALARM DEVICES LOCATED ON BUILDING EXTERIOR SHALL BE WEATHERPROOF RATED.
24. CONDUITS AND/OR WIRING SHALL NOT PENETRATE STAIR ENCLOSURES UNLESS SPECIFICALLY SERVING EQUIPMENT OR DEVICES LOCATED WITHIN STAIR ENCLOSURE.
25. WHERE INDICATED, PROVIDE FIXTURES WITH EMERGENCY BATTERY TO OPERATE LAMPS FOR 1 1/2 HOURS UPON LOSS OF NORMAL POWER. WIRE EMERGENCY BATTERY AND EXIT LIGHTS TO LINE SIDE OF AREA LIGHTING CIRCUIT.
26. DIRECTIONAL CHEVRONS SHALL CONFORM TO NFPA 5-10.4.1.2 AND SHALL BE IDENTIFIABLE AS A DIRECTIONAL INDICATOR AT A MINIMUM OF 40 FT, UNDER ALL SPACE CONDITIONS, PROVIDE DIRECTIONAL CHEVRONS AS INDICATED ON PLAN.
27. BRANCH CIRCUIT WIRING IS SHOWN ON THE FLOOR PLANS. NUMERALS ADJACENT TO THE HOMERUN SYMBOLS FOR LIGHTING, RECEPTACLES, MOTORS, APPLIANCES, ETC. INDICATE THE CIRCUIT NUMBER TO WHICH THE ITEMS ARE TO BE CONNECTED, PROVIDE BRANCH CIRCUIT WIRING FOR ALL ITEMS SHOWN IN ACCORDANCE WITH THESE GENERAL NOTES AND THE ELECTRICAL SPECIFICATIONS.
28. ALL 1 POLE, 15 AND 20 AMPERE BRANCH CIRCUITS SERVING RECEPTACLE OR LIGHTING SHALL BE 2 WIRE CIRCUITS PROVIDING AN INDIVIDUAL NEUTRAL CONDUCTOR FOR EACH UNGROUNDED (HOT) CIRCUIT CONDUCTOR. DO NOT SHARE NEUTRAL CONDUCTORS.
29. REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF CEILING MOUNTED DEVICES.
30. ALL EXPOSED CABLES OF ANY TYPE IN PLENUM CEILING SPACE SHALL BE PLENUM RATED.
31. CONTRACTOR SHALL PROVIDE ALL NECESSARY MISCELLANEOUS STEEL FOR THE SUPPORT OF ALL EQUIPMENT, PIPING, CONDUIT AND DUCTWORK, SUSPENDED FROM SLAB, STEEL, WALL OR TRUSSWORK.
32. ALL PENETRATIONS OF FLOORS AND WALLS (WHETHER OR NOT FIRE RESISTANCE RATED) SHALL BE PROVIDED WITH A THROUGH PENETRATION PROTECTION SYSTEM (FIRESTOPPING), EACH THROUGH - PENETRATION PROTECTION SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ASTM E814 AND BE LISTED FOR THE TYPE OF FLOOR OR WALL ASSEMBLY PENETRATED AND THE TYPE OF PROTECTION SYSTEM.
33. IT IS NOT THE INTENTION TO SHOW EVERY FITTING, HANGER, WIRE OR DEVICE, ALL SUCH ITEMS SHALL BE FURNISHED AND INSTALLED AS NECESSARY FOR A COMPLETE SYSTEM.
34. SEE SPECIFICATION SECTION "ELECTRICAL IDENTIFICATION" FOR PROPERLY LABELING EQUIPMENT WIRING, BOXES, ETC.
35. CONTRACTOR SHALL DETERMINE THE QUANTITY OF CONDUCTORS REQUIRED FOR PROPER OPERATION OF ALL SWITCHING SCHEMES.
36. PROVIDE ALL BONDING AND GROUNDING REQUIRED BY THE NATIONAL ELECTRIC CODE, NFPA 70 AND AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
37. ALL REQUIRED BONDING CONDUCTORS SHALL BE MINIMUM #8 SOLID INSULATED COPPER. PROVIDE ALL NECESSARY FITTINGS, JUNCTION BOXES, END FITTINGS, ETC., FOR A COMPLETE, CONTINUOUS INSTALLATION.
38. ALL BONDING/GROUNDING CONNECTIONS SHALL BE MADE BY LISTED CLAMP OR CONNECTORS AS REQUIRED BY ARTICLE 250 OF NFPA 70, THE NATIONAL ELECTRIC CODE (CURRENT ADOPTED EDITION).
39. SEISMICALLY SUPPORT THE EQUIPMENT AS REQUIRED BY CODE, USE SEISMIC CATAGORY B ASSUMING SITE CLASS D IF SCOPE CREEP IS INVOLVED. OTHERWISE THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED. SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTOR'S SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A DETAILED REPORT FOR THE RECORD.

ELECTRICAL DEMOLITION NOTES

1. BEFORE SUBMITTING BID, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE DOCUMENTS OF OTHER TRADES UNDER WHICH THEIR WORK WILL BE ACCOMPLISHED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ANY DAILY INTERRUPTIONS OR SHUTDOWNS OF THE EXISTING SYSTEMS IN ADVANCE WITH OWNER'S DESIGNATED REPRESENTATIVE. THIS SHALL INCLUDE SERVICES INTERRUPTIONS AND CONNECTIONS, MECHANICAL AND ELECTRICAL DISRUPTIONS EFFECTING OTHER TRADES, INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHERE NECESSARY.
3. DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING REUSED SHALL BE REMOVED, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, PIPES, CONDUITS, WIRES, AND CONTROLS BACK TO THE POINT OF ORIGIN.
4. REFER TO THE ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE FULL EXTENT OF THE DEMOLITION AND RECONSTRUCTION SCOPE OF WORK SHALL BE DETERMINED BY THE ENTIRE SET OF BID DOCUMENTS.
5. THE CONTRACTORS SHALL COORDINATE THE DEMOLITION SCOPE OF WORK WITH THE GENERAL CONTRACTOR'S OR CONSTRUCTION MANAGER'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF WORK, CARE MUST BE TAKEN SO AS NOT TO DESTROY, REMOVE OR DEMOLISH ANY EQUIPMENT, APPURTENANCES OR DEVICES INTENDED TO REMAIN. PROVIDE TEMPORARY SERVICES AND SYSTEM MODIFICATIONS TO ACCOMMODATE CONTINUOUS OPERATION OF ACTIVE SYSTEM.
6. THE LOCATION OF EXISTING ELECTRICAL SYSTEM SHOWN ON FLOOR PLANS, IS BASED ON THE BEST AVAILABLE INFORMATION, THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF CONSTRUCTION, EXACT QUANTITY AND LOCATION(S) OF EXISTING EQUIPMENT, PANELS, CONDUITS, LIGHTING, ETC. TO BE REMOVED AND ADJUST AS NECESSARY.
7. ALL EQUIPMENT, AND ASSOCIATED WIRING, CONDUITS INDICATED TO BE REMOVED OR RELOCATED, SHALL BE DISCONNECTED AND REMOVED, INCLUDING HANGERS AND OTHER COMPONENTS. NO EQUIPMENT, WIRING OR CONDUITS SHALL BE ABANDONED IN PLACE, UNLESS SPECIFICALLY NOTED.
8. ALL SYSTEMS TO BE REMOVED SHALL BE REMOVED BACK TO THE POINT OF SOURCE. THE CONTRACTOR SHALL VERIFY WHICH SYSTEMS MUST REMAIN ACTIVE TO SERVE ADJACENT SPACES DURING CONSTRUCTION, SHOULD THE CONTRACTOR ENCOUNTER, DURING DEMOLITION OF EXISTING WALLS OR CHASES, ANY WIRING OR CONDUIT WHICH MUST REMAIN ACTIVE, IMMEDIATELY GIVE NOTICE TO THE ENGINEER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
9. ALL SALVAGEABLE MATERIALS OR EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER AT THE END OF EACH DAY. ITEMS REMOVED AND NOT REUSED OR CLAIMED BY THE OWNER SHALL BECOME PROPERTY OF THE TRADE CONTRACTOR AND SHALL BE TRANSPORTED FROM THE SITE. SITE STORAGE OF REMOVED ITEMS WILL NOT BE PERMITTED.
10. PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES AND REGULATIONS; THIS APPLIES TO HAZARDOUS MATERIALS AND CONTAMINATED ITEMS TO BE DEMOLISHED.
11. THE CONTRACTOR SHALL OBTAIN EXISTING ELECTRICAL DRAWINGS FROM THE OWNER IF AVAILABLE TO HELP DETERMINE FULL SCOPE OF WORK.

drawing title
ABBREVIATIONS, SYMBOLS & NOTES

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REVISIONS

mark	date	description
	11.11.19	SD SUBMISSION
	1.15.20	CD SUBMISSION
	3.17.20	REVISED CD SUBMISSION
	4.10.20	ISSUED FOR BID

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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RZ DESIGN ASSOCIATES, INC.
750 OLD MAIN STREET SUITE 202
ROCKY HILL, CONNECTICUT 06067

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LYMAN CENTER
BID PACKAGE 1 - HVAC / ELECTRICAL RENOVATIONS
Southern Connecticut State University
NEW HAVEN, CT 06515

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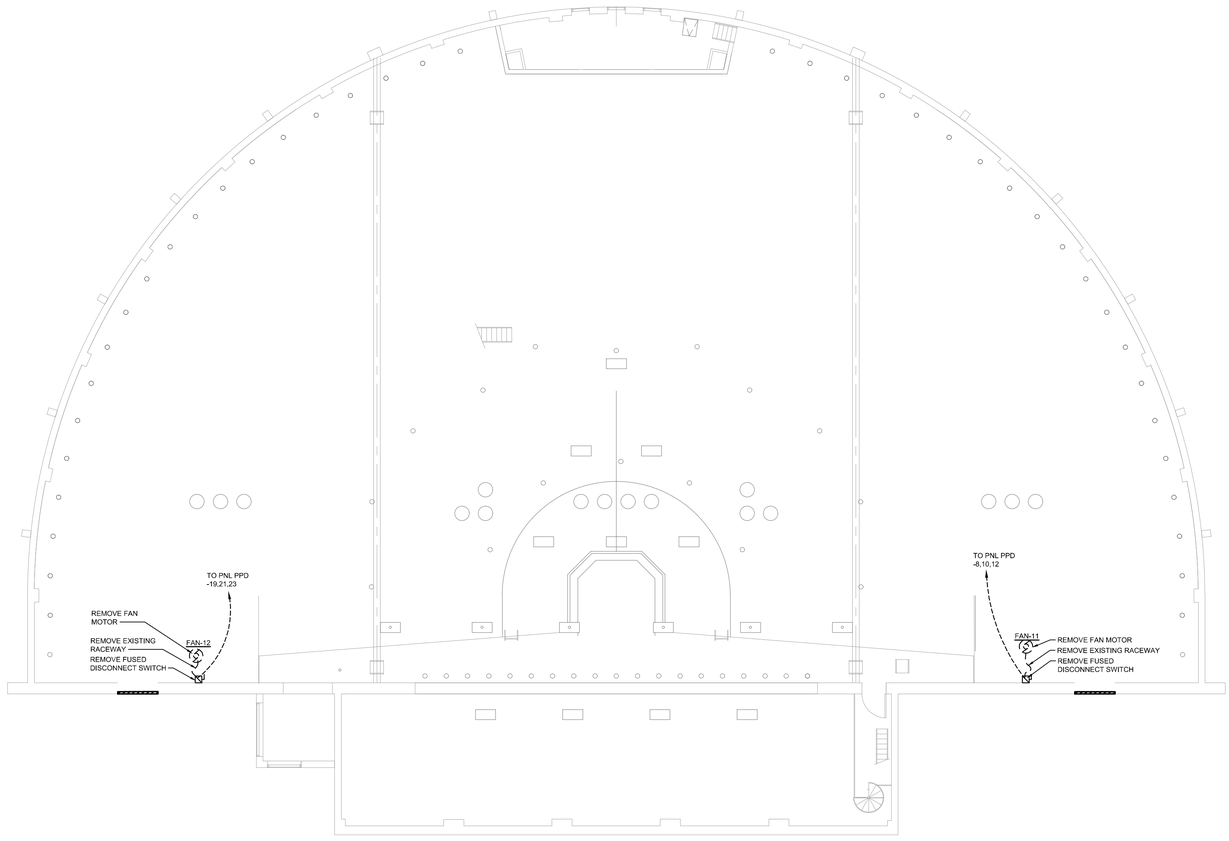

1 ED1.00 ATTIC ELECTRICAL DEMOLITION PLAN

SCALE: 3/32" = 1'-0"

DEMOLITION GENERAL NOTES:

1. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT MOTORS TO BE DISCONNECTED.
2. DEMOLITION SHALL CONSIST OF REMOVING THE FOLLOWING ITEMS:
3. DISCONNECT FAN MOTOR LEADS AND REMOVE THE CONDUCTORS BACK TO SOURCE DISCONNECT SWITCH.
4. REMOVE FAN MOTOR RACEWAY BACK TO EXISTING MOTOR STARTER.
5. COORDINATE WITH CONTROLS CONTRACTOR TO REMOVE EXISTING MOTOR CONTROL WIRING.
6. REMOVE EXISTING FAN MOTOR STARTER.
7. REMOVE EXISTING FAN MOTOR DISCONNECT SWITCH.
8. REMOVE AND REPLACE EXISTING FEEDERS BACK TO PANEL PPD. REPLACE FEEDERS IN EXISTING RACEWAY, SEE DRAWING E1.00

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ATTIC ELECTRICAL
DEMOLITION PLAN

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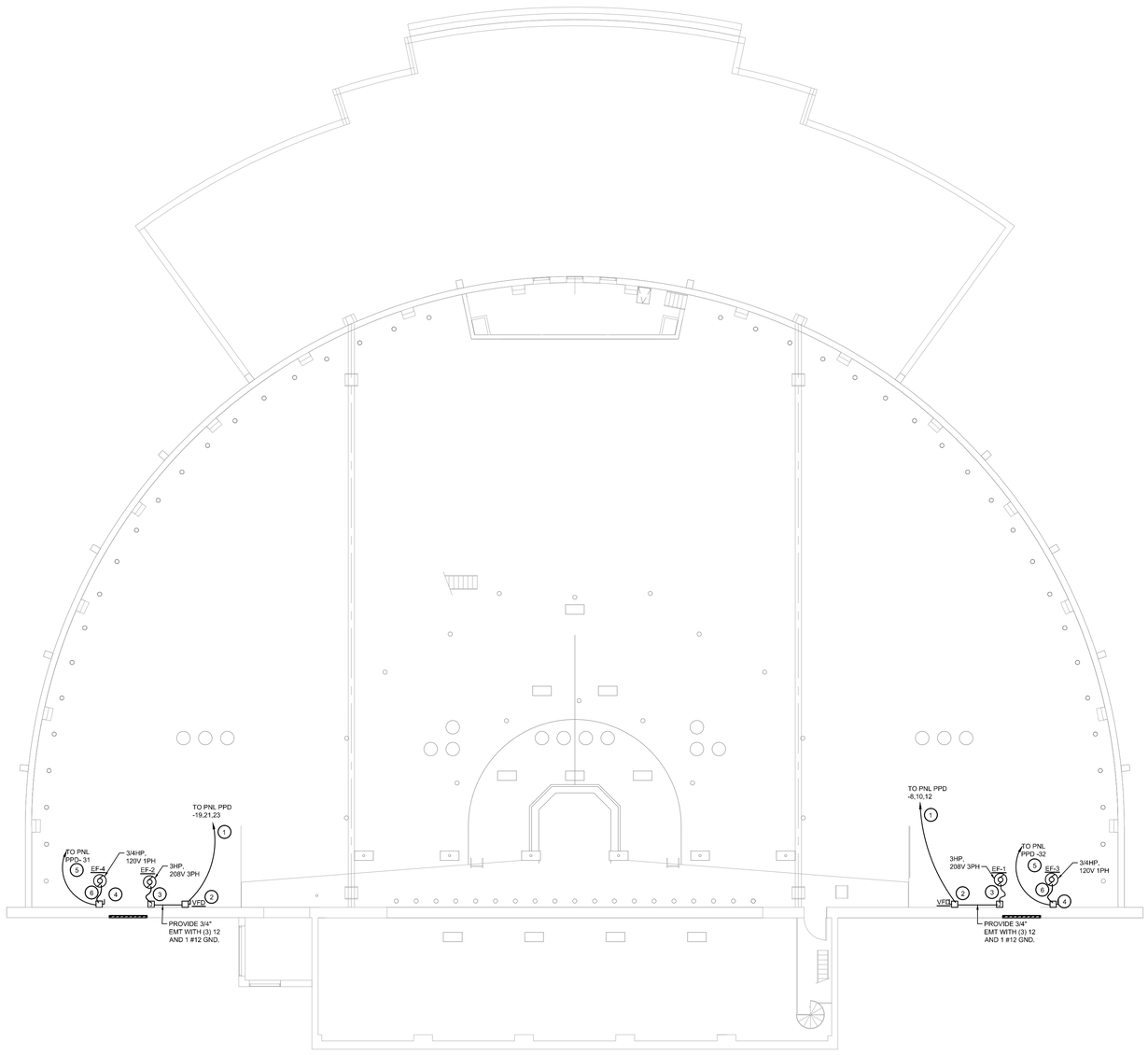

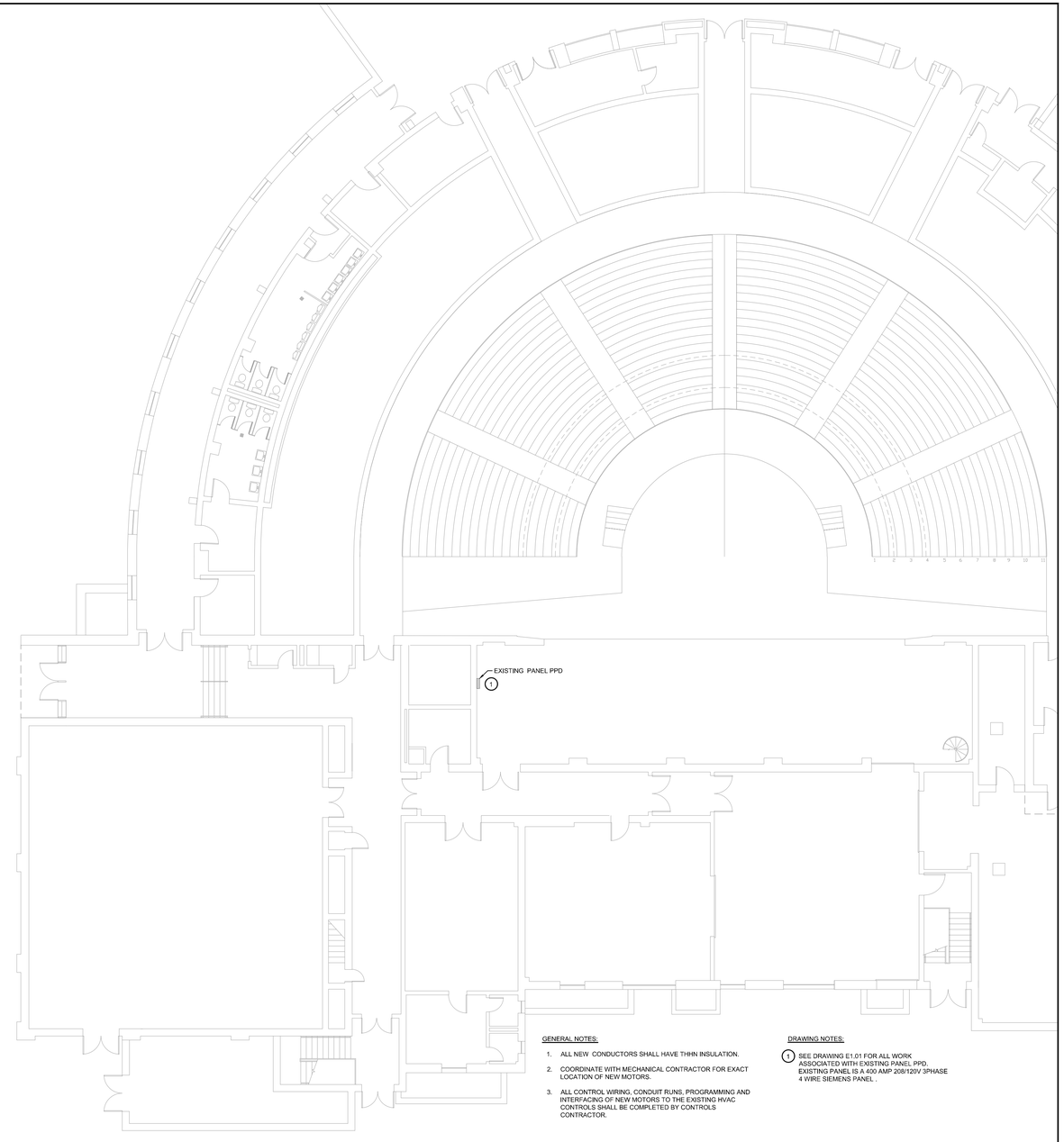

1 / E1.00 ATTIC ELECTRICAL PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. ALL NEW CONDUCTORS SHALL BE COPPER AND HAVE THHN INSULATION.
2. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF NEW MOTORS.
3. ALL CONTROL WIRING, CONDUIT RUNS, PROGRAMMING AND INTERFACING OF NEW MOTORS TO THE EXISTING HVAC CONTROLS SHALL BE COMPLETED BY CONTROLS CONTRACTOR.
4. PROVIDE ALL REQUIRED MATERIALS TO INSTALL NEW EQUIPMENT.
5. EXISTING DUCT SMOKE DETECTORS TO REMAIN IN OPERATION DURING CONSTRUCTION.

DRAWING NOTES:

(1) PROVIDE NEW HOMERUN TO PANEL PPD. PROVIDE (3) #10 AWG AND (1) #10 GND IN EXISTING 3/4" EMT. CONNECT TO PANEL PPD ON 1ST FLOOR STAGE LEFT WING. PROVIDE AND CONNECT TO NEW 20A-3 POLE CIRCUIT BREAKER THAT IS OF THE SAME STYLE AND MAKE OF THE EXISTING PANEL CIRCUIT BREAKER. PROVIDE NEW UPDATED TYPED PANEL SCHEDULE.

(2) CONNECT TO VFD WITH DISCONNECT SWITCH, VFD AND CONNECTED CONTROLS DEVICES AND THE WIRING TO INTEGRATE INTO THE EXISTING SYSTEM IS BY ATC CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT FOR POWER CONDUCTORS TO THE VFD AND THE MOTOR.

(3) PROVIDE (2) #12 AWG AND (1) #12 GND IN 3/4" LFMC FROM JUNCTION BOX TO MOTOR CONNECTION BOX. TERMINATE POWER CONDUCTORS TO MOTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR PROPER ROTATION.

(4) PROVIDE NEMA 1 ENCLOSED NON FUSED FRACTIONAL HP ONE POLE DISCONNECT SWITCH WITH RED PILOT LIGHT.

(5) PROVIDE NEW 3/4" CONDUIT RUN TO PANEL PPD ON FIRST FLOOR STAGE LEFT. PROVIDE (2) #12AWG AND (1) #12 GND CONNECT TO NEW CIRCUIT BREAKER. PROVIDE NEW 15A -1 POLE CIRCUIT BREAKER THAT IS OF THE SAME STYLE AND MAKE AS THE EXISTING PANEL CIRCUIT BREAKERS. PROVIDE NEW UPDATED TYPED PANEL SCHEDULE.

(6) PROVIDE (2) #12 AWG AND (1) #12 GND IN A 3/4" EMT / LFMC TO MOTOR CONNECTION BOX. TERMINATE CONDUCTORS AND CONFIRM ROTATION WITH MECHANICAL CONTRACTOR.

GENERAL NOTES:

1. ALL NEW CONDUCTORS SHALL HAVE THHN INSULATION.
2. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF NEW MOTORS.
3. ALL CONTROL WIRING, CONDUIT RUNS, PROGRAMMING AND INTERFACING OF NEW MOTORS TO THE EXISTING HVAC CONTROLS SHALL BE COMPLETED BY CONTROLS CONTRACTOR.

DRAWING NOTES:

(1) SEE DRAWING E1.01 FOR ALL WORK ASSOCIATED WITH EXISTING PANEL PPD. EXISTING PANEL IS A 400 AMP 208/120V 3PHASE 4 WIRE SIEMENS PANEL .

1 / E1.00 GROUND FLOOR ELECTRICAL PLAN
SCALE: 3/32" = 1'-0"

drawing title: ATTIC ELECTRICAL PLAN

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