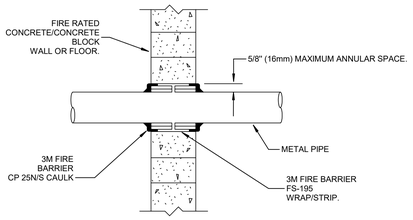


NOTES:

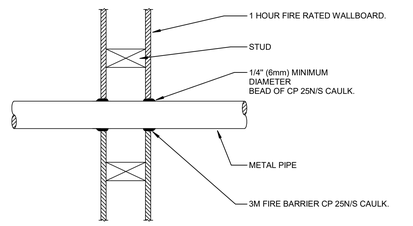
1. THE MAXIMUM ANNULAR SPACE AROUND THE METAL PIPE OR CONDUIT IS 5/8" (16mm). (IF THE ANNULAR SPACE EXCEEDS 5/8" PATCH THE WALL AND PENETRATE WALL AT ANOTHER LOCATION).
2. WRAP THE 3M MODEL# FS-195 WRAP/STRIP AROUND THE PIPE/CONDUIT, FOIL SIDE OUT, TO FILL THE SPACE BETWEEN THE PIPE/CONDUIT AND THE WALL OPENING. THE 3M MODEL# FS-195 WRAP/STRIP SHOULD BE TIGHTLY SECURED WITH ALUMINUM FOIL TAPE OR STEEL TIE WIRE AND PUSHED INTO THE OPENING UNTIL THE TOP EDGE OF THE WRAP IS FLUSH WITH THE WALL SURFACE. THE IDENTICAL INSTALLATION SHOULD BE INSTALLED ON THE OTHER SIDE OF THE WALL.
3. USE 3M MODEL# CP 25N/S(NO SAG) CAULK TO FILL THE AREA BETWEEN THE FS-195 WRAP/STRIP AND THE EDGES OF THE OPENING AND ANY VOIDS IN THE 3M MODEL# FS-195 WRAP/STRIP. A FILL OF CP 25 CAULK SHOULD COAT ALL EXPOSED EDGES OF THE FS-195 WRAP/STRIP AND COMPLETELY SEAL THE AREA BETWEEN THE FS-195 WRAP/STRIP, THE PIPE/CONDUIT AND THE WALL SURFACE.

PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH A CONCRETE WALL

NOT TO SCALE

FIRE STOPPING NOTES:

1. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED. ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS. ALL FLOORS CORRIDOR WALLS, STAIR WALLS, MECHANICAL ROOM WALLS, STORAGE ROOM WALLS AND OTHER HAZARDOUS ROOM WALLS ARE ONE HOUR RATED.
2. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT HOSPITAL ENGINEER AND CMTA TO ADVISE OF DATE AND TIME OF THIS MEETING.
3. ALL PENETRATIONS WILL BE REVIEWED BY THE HOSPITAL ENGINEER OR CMTA. PRIOR TO INSPECTION, ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.

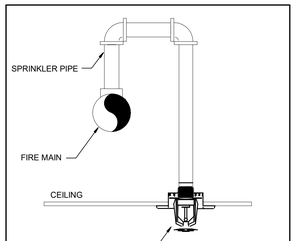


NOTES:

1. FORCE THE 3M MODEL# CP 25N/S CAULK INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.
2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/S CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm). (IF IT DOES PATCH WALL AND PENETRATE WALL AT ANOTHER LOCATION).
4. INSTALL THE 3M FIRESTOP ON BOTH SIDES OF THE WALL.

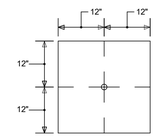
PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH ONE HOUR WALL

NOT TO SCALE



RETURN BEND DETAIL

SCALE: NONE



SPRINKLER HEADS TO BE INSTALLED IN CENTER OF 2x2 CEILING TILES.

2x2 CEILING TILE DETAIL

SCALE: NONE

GENERAL NOTES - FIRE PROTECTION

A. ALL AREAS SHALL BE PROTECTED BY A 100% WET PIPE FIRE SUPPRESSION SYSTEM INSTALLED IN STRICT ACCORDANCE WITH NFPA-13, THE OHIO BUILDING CODES AND THE PROJECT SPECIFICATIONS.
B. ALL AREAS ARE PRESENTLY PROTECTED BY A 100% WET PIPE FIRE SUPPRESSION SYSTEM. CONTRACTOR SHALL MODIFY THE SYSTEM AS REQUIRED TO MAINTAIN 100% PROTECTION, IN ACCORDANCE WITH NFPA 13, LOCAL BUILDING CODE AND SPECIFICATIONS.
C. THE SUCCESSFUL FIRE PROTECTION CONTRACTOR SHALL OBTAIN AND UTILIZE THE ARCHITECTURAL REFLECTED CEILING PLAN FOR LAYING OUT THE SPRINKLER HEADS. THE REFLECTED CEILING PLANS SHOWN ARE TO COORDINATE CEILING TYPES AND LOCATIONS. REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR CEILING DEVICE LOCATIONS. REFER TO THE SPECIFICATIONS FOR COORDINATION DRAWING REQUIREMENTS.
D. INSTALL HEADS IN CENTER OF 2'X2' TILES. INSTALL HEADS ON 1/4 POINTS OF THE 4' DIMENSION AND CENTER OF THE 2' DIMENSION IN 2'X4' TILES. DO NOT MOUNT HEADS IN CENTER OF 2'X4' TILE IF IT IS SCORED TO LOOK LIKE TWO 2'X2' TILES.
E. ALL SPRINKLER HEADS SHALL BE "SEMI-RECESSED", QUICK RESPONSE SPRINKLER HEADS (UNLESS OTHERWISE NOTED ON THE PLANS.) HEADS SHALL BE FED FROM A RETURN BEND ARRANGEMENT.
F. UTILIZE UPRIGHT AND/OR WALL-MOUNTED TYPE SPRINKLER HEADS IN AREAS WITHOUT CEILINGS.
G. THE FIRE PROTECTION CONTRACTOR SHALL PERFORM HIS OWN FLOW TEST PRIOR TO SUBMITTING SHOP DRAWINGS.
H. REFER TO A COMPLETE SET OF DOCUMENTS (ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICAITONS) FOR COORDINATION OF TRADES, ROOMS, STRUCTURE AND EQUIPMENT. HVAC DUCTWORK MAINS SHALL BE INSTALLED PRIOR TO FIRE PROTECTION PIPING. ROUTE THROUGH STRUCTURAL JOISTS WHEN POSSIBLE. PROVIDE DRAIN VALVES IN THE FIRE PROTECTION SYSTEM WHERE REQUIRED TO COMPLETELY DRAIN THE SYSTEM.
I. REFER TO THE SPECIFICATIONS FOR SPRINKLER HEAD TYPES.
J. PROVIDE ALL REQUIRED DRAIN PIPING TO TEST FLOW SWITCHES. DISCHARGE DRAIN PIPING TO OUTDOORS OR A FLOOR DRAIN.
K. SIZE ALL FIRE PROTECTION PIPING IN ACCORDANCE WITH NFPA 13. PIPE SIZING SHALL BE ACCOMPLISHED USING HYDRAULIC CALCULATIONS.
L. SUBMIT HYDRAULIC CALCULATIONS AND SYSTEMS DESIGN FOR REVIEW TO THE M/E ENGINEER.
M. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS.
N. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
O. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
P. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
Q. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, STATE, MUNICIPALITY, UTILITY COMPANY, ETC.)
R. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
S. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
T. WHERE CEILINGS ARE INDICATED ALL SPRINKLER PIPING MUST BE INSTALLED ABOVE CEILINGS. SPRINKLER PIPING MUST BE COORDINATED WITH OTHER TRADES. PIPING MUST BE OFFSET TO AVOID CONFLICTS WITH DUCTWORK, CONDUIT, ALL EQUIPMENT, ETC.
U. LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
V. ALL OFFSETS IN DUCTS AND PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
W. COORDINATE ALL WORK WITH ELECTRICAL, MECHANICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.
X. SEAL AIRTIGHT AROUND ALL PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
Y. THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
Z. VALVES OR ANY FIRE PROTECTION ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.

ABBREVIATIONS

ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
CLG	CEILING
CLR	CLEAR
DN	DOWN
ENGR	ENGINEER
EQ	EQUAL
ETR	EXISTING TO REMAIN
EXT	EXTERIOR
FVC	FIRE VALVE CABINET
FL	FLOOR
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPC	FIRE PROTECTION CONTRACTOR
FT	FEET **OR** FOOT
FUT	FUTURE
GA	GAGE/GAUGE
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
HORIZ	HORIZONTAL
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
IN	INCH (-ES)
INT	INTER (-IOR, -ERVAL)
IPS	IRON PIPE SIZE
LBS	POUNDS
LF	LINEAR FEET/FOOT
MAX	MAXIMUM
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MTG	MOUNTING
N/A	NOT APPLICABLE
NC	NOISE CRITERIA **OR** NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DI (-AMETER, -MENSION)
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PPSI GAUGE
SQ FT	SQUARE FEET **OR** FOOT
TBD	TO BE DETERMINED

ABBREVIATIONS (CONTINUED)

TE	TOP ELEVATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
℄	CENTERLINE

GENERAL SYMBOLS

#	TAGGED NOTE DESIGNATOR
1	REVISION TRIANGLE
ROOM NAME / RM #	ROOM TAG
TAG / INSTANCE	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

MECHANICAL PIPING LEGEND

	PIPE ELBOW TURNING UP
	PIPE ELBOW TURNING DOWN
	PIPE TEE; CONNECTION ON TOP
	PIPE TEE; CONNECTION ON BOTTOM
	PIPE CAP
—FP—	FIRE PROTECTION PIPING
-- D(XXX) --	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
—E(XXX)—	EXISTING PIPING - (XXX) DENOTES SYSTEM
—A(XXX)—	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	FLEXIBLE PIPE CONNECTION
	PIPING UNION
FS	FLOW SWITCH
PS	PRESSURE SWTICH
TS	TAMPER SWITCH
T	PETE'S PLUG; TEMPERATURE/PRESSURE PORT
	SEMI-RECESSED SPRINKLER HEAD WITH REMOVABLE ESCUTCHEON PLATE
	UPRIGHT TYPE SPRINKLER HEAD
	SIDEWALL TYPE SPRINKLER HEAD

FP HATCH LEGEND

LIGHT HAZARD AREA CLASSIFICATION

ORDINARY HAZARD, GROUP 1 CLASSIFICATION

ORDINARY HAZARD, GROUP 2 CLASSIFICATION

Sheet List - Fire Suppression

SHEET #	SHEET NAME
F001	FIRE SUPPRESSION LEGEND
F101	FIRE SUPPRESSION FIRST FLOOR PLAN
F102	FIRE SUPPRESSION FIRST FLOOR PLAN ALTERNATE
F103	FIRE SUPPRESSION SECOND FLOOR PLAN
F104	FIRE SUPPRESSION SECOND FLOOR PLAN ALTERNATE

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No.	Revisions / Submissions	Date

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434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

FIRE SUPPRESSION LEGEND

STATE OF OHIO — BRADLEY STEVEN BRUENING — 81283 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: JDW	Drawing No.: F001
Checked: BSB	

2/26/2021 9:41:41 AM

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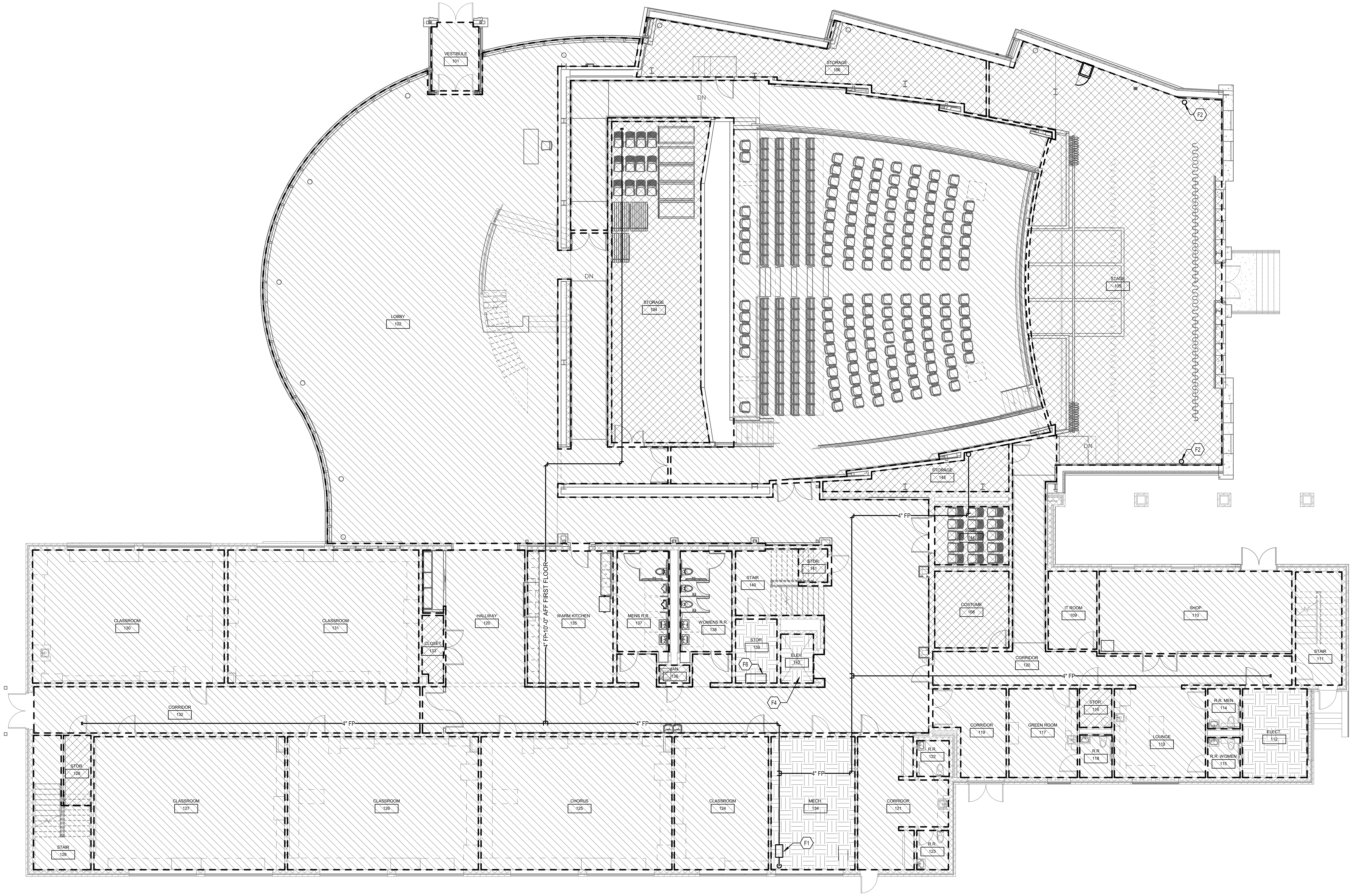
FP HATCH LEGEND

- LIGHT HAZARD AREA CLASSIFICATION
- ORDINARY HAZARD, GROUP 1 CLASSIFICATION
- ORDINARY HAZARD, GROUP 2 CLASSIFICATION



FIRST FLOOR FIRE PROTECTION PLAN

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

SHEET NOTES:

TAGGED NOTES

F1	PROVIDE WET SPRINKLER RISER WITH TAMPER AND FLOW SWITCHES IN THIS AREA.
F2	PROVIDE 1 1/2" HOSE REEL AND FIRE HOSE CABINET FOR REQUIRED STAGE PROTECTION.
F4	PROVIDE SPRINKLER COVERAGE IN BASE OF ELEVATOR PIT. PROVIDE CONTROL VALVE WITH TAMPER SWITCH.
F6	LOCATION OF EXISTING ELEVATOR EQUIPMENT.

No.	Revisions / Submissions	Date

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712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

FIRE SUPPRESSION FIRST FLOOR PLAN

STATE OF OHIO BRADLEY STEVEN BRUENING 81283 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: JDW	Drawing No. F101
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FP HATCH LEGEND

- LIGHT HAZARD AREA CLASSIFICATION
- ORDINARY HAZARD, GROUP 1 CLASSIFICATION
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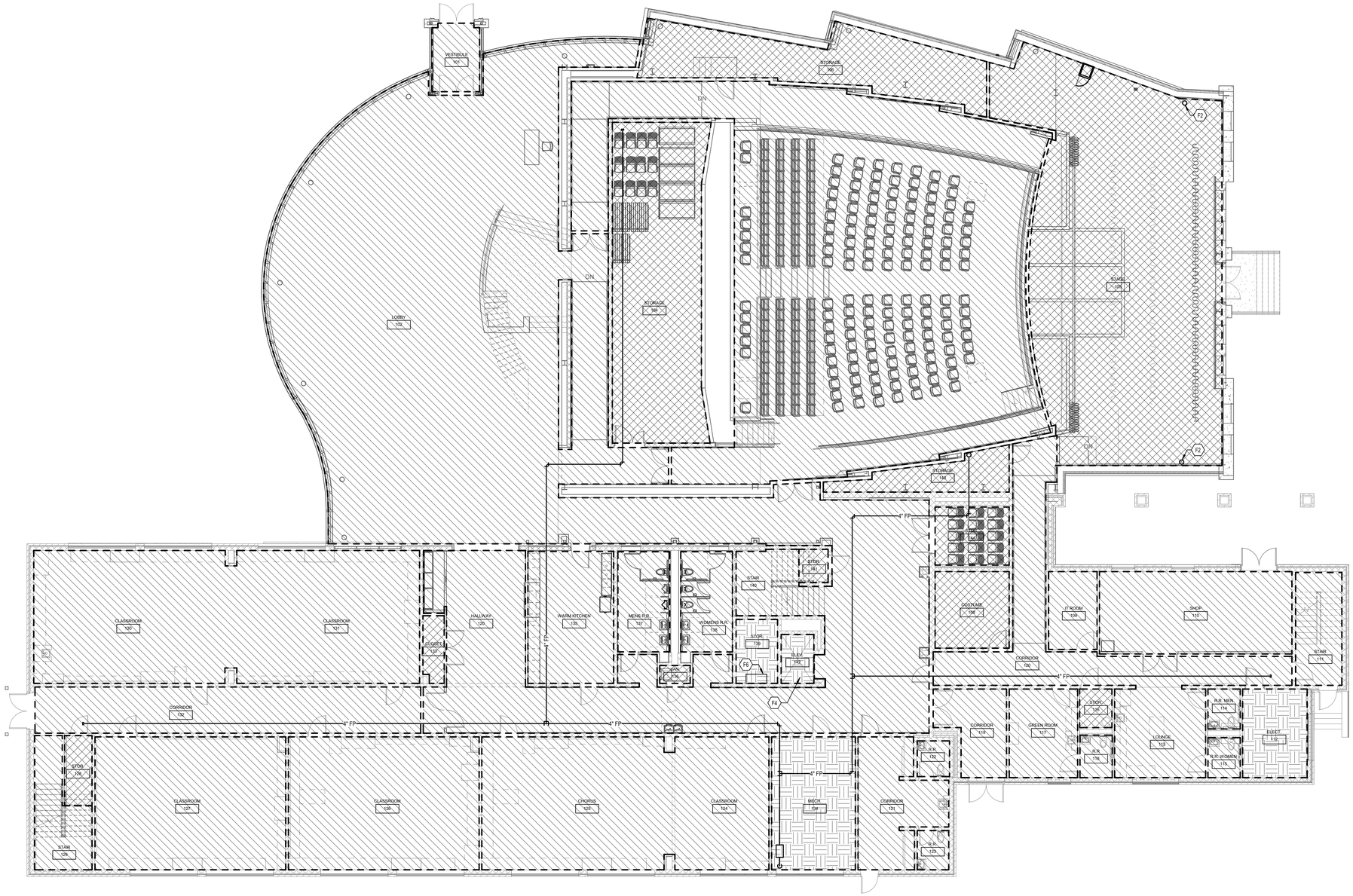

FIRST FLOOR FIRE PROTECTION PLAN ALTERNATE
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES

F2	PROVIDE 1 1/2" HOSE REEL AND FIRE HOSE CABINET FOR REQUIRED STAGE PROTECTION.
F4	PROVIDE SPRINKLER COVERAGE IN BASE OF ELEVATOR PIT. PROVIDE CONTROL VALVE WITH TAMPER SWITCH.
F6	LOCATION OF EXISTING ELEVATOR EQUIPMENT.

No.	Revisions / Submissions	Date

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FIRE SUPPRESSION FIRST FLOOR PLAN ALTERNATE

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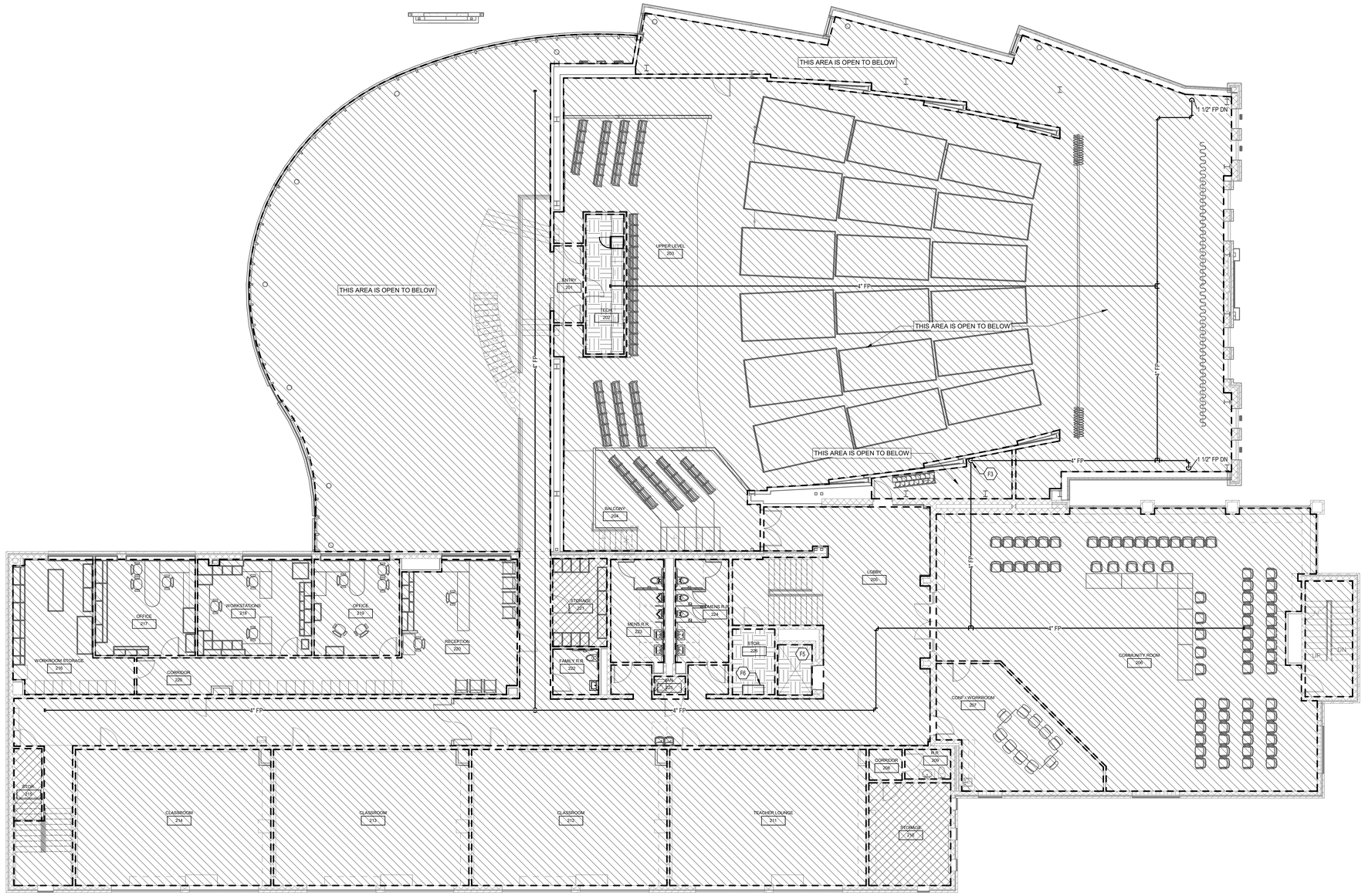
FP HATCH LEGEND

- LIGHT HAZARD AREA CLASSIFICATION
- ORDINARY HAZARD, GROUP 1 CLASSIFICATION
- ORDINARY HAZARD, GROUP 2 CLASSIFICATION



1 SECOND FLOOR FIRE PROTECTION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES	##
F3	FP MAIN UP FROM FIRST FLOOR. PROVIDE TAMPER AND FLOW SWITCH FOR SECOND FLOOR PIPING.
F5	PROVIDE SPRINKLER COVERAGE IN TOP OF ELEVATOR SHAFT. PROVIDE CONTROL VALVE WITH TAMPER SWITCH.
F6	LOCATION OF EXISTING ELEVATOR EQUIPMENT.

No.	Revisions / Submissions	Date

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FIRE SUPPRESSION SECOND FLOOR PLAN

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FP HATCH LEGEND

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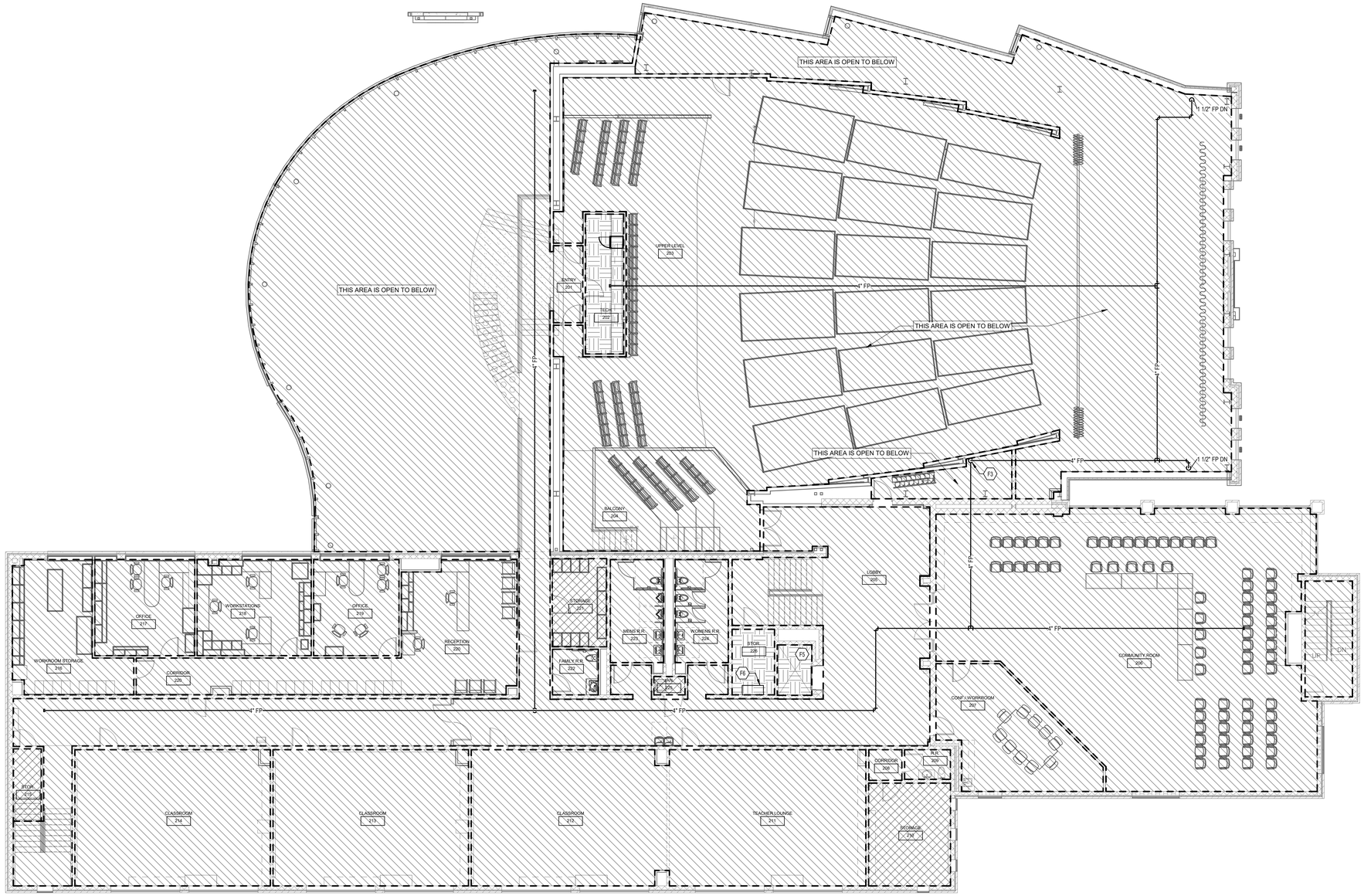
- ORDINARY HAZARD, GROUP 2 CLASSIFICATION



1 SECOND FLOOR FIRE PROTECTION PLAN ALTERNATE
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (#)

F3	FP MAIN UP FROM FIRST FLOOR. PROVIDE TAMPER AND FLOW SWITCH FOR SECOND FLOOR PIPING.
F5	PROVIDE SPRINKLER COVERAGE IN TOP OF ELEVATOR SHAFT. PROVIDE CONTROL VALVE WITH TAMPER SWITCH.
F6	LOCATION OF EXISTING ELEVATOR EQUIPMENT.

No.	Revisions / Submissions	Date

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FIRE SUPPRESSION SECOND FLOOR PLAN ALTERNATE

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18620.00	2021/03/01
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PLUMBING FIXTURE SCHEDULE

TAG	MANUFACTURER	MODEL	FAUCET/VALVE MANUFACTURER	FAUCET/VALVE MODEL	CW	HW	SAN	VENT	ACCESSORIES
P-1A	AMERICAN STANDARD	0356.421	T&S BRASS	B-2711-VF05	1/2"	1/2"	2"	1-1/2"	WALL-HUNG LAVATORY, ADA COMPLIANT, VITREOUS CHINA, FRONT OVERFLOW, FAUCET LEDGE WITH PEDESTAL SPOUT, 0.5 GPM, MANUAL BALL FAUCET.
P-1A	AMERICAN STANDARD	0491.156	T&S BRASS	B-2711-VF05	1/2"	1/2"	2"	1-1/2"	TOP MOUNT LAVATORY, ADA COMPLIANT, VITREOUS CHINA, FRONT OVERFLOW, FAUCET LEDGE WITH PEDESTAL SPOUT, 0.5 GPM, MANUAL BALL FAUCET.
P-2A	AMERICAN STANDARD	3351.101	SLOAN	111 ESS-1.28-OR-HW	1-1/4"	---	3"	2"	WALL-HUNG FLUSHVALVE TOILET, ADA COMPLIANT, VITREOUS CHINA, 1.28 GPF SIPHON JET, HARDWIRED AUTOMATIC FLUSHVALVE.
P-2B	AMERICAN STANDARD	3351.101	SLOAN	111 ESS-1.28-OR-HW	1-1/4"	---	3"	2"	WALL-HUNG FLUSHVALVE TOILET, VITREOUS CHINA, 1.28 GPF SIPHON JET, HARDWIRED AUTOMATIC FLUSHVALVE.
P-3	AMERICAN STANDARD	6590.001	SLOAN	186 ESS-0.125-DBP-OR-HW	3/4"	---	2"	2"	WALL-HUNG URINAL, VITREOUS CHINA, 0.125 GPF WASHOUT, HARDWIRED AUTOMATIC FLUSHVALVE.
P-4A	ZURN	MS2620	ZURN	Z812H4-XL	1/2"	1/2"	1-1/2"	2"	FLOOR MOUNT UTLITY SINK, PVC DRAIN BODY, STEEL SELF-LEVELING LEGS, SWING GOOSENECK SPOUT, 2.2 GPM AERATOR.
P-4B	ELKAY	14-3C16X20-2-18X	T&S BRASS	B-0133-12-CR-B	3/4"	3/4"	2"	3"	FLOOR MOUNT THREE-COMPARTMENT SINK WITH DRAINBOARDSAND BACKSPLASH, STAINLESS STEEL, ADJUSTABLE LEGS, 1.15 GPM FLEXIBLE SPRAY VALVE, GOOSENECK SWING POTFILLER.
P-5	HALSEY TAYLOR	HTHB-HACG8BLPV-NF	---	---	1/2"	---	1-1/2"	1-1/2"	WALL-HUNG BI-LEVEL WATER COOLER WITH BOTTLE FILLER, 8.0 GPH CHILLING CAPACTIY, PUSH BUTTON ACTIVATION.

WATER HEATER SCHEDULE

TAG	TYPE	MANUFACTURER	MODEL	STORAGE CAPACITY	WATER RECOVERY	LOAD RATING	OUTLET TEMP
WH-1	NATURAL GAS	AO SMITH	BTX-100	50 GAL	115 GPH @ 100 DEG RISE	100,000 BTU/HR	140 F

RECIRCULATION PUMP SCHEDULE

TAG	RP-1
MANUFACTURER	BELL & GOSSETT
MODEL	PL-30
HP	1/12 HP
FLOW (GPM)	5 GPM
HEAD (FT)	25 FT
ALL BRONZE BODY / LEAD FREE	YES

EXPANSION TANK SCHEDULE

TAG	ET-1
MANUFACTURER	WATTS
MODEL	DETA-5
STORAGE CAPACITY	3.5 GAL

PLUMBING GENERAL NOTES:

A. COORDINATE THE LOCATION OF DRAIN, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
D. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
E. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
F. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
G. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, STATE, ETC.)
H. CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
I. IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB, CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.
J. WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
K. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
L. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
M. ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
N. LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
O. ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
P. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER, ETC.)
Q. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
R. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
S. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
T. VALVES OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
U. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
V. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.

PLUMBING DEMOLITION NOTES:

A. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELED VERIFY EXACT REQUIREMENTS.
B. ALL OUTAGES SHALL BE SCHEDULED THROUGH THE PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.
C. DURING SPRINKLER SYSTEM OUTAGES THE CONTRACTORS SHALL PROVIDE FIRE WATCH OF AREAS WITH OUTAGES.
D. ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.
E. ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.
F. HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (U.O.N) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
G. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH THE OWNER.

SYMBOLS & ABBREVIATIONS

A, AIR	MEDICAL AIR		POINT OF CONNECTION
AFF	ABOVE FINISHED FLOOR		LIMIT OF DEMOLITION
AFR	ABOVE FINISHED ROOF		PIPE ELBOW TURNING UP/TURNING DOWN
C.I.	CAST IRON		PIPE TEE TURNING UP/TURNING DOWN
CO2	CARBON DIOXIDE	A	MEDICAL AIR
CW	DOMESTIC COLD WATER	CA	COMPRESSED AIR
DN	DOWN	FM	FORCED MAIN
EV	EVACUATION (WASTE ANESTHETIC GAS DISPOSAL)	FP	FIRE PROTECTION LINE
FHV	FIRE HOSE VALVE WITH CABINET	G	GAS LINE
FPRH	FREEZE PROOF ROOF HYDRANT	GW	SANITARY WASTE PIPING TO GREASE TRAP
FPWH	FREEZE PROOF WALL HYDRANT	O	OXYGEN PIPING
HB	HOSE BIBB	ORL	OVERFLOW ROOF LEADER PIPING
HW	DOMESTIC HOT WATER	RWL	ROOF LEADER PIPING
IAW	IN ACCORDANCE WITH	SAN	SANITARY WASTE PIPING
ID	INSIDE DIMENSION	SS	STORM SEWER PIPING
IE	INVERT ELEVATION	V	VACUUM PIPING
LPA	LINE PRESSURE ALARM (MEDICAL GAS AREA ALARM)	VT	VENT PIPING
MH	MANHOLE	E(NAME)	EXISTING PIPING (THIN LINE)
MSA	MULTI-SINGLE ALARM (MEDICAL GAS MASTER ALARM)	ABAN(NAME)	ABANDONED EXISTING PIPING (THIN LINE)
NTS	NOT TO SCALE		DOMESTIC COLD WATER PIPING
NIC	NOT IN CONTRACT		DOMESTIC HOT WATER SUPPLY
NO	NORMALLY OPEN		DOMESTIC RECIRCULATING HOT WATER
NC	NORMALLY CLOSED	CO	CLEANOUT IN CEILING SPACE
O, OX	OXYGEN	CO	FLOOR CLEANOUT
OD	OUTSIDE DIMENSION	ECO	EXTERIOR CLEANOUT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED		BALANCING VALVE
OFOI	OWNER FURNISHED, OWNER INSTALLED		BALL VALVE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED		SAFETY RELIEF VALVE
OR	OPEN RECEPTACLE		SAFETY RELIEF VALVE
ORL	OVERFLOW ROOF LEADER		OS&Y (GATE) VALVE
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS)		PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH		STRAINER
RHW	DOMESTIC RECIRCULATING HOT WATER		CHECK VALVE
RL	ROOF LEADER		DOUBLE CHECK VALVE ASSEMBLY
SCW	SOFT DOMESTIC COLD WATER		PIPING UNION
SR	SANITARY RISER		FLOW SWITCH
TB	THRUST BLOCK		PRESSURE SWTICH
TE	TOP ELEVATION		TAMPER SWITCH
TP	TRAP PRIMER		THERMOMETER
TYP	TYPICAL	V	VACUUM BREAKER
UON	UNLESS OTHERWISE NOTED		LIMITED AREA SPRINKLER HEAD
V, VAC	VACUUM		PETE'S PLUG
VTR	VENT THRU ROOF	FD-#	FLOOR DRAIN DESIGNATOR
X	TAGGED NOTE DESIGNATOR	RD-#	ROOF DRAIN DESIGNATOR
1	REVISION DESIGNATOR	P-#	PLUMBING FIXTURE DESIGNATOR
			HOSE BIB

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

Sheet List - Plumbing

No.	Revisions / Submissions	Date

LWC INCORPORATED
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WAYNE LOCAL SCHOOLS

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STATE OF OHIO — BRADLEY STEVEN BRUENING — 81283 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
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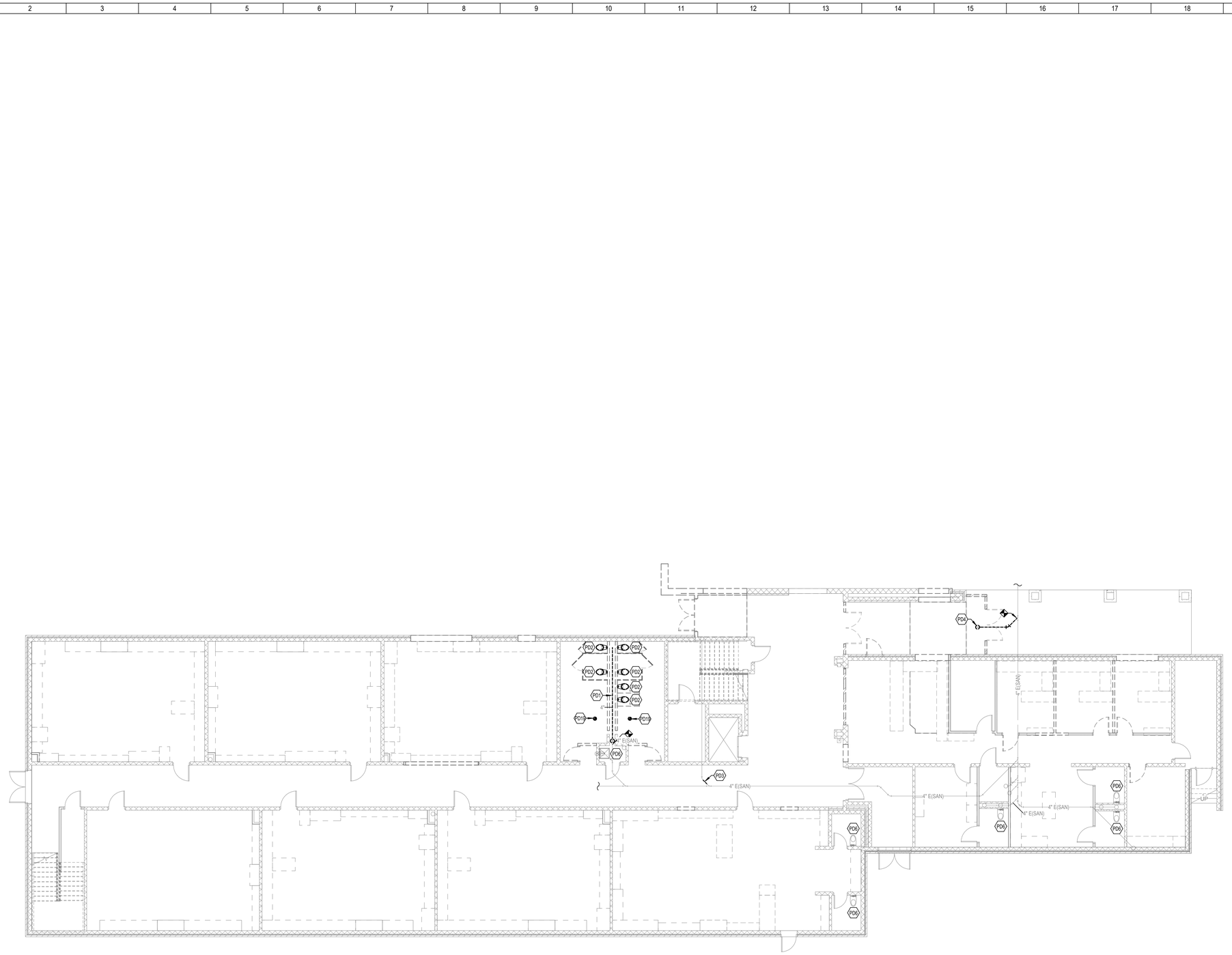

1 FIRST FLOOR UNDERSLAB DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES ##

PD1	DEMO ALL SANITARY PLUMBING WITHIN CHASE. DEMO SANITARY RISER TO SECOND FLOOR.
PD2	DEMO EXISTING PLUMBING FIXTURE AND ASSOCIATED PLUMBING TO MAIN (TYP).
PD3	PARTIALLY DEMO SANITARY CONNECTION TO MAIN FOR ABANDONMENT. CAP EACH END.
PD4	DEMO EXISTING TRAP PRIMER FLOOR DRAIN. DEMO SANITARY AND DOMESTIC COLD BACK TO MAIN AND CAP.
PD6	EXISTING PLUMBING FIXTURE TO REMAIN. EXISTING PLUMBING TO REMAIN.
PD19	DEMO EXISTING FLOOR DRAIN BACK TO MAIN.

No.	Revisions / Submissions	Date

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PLUMBING UNDERSLAB DEMOLITION PLAN

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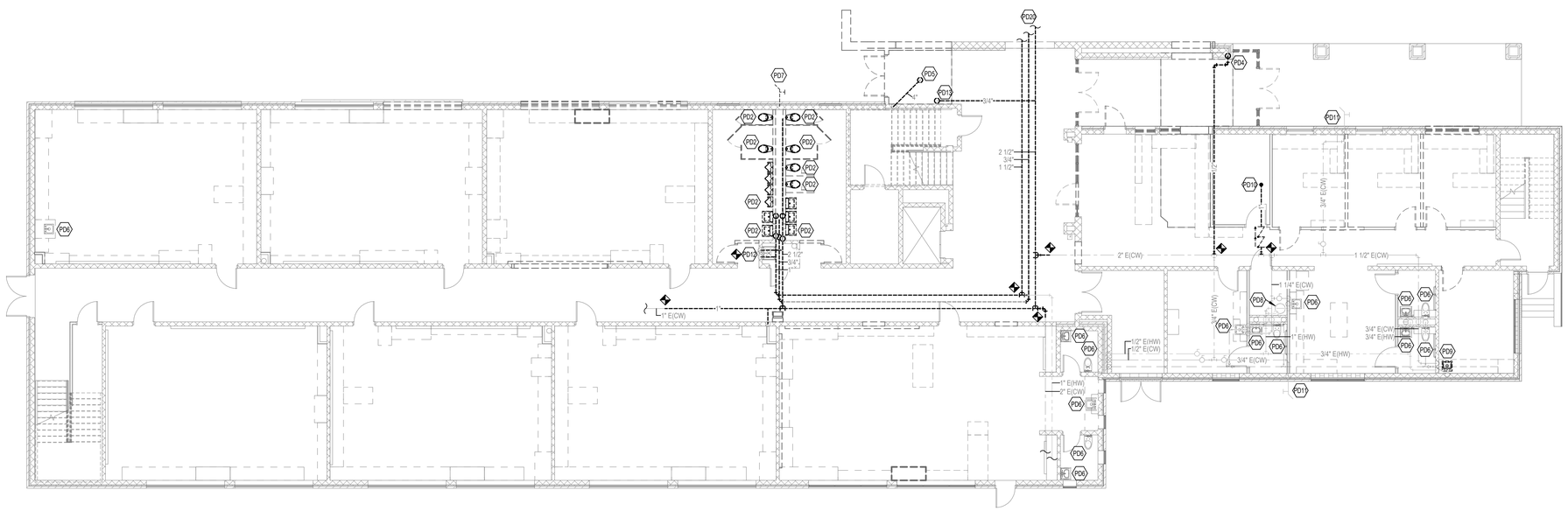

1 FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES #

PD2	DEMO EXISTING PLUMBING FIXTURE AND ASSOCIATED PLUMBING TO MAIN (TYP).
PD4	DEMO EXISTING TRAP PRIMER FLOOR DRAIN. DEMO SANITARY AND DOMESTIC COLD BACK TO MAIN AND CAP.
PD5	DEMO EXISTING TRAP PRIMER FLOOR DRAIN. DEMO DOMESTIC COLD BACK TO MAIN AND CAP. DEMO SANITARY TO WALL AND CAP.
PD6	EXISTING PLUMBING FIXTURE TO REMAIN. EXISTING PLUMBING TO REMAIN.
PD7	DEMO EXISTING FREEZEPROOF WALL HYDRANT. DEMO DOMESTIC COLD BACK TO MAIN.
PD8	EXISTING WATER HEATER AND ASSOCIATED PLUMBING TO REMAIN.
PD9	DEMO EXISTING PLUMBING FIXTURE. DEMO PLUMBING TO WALL AND CAP TO BE ABANDONED.
PD10	DEMO EXISTING LIMITED AREA SPRINKLER. DEMO ASSOCIATED VALVING/PLUMBING BACK TO MAIN AND CAP.
PD11	EXISTING FREEZEPROOF WALL HYDRANT TO REMAIN.
PD12	EXISTING PLUMBING FIXTURE TO REMAIN. DEMO DOMESTIC AND VENT PLUMBING FROM MAIN TO WALL. MAINTAIN PLUMBING WITHIN WALL FOR RECONNECTION.
PD13	DEMO DOMESTIC COLD MECHANICAL EQUIPMENT CONNECTION. DEMO ASSOCIATED VALVING/PLUMBING TO MAIN.
PD20	TO PREVIOUSLY DEMOED WATER HEATER AND WATER SERVICE DONE BY SEPARATE CONTRACTOR.

No.	Revisions / Submissions	Date

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PLUMBING FIRST FLOOR DEMOLITION PLAN

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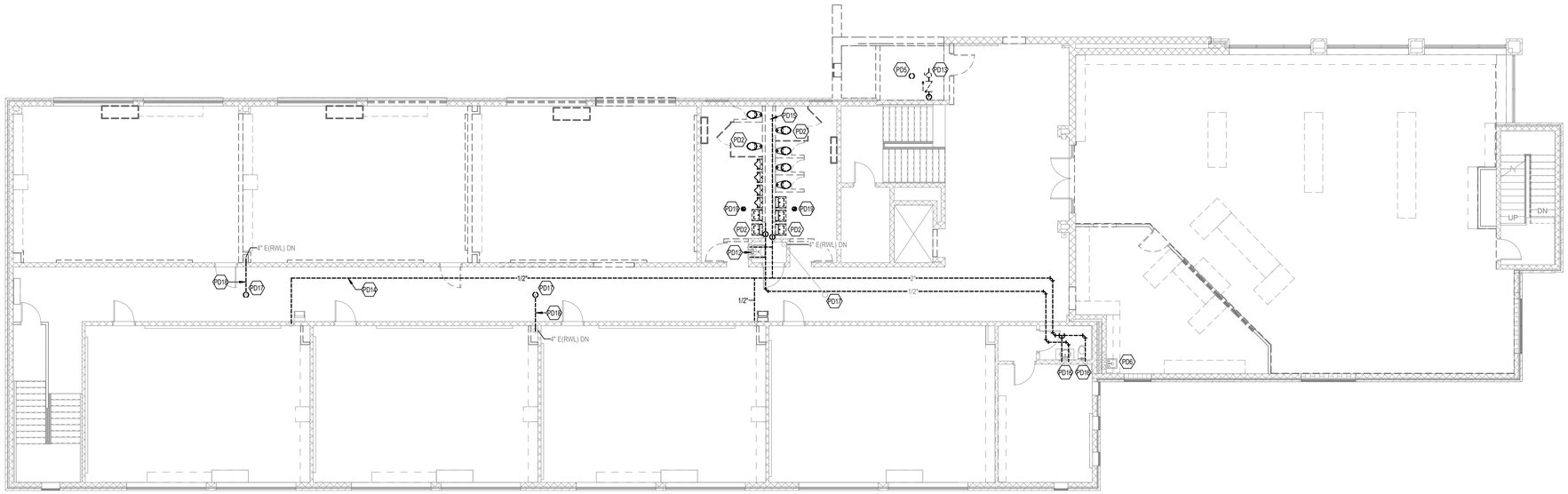

1 SECOND FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

PD2	DEMO EXISTING PLUMBING FIXTURE AND ASSOCIATED PLUMBING TO MAIN (TYP).
PD5	DEMO EXISTING TRAP PRIMER FLOOR DRAIN. DEMO DOMESTIC COLD BACK TO MAIN AND CAP. DEMO SANITARY TO WALL AND CAP.
PD6	EXISTING PLUMBING FIXTURE TO REMAIN. EXISTING PLUMBING TO REMAIN.
PD12	EXISTING PLUMBING FIXTURE TO REMAIN. DEMO DOMESTIC AND VENT PLUMBING FROM MAIN TO WALL. MAINTAIN PLUMBING WITHIN WALL FOR RECONNECTION.
PD13	DEMO DOMESTIC COLD MECHANICAL EQUIPMENT CONNECTION. DEMO ASSOCIATED VALVING/PLUMBING TO MAIN.
PD14	DEMO EXISTING DOMESTIC COLD TO PREVIOUSLY DEMOED DRINKING FOUNTAIN. DEMO PLUMBING TO WALL AND CAP FOR ABANDONMENT.
PD15	DEMO EXISTING VENT PLUMBING IN CHASE TO VENT THROUGH ROOF. PLUMBING CONTRACTOR IS TO VERIFY SIZE OF EXISTING VENT THROUGH ROOF. IF UNDER 4", PROVIDE WITH NEW 4" VENT THROUGH ROOF IN EXISTING LOCATION.
PD16	EXISTING PLUMBING FIXTURE TO REMAIN. DEMO DOMESTIC PLUMBING FROM MAIN TO WALL. MAINTAIN PLUMBING WITHIN WALL FOR RECONNECTION.
PD17	EXISTING ROOF DRAIN TO REMAIN.
PD18	DEMO ROOF LEADER HORIZONTAL FROM ROOF DRAIN TO RISER IN ORDER TO RAISE PLUMBING. MAINTAIN RISER AND DRAIN FOR RECONNECTION.
PD19	DEMO EXISTING FLOOR DRAIN BACK TO MAIN.

No.	Revisions / Submissions	Date

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PLUMBING SECOND FLOOR DEMOLITION PLAN

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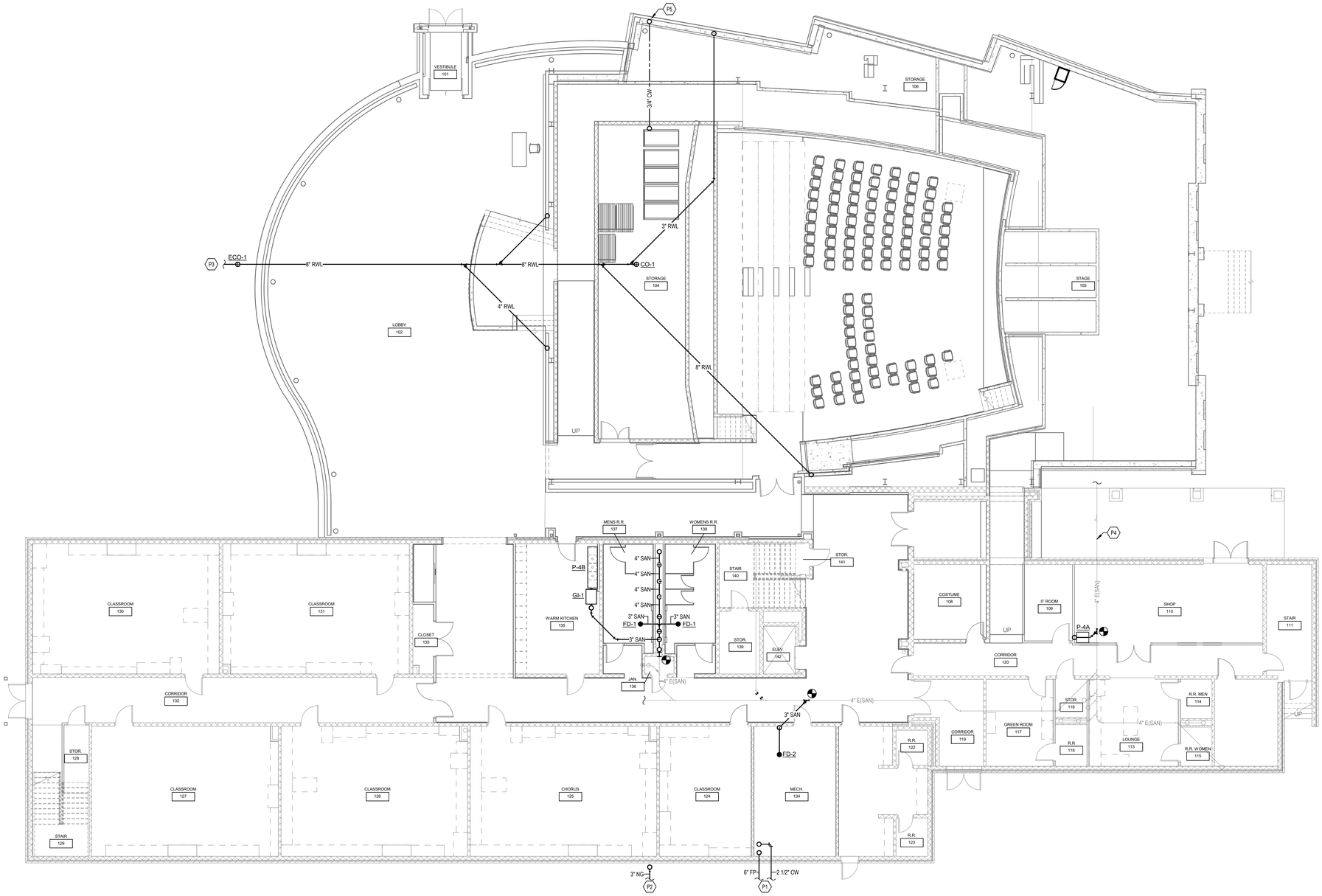

1 FIRST FLOOR UNDERSLAB PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

P1	NEW 2-1/2" DOMESTIC AND 6" FIRE PROTECTION SERVICE. REFER TO CIVIL AND FIRE PROTECTION DRAWINGS FOR CONTINUATION.
P2	NEW 3" GAS SERVICE. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
P3	NEW 8" ROOF LEADERS TO STORM MAIN. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
P4	MAINTAIN EXISTING 6" SANITARY. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
P5	ROUTE 3/4" DOMESTIC COLD UNDER SLAB FOR NEW FREEZEPROOF WALL HYDRANT AS SHOWN.

No.	Revisions / Submissions	Date

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PLUMBING UNDERSLAB PLAN

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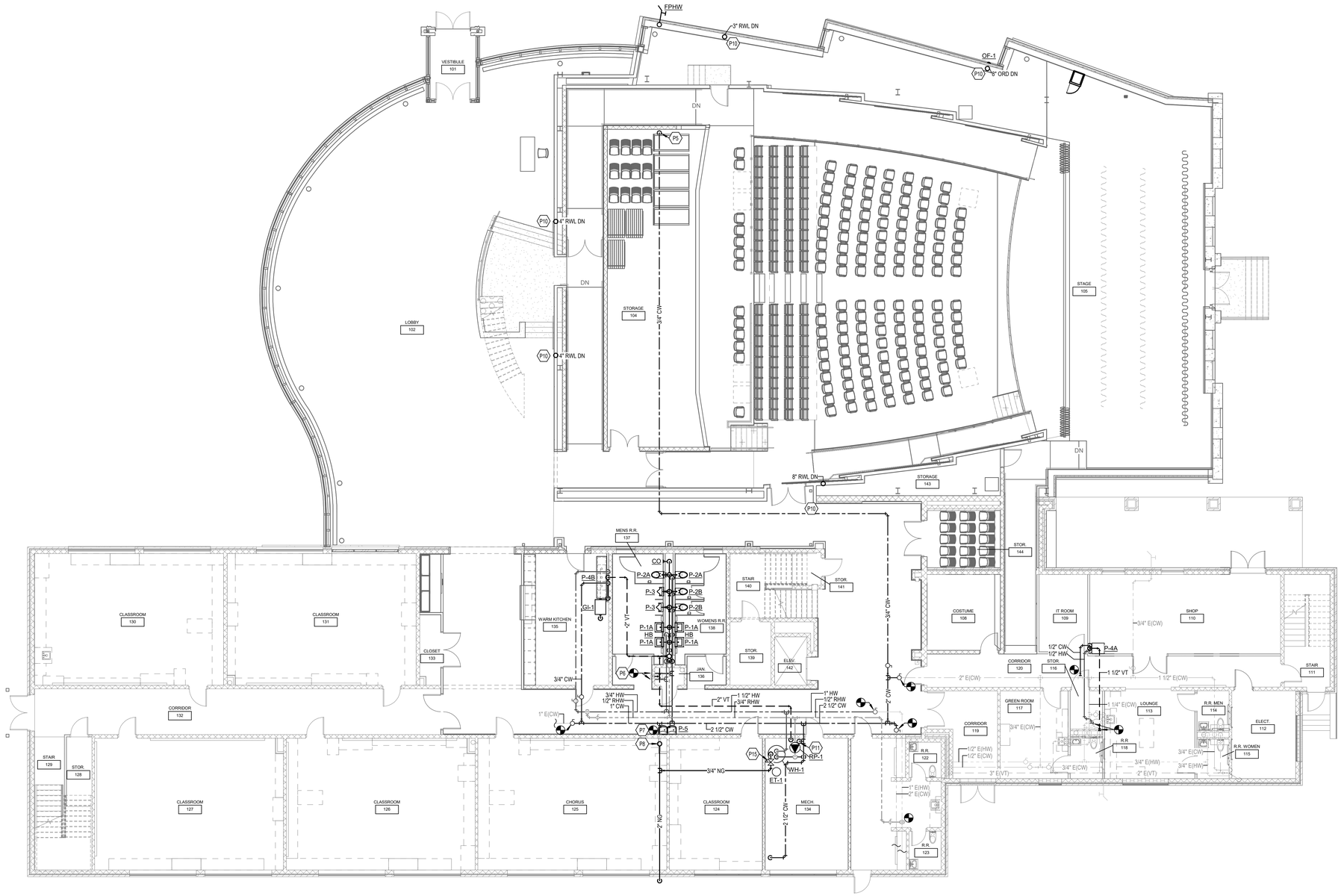

1 FIRST FLOOR PLUMBING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (#)

P5	ROUTE 3/4" DOMESTIC COLD UNDER SLAB FOR NEW FREEZEPROOF WALL HYDRANT AS SHOWN.
P6	CONNECT NEW DOMESTIC AND VENT PLUMBING TO EXISTING PLUMBING WITHIN WALL.
P7	CONNECT NEW FIXTURE TO EXISTING PLUMBING WITHIN WALL.
P8	NEW GAS RISER TO BE LOCATED IN NEW CHASE.
P10	PROVIDE CLEANOUT ON ROOF LEADER RISER ACCESSIBLE FROM THIS FLOOR.
P11	PROVIDE PRECISION PLUMBING PRODUCTS PR-500 PRESSURE ACTIVATED TRAP PRIMER FOR FLOOR DRAIN FD-2
P15	CONNECT GAS TO NEW WATER HEATER. PROVIDE WITH PRESSURE REGULATOR AS SHOWN. VENT REGULATOR TO EXTERIOR.

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PLUMBING FIRST FLOOR PLAN

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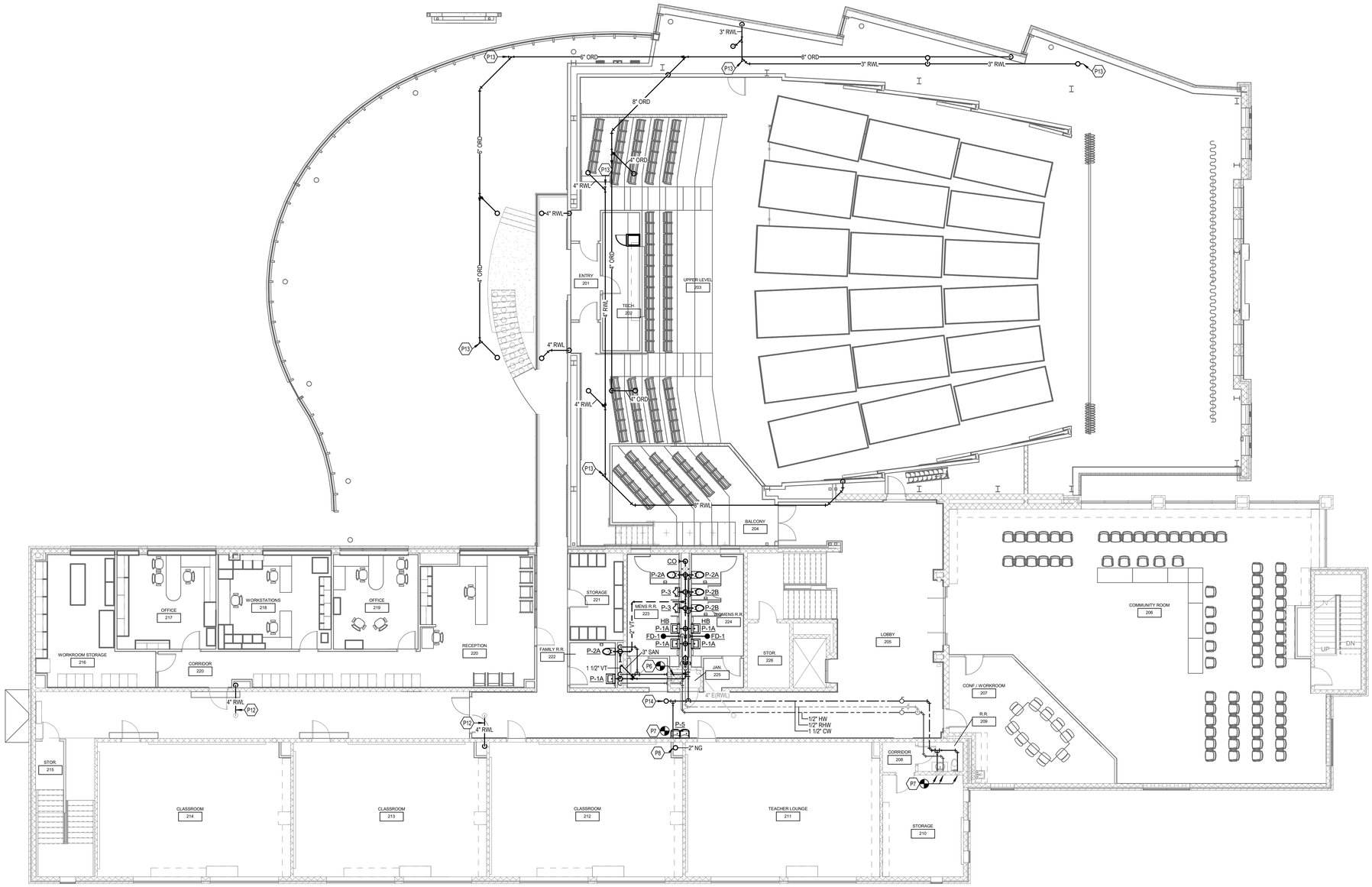

1 SECOND FLOOR PLUMBING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

P6	CONNECT NEW DOMESTIC AND VENT PLUMBING TO EXISTING PLUMBING WITHIN WALL.
P7	CONNECT NEW FIXTURE TO EXISTING PLUMBING WITHIN WALL.
P8	NEW GAS RISER TO BE LOCATED IN NEW CHASE.
P12	CONNECT NEW HORIZONTAL ROOF LEADER WITH EXISTING RISER AND ROOF DRAINS. HORIZONTAL ROOF LEADER SHOULD BE LOCATED ABOVE NEW DUCTWORK. COORDINATE WITH MECHANICAL CONTRACTOR FOR ELEVATIONS.
P13	PROVIDE CLEANOUT OFF OF TEE IN JOIST SPACE.
P14	3/4" DOMESTIC COLD UP TO ROOF HYDRANT FPRH.

No.	Revisions / Submissions	Date

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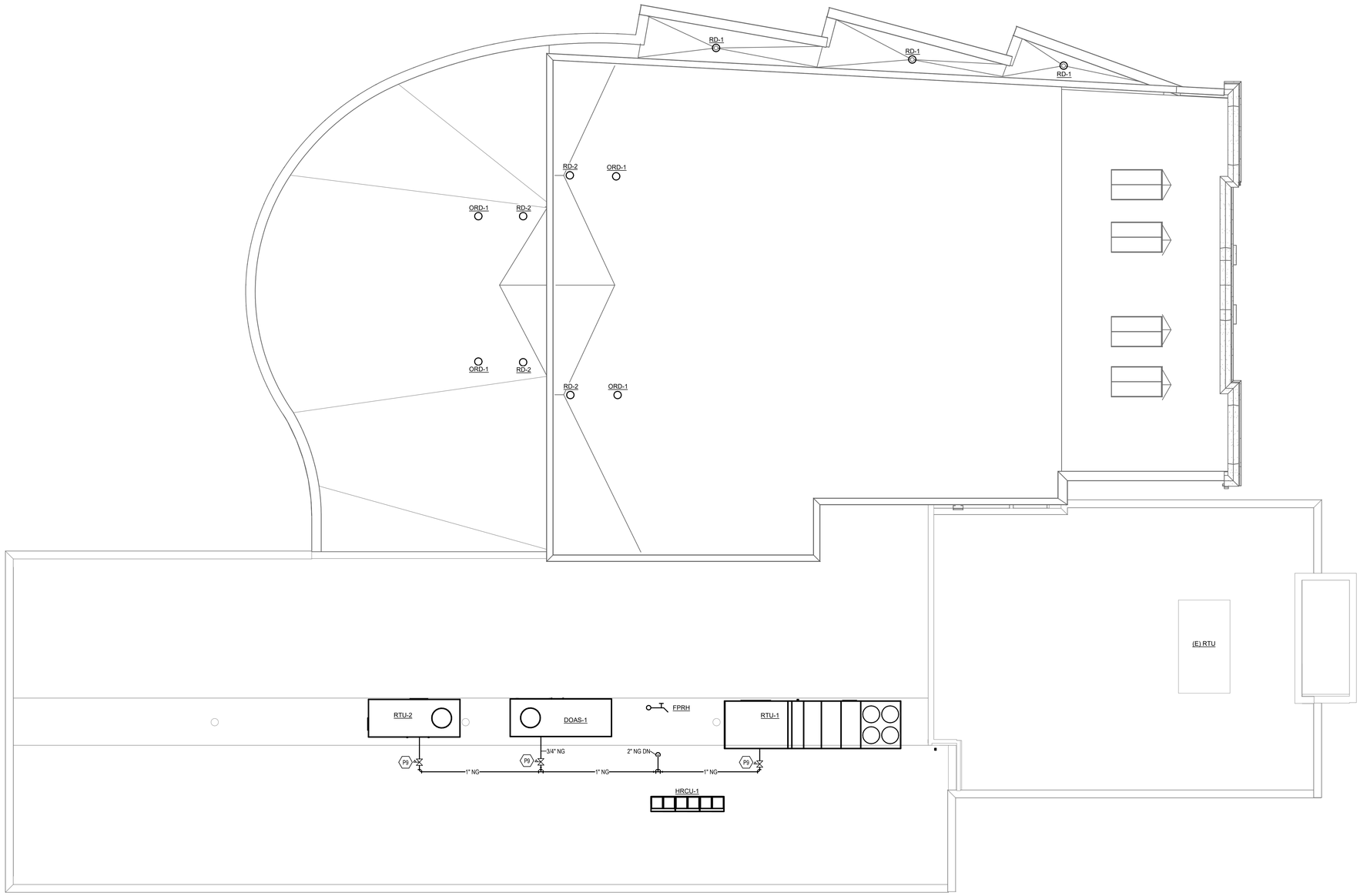

1 ROOF PLUMBING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES #

P9	CONNECT GAS TO NEW MECHANICAL EQUIPMENT. PROVIDE WITH PRESSURE REGULATOR AS SHOWN. REFER TO MECHANICAL DRAWINGS FOR MORE DETAILS.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

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PLUMBING ROOF PLAN

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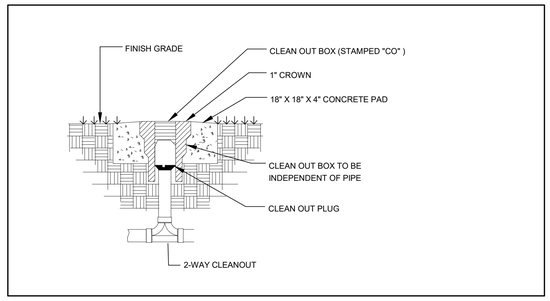
STATE OF OHIO
BRADLEY STEVEN BRUENING
81283
REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: JDW	Drawing No. P203
Checked: BSB	



1 EXTERIOR CLEANOUT DETAIL
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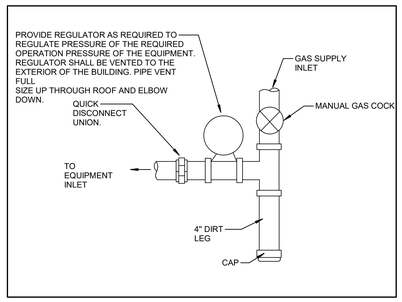
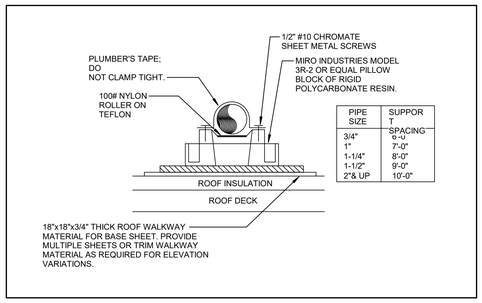
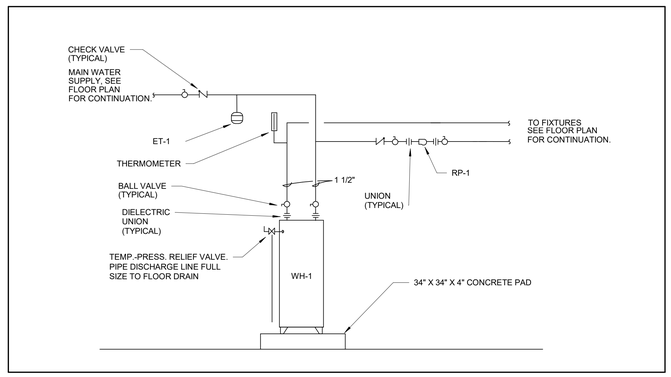


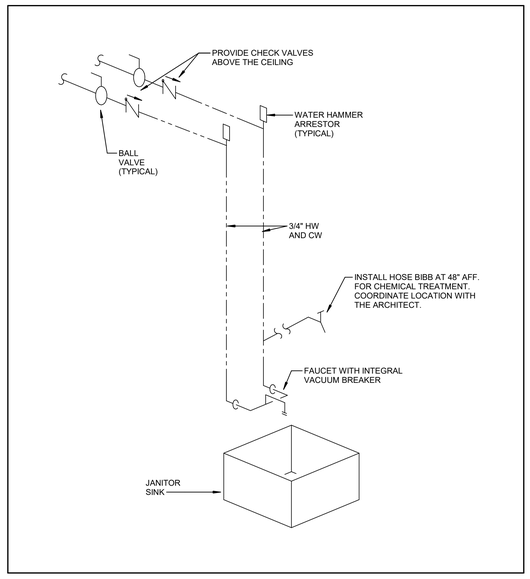
TYPICAL GAS CONNECTION DETAIL
2 SCALE: N.T.S.



ROOFTOP GAS PIPING SUPPORT DETAIL
3 SCALE: N.T.S.



SINGLE WATER HEATER WITH RECIRC - PIPING SCHEMATIC
4 SCALE: N.T.S.



5 JANITOR SINK DETAIL
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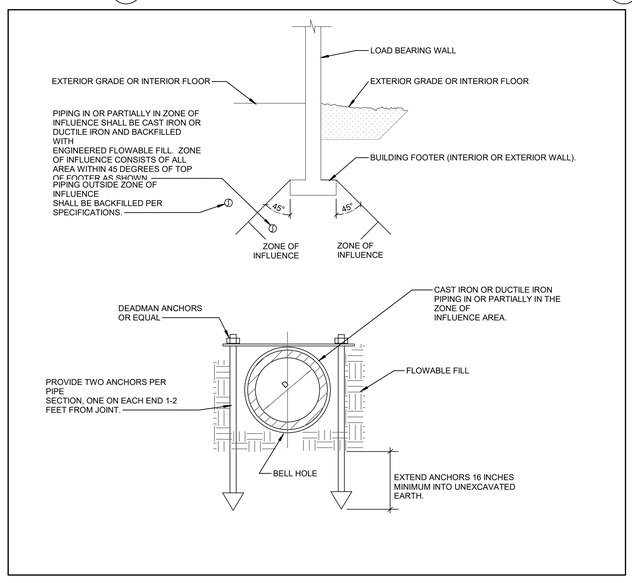
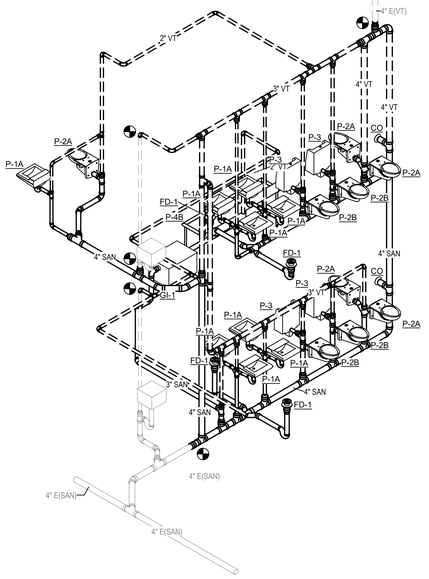
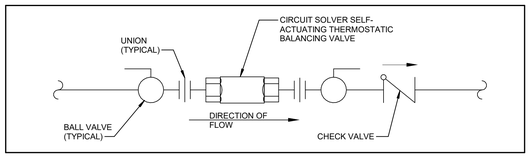


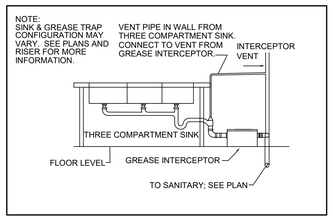
UNDERGROUND PIPING AND FOOTER COORDINATION SCHEMATIC
6 SCALE: N.T.S.



PLUMBING ISOMETRIC
7 SCALE: N.T.S.



HOT WATER BALANCING VALVE DETAIL
8 SCALE: N.T.S.



9 GREASE INTERCEPTOR DETAIL
SCALE: N.T.S.

No.	Revisions / Submissions	Date

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PLUMBING DETAILS AND ISOMETRICS

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Comm. No.	Date
18620.00	2021/03/01
Drawn: JDW	Drawing No. P301
Checked: BSB	

2/26/2021 11:25:11 AM

GENERAL NOTES - MECHANICAL

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE GENERAL AND SPECIAL CONDITIONS, "GENERAL CONDITIONS - MECHANICAL" OF THE PROJECT SPECIFICATIONS AND TO ALL OTHER CONTRACT DOCUMENTS AS THEY APPLY TO THIS BRANCH OF WORK. ATTENTION IS ALSO DIRECTED TO ALL OTHER SECTIONS OF THE CONTRACT DOCUMENTS WHICH AFFECTS THE WORK AND WHICH ARE HEREBY MADE A PART OF THE WORK SPECIFIED.
2. ALL MANUFACTURERS, SUPPLIERS, FABRICATORS, CONTRACTORS, ETC. SUBMITTING PROPOSALS FOR ANY PART OF THE WORK, SERVICES, MATERIALS OR EQUIPMENT TO BE USED ON OR APPLIED TO THIS PROJECT ARE HEREBY DIRECTED TO FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS. IN CASE OF CONFLICTS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION AND FINAL DETERMINATION PRIOR TO THE BID.
3. THE WORK SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT, TRANSPORTATION, SUPPLIES, MATERIALS, APPURTENANCES AND SERVICES NECESSARY FOR THE SATISFACTORY INSTALLATION OF THE COMPLETE AND OPERATING SYSTEMS INDICATED OR SPECIFIED IN THE CONTRACT DOCUMENTS.
4. ANY MATERIALS, LABOR, EQUIPMENT OR SERVICES NOT MENTIONED SPECIFICALLY HEREIN WHICH MAY BE NECESSARY TO COMPLETE ANY PART OF THE SYSTEMS IN A SUBSTANTIAL MANNER, IN COMPLIANCE WITH THE REQUIREMENTS STATED, IMPLIED OR INTENDED IN THE PLANS AND SPECIFICATIONS, SHALL BE INCLUDED IN THE BID AS PART OF THE CONTRACT.
5. THE ENGINEER DOES NOT DEFINE THE SCOPE OF INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS AND VENDORS. ANY SHEET NUMBERING OR SPECIFICATION NUMBERING SYSTEM USED WHICH IDENTIFIES DISCIPLINES IS SOLELY FOR THE ENGINEER'S CONVENIENCE AND IS NOT INTENDED TO DEFINE A SUBCONTRACTOR'S SCOPE OF WORK. INFORMATION REGARDING INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS AND VENDORS MAY BE DETAILED, DESCRIBED AND INDICATED AT DIFFERENT LOCATIONS THROUGHOUT THE CONTRACT DOCUMENTS. NO CONSIDERATION WILL BE GIVEN TO REQUESTS FOR CHANGE ORDERS FOR FAILURE TO OBTAIN AND REVIEW THE COMPLETE SET OF CONTRACT DOCUMENTS WHEN PREPARING BIDS, PRICES AND QUOTATIONS. UNLESS STATED OTHERWISE, THE SUBDIVISION AND ASSIGNMENT OF WORK UNDER THE VARIOUS SECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR HOLDING THE PRIME CONTRACT.
6. IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO CALL FOR A COMPLETE AND OPERATIONAL SYSTEM, INCLUDING ALL COMPONENTS, ACCESSORIES, FINISH WORK, ETC NECESSARY FOR TROUBLE FREE OPERATION; TESTED AND READY FOR OPERATION. ANYTHING THAT MAY BE REQUIRED, IMPLIED, OR INFERRED BY THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCLUDED AS PART OF THE BID.
7. ALL CONTRACTORS AND VENDORS PROVIDING A BID FOR THIS PROJECT SHALL REVIEW THE PLANS AND SPECIFICATIONS AND DETERMINE ANY MODIFICATIONS AND/OR ADJUSTMENTS NECESSARY RELATIVE TO THE PROPOSED EQUIPMENT AND MATERIALS WITH SPECIFIC MANUFACTURER'S INSTALLATION REQUIREMENTS. INCLUDE IN THE BID ANY NECESSARY METHODS, FEATURES, OPTIONS, ACCESSORIES, ETC. NECESSARY TO INSTALL THE PROPOSED EQUIPMENT AND MATERIALS, REGARDLESS OF WHETHER USED AS BASIS OF DESIGN OR BEING OFFERED AS A SUBSTITUTION, IN ACCORDANCE WITH THE SPECIFIC MANUFACTURER'S INSTALLATION REQUIREMENTS, WHETHER SPECIFICALLY DETAILED OR NOT, WITHIN THE PLANS AND SPECIFICATIONS.
8. THE BIDDER/PROPOSER SHALL COMPLETELY REVIEW THE CONTRACT DOCUMENTS. ANY INTERPRETATION AS TO DESIGN INTENT OR SCOPE SHALL BE PROVIDED BY THE ENGINEER. SHOULD ANY INTERPRETATION BE REQUIRED, THE BIDDER/PROPOSER SHALL REQUEST A CLARIFICATION NOT LESS THAN TEN (10) DAYS PRIOR TO THE SUBMISSION OF THE BID SO THAT THE CONDITION MAY BE CLARIFIED BY ADDENDUM. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY DEVELOPS; THE INTERPRETATION OF THE ENGINEER SHALL BE FINAL.
9. THE CONTRACTOR SHALL PROVIDE LAYOUT CONFIRMATION OF EQUIPMENT LOCATIONS TO VERIFY THAT ALL COMPONENTS WILL FIT IN THE PROPOSED SPACE AND HAVE ADEQUATE CLEARANCE FOR SERVICES. COORDINATE THE LOCATION OF DRAINS, CONNECTIONS, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).
10. EQUIPMENT AND MATERIALS SUBSTITUTIONS OR DEVIATIONS SHALL COMPLY WITH "GENERAL PROVISIONS - MECHANICAL PART 6." ANY VENDOR WISHING TO OBTAIN AN EQUIPMENT SUBSTITUTION SHALL REQUEST A CLARIFICATION NOT LESS THAN TEN (10) DAYS PRIOR TO THE SUBMISSION OF THE PROPOSAL SO THAT IT MAY BE CONSIDERED AND POTENTIALLY INCLUDED BY ADDENDUM. REQUESTS MADE AFTER THIS PERIOD WILL BE REJECTED.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE REGARDLESS IF CONTRACTOR IS IGNORANT OF CODES, RULES, REGULATIONS, LAWS, ETC. THE CONTRACTOR SHALL ALSO BE VERSED IN ALL CODES, RULES, REGULATIONS, LAWS, ETC. PERTINENT TO THEIR PART OF THE WORK PRIOR TO SUBMISSION OF THE PROPOSAL.
12. ALL WARRANTIES SHALL BEGIN STARTING AT THE PROJECT'S SUBSTANTIAL COMPLETION DATE. ALL EQUIPMENT, MATERIAL AND LABOR WARRANTIES SHALL BE FURNISHED BY THE EQUIPMENT SUPPLIER/VENDOR.
13. WHEREVER WORK PENETRATES ROOFING, IT SHALL BE DONE IN A MANNER THAT WILL NOT DIMINISH OR VOID THE ROOFING GUARANTEE OR WARRANTY IN ANY WAY. COORDINATE ALL SUCH WORK WITH THE ROOFING INSTALLER.
14. DUCTWORK, PIPING AND EQUIPMENT SHALL BE KEPT CLEAN AT ALL TIMES. DUCTWORK STORED ON THE JOB SITE SHALL BE PLACED A MINIMUM OF 4" ABOVE THE FLOOR AND BE COMPLETELY COVERED IN PLASTIC. INSTALLED DUCTWORK SHALL BE PROTECTED WITH PLASTIC. DO NOT INSTALL THE DUCTWORK OR INSULATION (PIPE OR DUCT) IF THE BUILDING IS NOT "DRIED-IN". IF THIS IS REQUIRED, THE ENTIRE LENGTHS SHALL BE COVERED IN PLASTIC TO PROTECT. THE OWNER/ENGINEER SHALL PERIODICALLY INSPECT THAT THESE PROCEDURES ARE FOLLOWED. IF DEEMED UNACCEPTABLE, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN THE DUCT SYSTEM UTILIZING A NADCA CERTIFIED CONTRACTOR.
15. THE PERMANENT SYSTEMS, WHEN INSTALLED, MAY BE USED FOR TEMPORARY SERVICES WITH THE CONSENT OF THE ENGINEER AND IN STRICT ACCORDANCE WITH "GENERAL PROVISIONS - MECHANICAL - TEMPORARY USE OF EQUIPMENT."
16. THE CONTRACTOR AND THEIR SUBCONTRACTORS SHALL INCLUDE IN THE BID TO PROVIDE EQUIPMENT AND CONTROLS STARTUP AND VERIFICATION FOR ALL MECHANICAL SYSTEMS SPECIFIED FOR THIS PROJECT AND IN STRICT ACCORDANCE WITH "GENERAL PROVISIONS - MECHANICAL - EQUIPMENT/CONTROLS STARTUP & VERIFICATION."
17. THE CONTRACTOR SHALL DETERMINE FROM THE CONTRACT DOCUMENTS, THE DATE OF COMPLETION FOR THE PROJECT AND INSURE THAT EQUIPMENT DELIVERY SCHEDULES CAN BE MET SO AS TO ALLOW THIS COMPLETION TO BE MET.
18. THROUGH COORDINATION WITH OTHER CONTRACTORS, VENDORS, AND SUPPLIERS ASSOCIATED WITH THIS PROJECT, THIS CONTRACTOR SHALL INSURE, 100% FUNCTIONAL, TESTED, INSPECTED AND APPROVED SYSTEMS. CLAIMS FOR ADDITIONAL COST OR CHANGE ORDERS WILL BE REJECTED.
19. PRIOR TO ORDERING ANY MATERIALS OR ROUGH-IN OF ANY KIND, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF ALL ELECTRICAL REQUIREMENTS (I.E. VOLTAGE, PHASE, CIRCUIT BREAKER, WIRE SIZING, ETC.) WITH THE ELECTRICAL CONTRACTOR. THERE WILL BE NO CHANGE IN THE CONTRACT AMOUNT FOR ANY DISCREPANCIES.
20. ALL OFFSETS, TURNS, FITTINGS, TRIM, DETAIL, ETC., MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSERS' DISCRETION.
21. DO NOT SCALE FROM DRAWINGS, PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM CONTRACTOR GENERATED DIMENSIONED DRAWINGS.
22. THE CONTRACTOR SHALL ENSURE PROPER COORDINATION BETWEEN ALL TRADES SUCH THAT CONDUITS, PIPING, DUCTWORK, ETC, DOES NOT BLOCK ACCESS TO VALVES, EQUIPMENT, DUCT ACCESS DOORS, ETC. ITEMS THAT HAVE BEEN INSTALLED WHERE ACCESS IS COMPROMISED SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
23. THESE DRAWINGS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE, HOWEVER LOCATIONS AND SIZES WERE TAKEN FROM DIFFERENT SOURCES AND ARE SUBJECT TO DEVIATION. THE CONTRACTOR SHALL ASSUME SOME DEVIATIONS AND INCLUDE OFFSETS, ADDITIONAL PIPING, ETC. AT THE TIME OF BID.
24. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR THEIR WORK. ALL CUTTING AND PATCHING SHALL MATCH ADJACENT SURFACES AND PERFORMED BY SKILLED WORKERS OF THE TRADE. REFER TO SPECIFICATION SECTION "SLEEVING, CUTTING, PATCHING, REPAIRING, ETC." AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
25. ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES, EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE, IN WRITING.
26. PRIOR TO PURCHASE OR FABRICATION OF PIPING, THE CONTRACTOR SHALL COORDINATE INSTALLATION WITH ACTUAL CONDITIONS AND INSTALL ACCORDINGLY.
27. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED AT NO ADDITIONAL COST UNDER THE ITEM WHETHER SHOWN OR NOT ON THE PLANS TO ALLOW ACCESS AND ADJUSTMENT.
28. THE CONTRACTOR SHALL VISIT THE SITE FOR EXACT LOCATIONS OF ALL WALL AND CEILING DEVICES. THIS SHALL INCLUDE PLUMBING FIXTURES, CEILING GRILLES AND DIFFUSERS, ETC.
29. CONTRACTOR SHALL CLEAN UP CONSTRUCTION DEBRIS AT ALL TIMES DURING CONSTRUCTION.

GENERAL NOTES - DEMOLITION

A. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELED VERIFY EXACT REQUIREMENTS.
B. ALL OUTAGES SHALL BE SCHEDULED THROUGH THE PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.
C. DURING SPRINKLER SYSTEM OUTAGES THE CONTRACTORS SHALL PROVIDE FIRE WATCH OF AREAS WITH OUTAGES.
D. ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.
E. ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.
F. HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (U.O.N) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
G. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH THE OWNER.

ABBREVIATIONS

ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
APD	AIR PRESSURE DROP
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GR	GRAINS
HD	HEAD
HP	H (-ORSEPOWER, -EAT PUMP)
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
NC	NOISE CRITERIA **OR** NORMALLY CLOSED

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DI (-AMETER, -MENSION)
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
RH	RELATIVE HUMIDITY [%]
RPM	REVOLUTIONS PER MINUTE
SD	SMOKE DAMPER
SP	STATIC PRESSURE
SQ FT	SQUARE FEET **OR** FOOT
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WPD	WATER PRESSURE DROP
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

#	TAGGED NOTE DESIGNATOR
1	REVISION TRIANGLE
ROOM NAME (RM. #)	ROOM TAG
XXX-X	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR DIFFUSER
	TRANSFER AIR GRILLE W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
TAG AIRFLOW	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER,LOUVER)
##/##	RECTANGULAR DUCT
#ø	ROUND/SPIRAL DUCT
##/##ø	FLAT OVAL DUCT
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
OA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
CAE	COMBUSTION AIR EXHAUST DUCT
CAI	COMBUSTION AIR INTAKE DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
E(XXX)	EXISTING DUCT - (XXX) DENOTES SYSTEM
D(XXX)	DUCT TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
A(XXX)	DUCT TO BE ABANDONED IN PLACE - (XXX) DENOTES SYSTEM
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
T	THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
TC	TEMPERATURE & CARBON DIOXIDE SENSOR
VERT. HORIZ.	MANUAL BALANCING/VOLUME DAMPER
VERT. HORIZ.	MOTORIZED DAMPER

MECHANICAL PIPING LEGEND

	PIPE ELBOW TURNING UP
	PIPE ELBOW TURNING DOWN
	PIPE TEE; CONNECTION ON TOP
	PIPE TEE; CONNECTION ON BOTTOM
	PIPE CAP
CD	CONDENSATE DRAIN
CHWS/R	CHILLED WATER SUPPLY/RETURN
CWS/R	CONDENSER WATER SUPPLY/RETURN
DTS/R	DUAL TEMP. WATER SUPPLY/RETURN
GS/R	GEOTHERMAL WATER SUPPLY/RETURN
HPC	HIGH PRESSURE STEAM CONDENSATE
HPS(#)	HIGH PRESSURE STEAM; (#) DENOTES PRESSURE
HPS/R	HEAT PUMP WATER SUPPLY/RETURN
HRS/R	HEAT RECOVERY SUPPLY/RETURN PIPING
HWS/R	HEATING WATER SUPPLY/RETURN
LPC	LOW PRESSURE STEAM CONDENSATE
LPS(#)	LOW PRESSURE STEAM; (#) DENOTES PRESSURE
MPC	MEDIUM PRESSURE STEAM RETURN
MPS(#)	MEDIUM PRESSURE STEAM; (#) DENOTES PRESSURE
SVT	STEAM VENT PIPING
D(XXX)	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
E(XXX)	EXISTING PIPING - (XXX) DENOTES SYSTEM

PHASING NOTES

A. THIS PROJECT INTERFACES EXTENSIVELY WITH EXISTING BUILDING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND PHASE ALL TIE-INS AND INTERRUPTIONS OF EXISTING SERVICES TO MINIMIZE OR ELIMINATE DOWNTIME. AS AN EXAMPLE, MAIN GAS SERVICE, WATER SERVICE, ELECTRICAL SERVICE, HVAC SERVICES, STEAM GENERATION, ETC., WILL BE AFFECTED AND REPLACED OR MOVED DURING THIS PROJECT. THE CONTRACTOR SHALL INSTALL ALL NEW SERVICES AND EQUIPMENT AND HAVE THEM TESTED AND FULLY AND RELIABLY FUNCTIONAL PRIOR TO INTERRUPTING, RELOCATING OR REMOVING ANY EXISTING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BARE ANY AND ALL COSTS ASSOCIATED WITH THIS PHASING, INCLUDING TEMPORARY SERVICES, TEMPORARY RELOCATION, PREMIUM TIME WORK, ETC. CONTRACTOR SHALL COORDINATE ALL SAID WORK WITH THE OWNER AND APPLICABLE UTILITIES PER THE CONTRACT DOCUMENTS.

HAZARDOUS MATERIALS NOTES

A. THE CONTRACTOR IT IS HEREBY ADVISED THAT IS POSSIBLE THAT ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS ARE OR WERE PRESENT IN THIS BUILDING(S). ANY WORKER, OCCUPANT, VISITOR, ETC., WHO ENCOUNTERS ANY MATERIAL OF WHOSE CONTENT THEY ARE NOT CERTAIN SHALL PROMPTLY REPORT THE EXISTENCE AND LOCATION OF THAT MATERIAL TO THE OWNER. FURTHERMORE, THE CONTRACTOR SHALL INSURE THAT NO ONE COMES NEAR TO OR IN CONTACT WITH ANY SUCH MATERIAL OR FUMES THEREFROM UNTIL ITS CONTENT CAN BE ASCERTAINED TO BE NON-HAZARDOUS.
B. CMTA, INC. HAS NO EXPERTISE IN THE DETERMINATION OF THE PRESENCE OF ANY HAZARDOUS MATERIAL. THEREFORE, NO ATTEMPT HAS BEEN MADE BY CMTA TO IDENTIFY THE EXISTENCE OR LOCATION OF ANY SUCH HAZARDOUS MATERIAL. FURTHERMORE, CMTA NOR ANY AFFILIATE HEREOF WILL NOT OFFER OR MAKE ANY RECOMMENDATIONS RELATIVE TO THE REMOVAL, HANDLING OR DISPOSAL OF SUCH MATERIAL.
C. IF THE WORK WHICH IS TO BE PERFORMED INTERFACES, CONNECTS OR RELATES IN ANY PHYSICAL WAY WITH OR TO EXISTING COMPONENTS WHICH CONTAIN OR BEAR ANY HAZARDOUS MATERIAL, ASBESTOS BEING ONE, THEN IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONTACT THE OWNER AND SO ADVISE HIM/HER IMMEDIATELY.
D. THE CONTRACTOR BY EXECUTION OF THE CONTRACT FOR ANY WORK AND/OR BY THE ACCOMPLISHMENT OF ANY WORK THEREBY AGREE TO BRING NO CLAIM RELATIVE TO HAZARDOUS MATERIALS FOR NEGLIGENCE, BREACH OF CONTRACT, INDEMNITY, OR ANY OTHER SUCH ITEM AGAINST CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS OR CONSULTANTS. ALSO, THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS AND CONSULTANTS HARMLESS FROM ANY SUCH RELATED CLAIMS WHICH MAY BE BROUGHT BY ANY SUBCONTRACTORS, SUPPLIERS OR ANY OTHER THIRD PARTIES.
E. THE CONTRACTOR IS DIRECTED TO THE SPECIFICATIONS FOR FURTHER INFORMATION.

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

Sheet List - Mechanical

SHEET #	SHEET NAME
M101	MECHANICAL FIRST FLOOR DEMOLITION
M102	MECHANICAL SECOND FLOOR DEMOLITION
M103	MECHANICAL ROOF DEMOLITION
M201	MECHANICAL FIRST FLOOR PLAN
M202	MECHANICAL SECOND FLOOR PLAN
M203	MECHANICAL ROOF PLAN
M204	MECHANICAL FIRST FLOOR PLAN ALTERNATE
M205	MECHANICAL SECOND FLOOR ALTERNATE
M206	MECHANICAL SECTIONS
M301	REFRIGERANT PIPING FIRST FLOOR PLAN
M302	REFRIGERANT PIPING SECOND FLOOR PLAN
M401	MECHANICAL DETAILS
M501	MECHANICAL CONTROLS
M601	MECHANICAL SCHEDULES
M602	MECHANICAL SCHEDULES
M701	VENTILATION CALCULATIONS
ME101	COORDINATED REFLECTED CEILING PLAN
M000	MECHANICAL LEGEND

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL LEGEND

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO — BRIAN K. ROSE E-56929 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M000
Checked: BKR	

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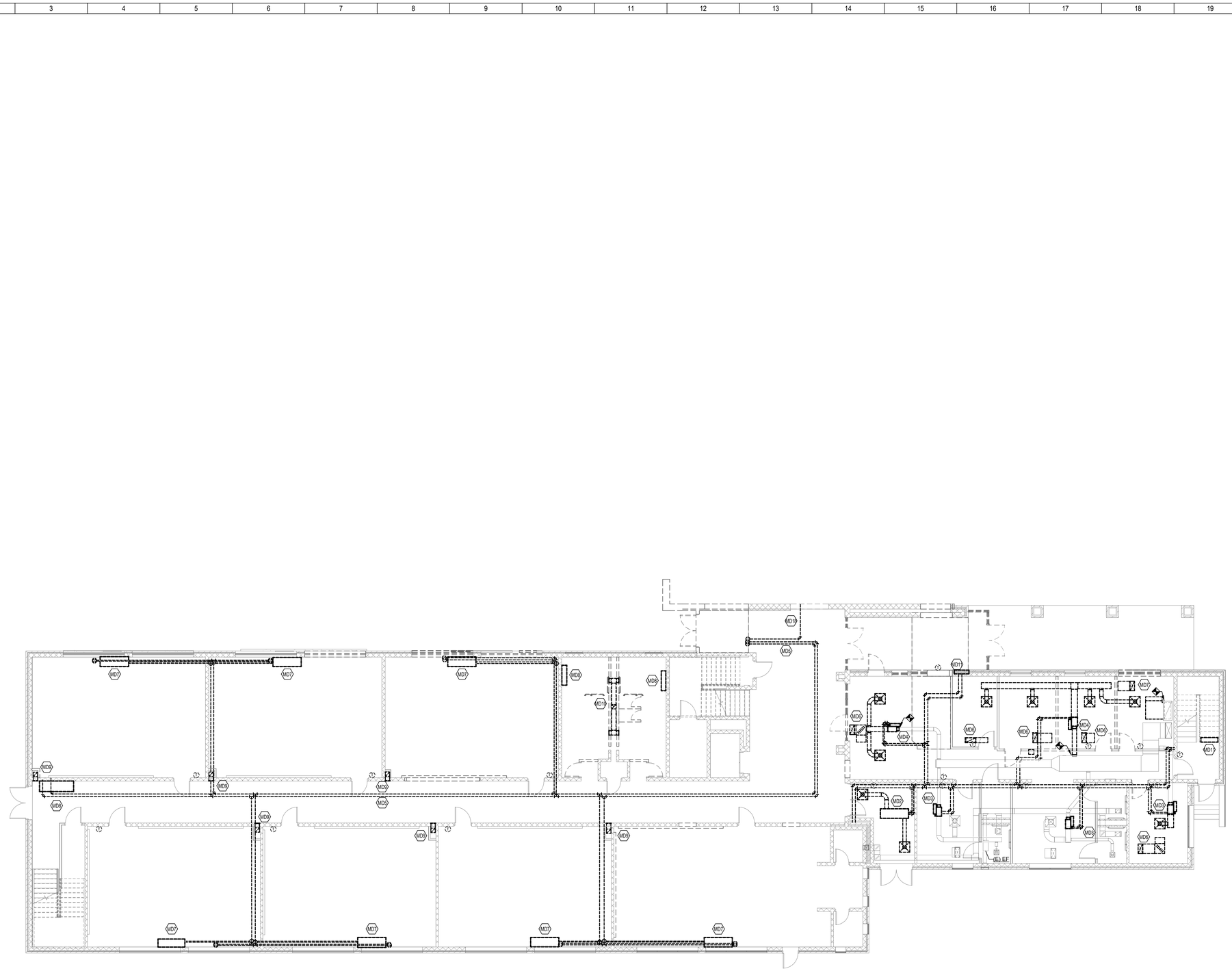

1 FIRST FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

MD2	REMOVE HORIZONTAL DUCTED UNIT HEATER ABOVE CEILING, ASSOCIATED DUCTWORK, DIFFUSERS, PIPING, POWER AND CONTROLS IN ITS ENTIRETY.
MD3	REMOVE EXISTING VAV BOX, ASSOCIATED PIPING, AND CONTROLS IN ITS ENTIRETY. ASSOCIATED DUCTWORK SHALL REMAIN.
MD4	REMOVE EXISTING VAV BOX, ASSOCIATED PIPING, DUCTWORK, HANGERS, DIFFUSERS AND CONTROLS IN ITS ENTIRETY.
MD5	REMOVE EXISTING HOT WATER PIPING, INSULATION AND HANGERS BACK TO SECOND FLOOR MECHANICAL ROOM IN ITS ENTIRETY.
MD6	REMOVE EXISTING RETURN GRILLE AND ASSOCIATED RETURN BOOT.
MD7	REMOVE EXISTING UNIT VENTILATOR AND ALL ASSOCIATED HYDRONIC PIPING, HANGERS, VALVES, ELECTRICAL WIRING, THERMOSTAT, AND CONTROL WIRING IN ITS ENTIRETY. INTAKE LOUVER SHALL BE REMAIN AND SHALL BE SEALED OFF WATER/AIR TIGHT. PROVIDE 2" INSULATED ALUMINUM PANEL AT THE INTERIOR FACE. MC SHALL PROVIDE SHEET METAL PLATE WITH FINISHED EDGE TO COVER WALL OPENING.
MD8	REMOVE EXISTING CABINET HEATER, ASSOCIATED PIPING, VALVES, ELECTRICAL WIRING, THERMOSTAT, AND CONTROL WIRING IN ITS ENTIRETY.
MD9	REMOVE EXISTING SIDEWALL GRILLE AND DUCT RISER BETWEEN FIRST AND SECOND FLOOR. PATCH AND REPAIR WALL OPENING.
MD10	REMOVE RESTROOM EXHAUST GRILLES AND ASSOCIATED DUCTWORK IN ITS ENTIRETY.
MD11	REMOVE HOT WATER CABINET UNIT HEATER, ASSOCIATED PIPING, ELECTRICAL WIRING, THERMOSTAT AND CONTROL WIRING IN ITS ENTIRETY.
MD18	REMOVE EXISTING STEAM AND CONDENSATE PIPING IN ITS ENTIRETY, INCLUDING INSULATION AND HANGERS.

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL FIRST FLOOR DEMOLITION

CMTA
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STATE OF OHIO — BRIAN K. ROSE E-56979 — REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
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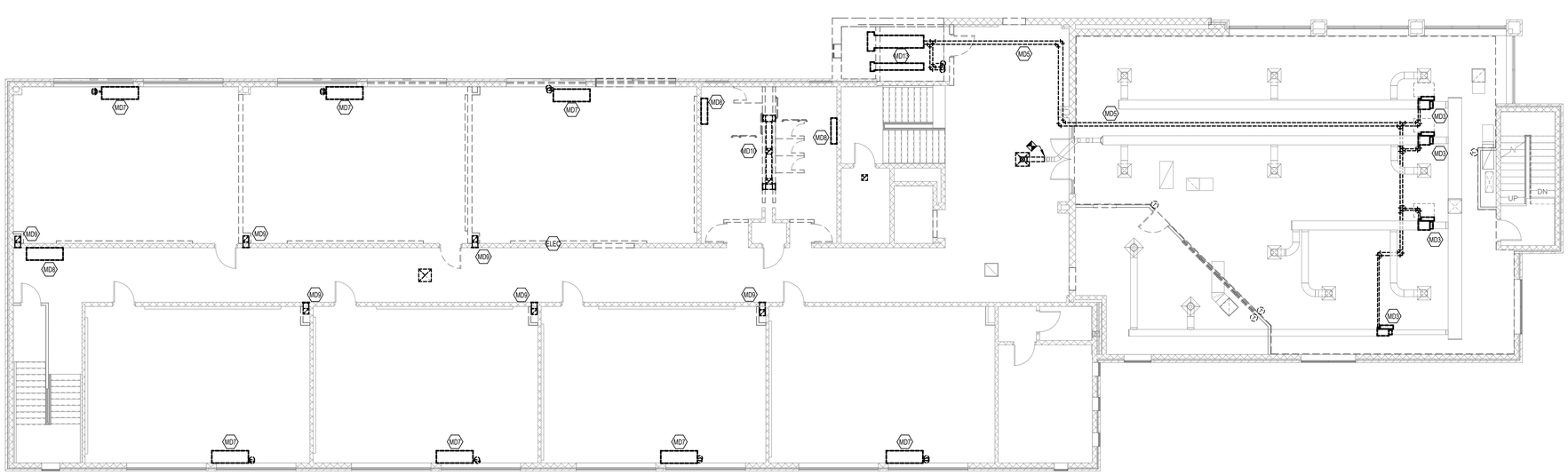
Checked BKR	



1 SECOND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

MD3	REMOVE EXISTING VAV BOX, ASSOCIATED PIPING, AND CONTROLS IN ITS ENTIRETY. ASSOCIATED DUCTWORK SHALL REMAIN.
MD5	REMOVE EXISTING HOT WATER PIPING, INSULATION AND HANGERS BACK TO SECOND FLOOR MECHANICAL ROOM IN ITS ENTIRETY.
MD7	REMOVE EXISTING UNIT VENTILATOR AND ALL ASSOCIATED HYDRONIC PIPING, HANGERS, VALVES, ELECTRICAL WIRING, THERMOSTAT, AND CONTROL WIRING IN ITS ENTIRETY. INTAKE LOUVER SHALL BE REMAIN AND SHALL BE SEALED OFF WATER/AIR TIGHT. PROVIDE 2" INSULATED ALUMINUM PANEL AT THE INTERIOR FACE. MC SHALL PROVIDE SHEET METAL PLATE WITH FINISHED EDGE TO COVER WALL OPENING.
MD8	REMOVE EXISTING CABINET HEATER, ASSOCIATED PIPING, VALVES, ELECTRICAL WIRING, THERMOSTAT, AND CONTROL WIRING IN ITS ENTIRETY.
MD9	REMOVE EXISTING SIDEWALL GRILLE AND DUCT RISER BETWEEN FIRST AND SECOND FLOOR. PATCH AND REPAIR WALL OPENING.
MD10	REMOVE RESTROOM EXHAUST GRILLES AND ASSOCIATED DUCTWORK IN ITS ENTIRETY.
MD13	REMOVE HOT WATER SYSTEM ORIGINATING FROM THIS ROOM IN ITS ENTIRETY, INCLUDING STEAM TO HOT WATER CONVERTERS, PUMPS, PIPING & INSULATION, AIR SEPARATOR, EXPANSION TANK, VALVES, CONTROLS, AND ELECTRICAL.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

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MECHANICAL SECOND FLOOR DEMOLITION

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STATE OF OHIO — BRIAN K. ROSE E-56929 — REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
Drawn KAS	Drawing No. M102
Checked BKR	

1 ROOF MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES

MD16 EXISTING PACKAGED ROOFTOP TO REMAIN.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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WAYNE LOCAL SCHOOLS

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MECHANICAL ROOF DEMOLITION

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STATE OF OHIO
BRIAN K. ROSE
E-56979
REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
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Checked: BKR	

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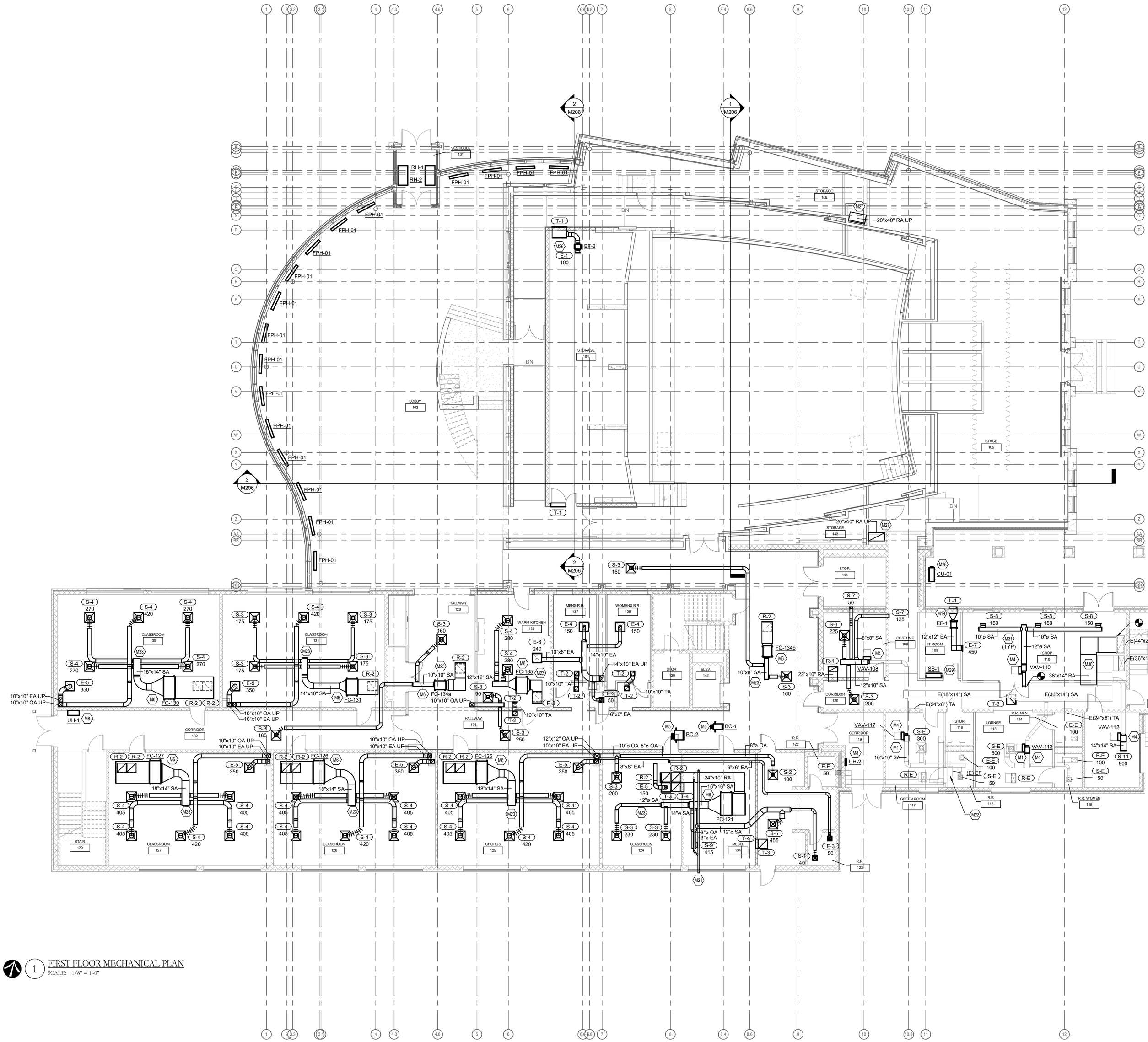

1 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

R,G,D RUNOUT SCHEDULE

MARK	DUCT RUNOUT SIZE
E-1	10"x10"
E-2	6"x6"
E-3	6"x6"
E-4	8" Ø
E-5	10"Ø
E-6	22"x22"
E-7	12"x12"
R-4	22"x22"
S-1	6" Ø
S-2	6" Ø
S-3	8" Ø
S-4	10" Ø
S-5	12" Ø
S-6	14"Ø
S-7	8"x8"
S-11	14"x14"
S-12	8" Ø
S-13	10" Ø
S-14	14" Ø
T-1	34"x8"
T-3	22"x22"
T-4	22"x6"

VAV RUN OUT SCHEDULE FIRST FLOOR

MARK	DUCT RUNOUT SIZE
VAV-108	8" Ø
VAV-110	8" Ø
VAV-112	10" Ø
VAV-113	8" Ø
VAV-117	6" Ø

SHEET NOTES:

TAGGED NOTES (##)

M1	EXISTING SUPPLY DIFFUSER TO REMAIN. BALANCING CONTRACTOR SHALL BALANCE EXISTING DIFFUSERS TO AIRFLOW LISTED ON PLAN.
M4	PROVIDE NEW VAV TERMINAL UNIT IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES AND CODE REQUIRED ELECTRICAL CLEARANCES ARE MAINTAINED.
M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M6	VRF FAN COIL TO BE INSTALLED IN THIS LOCATION. FAN COIL TO BE MOUNTED TIGHT TO STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M8	NEW UNIT HEATER TO BE INSTALLED IN THIS LOCATION. REFER TO UNIT HEATER SCHEDULE ON SHEET M601.
M19	NEW INLINE EXHAUST FAN TO BE INSTALLED TIGHT TO STRUCTURE. REFER TO EXHAUST FAN SCHEDULE ON SHEET M602.
M21	TERMINATE WATER HEATER VENT AND COMBUSTION AIR WITH MANUFACTURER APPROVED CONCENTRIC VENT KIT. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS FOR VENT SIZING AND LENGTH REQUIREMENTS.
M22	EXISTING INLINE EXHAUST FAN. BALANCE EACH EXHAUST GRILLE ASSOCIATED WITH FAN TO AIRFLOWS LISTED ON PLANS. BALANCE FAN AS NECESSARY TO ACHIEVE AIRFLOWS.
M23	REFER TO ARCHITECTURAL CEILING PLANS FOR CEILING HEIGHT AND SLOPE. DUCTWORK SHALL BE ROUTED BETWEEN STRUCTURAL JOISTS WHERE NECESSARY FOR FIT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL ABOVE CEILING TRADES TO ENSURE FIT PRIOR TO CONSTRUCTION.
M26	PROVIDE 1" INTERNAL ACOUSTICAL INSULATION INSIDE PLENUM BOX AND DUCTWORK DOWNSTREAM OF EXHAUST FAN.
M27	RETURN DUCT SHALL EXTEND DOWN TO FLOOR OPENING WHERE RETURN AIR TUNNEL BEGINS. CONNECT DUCT TO TUNNEL OPENING AND SEAL AIR TIGHT. REFER TO ARCHITECTURAL PLANS FOR OPENING SIZE AND LOCATION.
M28	PROVIDE NEW SPLIT SYSTEM CONDENSING UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM OUTDOOR UNIT SCHEDULE ON SHEET M602.
M29	PROVIDE NEW WALL MOUNTED SPLIT SYSTEM FAN COIL UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM INDOOR UNIT SCHEDULE ON SHEET M602.
M30	EXTEND RETURN DUCT INTO CORRIDOR CEILING PLENUM AS SHOWN.
M31	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE ORIENTED 30° FROM THE HORIZONTAL DIRECTION. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL FIRST FLOOR PLAN

CMTA
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STATE OF OHIO
BRIAN K. ROSE
E-56979
REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
Drawn KAS	Drawing No. M201
Checked BKR	

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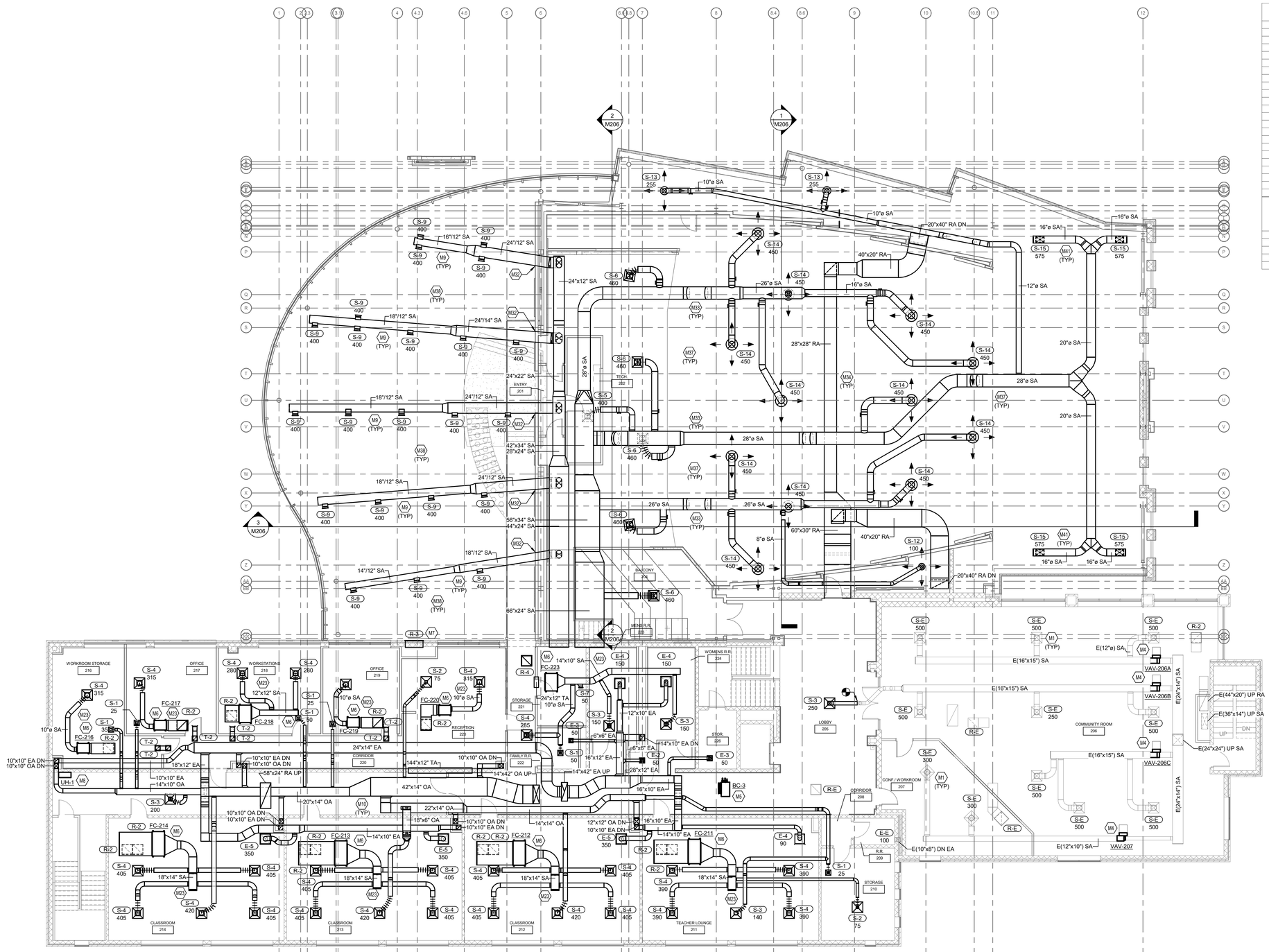

SECOND FLOOR MECHANICAL PLAN

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

R,G,D RUNOUT SCHEDULE

MARK	DUCT RUNOUT SIZE
E-1	10"x10"
E-2	6"x6"
E-3	6"x6"
E-4	8" Ø
E-5	10"Ø
E-6	22"x22"
E-7	12"x12"
R-4	22"x22"
S-1	6" Ø
S-2	6" Ø
S-3	8" Ø
S-4	10" Ø
S-5	12" Ø
S-6	14"Ø
S-7	8"x8"
S-11	14"x14"
S-12	8" Ø
S-13	10" Ø
S-14	14" Ø
T-1	34"x8"
T-3	22"x22"
T-4	22"x6"

VAV RUN OUT SCHEDULE SECOND FLOOR

MARK	DUCT RUNOUT SIZE
VAV-206A	12" Ø
VAV-206B	12" Ø
VAV-206C	12" Ø
VAV-207	8" Ø

SHEET NOTES:

TAGGED NOTES (##)

M1	EXISTING SUPPLY DIFFUSER TO REMAIN. BALANCING CONTRACTOR SHALL BALANCE EXISTING DIFFUSERS TO AIRFLOW LISTED ON PLAN.
M4	PROVIDE NEW VAV TERMINAL UNIT IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES AND CODE REQUIRED ELECTRICAL CLEARANCES ARE MAINTAINED.
M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M6	VRF FAN COIL TO BE INSTALLED IN THIS LOCATION. FAN COIL TO BE MOUNTED TIGHT TO STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M7	BOTTOM OF GRILLE HEIGHT TO BE FLUSH WITH BOTTOM OF WINDOW SILL. GRILLE SHALL BE CENTERED BETWEEN WINDOWS. RETURN AIR SHALL PASS THROUGH ARCHITECTURAL ENCLOSURE BEHIND GRILLE INTO CEILING PLENUM.
M8	NEW UNIT HEATER TO BE INSTALLED IN THIS LOCATION. REFER TO UNIT HEATER SCHEDULE ON SHEET M601.
M9	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE ORIENTED 0° FROM THE HORIZONTAL DIRECTION. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.
M10	CONTRACTORS SHALL CLOSELY COORDINATE BETWEEN ALL TRADES TO ENSURE FIT ABOVE CEILINGS. TYP.
M23	REFER TO ARCHITECTURAL CEILING PLANS FOR CEILING HEIGHT AND SLOPE. DUCTWORK SHALL BE ROUTED BETWEEN STRUCTURAL JOISTS WHERE NECESSARY FOR FIT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL ABOVE CEILING TRADES TO ENSURE FIT PRIOR TO CONSTRUCTION.
M32	SPIRAL OVAL DUCTWORK SHALL BE EXPOSED, UNINSULATED AND HAVE PAINT GRIP FINISH ONCE IT PASSES THROUGH WALL. COORDINATE PAINT COLOR WITH ARCHITECT. DUCTWORK SHALL BE FULLY INSULATED PRIOR TO PASSING THROUGH WALL. PROVIDE COLLAR WHERE DUCT PENETRATES WALL TO CREATE A CLEAN, FINISHED APPEARANCE. DUCTWORK PASSING THROUGH WALL SHALL BE HELD TIGHT TO STRUCTURE TO MAXIMIZE CEILING HEIGHT.
M33	EXPOSED SUPPLY DUCTWORK IN THE AUDITORIUM SHALL BE FULLY INSULATED WITH BLACK DUCT INSULATION. PAINTED INSULATION SHALL NOT BE ACCEPTABLE. REFER TO SPECIFICATIONS.
M34	EXPOSED RETURN DUCT IN THE AUDITORIUM SHALL HAVE PAINT GRIP FINISH AND SHALL BE PAINTED BLACK TO MATCH SUPPLY DUCT INSULATION.
M37	DUCTWORK IN THIS AREA SHALL BE ROUTED THROUGH OPENINGS IN STRUCTURAL JOISTS. COORDINATE WITH STRUCTURAL PLANS TO DETERMINE EXACT DUCT ROUTING.
M38	DUCTWORK IN LOBBY SHALL BE ROUTED PARALLEL TO ROOF JOISTS. COORDINATE SO DUCTWORK IS TIGHT TO STRUCTURE AND LOCATED ABOVE THE GYPSUM DROP CEILING. REFER TO ARCHITECTURAL PLANS.
M41	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE MOUNTED 0° FROM THE VERTICAL POINTING DOWNWARD. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL SECOND FLOOR PLAN

STATE OF OHIO — BRIAN K. ROSE E-56979 — REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
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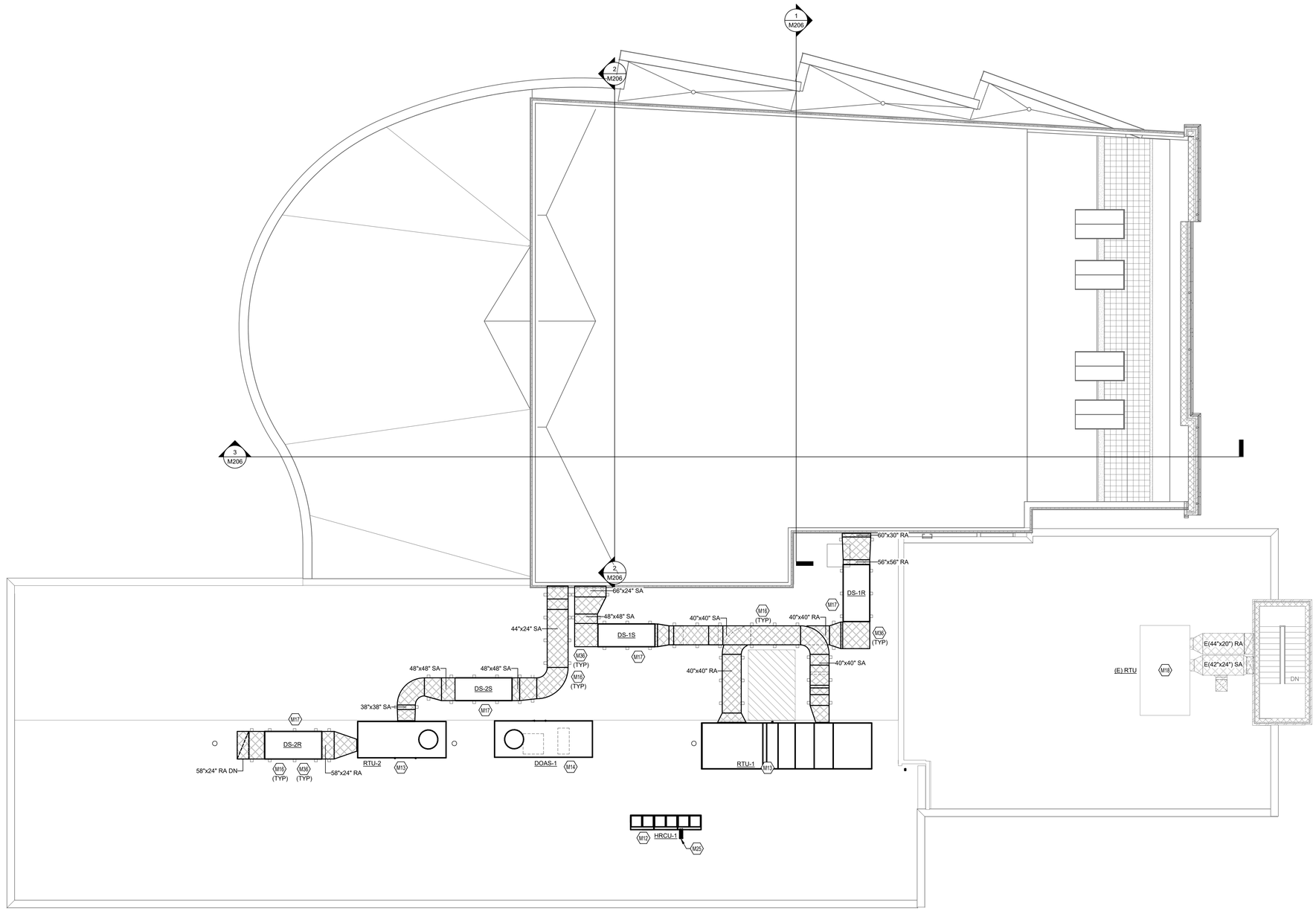

1 ROOF MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

M12	NEW VRF HEAT PUMPS TO BE INSTALLED ON RAIL. SEE HEAT PUMP CURB DETAIL ON SHEET M401.
M13	PROVIDE NEW PACKAGED ROOFTOP UNIT. COORDINATE EXACT LOCATION WITH STRUCTURAL AND THE EXISTING ROOF DRAINS. REFER TO ROOF MOUNTED AIR HANDLING UNIT DETAIL ON SHEET M401.
M14	PROVIDE NEW DEDICATED OUTDOOR AIR UNIT. COORDINATE EXACT LOCATION WITH STRUCTURAL AND THE EXISTING ROOF DRAINS. REFER TO ROOF MOUNTED AIR HANDLING UNIT DETAIL ON SHEET M401.
M16	ROOFTOP DUCTWORK SHALL BE THERMADUCT OUTDOOR RECTANGULAR OR APPROVED EQUAL. DUCTWORK SHALL BE SUPPORTED USING BIG FOOT SYSTEMS H-FRAME DUCT SUPPORTS OR APPROVED EQUAL. DUCTWORK SHALL BE SUPPORTED AT EVENLY SPACED INTERVALS AND SHALL BE SUPPORTED AT EACH CHANGE IN DIRECTION OR ELEVATION.
M17	DUCT SILENCERS SHALL BE EXTERNALLY WRAPPED WITH INSULATION AND EXTERIOR INSULATION JACKET. PLACE A PIECE OF CONDUIT/PIPE ACROSS CENTER OF SILENCER BEFORE WRAPPING INSULATION TO CREATE A SLOPED SURFACE ON TOP SURFACE TO PREVENT WATER POOLING.
M18	EXISTING ROOF TOP UNIT TO REMAIN.
M25	PROVIDE A PIPING ROOF CURB TO ROUTE REFRIGERANT PIPING DOWN TO FLOOR SECOND FLOOR CEILING. REFER TO PIPING ROOF CURB DETAIL ON SHEET M401.
M36	HATCHED DUCTWORK SHALL BE INTERNALLY LINED WITH KINETICS MODEL KNM-100AL NOISE INSULATION MATERIAL. INTERNAL INSULATION SHALL BE ACCOUNTED FOR IN DUCT SIZING. DUCT DIMENSIONS ON PLANS ARE THE INTERNAL FREE AREA OF THE DUCT.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

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MECHANICAL ROOF PLAN

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STATE OF OHIO
BRIAN K. ROSE
E-56979
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Comm. No. 18620.00	Date 2021/03/01
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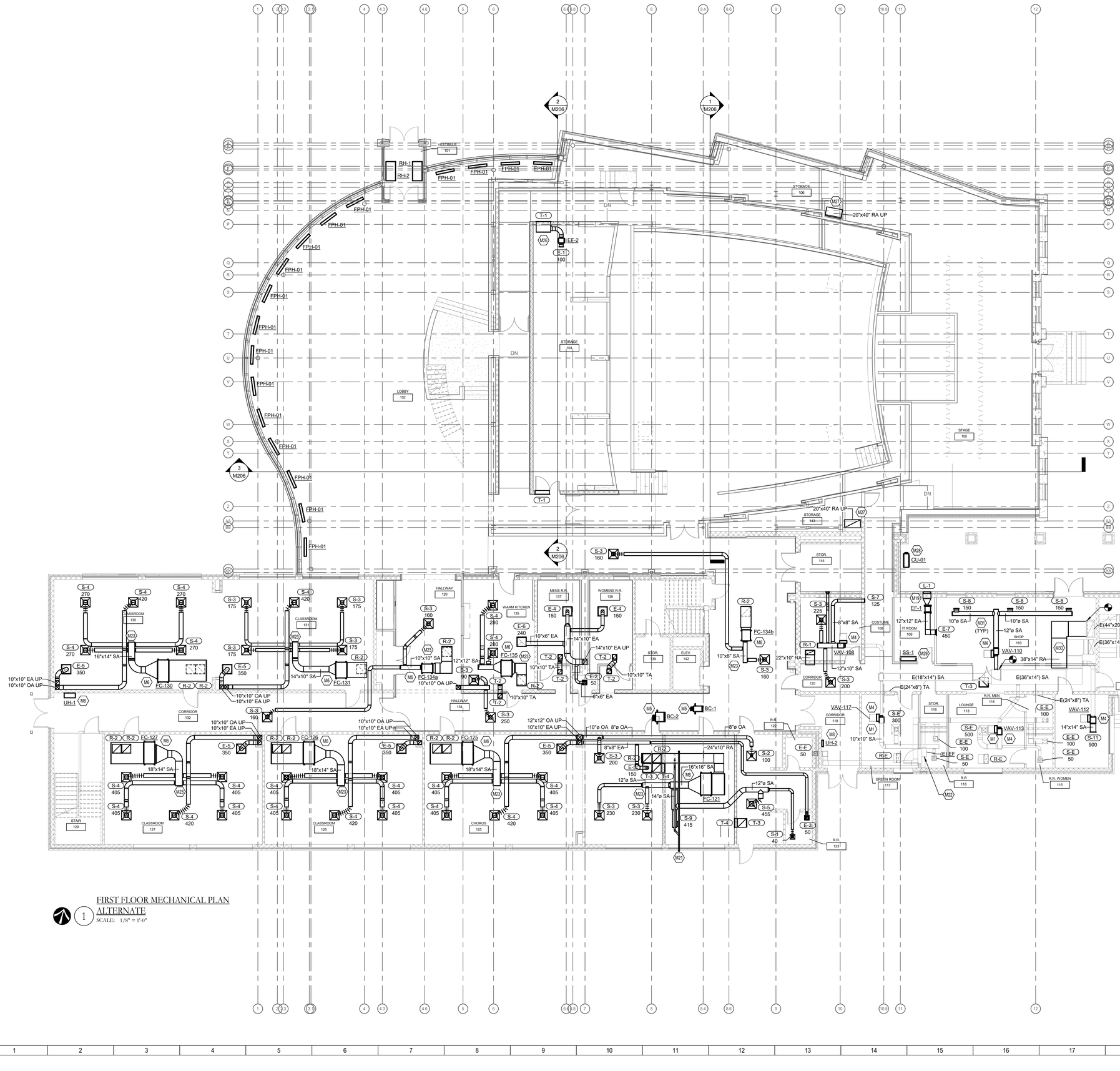

FIRST FLOOR MECHANICAL PLAN
ALTERNATE
1 SCALE: 1/8" = 1'-0"

R,G,D RUNOUT SCHEDULE

MARK	DUCT RUNOUT SIZE
E-1	10"x10"
E-2	6"x6"
E-3	6"x6"
E-4	8" Ø
E-5	10"Ø
E-6	22"x22"
E-7	12"x12"
R-4	22"x22"
S-1	6" Ø
S-2	6" Ø
S-3	8" Ø
S-4	10" Ø
S-5	12" Ø
S-6	14"Ø
S-7	8"x8"
S-11	14"x14"
S-12	8" Ø
S-13	10" Ø
S-14	14" Ø
T-1	34"x8"
T-3	22"x22"
T-4	22"x6"

VAV RUN OUT SCHEDULE FIRST FLOOR

MARK	DUCT RUNOUT SIZE
VAV-108	8" Ø
VAV-110	8" Ø
VAV-112	10" Ø
VAV-113	8" Ø
VAV-117	6" Ø

SHEET NOTES:

TAGGED NOTES (##)

M1	EXISTING SUPPLY DIFFUSER TO REMAIN. BALANCING CONTRACTOR SHALL BALANCE EXISTING DIFFUSERS TO AIRFLOW LISTED ON PLAN.
M4	PROVIDE NEW VAV TERMINAL UNIT IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES AND CODE REQUIRED ELECTRICAL CLEARANCES ARE MAINTAINED.
M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M6	VRF FAN COIL TO BE INSTALLED IN THIS LOCATION. FAN COIL TO BE MOUNTED TIGHT TO STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M8	NEW UNIT HEATER TO BE INSTALLED IN THIS LOCATION. REFER TO UNIT HEATER SCHEDULE ON SHEET M601.
M19	NEW INLINE EXHAUST FAN TO BE INSTALLED TIGHT TO STRUCTURE. REFER TO EXHAUST FAN SCHEDULE ON SHEET M602.
M21	TERMINATE WATER HEATER VENT AND COMBUSTION AIR WITH MANUFACTURER APPROVED CONCENTRIC VENT KIT. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS FOR VENT SIZING AND LENGTH REQUIREMENTS.
M22	EXISTING INLINE EXHAUST FAN. BALANCE EACH EXHAUST GRILLE ASSOCIATED WITH FAN TO AIRFLOWS LISTED ON PLANS. BALANCE FAN AS NECESSARY TO ACHIEVE AIRFLOWS.
M23	REFER TO ARCHITECTURAL CEILING PLANS FOR CEILING HEIGHT AND SLOPE. DUCTWORK SHALL BE ROUTED BETWEEN STRUCTURAL JOISTS WHERE NECESSARY FOR FIT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL ABOVE CEILING TRADES TO ENSURE FIT PRIOR TO CONSTRUCTION.
M26	PROVIDE 1" INTERNAL ACOUSTICAL INSULATION INSIDE PLENUM BOX AND DUCTWORK DOWNSTREAM OF EXHAUST FAN.
M27	RETURN DUCT SHALL EXTEND DOWN TO FLOOR OPENING WHERE RETURN AIR TUNNEL BEGINS. CONNECT DUCT TO TUNNEL OPENING AND SEAL AIR TIGHT. REFER TO ARCHITECTURAL PLANS FOR OPENING SIZE AND LOCATION.
M28	PROVIDE NEW SPLIT SYSTEM CONDENSING UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM OUTDOOR UNIT SCHEDULE ON SHEET M602.
M29	PROVIDE NEW WALL MOUNTED SPLIT SYSTEM FAN COIL UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM INDOOR UNIT SCHEDULE ON SHEET M602.
M30	EXTEND RETURN DUCT INTO CORRIDOR CEILING PLENUM AS SHOWN.
M31	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE ORIENTED 30° FROM THE HORIZONTAL DIRECTION. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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WAYNESVILLE PERFORMING ARTS CENTER

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MECHANICAL FIRST FLOOR PLAN ALTERNATE

STATE OF OHIO — BRIAN K. ROSE E-56979 — REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
Drawn Author	Drawing No. M204
Checked Checker	

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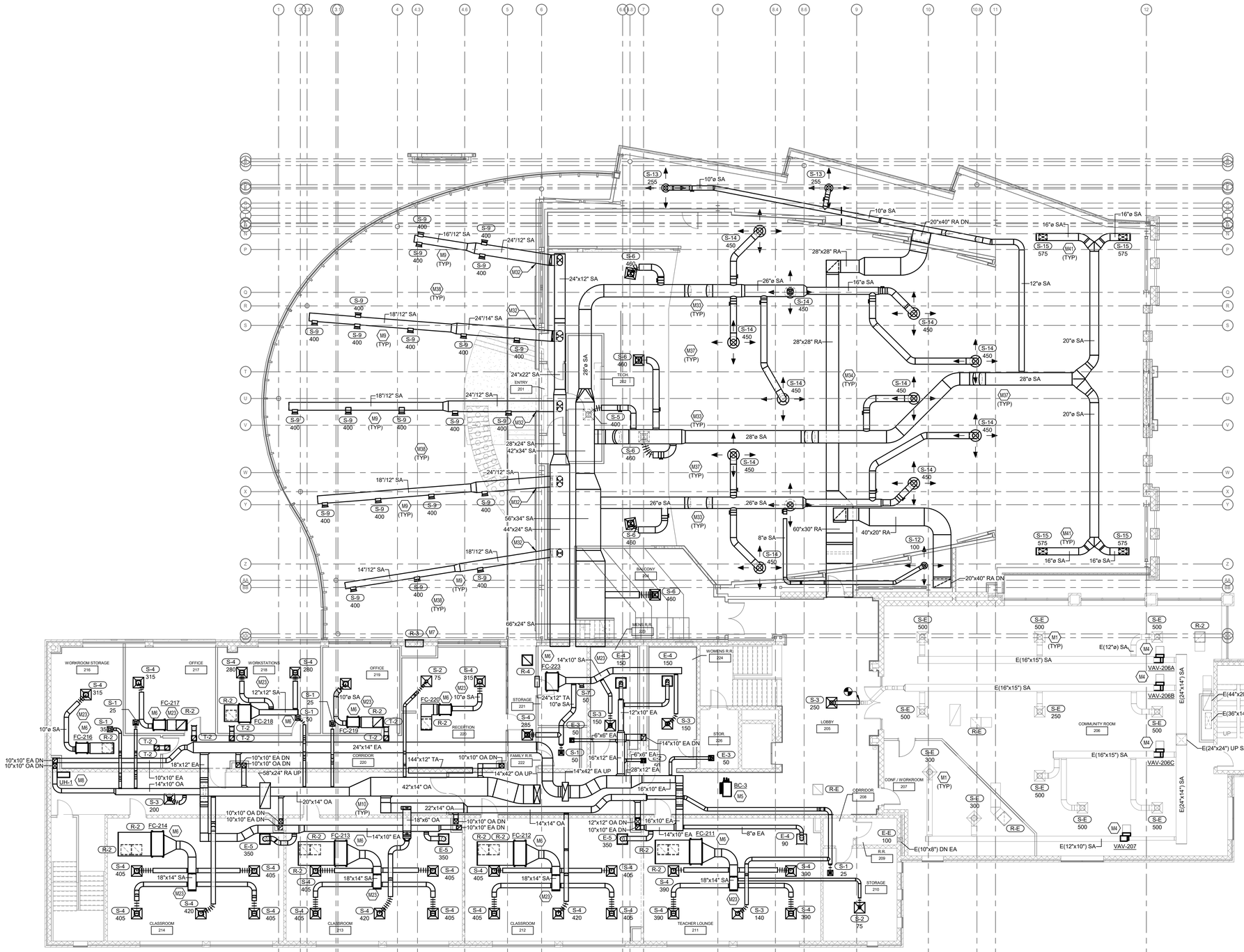

SECOND FLOOR MECHANICAL PLAN ALTERNATE
SCALE: 1/8" = 1'-0"

R,G,D RUNOUT SCHEDULE

MARK	DUCT RUNOUT SIZE
E-1	10"x10"
E-2	6"x6"
E-3	6"x6"
E-4	8" Ø
E-5	10"Ø
E-6	22"x22"
E-7	12"x12"
R-4	22"x22"
S-1	6" Ø
S-2	6" Ø
S-3	8" Ø
S-4	10" Ø
S-5	12" Ø
S-6	14"Ø
S-7	8"x8"
S-11	14"x14"
S-12	8" Ø
S-13	10" Ø
S-14	14" Ø
T-1	34"x8"
T-3	22"x22"
T-4	22"x6"

VAV RUN OUT SCHEDULE SECOND FLOOR

MARK	DUCT RUNOUT SIZE
VAV-206A	12" Ø
VAV-206B	12" Ø
VAV-206C	12" Ø
VAV-207	8" Ø

SHEET NOTES:

TAGGED NOTES (##)

M1	EXISTING SUPPLY DIFFUSER TO REMAIN. BALANCING CONTRACTOR SHALL BALANCE EXISTING DIFFUSERS TO AIRFLOW LISTED ON PLAN.
M4	PROVIDE NEW VAV TERMINAL UNIT IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES AND CODE REQUIRED ELECTRICAL CLEARANCES ARE MAINTAINED.
M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M6	VRF FAN COIL TO BE INSTALLED IN THIS LOCATION. FAN COIL TO BE MOUNTED TIGHT TO STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M7	BOTTOM OF GRILLE HEIGHT TO BE FLUSH WITH BOTTOM OF WINDOW SILL. GRILLE SHALL BE CENTERED BETWEEN WINDOWS. RETURN AIR SHALL PASS THROUGH ARCHITECTURAL ENCLOSURE BEHIND GRILLE INTO CEILING PLENUM.
M8	NEW UNIT HEATER TO BE INSTALLED IN THIS LOCATION. REFER TO UNIT HEATER SCHEDULE ON SHEET M601.
M9	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE ORIENTED 0° FROM THE HORIZONTAL DIRECTION. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.
M10	CONTRACTORS SHALL CLOSELY COORDINATE BETWEEN ALL TRADES TO ENSURE FIT ABOVE CEILINGS. TYP.
M23	REFER TO ARCHITECTURAL CEILING PLANS FOR CEILING HEIGHT AND SLOPE. DUCTWORK SHALL BE ROUTED BETWEEN STRUCTURAL JOISTS WHERE NECESSARY FOR FIT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL ABOVE CEILING TRADES TO ENSURE FIT PRIOR TO CONSTRUCTION.
M32	SPIRAL OVAL DUCTWORK SHALL BE EXPOSED, UNINSULATED AND HAVE PAINT GRIP FINISH ONCE IT PASSES THROUGH WALL. COORDINATE PAINT COLOR WITH ARCHITECT. DUCTWORK SHALL BE FULLY INSULATED PRIOR TO PASSING THROUGH WALL. PROVIDE COLLAR WHERE DUCT PENETRATES WALL TO CREATE A CLEAN, FINISHED APPEARANCE. DUCTWORK PASSING THROUGH WALL SHALL BE HELD TIGHT TO STRUCTURE TO MAXIMIZE CEILING HEIGHT.
M33	EXPOSED SUPPLY DUCTWORK IN THE AUDITORIUM SHALL BE FULLY INSULATED WITH BLACK DUCT INSULATION. PAINTED INSULATION SHALL NOT BE ACCEPTABLE. REFER TO SPECIFICATIONS.
M34	EXPOSED RETURN DUCT IN THE AUDITORIUM SHALL HAVE PAINT GRIP FINISH AND SHALL BE PAINTED BLACK TO MATCH SUPPLY DUCT INSULATION.
M37	DUCTWORK IN THIS AREA SHALL BE ROUTED THROUGH OPENINGS IN STRUCTURAL JOISTS. COORDINATE WITH STRUCTURAL PLANS TO DETERMINE EXACT DUCT ROUTING.
M38	DUCTWORK IN LOBBY SHALL BE ROUTED PARALLEL TO ROOF JOISTS. COORDINATE SO DUCTWORK IS TIGHT TO STRUCTURE AND LOCATED ABOVE THE GYPSUM DROP CEILING. REFER TO ARCHITECTURAL PLANS.
M41	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE MOUNTED 0° FROM THE VERTICAL POINTING DOWNWARD. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.

No.	Revisions / Submissions	Date

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MECHANICAL SECOND FLOOR ALTERNATE

STATE OF OHIO — BRIAN K. ROSE E-56979 — REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
Drawn Author	Drawing No. M205
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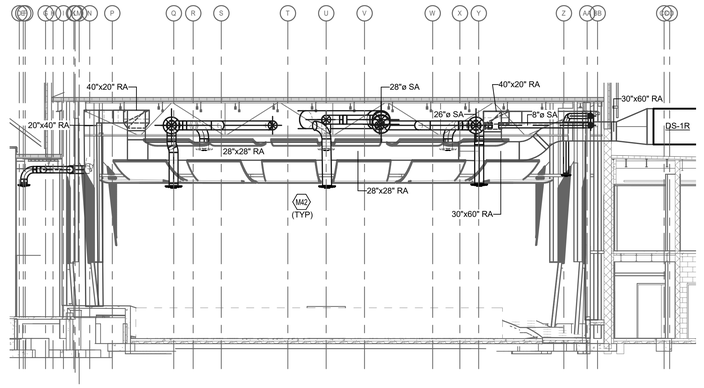
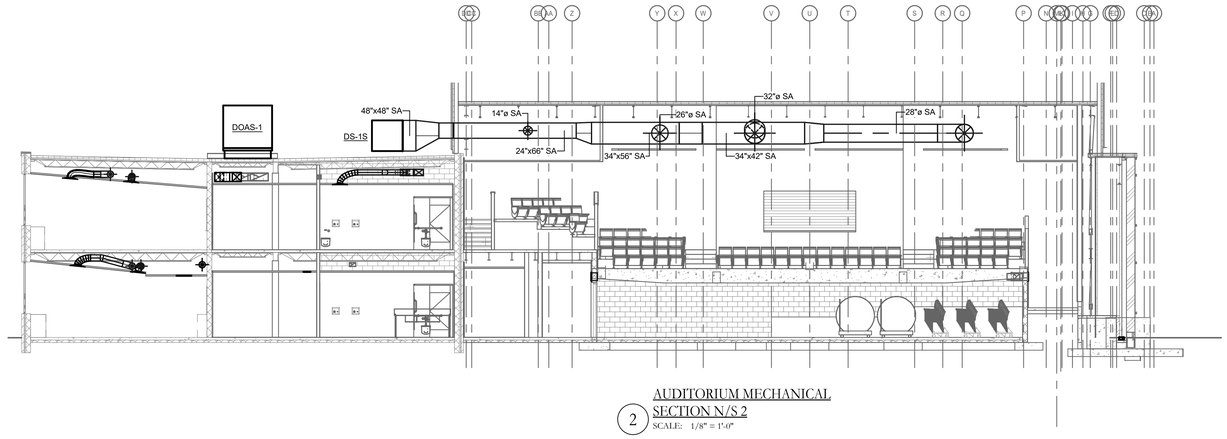
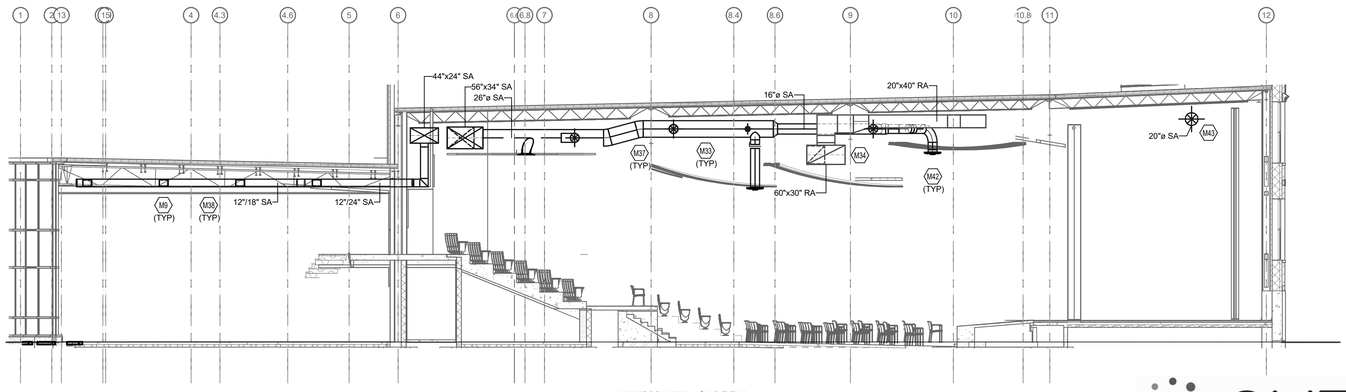


1 AUDITORIUM MECHANICAL SECTION N/S 1
SCALE: 1/8" = 1'-0"



2 AUDITORIUM MECHANICAL SECTION N/S 2
SCALE: 1/8" = 1'-0"



3 AUDITORIUM/LOBBY MECHANICAL SECTION E/W 1
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

M9	DIFFUSERS SHALL BE MOUNTED TO EXPOSED SPIRAL DUCT. DIFFUSERS SHALL BE ORIENTED 0° FROM THE HORIZONTAL DIRECTION. REFER TO REGISTER DUCT TAKEOFF DETAIL ON SHEET M401.
M33	EXPOSED SUPPLY DUCTWORK IN THE AUDITORIUM SHALL BE FULLY INSULATED WITH BLACK DUCT INSULATION. PAINTED INSULATION SHALL NOT BE ACCEPTABLE. REFER TO SPECIFICATIONS.
M34	EXPOSED RETURN DUCT IN THE AUDITORIUM SHALL HAVE PAINT GRIP FINISH AND SHALL BE PAINTED BLACK TO MATCH SUPPLY DUCT INSULATION.
M37	DUCTWORK IN THIS AREA SHALL BE ROUTED THROUGH OPENINGS IN STRUCTURAL JOISTS. COORDINATE WITH STRUCTURAL PLANS TO DETERMINE EXACT DUCT ROUTING.
M38	DUCTWORK IN LOBBY SHALL BE ROUTED PARALLEL TO ROOF JOISTS. COORDINATE SO DUCTWORK IS TIGHT TO STRUCTURE AND LOCATED ABOVE THE GYPSUM DROP CEILING. REFER TO ARCHITECTURAL PLANS.
M42	DIFFUSER HEIGHTS IN AUDITORIUM SHALL BE COORDINATED TO BE AT SAME LEVEL AS ADJACENT CEILING CLOUDS. COORDINATE EXACT HEIGHTS WITH ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR CEILING LAYOUT AND HEIGHTS. TYP.
M43	COORDINATE DUCTWORK ABOVE STAGE WITH CURTAINS, LIGHTS, SUPPORTS, ETC.

No.	Revisions / Submissions	Date

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MECHANICAL SECTIONS

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Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M206
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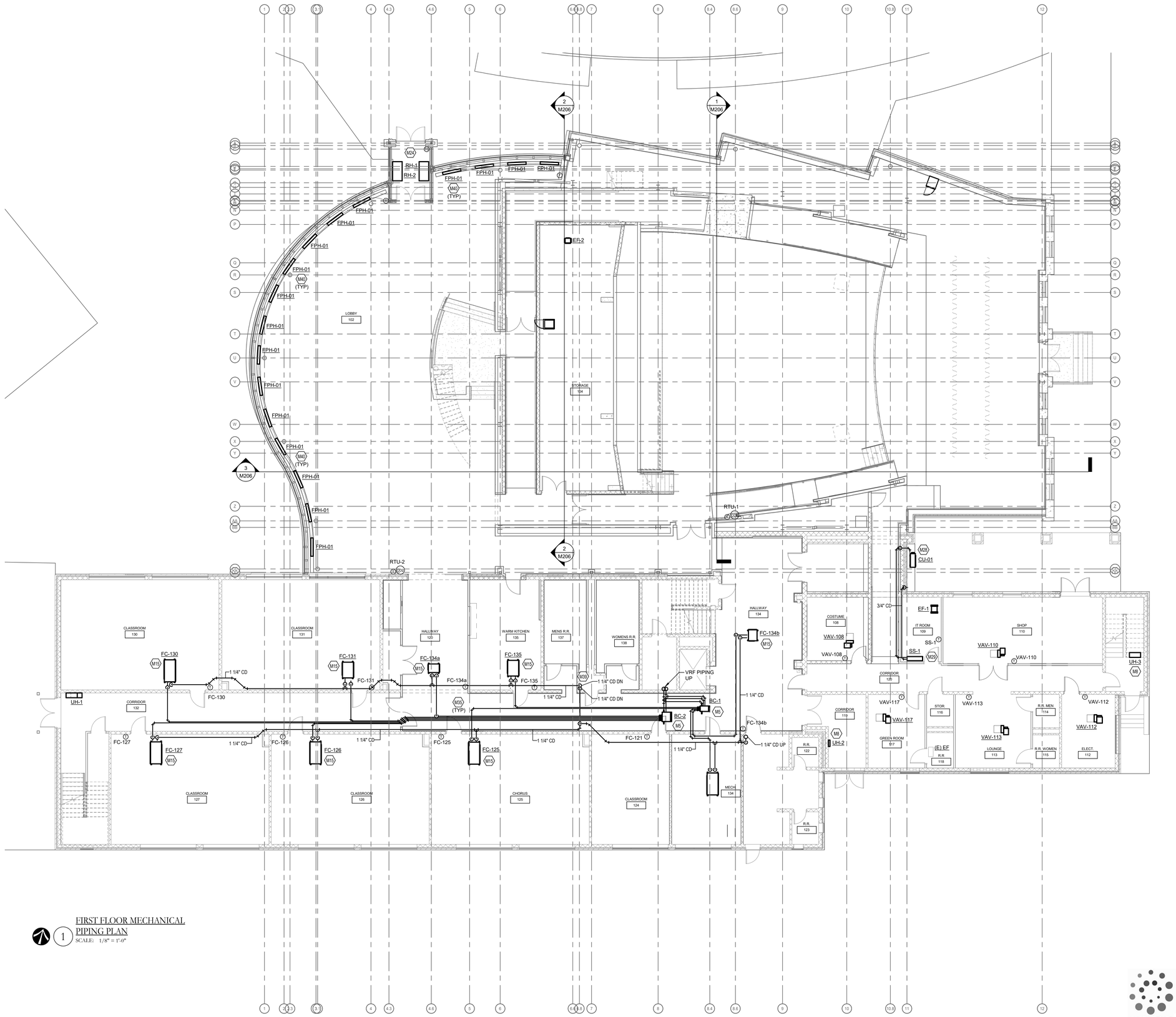

1 FIRST FLOOR MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES

M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M8	NEW UNIT HEATER TO BE INSTALLED IN THIS LOCATION. REFER TO UNIT HEATER SCHEDULE ON SHEET M601.
M15	ROUTE REFRIGERANT AND CONDENSATE PIPING AS SHOWN. REFER TO VRV PIPING SCHEMATIC ON SHEET M501. CONDENSATE PIPING SHALL SLOPE A MINIMUM OF 1/8" PER FOOT
M24	PROVIDE ELECTRIC RADIANT CEILING PANELS RECESSED IN GYPSUM CEILING. REFER TO RADIANT CEILING PANEL SCHEDULE ON SHEET M602. CONTROLS CONTRACTOR SHALL PROVIDE BUTTON SENSOR TO CONTROL HEATERS. SENSOR COLOR SHALL BE WHITE.
M28	PROVIDE NEW SPLIT SYSTEM CONDENSING UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM OUTDOOR UNIT SCHEDULE ON SHEET M602.
M29	PROVIDE NEW WALL MOUNTED SPLIT SYSTEM FAN COIL UNIT IN THIS LOCATION. REFER TO SPLIT SYSTEM INDOOR UNIT SCHEDULE ON SHEET M602.
M35	COORDINATE REFRIGERANT LINESET LENGTHS AND ROUTING WITH VRF MANUFACTURER. PIPE SIZES SHALL BE DETERMINED BY VRF MANUFACTURER. REFER TO PIPING SCHEMATIC ON SHEET M501.
M39	SPILL CONDENSATE TO MOP SINK IN JANITORS CLOSET.
M40	LAYOUT FAN POWERED TRENCH HEATERS EVENLY SPACED THROUGHOUT FLOOR TRENCH. MULTIPLE HEATERS SHALL BE CONTROLLED BY A SINGLE THERMOSTAT AS SHOWN. REFER TO ELECTRIC FAN POWERED HEATER SCHEDULE.

No.	Revisions / Submissions	Date

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REFRIGERANT PIPING FIRST FLOOR PLAN

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Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M301
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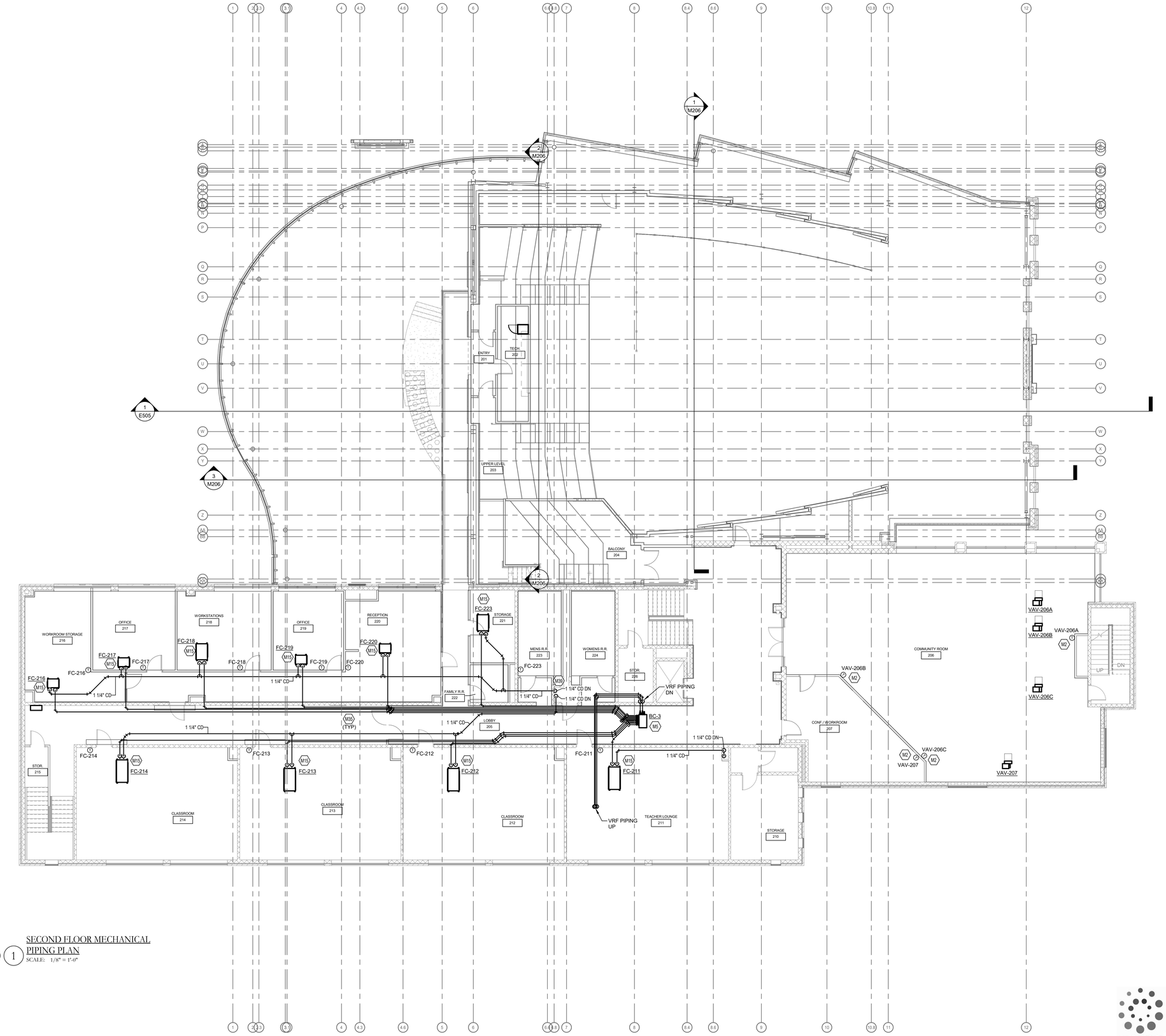

1 SECOND FLOOR MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

TAGGED NOTES (##)

M2	PROVIDE NEW WALL MOUNTED THERMOSTAT TO CONTROL INDICATED VAV BOX. SEE THERMOSTAT/ELECTRICAL OUTLET COORDINATION DETAIL FOR REFERENCE.
M5	VRF BRANCH SELECTOR TO BE INSTALLED TIGHT TO STRUCTURE IN THIS LOCATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION TO ENSURE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
M15	ROUTE REFRIGERANT AND CONDENSATE PIPING AS SHOWN. REFER TO VRV PIPING SCHEMATIC ON SHEET M501. CONDENSATE PIPING SHALL SLOPE A MINIMUM OF 1/8" PER FOOT
M35	COORDINATE REFRIGERANT LINESET LENGTHS AND ROUTING WITH VRF MANUFACTURER. PIPE SIZES SHALL BE DETERMINED BY VRF MANUFACTURER. REFER TO PIPING SCHEMATIC ON SHEET M501.
M39	SPILL CONDENSATE TO MOP SINK IN JANITORS CLOSET.

No.	Revisions / Submissions	Date

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REFRIGERANT PIPING SECOND FLOOR PLAN

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Comm. No. 18620.00	Date 2021/03/01
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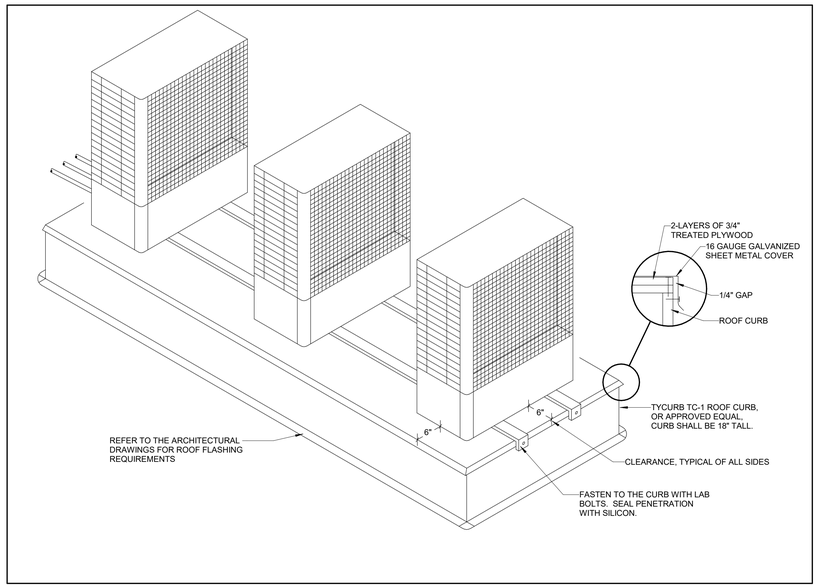
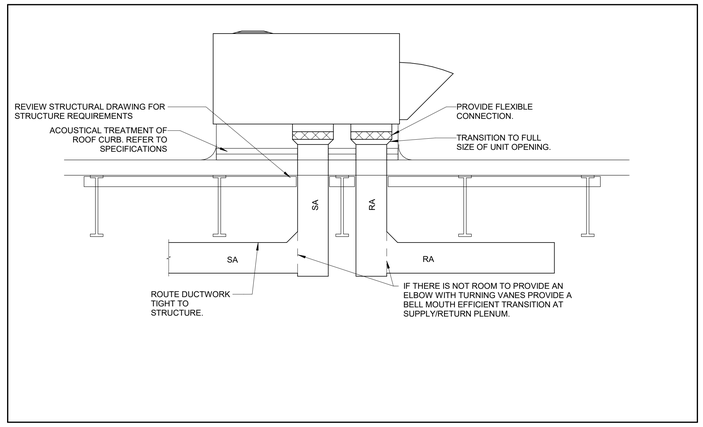
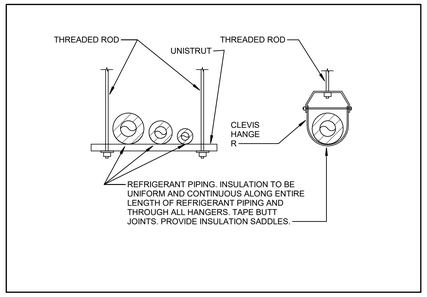


9 HEAT PUMP CURB DETAIL
SCALE: NONE



2 ROOF MOUNTED AIR HANDLING UNIT
SCALE: NONE



7 REFRIGERANT PIPING INSULATION DETAIL
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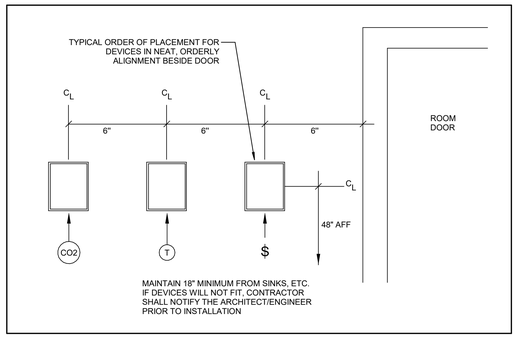

4 THERMOSTAT/ELECTRICAL OUTLET COORDINATION DETAIL
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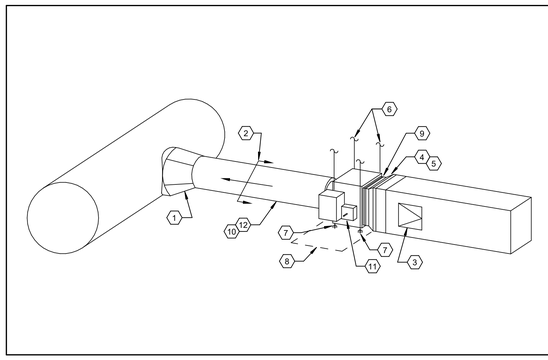
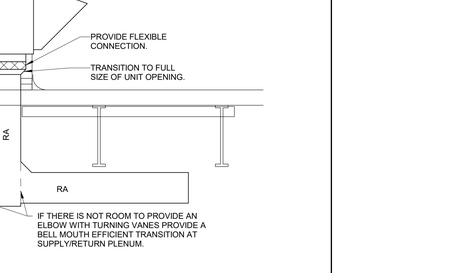


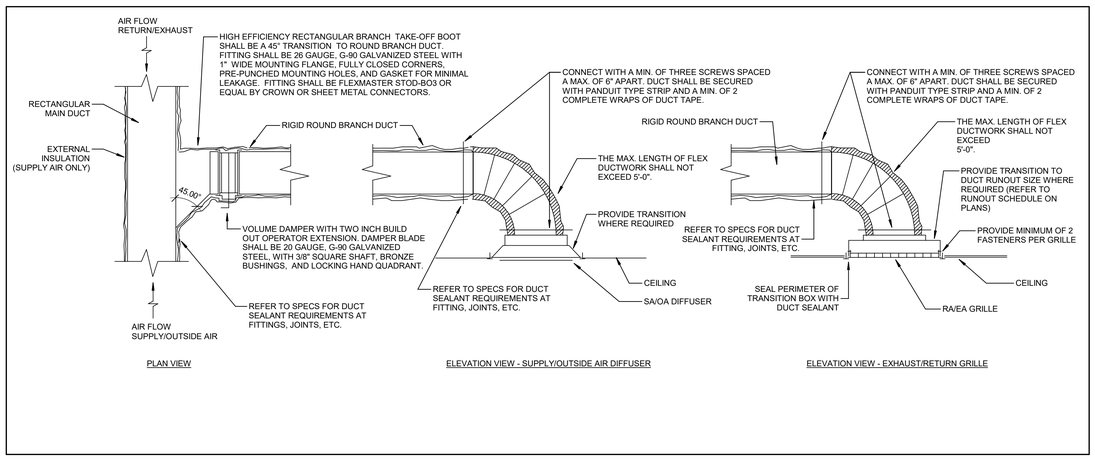
TAGGED NOTES: (X)

1. HIGH EFFICIENCY DUCT TAKE-OFF. REFER TO DRAWINGS FOR SIZE.
2. MAINTAIN A MINIMUM OF THREE DUCT DIAMETERS BETWEEN TAKE-OFF AND CAV/VAV UNIT. NO FLEXIBLE DUCTWORK ALLOWED ON THE INLET SIDE OF UNIT.
3. ACCESS PANEL SHALL BE PROVIDED ON BOTH SIDES OF THE COIL TO ALLOW ACCESS FOR CLEANING.
4. PROVIDE TRANSITION BETWEEN CAV/VAV UNIT AND DUCT.
5. PROVIDE FLEXIBLE CONNECTION BETWEEN CAV/VAV UNIT AND DUCT.
6. SUPPORT UNIT FROM STRUCTURE.
7. UNISTRUT WITH VIBRATION ISOLATION PAD.
8. DO NOT BLOCK ACCESS / CLEARANCE WITH PIPING, CONDUIT, SUPPORTS, ETC.
9. ELECTRIC REHEAT COIL.
10. 2.2" THICK INSULATION, MAINTAIN INSULATION TO EDGE OF UNIT, TYP.
11. REFER TO THE CAV/VAV SCHEDULE FOR TERMINAL UNITS THAT WILL REQUIRE POWER CONNECTIONS AND LOW VOLTAGE TRANSFORMERS.
12. REFER TO RUNOUT SCHEDULE ON PLANS FOR DUCT SIZE.

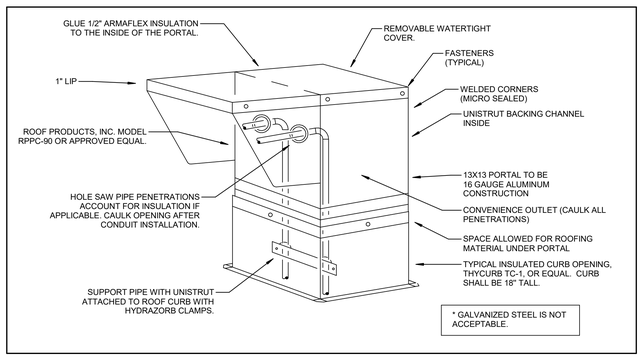
VAV BRANCH DUCT CONNECTION - ELECTRIC REHEAT DETAIL
5 SCALE: NONE



REGISTER DUCT TAKEOFF DETAIL
3 SCALE: NONE



6 DUCT BRANCH DETAIL
SCALE: NONE



1 PIPE ROOF CURB DETAIL
SCALE: NONE

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MECHANICAL DETAILS

STATE OF OHIO BRIAN K. ROSE E-56979 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No. M401
Checked: BKR	

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GENERAL COMMENTS FOR CONTROL SYSTEM

1. TIME SCHEDULES (ALL TIMES SHALL BE USER ADJUSTABLE):
   a. When the system is fully tested and operational and after the Owner's staff have been fully instructed as to the operation of the system the schedule shall be as follows unless otherwise instructed:
   b. All initial time schedules shall be coordinated with the owner before programing is done.
   c. Each piece of equipment shall have its own adjustable time schedule.
   d. All schedules shall be coordinated and confirmed with the Owner prior to final implementation.
2. BUILDING PRESSURE SENSORS:
   a. The TCC will install (2) building pressure sensors. One will be installed in the event space and the other in the lobby space. Wire back to the BAS for monitoring.

RTU-1,2 CONTROL SEQUENCE

1. GENERAL: The RTU shall be provided with factory controls. The TCC shall provide and install combined thermostat/ humidity sensors, CO2 sensors and a wet bulb sensor installed in the joist space by the TCC and wired to the BAS. See plans for sensor locations. The BAS will provide an output to the RTU controller.
2. This unit has the following components:
   A. Exhaust and Outside Air Dampers (Economizer Mode)
   B. Power Exhaust Fan (Building Relief), ECM
   C. Filters
   D. RTU-1: (1) Variable Speed Compressor, (2) Fixed Speed Compressors
   E. RTU-2: (1) Variable Speed Compressor
   F. Supply Fan, ECM
   G. Gas Heat
   H. Humidity Control
   I. Hot gas reheat coil
   J. Needlepoint ionization
3. The rooftop unit shall be placed into operation by the DDC system based upon user defined schedule. The factory controller will change from cooling, fan only or heating based on the heating and cooling setpoints.
4. SUPPLY AIR FAN: The supply fan shall modulate from its minimum to maximum speed as required to maintain space temperature.
5. POWER EXHAUST AIR FAN: The Exhaust fan will be controlled by damper tracking exhaust air damper to the outside air damper. The difference in air flow to be 300 CFM (RTU-1) and 100 CFM (RTU-2).
6. OUTSIDE AIR DAMPER CONTROL: An airflow measuring station (integral to the unit) is to be provided on the outside air intake. The damper is to modulate based on the air flow station to maintain the minimum and maximum outside air requirements during normal occupied operation regardless of supply fan speed. The minimum outside air is to be 550 CFM (RTU-1) and 260 CFM (RTU-2). The maximum outside air is to be 2,000 CFM (RTU-1) and 400 CFM (RTU-2).
7. HEATING MODE: When the zone is calling for heating. The supply fan and gas heat shall modulate to maintain space temperature. The maximum discharge air temperature shall be 95°F.
8. COOLING MODE: The economizer dampers and compressors shall modulate to maintain supply air temperature setpoint at 55°F (adj.). Once the unit reaches its minimum airflow the discharge air temperature will reset up to meet space set point. Minimum supply air flow to be 3,500 CFM (RTU-1) and 1,800 CFM (RTU-2).
9. ECONOMIZER MODE: Economizer shall be comparative enthalpy control with modulating power exhaust. Minimum outside airflow shall be 2,000 CFM (RTU-1) and 400 CFM (RTU-2).
10. DEHUMIDIFICATION MODE: When the space temperature is at set point but the space humidity is above 55% (Adj.), the compressors will turn on and modulate up to 100% and the hot gas reheat will run to keep a leaving unit temperature suitable to maintain the space temperature and humidity set point. The unit will continue to dehumidify until the space is down to 50% humidity. The TCC shall generate an alarm if the space humidity remains 10% above setpoint for more than 30 min.
11. OUTSIDE AIR RESET: The outside air will reset based on space CO2. If the space CO2 is 400 PPM and the building is occupied, the outside air damper will reset to the minimum outdoor air CFM as stated in the equipment schedule. If the CO2 in the space reaches 1000 PPM it will modulate to maintain 1000 PPM but will not exceed the maximum outside air amount called out in the equipment schedule.
12. UNOCCUPIED SUPPLY AIR TEMPERATURE HEATING: If the space has a call for heating, the air handling unit shall start and supply 85°F air to the space. The minimum outside air damper position will be 0%.
13. UNOCCUPIED SUPPLY AIR TEMPERATURE COOLING: If there is a call for cooling in the space the air handling unit shall run in occupied mode except the minimum outside air damper position shall be 0% open.
14. UNOCCUPIED DEHUMIDFICATION MODE: If the space is at temperature but the humidity exceeds 55% (Adj.), the compressors will turn on and modulate up to 100% and the hot gas reheat will run to keep a leaving unit temperature suitable to maintain the space temperature at set point. The unit will continue to dehumidify until the space is down to 50% humidity.
15. BUILDING WARM UP: The unit shall use optimal start to warm the space to set point. Warm up sequence shall start 1 hour (Adj.) prior to the building entering occupied mode. Maximum supply air temperature shall be 95°F. Outside air to remain off.
16. BUILDING COOL DOWN: The unit shall use optimal start to cool space to set point. Cool down sequence shall start 1 hour (Adj.) prior to the building entering occupied mode. The outside air damper is to remain closed during this sequence. During building cool down the leaving air temperature from the unit must be higher than the building wet bulb. The leaving air temperature off the unit to be controlled by hot gas reheat. Wet bulb sensor to be located in joist space of the auditorium and the lobby.
17. BUILDING SMOKE EMERGENCY: The RTU is to be shut down during a building smoke emergency. Signal for shut off to be provided by fire alarm system.
18. NEEDLEPOINT IONIZATION: The needlepoint ionization will run whenever the supply fan is running. TCC to wire the output alarm to the BAS and provide an alarm if the unit does not run when called to do so.
19. The BAS shall monitor BACnet Points specified and provide all equipment schedules and setpoints.
20. SAFETIES:
    A. Turn off the supply and exhaust fan if the return air smoke detector indicates that smoke is present.
    B. Turn off the supply and exhaust fan if the duct static pressure exceeds 3.0" w.g.
21. MONITORS AND ALARMS:
    A. Provide alarm for smoke.
    B. Monitor the differential pressure across the filters and provide a notification when the filters need to be replaced.
    C. Monitor the status of the supply and exhaust fan with a current switch. Provide an alarm when the fans are commanded on but a fan is not running.
22. Setpoints (adj.):
    A. Occupied cooling: 74 °F (adj.) +/- 2 °F warmer/ cooler adjust (adj.)
    B. Unoccupied cooling: 80 °F (adj.)
    C. Occupied heating: 70°F(adj.) +/-2°F warmer/ cooler adjust (adj.)
    D. Unoccupied heating: 60 °F (adj.)

RTU-1,2, TCC POINTS LIST						
POINTS LIST	**ANALOG INPUT**	**ANALOG OUTPUT**	**DIGITAL INPUT**	**DIGITAL OUTPUT**	**TREND**	**ALARM**
Space Temperature (Qty)	X				X	High temperature > 85F Low Temperature< 55F
Space humidity (Qty)	X				X	High humidity > 70%
Space Temperature to the RTU		X			X	
Space Humidity to the RTU		X			X	

RTU-1,2, POINTS LIST						
BACNET OBJECTS TO THE BAS POINTS LIST	**ANALOG INPUT**	**ANALOG OUTPUT**	**DIGITAL INPUT**	**DIGITAL OUTPUT**	**TREND**	**ALARM**
OCCUPIED / UNOCCUPIED			X	X		STATUS DOES NOT MATCH COMMAND
UNIT STATUS			X		X	
MORNING WARM-UP STATUS			X		X	
COOLING STATUS / CAPACITY	X		X		X	
GAS HEATING STATUS / CAPACITY	X		X		X	
SUPPLY FAN STATUS / SPEED	X		X			
EXHAUST FAN STATUS / SPEED	X		X			
ECONOMIZER STATUS	X					
DISCHARGE AIR TEMPERATURE	X				X	HIGH TEMP LOW TEM
DISCHARGE AIR TEMPERATURE SETPOINT		X				
RETURN AIR TEMPERATURE	X					
OUTDOOR AIR TEMP	X					
OUTSIDE AIR CFM	X					AIRFLOW STATION
OUTSIDE AIR CFM SETPOINT		X				
ENTERING FAN / LEAVING COIL TEMP	X					
MIXED AIR TEMPERATURE	X					
BUILDING STATIC PRESSURE	X					
HOT GAS REHEAT		X				
DEW POINT TEMPERATURE	X					
OCCUPIED COOLING TEMP SETPOINT		X				
OCCUPIED HEATING TEMP SETPOINT		X				
UNOCCUPIED COOLING TEMP SETPT		X				
UNOCCUPIED HEATING TEMP SETPT		X				
DUCT STATIC PRESSURE SENSOR	X					
SPACE TEMPERATURE / HUMIDITY	X					
WET BULB SENSOR	X					
RETURN AIR SMOKE DETECTOR			X			ALARM
NEEDLEPOINT IONIZATION		X				ALARM
DIRTY FILTER SWITCH			X			ALARM
DUCT HIGH LIMIT SWITCH			X			ALARM
DUCT LOW LIMIT SWITCH			X			ALARM

DOAS-1 CONTROL SEQUENCE

1. GENERAL: The RTU shall be provided with factory controls with BACnet communication protocol for integration into the BAS.
2. This unit has the following components:
   A. Supply Fan, VFD
   B. Exhaust Fan, ECM
   C. Outside Air, Exhaust Air Dampers
   D. Filters
   E. Energy Recovery Wheel, VFD
   F. (1) Inverter Scroll Compressor
   G. Gas Heat
   H. Hot gas reheat coil
3. The rooftop unit shall be placed into operation by the DDC system based upon user defined schedule. The factory controller will change from cooling, fan only or heating based on the heating and cooling setpoints.
4. UNOCCUPIED MODE: The unit shall be off when scheduled as unoccupied and during building cool-down or warm-up. The outside air and exhaust air dampers shall be closed.
5. OCCUPIED MODE: The unit shall operate under factory sequences and shall include control of the unit for discharge air temperature, humidity and discharge air reset.
6. SUPPLY AIR FAN: The supply fan shall operate at constant volume to maintain the outside air CFM as stated in the schedule. An airflow measuring station shall be provided on the outside air intake.
7. EXHAUST AIR FAN: The Exhaust fan shall operate at constant volume to maintain the exhaust air CFM as stated in the schedule.
8. HEATING MODE: When there is a call for heating to maintain the discharge air temperature setpoint, the energy recovery wheel shall operate to precondition the air, and the gas heat shall modulate to maintain the discharge air temperature setpoint. The unit shall operate to maintain a discharge air temperature setpoint between 68 °F (adj.) and 74 °F (adj.).
9. COOLING MODE: When there is a call for cooling to maintain the discharge air temperature setpoint, the energy recovery wheel shall operate to precondition the air, and the compressor shall modulate to maintain the discharge air temperature setpoint. The unit shall operate to maintain a discharge air temperature setpoint between 65 °F (adj.) and 74 °F (adj.).
10. DEHUMIDIFICATION MODE: A return air humidity sensor shall be placed in the main return duct prior to entering the unit. The unit shall be placed into dehumidification mode when the return air relative humidity is above 60% (adj.). The energy recovery wheel shall operate to precondition the air, and the compressor shall modulate to maintain a leaving coil temperature of 55 °F. The hot gas reheat shall modulate to maintain the discharge air temperature setpoint.
11. BUILDING SMOKE EMERGENCY: The RTU is to be shut down during a building smoke emergency. Signal for shut off to be provided by fire alarm system.
12. The BAS shall monitor BACnet Points specified and provide all equipment schedules and setpoints.
13. SAFETIES:
    A. Turn off the supply and exhaust fan if the return air smoke detector indicates that smoke is present.
    B. Turn off the supply and exhaust fan if the duct static pressure exceeds 3.0" w.g.
14. MONITORS AND ALARMS:
    A. Provide alarm for smoke.
    B. Monitor the differential pressure across the filters and provide a notification when the filters need to be replaced.
    C. Monitor the status of the supply fan, exhaust fan and energy recovery wheel with a current switch. Provide an alarm when commanded on but not running.

DOAS-1, POINTS LIST						
BACNET OBJECTS TO THE BAS POINTS LIST	**ANALOG INPUT**	**ANALOG OUTPUT**	**DIGITAL INPUT**	**DIGITAL OUTPUT**	**TREND**	**ALARM**
OCCUPIED / UNOCCUPIED			X	X		STATUS DOES NOT MATCH COMMAND
UNIT STATUS			X		X	
COOLING STATUS / CAPACITY	X		X		X	
GAS HEATING STATUS / CAPACITY	X		X		X	
SUPPLY FAN STATUS / SPEED	X		X			
EXHAUST FAN STATUS / SPEED	X		X			
DISCHARGE AIR TEMPERATURE	X				X	HIGH TEMP LOW TEM
DISCHARGE AIR TEMPERATURE SETPOINT		X				
RETURN AIR TEMPERATURE	X					
RETURN AIR HUMIDITY	X					
SUPPLY LEAVING WHEEL TEMPERATURE	X					
EXHAUST LEAVING WHEEL TEMPERATURE	X					
OUTDOOR AIR TEMP	X					
OUTSIDE AIR CFM	X					AIRFLOW MEASURING STATION
OUTSIDE AIR CFM SETPOINT		X				
SUPPLY AIR ENTERING FAN / LEAVING COIL TEMP	X					
OUTSIDE AIR DAMPER			X	X		STATUS DOES NOT MATCH COMMAND
EXHAUST AIR DAMPER			X	X		STATUS DOES NOT MATCH COMMAND
BUILDING STATIC PRESSURE	X					
ENERGY RECOVERY WHEEL STATUS			X			ALARM
HOT GAS REHEAT		X				
OCCUPIED COOLING TEMP SETPOINT		X				
OCCUPIED HEATING TEMP SETPOINT		X				
RETURN AIR SMOKE DETECTOR			X			ALARM
OUTSIDE AIR DIRTY FILTER SWITCH			X			ALARM
RETURN AIR DIRTY FILTER SWITCH			X			ALARM
DUCT HIGH LIMIT SWITCH			X			ALARM
DUCT LOW LIMIT SWITCH			X			ALARM

SPLIT SYSTEMS:

1. TCC to provide a thermostat in the spaces that have a split system to monitor temperature. Provide an alarm if the temperature exceeds 80°F.

POINTS LIST	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	TREND	ALARM
ROOM TEMPERATURE	X				X	ALARM IF 80°F IS EXCEED.

VARIABLE/CONSTANT AIR VOLUME (VAV) TERMINAL UNIT

1. The terminal unit shall have a pressure independent control system.
2. A wall mounted thermostat/temperature sensor shall control the VAV box, unless noted otherwise.
3. When building is occupied and no heating or cooling is required, the VAV box airflow shall be at minimum for code required ventilation to the space.
4. When building is unoccupied and no heating or cooling is required, the VAV box airflow shall be at 0 CFM.
5. When cooling is required, the variable air inlet damper shall modulate between the minimum and maximum airflow rates to maintain room air temperature setpoint.
6. When heating is required, the variable air inlet damper shall be in the minimum air flow rate position and the electric heating coil modulated to maintain room setpoint. If additional heating is required, airflow shall be modulated to maximum airflow setpoint.
7. Primary Air CFM shall be monitored by BAS. An air flow sensor shall be located on the inlet side of the VAV box. This shall be used to set minimum/maximum setpoints.
8. Provide setpoint limit adjustment on each VAV graphics page.

Setpoints (adj.):

Occupied cooling: 74 °F +/- 2 °F warmer/ cooler adjust
Unoccupied cooling: 80 °F
Occupied heating: 70 °F +/- 2 °f warmer/ cooler
Unoccupied heating: 65 °F

POINTS LIST	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	TREND	ALARM
SPACE TEMPERATURE	X				X	HIGH ALARM LOW ALARM
DISCHARGE AIR TEMPERATURE	X					
AIRFLOW	X					
DAMPER		X				
ELECTRIC HEATING COIL		X				

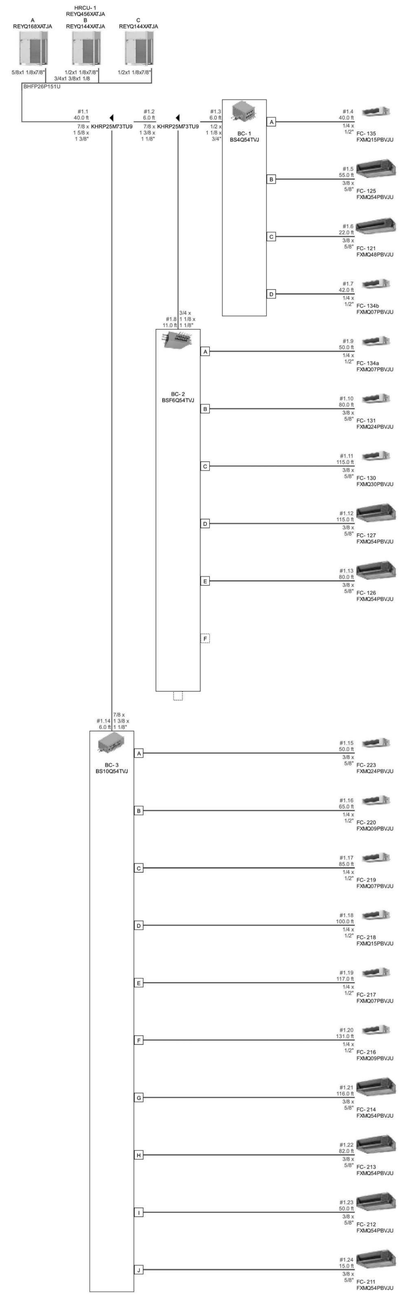
EF-1,2 & Existing Exhaust Fan:

1. Fan shall operate according to the building occupancy schedule, adjustable at the BAS.
2. Exhaust fan shall run continuously during occupied hours.

POINTS LIST	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	TREND	ALARM
FAN STATUS			X	X		STATUS DOES NOT MATCH COMMAND

ALL PIPING LENGTHS AND SIZES NEED TO BE VERIFIED BY THE CONTRACTOR AND MANUFACTURER. LENGTHS LISTED BELOW ARE NOT MEANT AS A TAKE OFF.

Piping HRCU- 1



1 VRV PIPING SCHEMATIC
SCALE: 12" = 1'-0"

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No.	Revisions / Submissions	Date

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434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL CONTROLS

STATE OF OHIO
BRIAN K. ROSE
E-56979
REGISTERED
PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M501
Checked: BKR	

PACKAGED RTU SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS				MIN. OUTDOOR AIR (CFM)	MAX. OUTDOOR AIR, NON ECONOMIZER (CFM)	SUPPLY FAN				EXHAUST FAN				COOLING PERFORMANCE										HOT GAS REHEAT		GAS HEAT			ELECTRICAL DATA				REMARKS
			LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)			AIRFLOW (CFM)	ESP (in. wg)	MOTOR TYPE	HP	EXHAUST AIRFLOW (CFM)	ESP (in. wg.)	MOTOR TYPE	HP	REFRIGERANT	COOLING STAGES	TOTAL (MBH)	SENSIBLE (MBH)	ENTERING COIL TEMPERATURE		LEAVING COIL TEMPERTURE		FACE VELOCITY (FPM)	APD (in. wg.)	COIL ROWS	FINS/IN	EER	CAPACITY (MBH)	COIL LAT DB	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	HEATING STAGES	VOLTS / HZ / PH	MCA	MOPD	
																					EAT DB	EAT WB	DB (F)	WB (F)												
RTU-1	DAIKIN	DPSA031	29' - 9"	8' - 0 1/2"	6' - 5 77/128"	8540	550	2000	10550	2.5	ECM	(2) 6.3	10550	0.50	ECM	7.0	R410A	(1) VARIABLE SPEED, (2) FIXED SPEED COMPRESSORS	344	279.7	76.8	63.7	52.6	52.5	398.2	0.66	6	12	11.3	199.7	70	400	324.0	MODULATING 10-100%	208/60/3	193.3	225	1-15
RTU-2	DAIKIN	DPS020A	13' - 6 77/256"	6' - 4 1/2"	5' - 10 1/2"	4041	260	400	8800	1.50	DIRECT	10	8800	0.25	ECM	8	R410A	(1) INVERTER SCROLL	241	223	74.5	60.9	51.3	51.1	411.2	0.46	4	15	11	178.3	70	300	240.0	MODULATING 12:1 TURNDOWN	208/60/3	130.6	175	1-13,16

PACKAGED RTU SOUND DATA

MARK	INLET FREQUENCY							DISCHAGE FREQUENCY							RADIATED FREQUENCY						
	63 Hz	125 Hz	250 Hz	1 kHz	2 kHz	4 kHz	8 kHz	63 Hz	125 Hz	250 Hz	1 kHz	2 kHz	4 kHz	8 kHz	63 Hz	125 Hz	250 Hz	1 kHz	2 kHz	4 kHz	8 kHz
RTU-1	70	61	66	65	64	60	70	74	78	82	82	81	77	78	46	63	68	78	77	74	66
RTU-2	77	76	84	71	70	65	62	83	82	87	80	77	72	67	80	74	76	75	72	73	65

REMARKS:
1. IF SELECTED EQUIPMENT SIZE OR WEIGHT DEVIATES FROM BASIS OF DESIGN, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS RELATED TO THIS CHANGE.
2. PROVIDE NEEDLEPOINT BIPOLAR IONIZATION UPSTREAM OF COOLING COIL. BASIS OF DESIGN IS GLOBAL PLASMA SOLUTIONS, GPS-IMOD OR EQUAL. ALL SUBSTITUTE MANUFACTURERS MUST MEET THE FOLLOWING REQUIREMENTS AND MUST RECEIVE ENGINEER'S APPROVAL:
   A. MUST BE COMPLETELY INSTALLED, STARTED, COMMISSIONED, WARRANTED AND SUPPORTED BY A LOCAL FACTORY AUTHORIZED TECHNICIAN.
   B. EQUIPMENT MUST BE SELF CLEANING.
   C. UL LISTED TO BE OZONE FREE.
   D. PROVIDE AN 18 MONTH WARRANTY FROM CONSTRUCTION COMPLETION DATE.
3. SUPPLY AND RETURN CONNECTIONS ON SIDE OF UNIT. REFER TO PLANS FOR CONFIGURATION.
4. SPRING VIBRATION ISOLATORS ON SUPPLY AND EXHAUST FANS.
5. 2" MERV 8 FILTERS.
6. UNIT SHALL BE PROVIDED WITH MANUFACTURER INSTALLED OUTSIDE AIRFLOW MONITORING STATION.
7. FIELD POWERED 120V GFI RECEPTACLE FOR MAINTENANCE.
8. 12" TALL ROOF CURB. PROVIDE VIBRATION ISOLATION RAIL, KINETICS KSR 2.0 OR EQUAL.
9. 1 YEAR PARTS WARRANTY, 5 YEAR COMPRESSOR WARRANTY, AND 10 YEAR GAS HEAT EXCHANGER WARRANTY.
10. PROVIDE FACTORY CONTROLS WITH BACNET COMMUNICATION.
11. SINGLE POINT POWER CONNECTION.
12. SUPPLY STAINLESS STEEL CONDENSATE DRAIN PAN FOR COOLING COIL SECTIONS. ENTIRE DRAIN SHALL BE PITCHED TO OUTLET. ROUTE CONDENSATE TO NEAREST ROOF DRAIN.
13. COMPRESSOR SOUND BLANKET.
14. THERMALLY BROKEN DOUBLE WALL CONSTRUCTION, R-13 INSULATION.
15. VARIABLE SPEED COMPRESSOR SHALL BE LEAD COMPRESSOR.
16. 2" R-13 INJECTED FOAM INSULATION WITH GALVANIZED STEEL LINER.

DEDICATED OUTSIDE AIR UNIT SCHEDULE - BUILDING D

MARK	MANUFACTURER	MODEL #	PHYSICAL DATA				SUPPLY FAN						EXHAUST FAN						ELECTRICAL				REMARKS
			WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	TOTAL OA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. (" WC)	T.S.P. (" WC)	B.H.P.	TOTAL EA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. (" WC)	B.H.P.	VOLTS / HZ / PH	MCA	MOCP	
DOAS-1	DAIKIN	DPS016A	182	77	71	4318	4575	DIRECT	1	2076	2.00	3.80	5.46	4130	ECM	1	1467	2.00	3.36	208/60/3	105	150	1-15

DEDICATED OUTSIDE AIR UNIT SCHEDULE - CONTD. 1

MARK	DX COOLING PERFORMANCE									HOT GAS REHEAT COIL		GAS HEATING PERFORMANCE				
	COOLING STAGES	REFRIGERANT	COIL AIRFLOW (CFM)	TOTAL (MBH)	SENSIBLE (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (MBH)	LAT (°F)	HEATING AIRFLOW (CFM)	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	EAT (°F)	LAT (°F)
DOAS-1	(1) INVERTER SCROLL	R410A	4585	188.3	140.6	81.2	67.4	55.4	55.4	100.6	74.0	4585	600	480	0.0	88.5

DEDICATED OUTSIDE AIR UNIT SCHEDULE - CONTD. 2

MARK	ENERGY RECOVERY WHEEL PERFORMANCE													OUTDOOR AIR APD (IN. W.G.)	EXHAUST AIR APD (IN. W.G.)
	WINTER OPERATION							SUMMER OPERATION							
	OUTDOOR AIR STREAM				EXHAUST AIR STREAM			OUTDOOR AIR STREAM				EXHAUST AIR STREAM			
	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	EAT DB (°F)	EAT WB (°F)	TOTAL EFFECTIVENESS	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	EAT DB (°F)	EAT WB (°F)	TOTAL EFFECTIVENESS	
DOAS-1	0	-1	45	38	72	54	65.5	92	74	81	67	74	62	59	0.56	0.56

REMARKS:
1. IF SELECTED EQUIPMENT SIZE OR WEIGHT DEVIATES FROM BASIS OF DESIGN, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS RELATED TO THIS CHANGE. IT IS THE CONTRACTOR'S AND ALTERNATE MANUFACTURER'S RESPONSIBILITY TO ENSURE FIT AND CLEARANCES ARE MAINTAINED. HEIGHT OF ALTERNATE UNITS CANNOT EXCEED BASIS OF DESIGN.
2. SUPPLY AND RETURN CONNECTIONS ON BOTTOM OF UNIT. REFER TO PLANS FOR CONFIGURATION. COORDINATE DUCT DROPS WITH EXISTING ROOF STRUCTURE AND PROVIDE DUCT TRANSITIONS IN CURB AS NECESSARY.
3. SPRING VIBRATION ISOLATORS ON SUPPLY AND EXHAUST FANS.
4. 2" MERV 8 FILTERS.
5. UNIT SHALL BE PROVIDED WITH MANUFACTURERS INSTALLED OUTSIDE AIRFLOW MONITORING STATION.
6. FIELD POWERED 120V GFI RECEPTACLE FOR MAINTENANCE.
7. 12" TALL MINIMUM ROOF CURB. PROVIDE VIBRATION ISOLATION RAIL, KINETICS KSR 2.0 OR EQUAL.
8. 1 YEAR PARTS WARRANTY, 5 YEAR COMPRESSOR WARRANTY, AND 10 YEAR GAS HEAT EXCHANGER WARRANTY.
9. PROVIDE FACTORY CONTROLS WITH BACNET COMMUNICATION.
10. PROVIDE FACTORY CONTROLS WITH BACNET COMMUNICATION.
11. SINGLE POINT POWER CONNECTION.
12. SUPPLY STAINLESS STEEL CONDENSATE DRAIN PAN FOR COOLING COIL SECTIONS. ENTIRE DRAIN SHALL BE PITCHED TO OUTLET. ROUTE CONDENSATE TO NEAREST ROOF DRAIN.
13. COMPRESSOR SOUND BLANKET.
14. 2" R-13 INJECTED FOAM INSULATION WITH GALVANIZED STEEL LINER.
15. ENERGY RECOVERY WHEEL VFD PROVIDED BY MANUFACTURER.

VRF INDOOR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	DIMENSIONS (IN.)			WEIGHT (LBS)	AIRFLOW (CFM)	REQUIRED COOLING (BTU/H)	REQUIRED HEATING (BTU/H)	AVAILABLE COOLING (BTU/H)	AVAILABLE HEATING (BTU/H)	ELECTRICAL					REMARKS
				LENGTH	WIDTH	HEIGHT							VOLTAGE	PHASE	HZ	MCA	MOCP	
FC-121	DAIKIN	FXQM48PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	101.40 lb	1377	30500	16200	44665	55993	208	1	60	3.4	15	1-5
FC-125	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	40800	14300	50211	62203	208	1	60	3.4	15	1-5
FC-126	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	40800	14300	50211	62203	208	1	60	3.4	15	1-5
FC-127	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	40800	14600	50211	62203	208	1	60	3.4	15	1-5
FC-130	DAIKIN	FXMQ30PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	101.40 lb	1094	24900	14300	27802	35247	208	1	60	2.8	15	1-5
FC-131	DAIKIN	FXMQ24PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	40	12	79.40 lb	688	20300	8000	22309	28014	208	1	60	1.8	15	1-5
FC-134a	DAIKIN	FXMQ07PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	5500	2200	6984	8803	208	1	60	0.6	15	1-5
FC-134b	DAIKIN	FXMQ07PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	5500	2200	6984	8803	208	1	60	0.6	15	1-5
FC-135	DAIKIN	FXMQ15PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	40	12	79.40 lb	560	10500	700	13944	17095	208	1	60	1.5	15	1-5
FC-211	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	41700	18500	50211	62203	208	1	60	3.4	15	1-5
FC-212	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	41400	14400	50211	62203	208	1	60	3.4	15	1-5
FC-213	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	41400	14400	50211	62203	208	1	60	3.4	15	1-5
FC-214	DAIKIN	FXMQ54PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	55	12	103.60 lb	1624	41500	14400	50211	62203	208	1	60	3.4	15	1-5
FC-216	DAIKIN	FXMQ09PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	8300	6100	8832	10885	208	1	60	0.6	15	1-5
FC-217	DAIKIN	FXMQ07PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	6400	5800	6984	8803	208	1	60	0.6	15	1-5
FC-218	DAIKIN	FXMQ15PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	40	12	79.40 lb	560	9500	8300	13944	17095	208	1	60	1.5	15	1-5
FC-219	DAIKIN	FXMQ07PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	2900	200	6984	8803	208	1	60	0.6	15	1-5
FC-220	DAIKIN	FXMQ09PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	22	12	55.10 lb	317	7300	700	8832	10885	208	1	60	0.6	15	1-5
FC-223	DAIKIN	FXMQ24PBVJU	DUCTED ABOVE CEILING FAN COIL UNIT	28	40	12	79.40 lb	688	18700	10700	22309	28014	208	1	60	1.8	15	1-5

REMARKS:
1. PROVIDE DIGITAL WALL MOUNTED THERMOSTAT (DAIKIN MODEL BRC1E72RMF) TO CONTROL UNIT. REFER TO PLANS FOR THERMOSTAT LOCATIONS.
2. INTEGRATE CONTROL OF VRV INDOOR UNITS TO THE INTELLIGENT TOUCH MANAGER.
3. CONTRACTOR SHALL COORDINATE LOCATION TO MAINTAIN MANUFACTURER RECOMMENDED SERVICE CLEARANCES.
4. DO NOT PROVIDE WITH FILTERS FOR UNIT FILTER RACK. FILTERS SHALL BE PROVIDED AT RETURN GRILLES.
5. UNIT SHALL HAVE INTEGRAL CONDENSATE PUMP WITH MINIMUM 18" RISE.

VRF OUTDOOR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL #	DESCRIPTION	DIMENSIONS (IN.)			WEIGHT (LBS)	REQUIRED COOLING (BTU/H) @ 95°F	REQUIRED HEATING (BTU/H) @ 0°F	EQUIPMENT PERFORMANCE (NON-DUCTED)				ELECTRICAL		REFRIGERANT TYPE	REMARKS
				LENGTH	WIDTH	HEIGHT				EER	IEER	COP @ 47°F	COP @ 17°F	VOLTAGE	PHASE		
HRCU-1	DAIKIN	REYQ456KAYDA	VRV IV HEAT RECOVERY SYSTEM	30	148	67	2247 lb	542146	673864	9.3	16.2	3.21	2.07	208	3	R410A	1-8

REMARKS:
1. PROVIDE WITH R-410A REFRIGERANT. SIZE LINES PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
2. PROVIDE ROOF SUPPORT SYSTEM. ROOF SUPPORT SHALL BE 18" OR THE MINIMUM HEIGHT RECOMMENDED BY THE VRV MANUFACTURER (WHICHEVER IS HIGHER).
3. PROVIDE DAIKIN INTELLIGENT TOUCH MANAGER (MODEL DCM601A71) WITH BACNET IP CLIENT SOFTWARE (MODEL DCM009A51).
4. MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUMES.
5. SUBSTITUTE MANUFACTURERS SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT.
6. CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PIPING DIMENSIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIRECT COSTS ASSOCIATED WITH ANY DEVIATIONS RESULTING FROM CHANGES IN DESIGN.
8. THE EQUIPMENT PERFORMANCE TO MEET OR EXCEED IECC 2015.

VRF BRANCH SELECTOR UNIT SCHEDULE

MARK	MODEL	MANUFACTURER	DIMENSIONS (IN.)			WEIGHT (LBS)	ASSOCIATED HEAT PUMP	NUMBER OF BRANCHES	VOLTAGE	PHASE	MCA	REMARKS
			LENGTH	WIDTH	HEIGHT							
BC-1	BSF4Q54TVJ	DAIKIN	14	24	10	48.5	HRCU-1	4	208	1	0.4	1-2
BC-2	BSF6Q54TVJ	DAIKIN	24	24	10	72.8	HRCU-1	6	208	1	0.6	1-2
BC-3	BS12Q54TVJ	DAIKIN	19	32	12	101.4	HRCU-1	10	208	1	1.0	1-2

REMARKS:
1. REFER TO PIPING SCHEMATICS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL COORDINATE TO ENSURE MANUFACTURERS RECOMMENDED CLEARANCES ARE MAINTAINED.

CMTA
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No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

MECHANICAL SCHEDULES

STATE OF OHIO BRIAN K. ROSE E-56929 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M601
Checked: BKR	

REGISTERS, GRILLES, AND DIFFUSERS

MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE (WxH)	PANEL SIZE	DUCT INLET SIZE	MAX AIRFLOW	MAX NC	THROW PATTERN	REMARKS
E-1	TITUS	350ZRS	STEEL LOUVERED RETURN GRILLE	10"x10"	12"x12"	10"x10"	100	20	--	1,5
E-2	TITUS	50F	ALUMINUM EGGCRATE GRILLE	6"x6"	8"x8"	6"x6"	50	20	--	1,5
E-3	TITUS	50F	ALUMINUM EGGCRATE GRILLE	10"x10"	12"x12"	6"x6"	50	20	--	1,3
E-4	TITUS	50F	ALUMINUM EGGCRATE GRILLE	22"x22"	24"x24"	8" Ø	150	20	--	1,3,4
E-5	TITUS	50F	ALUMINUM EGGCRATE GRILLE	22"x22"	24"x24"	10"Ø	350		--	1,3,4
E-6	TITUS	50F	ALUMINUM EGGCRATE GRILLE	22"x22"	24"x24"	22"x22"	240	20	--	1,3,7
E-7	TITUS	4FS	LOUVERED EXHAUST GRILLE, 1/2" BLADE SPACING, 45° DEFLECTION	12"x12"	14"x14"	12"x12"	450	20	--	1,6
R-1	TITUS	50F	ALUMINUM EGGCRATE RETURN GRILLE	22"x10"	24"x12"	--	225	20	--	1,3,7
R-2	TITUS	CTRA-FF	RETURN GRILLE WITH FILTER RACK	22"x22"	24"x24"	--	1215	14	--	
R-3	TITUS	4FS	LOUVERED RETURN GRILLE, 1/2" BLADE SPACING, 45° DEFLECTION, BLADES PARALLEL TO SHORT DIMENSION	38"x78"	40"x80"	--	8800	25	--	1,6
R-4	TITUS	50F	ALUMINUM EGGCRATE RETURN GRILLE	22"x22"	24"x24"	22"x22"	690	--	--	1,3
S-1	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	12"x12"	6" Ø	50	20	4-WAY	1,3
S-2	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	24"x24"	6" Ø	100	20	4-WAY	1,3
S-3	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	24"x24"	8" Ø	250	20	4-WAY	1,3
S-4	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	24"x24"	10" Ø	420	20	4-WAY	1,3
S-5	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	24"x24"	12" Ø	455	20	4-WAY	1,3
S-6	TITUS	OMNI-AA	ALUMINUM SQUARE PLAQUE FACE DIFFUSER	--	24"x24"	14"Ø	460	--	4-WAY	1,3
S-7	TITUS	272FL	ALUMINUM DOUBLE DEFLECTION SUPPLY GRILLE	8"x8"	10"x10"	8"x8"	125		2-WAY	
S-8	TITUS	S300FS	ALUMINUM SPIRAL DUCT MOUNTED DOUBLE DEFLECTION GRILLE	12"x6"	--	--	150	--	2-WAY	5,9,10
S-9	TITUS	S300FS	ALUMINUM SPIRAL DUCT MOUNTED DOUBLE DEFLECTION GRILLE	12"x8"	--	--	400		2-WAY	
S-11	TITUS	272FL	ALUMINUM DOUBLE DEFLECTION SUPPLY GRILLE, 3/4" BLADE SPACING	14"x14"	16"x16"	14"x14"	900	25	2-WAY	1,5
S-12	TITUS	TMRA-AA	ALUMINUM ROUND ADJUSTABLE SUPPLY DIFFUSER	--	--	8" Ø	100	20	360°	2,5
S-13	TITUS	TMRA-AA	ALUMINUM ROUND ADJUSTABLE SUPPLY DIFFUSER	--	--	10" Ø	255	20	360°	2,5
S-14	TITUS	TMRA-AA	ALUMINUM ROUND ADJUSTABLE SUPPLY DIFFUSER	--	--	14" Ø	450	20	360°	2,5
S-15	TITUS	S300FS	ALUMINUM SPIRAL DUCT MOUNTED DOUBLE DEFLECTION GRILLE	18"x12"	--	--	575	20	2-WAY	2,5,9
T-1	TITUS	4FS	LOUVERED TRANSFER GRILLE, 1/2" BLADE SPACING, 45° DEFLECTION, BLADES PARALLEL TO SHORT DIMENSION	34"x8"	36"x10"	34"x8"	100	--	--	1,6
T-2	TITUS	50F	ALUMINUM EGGCRATE TRANSFER GRILLE	10"x10"	12"x12"	--	150	--	--	1,3
T-3	TITUS	50F	ALUMINUM EGGCRATE TRANSFER GRILLE	22"x22"	24"x24"	22"x22"	415		--	
T-4	TITUS	4FS	LOUVERED TRANSFER GRILLE, 1/2" BLADE SPACING, 45° DEFLECTION, BLADES PARALLEL TO SHORT DIMENSION	22"x6"	24"x8"	22"x6"	415		--	

REMARKS:
1. WHITE IN COLOR.
2. BLACK IN COLOR.
3. REFER TO ARCHITECTURAL CEILING PLANS TO DETERMINE REQUIRED BORDER TYPE.
4. PROVIDE SQUARE TO ROUND ADAPTER. PAINT INSIDE OF ADAPTER BLACK.
5. DUCT MOUNTED.
6. SIDEWALL MOUNTED. CONCEALED SCREW FASTENING.
7. PROVIDE FULL SIZE PLENUM BOX ON TOP OF GRILLE TO MAKE DUCT CONNECTION. PAINT INSIDE FACE OF PLENUM BOX BLACK.
8. FILTER RACK RETURN GRILLE TO BE INSTALLED WITH MERV 8 FILTER.
9. PROVIDE WITH INTEGRAL SCOOP DAMPER FOR BALANCING.
10. COORDINATE COLOR WITH ARCHITECT DURING SUBMITTAL REVIEW.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	TYPE	AIRFLOW (CFM)	E.S.P.	DRIVE	RPM	ELECTRICAL DATA			SONES	REMARKS
									VOLTAGE	PHASE	HZ		
EF-1	GREENHECK	CSP-A710	SHOP EXHAUST	INLINE EXHAUST FAN	450	0.51	DIRECT	1080	120	1	60	2.5	1-3
EF-2	GREENHECK	CSP-A390-VG	STORAGE	INLINE EXHAUST FAN	100	0.40	DIRECT	1181	120	1	60	1.3	1-3

REMARKS:
1. SUPPORT FROM STRUCTURE UTILIZING VIBRATION ISOLATION HANGING KIT.
2. STATIC PRESSURE INCLUDES BACKDRAFT DAMPER.
3. PROVIDE WITH SOFT START.

ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DIMENSIONS (WxHxD)	HEATING CAPACITY (kW)	CFM	POWER SUPPLY V / PH	AMPS	REMARKS
UH-1	INDEECO	CUI	CABINET UNIT HEATER	28"X26"X12"	4	250	208/1	20.6	1-4
UH-2	INDEECO	WCI	WALL HEATER	32"X22"X4"	8	320	208/1	38.9	1-3,5
UH-3	INDEECO	CUI	CABINET UNIT HEATER	29"X27"X12"	5	250	208/1	25.4	1,3-6

REMARKS:
1. PROVIDE WITH INTEGRAL, TAMPERPROOF, SINGLE-POLE THERMOSTAT.
2. SURFACE MOUNTED.
3. WHITE COLOR FINISH.
4. FRONT SUPPLY AND RETURN.
5. MOUNT BOTTOM OF UNIT 12" AFF.
6. FULLY RECESSED IN WALL.

DUCT SILENCER SCHEDULE

MARK	ASSOCIATED UNIT	DIM WxH	LENGTH	MANUFACTURER	NC	FLOW (CFM)	VELOCITY (FPM)	MAX PRESSURE DROP (IN. WG.)	CONFIGURATION	REMARKS
DS-1R	RTU-1 RETURN	56"x56"	120"	IAC ACOUSTICS	25	10,550	484	0.17	STRAIGHT	1-3
DS-1S	RTU-1 SUPPLY	48"x48"	120"	IAC ACOUSTICS	25	10,550	659	0.21	STRAIGHT	1-3
DS-2R	RTU-2 RETURN	58"x24"	120"	IAC ACOUSTICS	35	8,800	910	0.08	STRAIGHT	1-3
DS-2S	RTU-2 SUPPLY	48"x48"	120"	IAC ACOUSTICS	25	8,800	550	0.21	STRAIGHT	1-3

DUCT SILENCER SOUND DATA

MARK	DYNAMIC INSERTION LOSS (dB)								
	31.5 Hz	63 Hz	125 Hz	250 kHz	500 kHz	1 kHz	2 kHz	4 kHz	8 kHz
DS-1R	0	18	29	48	52	53	46	33	22
DS-1S	0	12	22	41	49	52	50	49	44
DS-2R	0	10	17	29	44	41	21	17	15
DS-2S	0	18	29	48	52	53	46	33	22

REMARKS:
1. SHALL BE LOCATED OUTDOORS ON ROOF. COMPLETELY INSULATE AND SEAL. PLACE 3/4" CONDUIT ALONG CENTER LENGTH OF SILENCER WHEN INSTALLING INSULATION TO CREATE A SLOPED SURFACE TO PREVENT WATER FROM POOLING.
2. 8" W.G. PRESSURE RATED.
3. ASTM E84 FLAMESPREAD CLASSIFICATION <20 AND SMOKE DEVELOPMENT RATING <20.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	WIDTH (IN)	HEIGHT (IN)	AIRFLOW (CFM)	FREE AREA (%)	FREE AREA	MAX PD (W.G.)	REMARKS
L-1	RUSKIN	EME520DD	WIND DRIVEN RAIN RESISTANT LOUVER	20	16	450	37	0.8	0.05	1-3

REMARKS:
1. COORDINATE COLOR WITH ARCHITECT.
2. SEAL AROUND LOUVER AIR AND WATER TIGHT.
3. PROVIDE WITH BIRD AND INSECT SCREEN.

ELECTRIC FAN POWERED HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DIMENSIONS (WxHxD)	HEATING CAPACITY (kW)	CFM	POWER SUPPLY V / PH	MCA	MOP	REMARKS
FPH-01	SOHO	SOHO-E 06-046-04-00-20-010-4	ELECTRIC FAN POWERED TRENCH HEATER	46"x4"x6"	1.0	125	208/1	6	10	1-3

REMARKS:
1. PROVIDE WITH 1" BALANCING PEDESTALS.
2. PROVIDE 8" WIDE, CURVED, EXTRUDED ALUMINUM GRILLES. GRILLES SHALL BE FLANGED SO THEY ARE SUPPORTED BY THE FLOOR, NOT BY THE HEATERS. GRILLES SHALL BE FABRICATED IN SEGMENTS BUT SHALL BE CONTINUOUS IN APPEARANCE ACROSS THE ENTIRETY OF THE FLOOR TRENCH. CONTRACTOR AND GRILLE MANUFACTURER SHALL BE RESPONSIBLE FOR COORDINATING EXACT DIMENSIONS AND CURVATURE OF GRILLE TO FIT THE FLOOR TRENCH. COORDINATE GRILLE COLOR FINISH SELECTION WITH ARCHITECT DURING SUBMITTAL REVIEW.
3. HEATERS SHALL BE CONTROLLED BY EXTERNAL WALL MOUNTED THERMOSTATS. REFER TO PLANS TO DETERMINE WHICH HEATERS ARE WIRED TO EACH THERMOSTAT. CONTROL WIRING SHALL BE ROUTED THROUGH TRENCH.

VAV BOX SCHEDULE

MARK	MANUFACTURER	MODEL	BOX TYPE	INLET SIZE	VOLUME CONTROL DAMPER			ELECTRIC HEATING COIL							REMARKS
					MAX CFM	OCC MIN CFM	UNOCC MIN CFM	HEATING CFM	EAT (°F)	LAT (°F)	CAPACITY (KW)	VOLTS/PH	MCA	MOP	
VAV-108	TITUS	DESV	SINGLE DUCT	8" Ø	600	100	0	360	55	85.7	3.5	208/1	21	25	1-9
VAV-110	TITUS	DESV	SINGLE DUCT	8" Ø	450	450	0	450	55	97.1	6	208/1	36.1	40	1-9
VAV-112	TITUS	DESV	SINGLE DUCT	10" Ø	900	0	0	540	55	96	7	208/1	42.1	45	1-9
VAV-113	TITUS	DESV	SINGLE DUCT	8" Ø	550	100	0	330	55	98.1	4.5	208/1	27	30	1-9
VAV-117	TITUS	DESV	SINGLE DUCT	6" Ø	350	100	0	200	55	94.5	2.5	208/1	15	15	1-9
VAV-206A	TITUS	DESV	SINGLE DUCT	12" Ø	1500	150	0	900	55	97.1	12	208/3	41.6	45	1-9
VAV-206B	TITUS	DESV	SINGLE DUCT	12" Ø	1500	150	0	900	55	97.1	12	208/3	41.6	45	1-9
VAV-206C	TITUS	DESV	SINGLE DUCT	12" Ø	1500	150	0	900	55	97.1	12	208/3	41.6	45	1-9
VAV-207	TITUS	DESV	SINGLE DUCT	8" Ø	600	100	0	360	55	98.9	5	208/1	30	30	1-9

REMARKS:
1. PRESSURE INDEPENDENT CONTROLS.
2. TCC SHALL PROVIDE AND FIELD INSTALL UNIT MOUNTED CONTROLLER.
3. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF LH/RH CONFIGURATION OF UNIT. ENSURE MANUFACTURER RECOMMENDED AND CODE REQUIRED ELECTRICAL CLEARANCES ARE MET.
4. DUCT RUNOUT SIZE SHALL MATCH VAV INLET DIAMETER SIZE.
5. 1/2" ECOSHIELD LINER WITH MAT COVERING.
6. FACTORY MOUNTED 208-24V CONTROL TRANSFORMER.
7. PROVIDE WITH DISCONNECT SWITCH.
8. MAX DISCHARGE AND RADIATED NC SHALL BE 30.
9. SHALL INCLUDE CFM READING WITH +/- 5% ACCURACY.

SPLIT SYSTEM OUTDOOR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN)			WEIGHT	REFRIGERANT TYPE	COOLING CAPACITY	HEATING CAPACITY	ELECTRICAL				REMARKS
			LENGTH	WIDTH	HEIGHT					VOLTAGE	PHASE	HZ	MCA	
CU-01	DAIKIN	RK24NMVJU	34	13	29	108	R410A	21200	0	208	1	60	18.3	1-5

REMARKS:
1. PROVIDE LOW AMBIENT KIT FOR 0°F OPERATION.
2. UNIT SHALL BE MOUNTED ON EXTERIOR WALL UTILIZING WALL MOUNTING KIT. BOTTOM OF UNIT SHALL BE 24" ABOVE GRADE.
3. PROVIDE WITH SINGLE POINT POWER CONNECTION; INDOOR UNIT POWER IS FED FROM OUTDOOR UNIT.
4. PROVIDE WITH R-410A REFRIGERANT, SIGHT GLASS, EXPANSION DEVICE, LINE DRIER, SIZE LINES AND PROVIDE INTERMEDIATE TRAPS PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
5. PROVIDE WITH UL LISTING.

SPLIT SYSTEM INDOOR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DIMENSIONS			WEIGHT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	ELECTRICAL			REMARKS
				LENGTH	WIDTH	HEIGHT				VOLTAGE	PH.	HZ	
SS-1	DAIKIN	FTK24NMVJU	WALL MOUNTED UNIT	39	10	12	27.00	21200	0	208	1	60	1-3

REMARKS:
1. PROVIDE WALL MOUNTED THERMOSTAT.
2. UNIT POWER IS PROVIDED BY OUTDOOR UNIT.
3. BOTTOM OF UNIT TO BE MOUNTED 9'-6" ABOVE FINISHED FLOOR.

ELECTRIC RADIANT CEILING PANEL SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	DIMENSIONS (WxHxD)	WEIGHT (LBS)	HEATING CAPACITY (kW)	POWER SUPPLY V / PH	AMPS	REMARKS
RH-1	MARLEY	CP758F	ELECTRIC RADIANT CEILING PANEL	24"X48"X2"	28	0.750	208/1	3.6	1-3
RH-2	MARLEY	CP758F	ELECTRIC RADIANT CEILING PANEL	24"X48"X2"	28	0.750	208/1	3.6	1-3

REMARKS:
1. COORDINATE COLOR FINISH WITH ARCHITECT DURING SUBMITTAL REVIEW.
2. REFER TO ARCHITECTURAL CEILING PLANS TO DETERMINE REQUIRED BORDER TYPE.
3. HEATERS SHALL BE CONTROLLED BY CEILING MOUNTED BUTTON SENSOR IN VESTIBULE.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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STATE OF OHIO — BRIAN K. ROSE E-56929 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M602
Checked: BKR	

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DOAS-1 OUTSIDE AIR CALCULATIONS

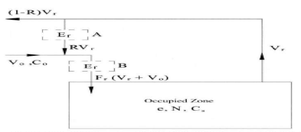
ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	ACTUAL OA (CFM)
130	Classroom	Classroom	752	31	0.12	10	1	400.24	100%	420
131	Classroom	Classroom	753	31	0.12	10	1	400.36	100%	420
134	Hallway	Common corridors	2219	0	0.06	0	1	133.14	100%	250
135	Warm Kitchen	Kitchens-commercials	339	6	0.12	7.5	1	85.68	100%	90
126	Classroom	Classroom	756	31	0.12	10	1	400.72	100%	420
127	Classroom	Classroom	756	31	0.12	10	1	400.72	100%	420
125	Chorus	Classroom	756	31	0.12	10	1	400.72	100%	420
121	Room	Office space	612	6	0.06	5	1	66.72	100%	100
217	Office	Office space	209	1	0.06	5	1	17.54	100%	25
218	Workstations	Office space	381	3	0.06	5	1	37.86	100%	50
219	Office	Office space	208	1	0.06	5	1	17.48	100%	25
220	Reception/Corridor	Reception areas	770	4	0.06	5	1	66.2	100%	75
205	Lobby/Corridor	Common corridors	2082	0	0.06	0	1	124.92	100%	200
211	Teacher Lounge	Breakrooms	760	8	0.12	5	1	131.2	100%	140
213	Classroom	Classroom	759	31	0.12	10	1	401.08	100%	420
212	Classroom	Classroom	759	31	0.12	10	1	401.08	100%	420
214	Classroom	Classroom	759	31	0.12	10	1	401.08	100%	420
210	Storage	Occupiable storage rooms for dry materials	238	1	0.06	5	1	19.28	100%	25
216	Workroom Storage	Occupiable storage rooms for dry materials	302	2	0.06	5	1	28.12	100%	35
124	Classroom	Classroom	375	15	0.12	10	1	195	100%	200

EXISTING RTU OUTSIDE AIR CALCULATIONS

ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	SA TO ROOM (CFM)	ACTUAL OA (CFM)
108	Costume	Music/Theater/Dance	170	3	0.06	10	0.8	50.25	25%	225	56.25
110	Shop	Woodwork shop/classrooms	464	6	0	0	0.8	0	25%	450	112.5
113	Lounge	Breakrooms	242	4	0.12	5	0.8	61.3	25%	500	125
117	Green Room	Breakrooms	180	2	0.12	5	0.8	39.5	25%	300	75
120	Corridor	Common corridors	465	0	0.06	0	0.8	34.875	25%	200	50
206	Community Room	Conference/Meeting	2424	75	0.06	5	0.8	650.55	25%	4250	1062.5
207	Conference/Workroom	Conference/Meeting	438	10	0.06	5	0.8	95.35	25%	600	150

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp	Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
Theater	Public Assembly Spaces	Auditorium seating area	7,000.0	445.0	5.0	0.06	2225	420	0.8	3306 OA required per VRP

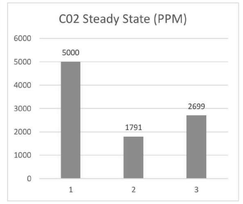
Zone Height (feet)	23.0
Desired Outside Air (Vo) IAQP (CF	2,000
Supply Air (Vs) (CFM)	10,550
Return Air (Vr)	8550
Recirc. Flow Factor (R)	0.81
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Sedentary**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant



Air Changes Per Hour	3.9	VRP OA CFM per person	7.4
Outside Air Per VRP	3306 CFM	IAQ OA CFM per person	4.5
Outside Air Per IAQ	2000 CFM		
Outside Air Savings	1306 CFM	Winter Heating Savings	
OA Summer Drybulb	95.0	OA Winter Design DB (F)	10
OA Summer Wetbulb	76.0	Supply Air DB Setpoint (F)	85
Coil Leaving Air Drybulb (F)	55.0	MBH Saved Winter	106.3
Coil Leaving Air Wetbulb (F	55.0	KW Saved Winter	31.2
OA MBH Saved Summer*	95.4		
OA Tons Saved Summer*	7.9		

*OA = Outside Air
***OSHA, NIOSH & WHO most conservative values used
http://www.cdc.gov/niosh/npg/npgsyn-a.html

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value Based on OSHA or NIOSH (PPM)	Steady State (lb/hr) Using the VRP* (Prescribed OA) Plasma Off	Steady State (lb/hr) Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate lb/person/min	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	3.4199E-09	1.5420E-09	Yes	1.2903E-08	50%	OSHA
Acetone	250.0	2.2047E-08	1.3260E-08	Yes	1.2993E-07	50%	NIOSH
Ammonia	25.00	1.5028E-06	9.0924E-07	Yes	8.9322E-06	50%	NIOSH
Benzene	1.0	2.5066E-08	1.4955E-08	Yes	1.4602E-07	50%	OSHA
2- Butanone (MEK)	200.0	1.4872E-06	8.9980E-07	Yes	8.8396E-06	50%	NIOSH
Carbon dioxide**	5000	4.9110E-05	5.1823E-05	Yes	2.4692E-05	0%	NIOSH
Chloroform	2.0	2.3336E-07	6.2118E-08	Yes	2.7342E-07	50%	NIOSH
Dioxane	100.0	1.9360E-08	3.5429E-09	Yes	0.0000E+00	50%	OSHA
Hydrogen Sulfide	10.0	1.2491E-10	2.2857E-11	Yes	0.0000E+00	50%	NIOSH
Methane	NA	6.2453E-11	6.2453E-11	Yes	0.0000E+00	0%	NA
Methanol	200.0	1.8780E-08	3.1046E-08	Yes	1.1163E-07	0%	NIOSH
Methylene Chloride	25.0	1.3510E-06	8.1712E-07	Yes	8.0262E-06	50%	OSHA
Propane	1000.0	1.2491E-09	1.2491E-09	Yes	0.0000E+00	0%	NIOSH
Tetrachloroethane	5.0	0.0000E+00	0.0000E+00	Yes	0.0000E+00	50%	OSHA
Tetrachloroethylene	100.0	1.5352E-06	9.2806E-07	Yes	9.1140E-06	50%	OSHA
Toluene	100.0	3.8372E-09	2.3215E-09	Yes	2.2806E-08	50%	NIOSH
1,1,1 - Trichloroethane	350.0	6.4536E-05	3.9017E-05	Yes	3.8318E-04	50%	NIOSH
Xylene	100.0	0.0000E+00	0.0000E+00	Yes	0.0000E+00	50%	OSHA



1 = ASHRAE IAQP & NIOSH C02 Limit is 5,000 PPM
2 = C02 Level at Ventilation Rate OA Flow Rate
3 = C02 Level at IAQ Procedure OA Flow Rate

**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove C02 is not a contaminant of concern when using air purification to control the other contaminants of concern, as found on submarines.

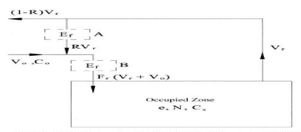
Building materials and furnishings assumed to have no VOCs and off-gassing is complete

All yellow shaded boxes require user input or review

Is IAQ acceptable at reduced outside air levels? **Yes**

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp	Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
Lobby	Public Assembly Spaces	Lobbies	3,614.0	100.0	5.0	0.06	500	217	0.8	896 OA required per VRP

Zone Height (feet)	23.0
Desired Outside Air (Vo) IAQP (CF	400
Supply Air (Vs) (CFM)	8,800
Return Air (Vr)	8400
Recirc. Flow Factor (R)	0.95
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Standing (desk work)**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant



Air Changes Per Hour	6.4	VRP OA CFM per person	9.0
Outside Air Per VRP	896 CFM	IAQ OA CFM per person	4.0
Outside Air Per IAQ	400 CFM		
Outside Air Savings	496 CFM	Winter Heating Savings	
OA Summer Drybulb	95.0	OA Winter Design DB (F)	10
OA Summer Wetbulb	76.0	Supply Air DB Setpoint (F)	85
Coil Leaving Air Drybulb (F)	55.0	MBH Saved Winter	40.4
Coil Leaving Air Wetbulb (F	55.0	KW Saved Winter	11.8
OA MBH Saved Summer*	36.2		
OA Tons Saved Summer*	3.0		

*OA = Outside Air
***OSHA, NIOSH & WHO most conservative values used
http://www.cdc.gov/niosh/npg/npgsyn-a.html

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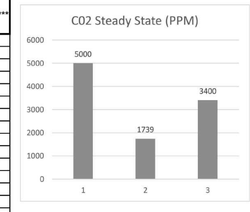
Acetaldehyde	100.0	3.9674E-09	6.0911E-10	Yes	1.9486E-08	50%	OSHA
Acetone	250.0	2.7561E-08	5.5715E-09	Yes	1.9622E-07	50%	NIOSH
Ammonia	25.00	1.8819E-06	3.8244E-07	Yes	1.3489E-05	50%	NIOSH
Benzene	1.0	3.1262E-08	6.2745E-09	Yes	2.2052E-07	50%	OSHA
2- Butanone (MEK)	200.0	1.8623E-06	3.7847E-07	Yes	1.3350E-05	50%	NIOSH
Carbon dioxide**	5000	5.0158E-05	5.6609E-05	Yes	3.7290E-05	0%	NIOSH
Chloroform	2.0	2.4496E-07	2.0205E-08	Yes	4.1292E-07	50%	NIOSH
Dioxane	100.0	1.9360E-08	8.7820E-10	Yes	0.0000E+00	50%	OSHA
Hydrogen Sulfide	10.0	1.2491E-10	5.6658E-12	Yes	0.0000E+00	50%	NIOSH
Methane	NA	6.2453E-11	6.2453E-11	Yes	0.0000E+00	0%	NA
Methanol	200.0	2.3517E-08	5.2681E-08	Yes	1.6858E-07	0%	NIOSH
Methylene Chloride	25.0	1.6915E-06	3.4367E-07	Yes	1.2121E-05	50%	OSHA
Propane	1000.0	1.2491E-09	1.2491E-09	Yes	0.0000E+00	0%	NIOSH
Tetrachloroethane	5.0	0.0000E+00	0.0000E+00	Yes	0.0000E+00	50%	OSHA
Tetrachloroethylene	100.0	1.9219E-06	3.9030E-07	Yes	1.3764E-05	50%	OSHA
Toluene	100.0	4.8049E-09	9.7644E-10	Yes	3.4441E-08	50%	NIOSH
1,1,1 - Trichloroethane	350.0	8.0795E-05	1.6409E-05	Yes	5.7868E-04	50%	NIOSH
Xylene	100.0	0.0000E+00	0.0000E+00	Yes	0.0000E+00	50%	OSHA



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Is IAQ acceptable at reduced outside air levels? **Yes**

ASHRAE 15 REFRIGERANT CONCENTRATION CALCULATION

ROOM #	NAME	SQUARE FOOTAGE (ft^2)	HEIGHT (ft.)	VOLUME (ft^3)	REFRIGERANT TYPE	MAX LB / MCF	CHARGE (LB)	REFRIGERANT CONCENTRATION (LB/MCF)
120	HALLWAY	926	8.5	7871	R-410A	26	168.4	21.39499428
125	CHORUS	755	9	6795	R-410A	26	168.4	24.78292862
126	CLASSROOM	755	9	6795	R-410A	26	168.4	24.78292862
127	CLASSROOM	755	9	6795	R-410A	26	168.4	24.78292862
130	CLASSROOM	760	9	6840	R-410A	26	168.4	24.61988304
131	CLASSROOM	760	9	6840	R-410A	26	168.4	24.61988304
211	TEACHERS LOUNGE	760	9	6840	R-410A	26	168.4	24.61988304
212	CLASSROOM	755	9	6795	R-410A	26	168.4	24.78292862
213	CLASSROOM	755	9	6795	R-410A	26	168.4	24.78292862
214	CLASSROOM	755	9	6795	R-410A	26	168.4	24.78292862
221	STORAGE	1996	9	17964	R-410A	26	168.4	9.374304164
COMBINED SPACES								
134, 135	HALLWAY & WARM KITCHEN	1970	9	17730	R-410A	26	168.4	9.498025945
123, 124, 134	RR, CLASSROOM, MECH & HALLWAY	1012	9	9108	R-410A	26	168.4	18.48924023
216, 217, 218, 219, 220	WORKROOM STORAGE, OFFICE, WORKSTATIONS, OFFICE, RECEPTION	1852	9	16668	R-410A	26	168.4	10.10319174

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

VENTILATION CALCULATIONS

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO BRIAN K. ROSE E-56979 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: M701
Checked: BKR	

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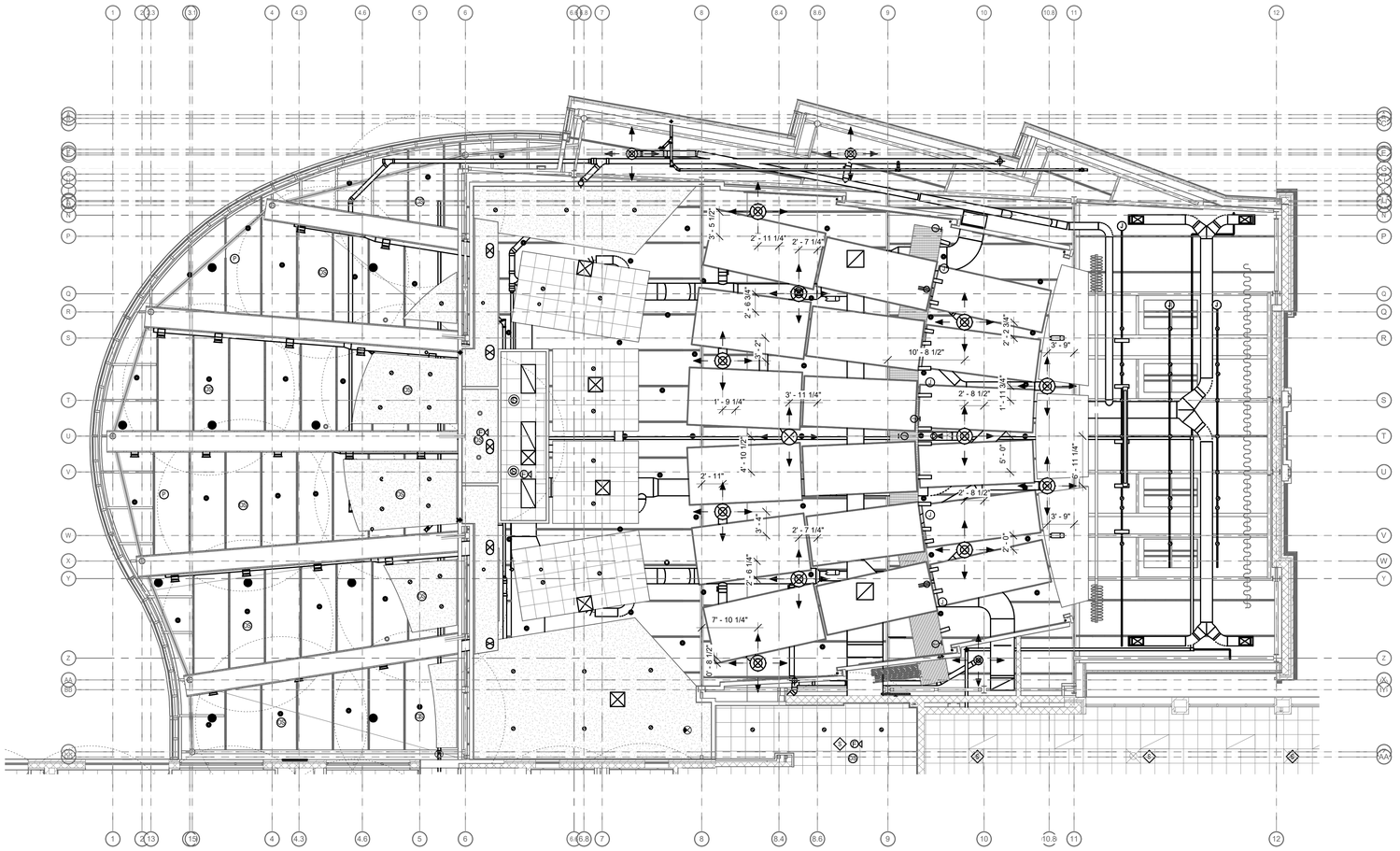
2/26/2021 11:27:19 AM



1 COORDINATED REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

COORDINATED REFLECTED CEILING PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO
BRIAN K. ROSE
E-56929
REGISTERED
PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: KAS	Drawing No.: ME101
Checked: BKR	

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ELECTRICAL GENERAL NOTES:

A. EACH CONTRACTOR, PROPOSER, SUPPLIER AND/OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO ENSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS TO AVOID CONFLICT WITH ANY OTHER BUILDINGS SYSTEMS. VERIFY SAME WITH SHOP DRAWINGS.

B. ADDITIONAL ELECTRICAL REQUIREMENTS MAY BE SHOWN ON PLANS FROM OTHER DISCIPLINES IN THIS SET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS AND SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF THE PROJECT REQUIREMENTS.

C. WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ALL LOCAL, STATE, AND NATIONAL CODES. INCLUDING BUT NOT LIMITED TO NFPA 70 (NEC), NFPA 72, INTERNATIONAL BUILDING CODES, ETC.

D. CONTRACTOR SHALL FOLLOW SEISMIC RESTRAINT AND DESIGN REQUIREMENTS CONTAINED IN LATEST ADOPTED STATE AND INTERNATIONAL BUILDING CODES, WITH ALL AMENDMENTS AS ADOPTED BY THE CURRENT LEGISLATION. REFER TO ELECTRICAL AND STRUCTURAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

E. ALL OFFSETS, TURNS, FITTINGS, TRIM, DETAIL, ETC. MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSER'S DISCRETION.

F. INSTALL NO PIPING, CONDUIT, DUCTWORK, ETC. IN A LOCATION OR IN A MANNER WHICH WILL ALLOW FREEZING OR THE COLLECTION OF CONDENSATION THEREON. IF IN DOUBT, CONTACT THE ENGINEER.

G. ADVISE THE ENGINEER OF ANY CONFLICTS, ERRORS, OMISSIONS, ETC. AT LEAST TEN DAYS PRIOR TO BID DATE, TO ALLOW CLARIFICATION BY WRITTEN ADDENDUM.

H. WHERE CONFLICTS ARE FOUND BETWEEN DRAWINGS, DETAILS, OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY. NOTIFY ARCHITECT OF DISCREPANCY IN WRITING.

I. DEVIATION FROM SPECIFICATIONS OR PLANS REQUIRES PRIOR WRITTEN APPROVAL FROM THE ENGINEERS AND MUST BE SUBMITTED IN WRITING NO LATER THAN TEN DAYS PRIOR TO THE BID DATE.

J. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, STATE, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, ETC.).

K. MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES INDICATED ABOVE FINISHED FLOOR ARE TO CENTER OF DEVICE UNO. MOUNTING HEIGHTS TO CEILING SUSPENDED DEVICES ARE TO BOTTOM OF DEVICE UNO.

L. INSTALL EQUIPMENT, MATERIALS, ETC. IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND DIRECTIONS. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEER PRIOR TO INSTALLATION FOR CLARIFICATION.

M. DO NOT RECESS PANELBOARD TUBS OR OTHER FLUSH-MOUNTED EQUIPMENT IN WALLS THAT HAVE A FIRE RATING. NO INSTALLATION SHALL DIMINISH OR VOID FIRE RESISTIVE RATINGS IN ANYWAY.

N. THE PURPOSE AND INTENT OF ALL OF THE DOCUMENTS PERTAINING TO THIS PROJECT IS TO PROVIDE A COMPLETE, FUNCTIONAL, SAFE, LIKE-NEW FACILITY. ANYTHING LESS SHALL BE UNACCEPTABLE.

O. ALL SYSTEMS, EQUIPMENT AND MATERIALS ARE TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. WORK NOT MEETING THIS CRITERION SHALL BE REMOVED AND REINSTALLED SATISFACTORILY. FINAL DETERMINATION OF THE ACCEPTABILITY OF THE QUALITY OF WORK RESIDES WITH THE ENGINEER

P. ALL WORK, MATERIALS, EQUIPMENT, ETC. SHALL BE FULLY GUARANTEED FOR ONE FULL CALENDAR YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION AS DOCUMENTED BY THE ENGINEER, UNLESS LONGER WARRANTY PERIODS FOR EQUIPMENT ARE SPECIFIED.

Q. UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL EQUIPMENT AND/OR MATERIALS WITHIN OCCUPIED SPACES OR EXPOSED TO VIEW ON THE BUILDING EXTERIOR SHALL BE PRIMED AND FINISHED SO AS TO COMPLEMENT ADJACENT SURFACE, UNLESS OTHERWISE NOTED. COORDINATE WORK AND COLORS WITH ARCHITECT.

R. WHERE PENETRATING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATION IN A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANYWAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING MANUFACTURER AND ARCHITECT.

S. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES, CASH CONTRIBUTIONS OR OTHER COSTS THAT THE UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (ELECTRIC, TELEPHONE, TELEVISION, DATA, ETC.).

T. COORDINATE WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND CASEWORK DETAILS FOR LOCATION OF ADDITIONAL RECEPTACLES, UTILITY OUTLETS, ELECTRICAL DEVICES, ETC.

U. CEILING-MOUNTED ELECTRICAL DEVICES SHALL BE CENTERED IN 2'X2' CEILING TILE AND INSTALLED CENTERED ON 2' DIMENSION OF 2'X4' TILE AND ON CENTERLINE OR A QUARTER POINT ON 4' DIMENSION.

V. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTORS' EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.

W. CHECK ALL THREE PHASE MOTORS WITH A PHASE ROTATION METER, PRIOR TO PLACING IN SERVICE.

X. PROVIDE DETAILED SHOP DRAWINGS TO ENGINEER PRIOR TO PURCHASING OR INSTALLING ANY EQUIPMENT

Y. DEVIATIONS IN SIZES, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEER OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.

Z. THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, OR WHOMEVER HOLDS THE PRIME CONTRACT(S) FOR THIS CONSTRUCTION IS RESPONSIBLE FOR THE COORDINATION, APPEARANCE, SCHEDULING AND TIMELINESS OF THE WORK OF ALL TRADES, CONTRACTORS, SUPPLIERS, INSTALLERS, ETC. POOR OR UNTIMELY WORK ON THE PART OF ANY SUBCONTRACTOR SHALL BE RESOLVED BY THE PARTY WHO ENGAGED THEM ON THIS PROJECT.

AA. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEER BEFORE AFFECTING INSTALLATION. REFER ALSO TO ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS, CEILING HEIGHTS AND OTHER DETAILS OF THESE DOCUMENTS, AS APPLICABLE.

BB. WHERE FIRE-RATED CEILING ASSEMBLIES ARE NOTED, PROVIDE UL-LISTED FIRE-RATED GYPSUM BOARD OR PRE-MANUFACTURED ENCLOSURES ABOVE LUMINAIRES, CEILING DEVICES, ETC. IN OR ON CEILING, AS REQUIRED TO MAINTAIN CEILING RATINGS.

CC. COORDINATE THE LOCATION OF DRAINS, ELECTRICAL OUTLETS, GAS OUTLETS, ETC. WITH ALL CASEWORK, KITCHEN EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).

DD. ALL ELECTRICAL COMPONENTS OR EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITER'S LABORATORIES OR OTHER APPROVED LISTING AGENCY. APPROVAL AND LABELING OF INDIVIDUAL COMPONENTS ON AN ASSEMBLY IS NOT ACCEPTABLE AS MEETING THIS REQUIREMENT, UNLESS WAIVED BY THE ENGINEER IN WRITING.

EE. ALL WIRING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF SPLICES. CONDUCTORS, WHETHER SINGLE OR MULTI-PAIR, SHALL BE INSTALLED CONTINUOUS INSOFAR AS POSSIBLE FROM TERMINAL POINT TO TERMINAL POINT.

FF. NO CONDUIT, SUPPORTS, ETC. SHALL BE RUN THROUGH ACCESS CLEARANCES OF EQUIPMENT BY OTHER TRADES (I.E. VAV BOXES). COORDINATE WITH ALL TRADES PRIOR TO CONSTRUCTION.

GG. ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE OR SUB-SERVICE FOR SAFETY PURPOSES. PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC. OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

HH. ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, DIRECTLY FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE, IN WRITING.

II. WHERE INTERRUPTING AN EXISTING UTILITY OR SERVICE DELIBERATELY OR ACCIDENTALLY, THE RESPONSIBLE CONTRACTOR SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME, PROVIDING PREMIUM TIME AS NEEDED.

JJ. REFER TO ARCHITECTURAL WALL ELEVATIONS (WHERE GIVEN) FOR HEIGHTS AND MOUNTING RELATIONSHIP OF OUTLETS AND EQUIPMENT. IF IN DOUBT, CONTACT ENGINEER FOR DIRECTION PRIOR TO ROUGH IN.

KK. FLUSH OR PEDESTAL TYPE FLOOR OUTLETS/BOXES, AS INDICATED ON PLAN, SHALL BE LOCATED BY DIMENSIONS PROVIDED BY THE ARCHITECT, UNLESS OTHERWISE SHOWN ON PLANS. IF IN DOUBT, CONTACT THE ENGINEER PRIOR TO ROUGHING-IN ANY WORK.

LL. AS APPLICABLE, REFER TO ARCHITECTURAL PHASING PLANS AND PHASING BOUNDARIES ON THESE DRAWINGS FOR SEQUENCING OF WORK, FULL EXTENT OF AREAS INVOLVED, EXTENT OF CEILING WORK, ETC. PROVIDE TEMPORARY CONNECTIONS FOR CIRCUITS AND WORK AS REQUIRED TO MAINTAIN SEQUENCE OF THE WORK FROM PHASE TO PHASE.

MM. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR HIS WORK. ALL CUTTING AND PATCHING SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S STANDARDS FOR SUCH WORK.

NN. ALL WORK SHALL BE CONCEALED UNLESS SPECIFICALLY INDICATED TO BE EXPOSED, OR REQUIRED TO BE EXPOSED. IF IN DOUBT, CONTACT THE ENGINEER FOR CLARIFICATIONS PRIOR TO INSTALLING ANY SUCH WORK.

OO. INTERRUPTION OF ANY EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER, GENERAL CONTRACTOR, UTILITY COMPANY AS NECESSARY, AND THE ARCHITECT, AT LEAST TWO WEEKS IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED TWO WEEKS IN ADVANCE, IN WRITING. IF UTILITY COMPANY REQUIRES A LONGER NOTIFICATION PERIOD, SO PROVIDE.

PP. WHERE BACKBOXES ARE LOCATED IN THE SAME VERTICAL CHANNEL/STUD SPACE ON OPPOSITE SIDES OF THE SAME WALL, PROVIDE SOUND-INSULATING PUTTY AROUND BOXES AS REQUIRED TO ELIMINATE SOUND TRANSMISSION FROM ROOM TO ROOM.

QQ. JUNCTION BOXES LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE LOCATED NO MORE THAN 36" ABOVE CEILING LEVEL. LABEL EACH BOX IN AREA OF WORK WITH A PERMANENT MARKER OR IN ACCORDANCE WITH SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

RR. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE REQUIREMENTS OF LOCAL UTILITY COMPANIES, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION. IF ANY CONFLICTS OR DISCREPANCIES OCCUR THE MOST STRINGENT SHALL APPLY.

SS. DO NOT SCALE FROM DRAWINGS, AS PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPPLIED TO THE CONTRACTOR.

TT. NOISY WORK, WORK OUTSIDE CONSTRUCTION BARRIERS, WORK IN OCCUPIED AREAS, ETC. SHALL BE PERFORMED AFTER HOURS OR ON WEEKENDS. COORDINATE EXACT SCHEDULING WITH FACILITY PRIOR TO CONSTRUCTION.

UU. ALL ITEMS HAVING KEYED LOCKS/OPERATORS SHALL HAVE CORED LOCKS/OPERATORS. ALL KEYING SHALL MATCH THE OWNER'S EXISTING KEY-WAYS. COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO CONSTRUCTION.

VV. REFER TO ARCHITECTURAL PLANS FOR PHASING REQUIREMENTS. WORK SHALL BE COMPLETED IN PHASES PER THE PHASING PLAN AND AS COORDINATED WITH OWNER AND GENERAL CONTRACTOR. PROVIDE ALL REQUIRED INCREMENTAL INSPECTIONS, CERTIFICATIONS, ETC. AND ALL TEMPORARY SERVICES AS REQUIRED BY OWNER TO ACCOMPLISH THE PHASING PLAN.

DESCRIPTION	MOUNTING HEIGHT (TO CENTER OF BOX)	DRAWING SYMBOL
LIGHTING		
REFER TO LUMINAIRE SCHEDULE FOR EXACT FIXTURE SPECIFICATIONS, MOUNTING HEIGHTS, ETC.		
SURFACE OR SUSPENDED CEILING FIXTURE (SLASH INDICATES RECESSED)		
POLE MOUNTED AREA LIGHT		
EMERGENCY BATTERY WALL-PACK		
WALL MOUNT FIXTURE		
FLOODLIGHT		
EXIT LIGHT (CEILING, END, WALL MOUNT)		
STRIP FIXTURE		
CROSS-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-CRITICAL BRANCH		
PARALLEL-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-LIFE SAFETY BRANCH		
LIGHTING CONTROL SWITCHES		
LIGHT SWITCH: LOW VOLTAGE	46"	$
LOW VOLTAGE DIMMER SWITCH	46"	$ D
LINE VOLTAGE SWITCH	46"	$ LV1
KEYED SWITCH	46"	$ K
OCCUPANCY OR VACANCY SENSOR SWITCH	46"	$ OS, $
NON-REVERSING MOTOR STARTER SNAP SWITCH	AS NOTED	$ M
MOMENTARY CONTACT SWITCH	46"	$ MC
NON-REVERSING MOTOR STARTER SNAP SWITCH	AS NOTED	$ M
MOMENTARY CONTACT SWITCH	46"	$ MC
TIMER SWITCH	46"	$ T
OCCUPANCY OR VACANCY SENSOR, CEILING MOUNT. REFER TO SEQUENCE OF OPERATIONS ON SHEET E600.	CLG	OS, VS
PHOTO-CELL AS NOTED	AS NOTED	PC
EMERGENCY AUTOMATIC TRANSFER SWITCH FOR LIGHTING CONTROLS (REFER TO DETAIL)	CLG	ER
POWER OUTLETS		
SIMPLEX RECEPTACLE	1'-6"	
DUPLEX RECEPTACLE-SAFETY TYPE, TAMPER-RESISTANT	1'-6"	S
DUPLEX RECEPTACLE	1'-6"	
SLASH THROUGH ANY DEVICE INDICATES MOUNTING ABOVE COUNTERTOP 4" ABOVE BACKSPLASH		
FILLED CENTER BAR INDICATES INTEGRAL GROUND FAULT PROTECTION (GFCI)	1'-6"	
DEAD FRONT GFCI DEVICE, LABEL AND INSTALL IN READILY ACCESSIBLE LOCATION		
FILLED OUTER BARS INDICATES INTEGRAL INTEGRAL USB OUTLETS IN ADDITION TO POWER RECEPTACLES	1'-6"	
GANG RECEPTACLE IN COMBINATION WITH SWITCH (PROVIDE DIVIDER IF LIGHTING CIRCUIT IS 277V)	46"	C/S
DUPLEX RECEPTACLE, CEILING MOUNTED	CLG	
QUADRUPLEX RECEPTACLE	1'-6"	
JUNCTION BOX, CEILING OR WALL		J, J
VOLTAGE/1PH RECEPTACLE, AS NOTED	AS NOTED	
VOLTAGE/3PH RECEPTACLE, AS NOTED	1'-6"	
SS INDICATES SURGE SUPPRESION TYPE OUTLET(S)		SS
GROUND FAULT PROTECTED DUPLEX WITH WEATHER-PROOF "WHILE IN USE" TYPE DIE-CAST METAL COVERPLATE WITH LOCKABLE ENCLOSURE AT OUTLET - SEE SPECIFICATIONS	2'-2"	WP
DUPLEX FOR ELECTRIC WATER COOLER: COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR TO CONCEAL OUTLET BEHIND COOLER, PROVIDE READILY ACCESSIBLE GFI DEVICE AT 18" ADJACENT TO WATER COOLER		
FIRE ALARM		
MAIN CONTROL PANEL CENTRAL PROCESSING UNIT (CPU)	6'-6" TO TOP	FACP
PULL STATION : DOUBLE ACTION	46" TO LEVER	F
KEYED, LOCKED PULL STATION : DOUBLE ACTION. STATION SHALL ONLY BE OPERABLE VIA KEY IN POSSESSION OF STAFF.	46" TO LEVER	F K
AUDIO/VISUAL NOTIFICATION APPLIANCE	WALL, CLG	F, F
AUDIO-ONLY NOTIFICATION APPLIANCE	WALL, CLG	A, A
VISUAL-ONLY NOTIFICATION APPLIANCE	WALL, CLG	V, V
BELL / LIGHT	80"	BL
BELL ONLY	80"	B
PHOTO-ELECTRIC SMOKE DETECTOR	CLG	SD
PHOTO-ELECTRIC SMOKE DETECTOR FOR PATIENT ROOM MONITORING (SEE RISER)	CLG	SD P
PROJECTED BEAM SMOKE DETECTOR; EMITTER (BE) AND RECEIVER (BR)		BE, BR
HEAT DETECTOR	CLG	HD
CARBON MONOXIDE DUCT DETECTOR	ABV CLG	CD
CARBON MONOXIDE ALARM: SINGLE STATION W/SOUNDER BASE	CLG	CM
CARBON MONOXIDE AUDIO/VISUAL NOTIFICATION APPLIANCE	WALL	F CM
DOOR HOLDER : WALL TYPE	WALL	DH
DOOR HOLDER : CLOSURE TYPE	ABV DOOR	DH C
DUCT SMOKE DETECTOR	ABV CLG	DD
CONNECTION TO SPRINKLER FLOW SWITCH WITH ADDRESSABLE MODULE		FS
CONNECTION TO SPRINKLER TAMPER SWITCH WITH ADDRESSABLE MODULE		TS
PRESSURE SWITCH		PS
REMOTE L.C.D. FIRE ALARM ANNUNCIATOR	54"	FAA
REMOTE FIRE ALARM ANNUNCIATOR W/ MICROPHONE	54"	FAAM
POST INDICATOR VALVE		PIV
POWER SUPPLY/CONTROL FOR AUDIO/VISUAL DEVICES	46"	NAC
TRANSPONDER CABINET	46"	TRAN
ZONE ADDRESSABLE MODULE		Z
H.V.A.C. SMOKE DAMPER CONNECTION		SM
FLUSH MOUNTED REMOTE ALARM INDICATING STATION/TEST SWITCH	7'-6"	RI
FIREMAN'S PHONE JACK	4'-6"	FP
FIREMAN'S KNOX BOX CONNECTION		KB
ADDRESSABLE RELAY MODULE		R
INDICATES VANDAL-PROOF POLYCARBONATE COVER, VANDAL PROOF COVERS SHALL BE UL LISTED FOR USE WITH THE SPECIFIC DEVICE THEY ARE PROTECTING		PC
INDICATES CHIME AUDIBLE NOTIFACTION		CH
DEVICE USED FOR ELEVATOR CONTROL		EL

DESCRIPTION	MOUNTING HEIGHT (TO CENTER OF BOX)	DRAWING SYMBOL
ABBREVIATIONS		
UNLESS OTHERWISE NOTED		UON
OWNER FURNISHED CONTRACTOR INSTALLED		OFCI
OWNER FURNISHED OWNER INSTALLED		OFOI
CONTRACTOR FURNISHED CONTRACTOR INSTALLED		CFCI
CONTRACTOR FURNISHED OWNER INSTALLED		CFOI
INDICATES EMERGENCY POWER		E, EM
SPECIAL OUTLETS		
FLOORBOX, POWER ONLY, AS SCHEDULED	FLOOR	
FLOORBOX, COMBINATION POWER AND LOW VOLTAGE, REFER TO FLOORBOX SCHEDULE	FLOOR	
FIRE RATED POKE THOUGH FLOOR BOX, COORDINATE EXACT COVER REQUIREMENTS WITH ARCHITECTURAL FINISHES, DEVICES AS SCHEDULED	FLOOR	
AUDIO/VISUAL SYSTEM OUTLET WITH DUPLEX RECEPTACLE, REFER TO ASSOCIATED DETAIL FOR ADDITIONAL INFORMATION	1'-6"	AV
COMBINATION POWER AND DATA OUTLET LOCATION, REFER TO ASSOCIATED DETAIL FOR ADDITIONAL INFORMATION	1'-6"	
COMBINATION POWER AND DATA OUTLET LOCATION, GFCI DUPLEX RECEPTACLE, REFER TO ASSOCIATED DETAIL FOR ADDITIONAL INFORMATION	1'-6"	
OVERHEAD PROJECTOR: PROVIDE DUPLEX RECEPTACLE, ONE DATA, HDMI, 3.5mm AUDIO, AND VGA OUTLET ON (3) PLATES	CLG	
SURFACE PLUG-MOLD		
SURFACE WIRE-MOLD		
POWER POLE AS NOTED		PP
MISCELLANEOUS		
CONDUIT CONCEALED IN WALLS OR IN CEILING SPACE: ARROW(S) INDICATE(S) HOME RUN & # OF CIRCUITS: HASHMARKS INDICATE # OF CONDUCTORS. DASHED LINE INDICATES CONDUIT BELOW FLOOR.		GROUND NEUTRAL PHASE
DISCONNECT SWITCH	5'-0"	
MAGNETIC STARTER	5'-0"	
MAGNETIC COMBINATION STARTER	5'-0"	
VARIABLE FREQUENCY DRIVE	5'-0"	
ENCLOSED FLUSH MTD. CIRCUIT BREAKER	5'-0"	
BOX ON ANY DEVICE INDICATES SURFACE MOUNTED BACKBOX/WIREMOLD		
CIRCLE ON ANY DEVICE INDICATES DEVICE FED FROM STUB UP CONDUIT		
WIREWAY WITH REMOVABLE COVER (SIZE AS NOTED)	AS SHOWN	
TRENCH DUCT (SIZE AS NOTED)	AS SHOWN	
PUSHBUTTON STATION	46"	
FLEXIBLE CONDUIT		
PANELBOARD, SURFACE OR FLUSH MOUNTED, HATCHING INDICATES EMERGENCY	6'-6" TO TOP	
TRANSFORMER	AS NOTED	
EQUIPMENT TAG, REFER TO EQUIPMENT SCHEDULE		EQUIP-1
TAGGED NOTE		
REVISION TAG		
MECHANICAL EQUIPMENT DESIGNATOR (SEE MECH. SCHEDULES)		
WIRE BASKET CABLE TRAY, SIZE AS NOTED	AS SHOWN	
LADDER CABLE TRAY, SIZE AS NOTED	AS SHOWN	
SOLID BOTTOM CABLE TRAY, SIZE AS NOTED	AS SHOWN	
LOW VOLTAGE CABLE PATH		
DOORBELL PUSHBUTTON STATION, PROVIDE COMPLETE WITH TRANSFORMER (MOUNT ABOVE CEILING IN CORRIDOR NEAR PUSH-BUTTON) AND ALL ACCESSORIES, POWER FROM NEAREST AVAILABLE 120V NORMAL POWER GENERAL RECEPTACLE CIRCUIT, NUTONE OR EQUAL	46"	DB
DOORBELL AUDIO/VISUAL STATION, PROVIDE PROVIDE CONNECTION TO PUSHBUTTON STATION IN AREA. COORDINATE EXACT AUDIO SOUND (CHIME, BUZZER, ETC.) DESIRED WITH OwNER/ARCHITECT, NUTONE OR EQUAL	7'-6"	DB
EQUIPMENT HARDWIRE CONNECTION (SEE DETAIL)		J
MOTOR CONNECTION, REFER TO EQUIPMENT CONNECTION SCHEDULE		
WIREGUARD - PROVIDE MANUFACTURER'S SPECIFIC GUARD FOR DEVICE NOTED		WG
WEATHERPROOF - NEMA-3R, WET LOCATION LISTED. PROVIDE COVERS, RATINGS, ETC, AS SUITABLE FOR OUTDOORS.		WP
EXPLOSION PROOF - PROVIDE WIRING METHODS, ENCLOSURES, RATINGS, ETC. AS SUITABLE FOR HAZARDOUS LOCATION.		XP
WIREGUARD - PROVIDE MANUFACTURER'S SPECIFIC GUARD FOR DEVICE NOTED		
PLUMBING FIXTURE SOLENOID VALVE/ELECTRIC EYE SENSOR CONNECTION. COORDINATE EXACT CONNECTION REQUIREMENTS WITH MANUFACTURER.		
PLUMBING FIXTURE ELECTRIC EYE TRANSFORMER CONNECTION. TRANSFORMER SHALL BE 120V-24V. MOUNT ABOVE SUSPENDED ACCESSIBLE CEILING IN J-BOX. PROVIDE ADDITIONAL TRANSFORMERS OF SAME TYPE AS/IF NEEDED		
PROVIDE CONNECTION TO HAND DRYER (SEE ARCHITECTURAL SPECIFICATIONS)	VERIFY WITH ARCHITECT	
SURGE PROTECTION DEVICE		SPD
GENERATOR ANNUNCIATOR PANEL - SEE SPECIFICATIONS	46"	GEN-A
THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL PROVIDE BACK-BOX CONDUIT STUB-UP, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS		T
CONDUIT UP		
CONDUIT DOWN		
GROUND BUS BAR ON INSULATED STANDOFFS	2'-0"	
BUS DUCT, AMPERAGES AS NOTED	AS SHOWN	

DESCRIPTION	MOUNTING HEIGHT (TO CENTER OF BOX)	DRAWING SYMBOL
SECURITY PANIC ALARM		
PANIC ALARM BUTTON	46"	PB
PANIC ALARM ANNUNCIATOR	46"	PA
AMBER STROBE	80"	AS
PANIC ALARM POWER SUPPLY CABINET	46"	SEC-P
SECURITY INTERCOM		
AUDIO/VIDEO INTERCOM STATION: MASTER WITH SELECTIVE DOOR CONTROLS, POWER SUPPLIES & DOOR RELAY CONTACTS AS REQUIRED FOR OPERATION OF ANY DOOR IN THE SYSTEM AND VIEWING OF ANY AUDIO/VIDEO INTERCOM REMOTE ON THE SYSTEM. AIPHONE#AX-MV W/DESK STAND - COLOR BY ARCHITECT.	18"	IM
SAME AS "IM" EXCEPT WALL MOUNTED	46"	IM W
AUDIO/VIDEO INTERCOM STATION: REMOTE WITH FLUSH-MTD S.S. ENCLOSURE. AIPHONE #AX-DVF.	46"	IR
SECURITY ACCESS CONTROL		
DOOR ALARM/POSITION SWITCH	DOOR FRAME	DA
MAGNETIC LOCK(S)	ABV DOOR	ML
DOOR POWER SUPPLY	ABV CLG	DS
DOOR DELAYED EGRESS/ELECTRIFIED PANIC MECHANISM	ABV DOOR	DP
ELECTRIC STRIKE	AT LATCH	ES
AUTOMATIC DOOR CONNECTION (MAY ALSO HAVE ELECTRIC STRIKE/MAG-LOCK/ELECTRIFIED PANIC CONNECTION - SEE ARCHITECTURAL HARDWARE SPECIFICATIONS)	CLG	AD
DOOR RELEASE PUSH-PLATE / INFRA-RED OPERATOR STATION. PROVIDE ANY ADDITIONAL ROUGH-IN FOR "EMERGENCY RELEASE" OPERATOR STATIONS AS REQUIRED.	46"	PP
DOOR RELEASE KEYSWITCH STATION	6'-0"	KS
DOOR RELEASE KEYPAD STATION	46"	KP
DOOR RELEASE CARD READER STATION. PROVIDE ANY ADDITIONAL ROUGH-IN FOR "EMERGENCY RELEASE" OPERATOR STATIONS AS REQUIRED.	46"	CR
SAME AS "CR" EXCEPT MULLION MOUNT	46"	CR M
MOTION SENSOR DOOR CONTROL	CEIL.	MS
PUSH-TO-EXIT BUTTON	46"	PE
ACCESS CONTROL POWER SUPPLIES/CONTROL PANEL	46"	SEC-A
SECURITY CCTV VIDEO SURVEILLANCE		
REMOTE DOOR RELEASE PUSH-BUTTON	8" ACT	RR
CCTV CAMERA: CEILING MOUNT DOME	CLG	CC
CCTV CAMERA: WALL MOUNT DOME	WALL	CC
INDICATES EXTERIOR CAMERA RATED FOR CONDITIONS, WET LOCATION LISTED, WITH AUXILLARY HEATER		WP
INDICATES CAMERA WITH PAN/TILT/ZOOM FUNCTION		PTZ
CCTV POWER SUPPLIES/CONTROL PANEL	46"	SEC-C
SECURITY INTRUSION DETECTION		
MOTION DETECTOR	CLG	MD
MOTION DETECTOR KEYPAD CONTROLLER	46"	MK
SECURITY SYSTEM HEAD END	46"	SEC-M
DATA / VOICE		
DATA OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA JACKS	1'-6"	#D
VOICE OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF VOICE JACKS	1'-6"	#V
COMBINATION OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA/VOICE JACKS	1'-6"	#D/#V
SLASH THROUGH ANY DEVICE INDICATES MOUNTING ABOVE COUNTERTOP 4" ABOVE BACKSPLASH		#D, #V, #D/#V
RF TRACKER ANTENNA	CLG	
MAIN DISTRIBUTION FRAME - REFERENCE DATA SYSTEM SCHEMATICS AND DETAILS FOR ADDITIONAL REQUIREMENTS		MDF
INTERMEDIATE DISTRIBUTION FRAME - REFERENCE DATA SYSTEM SCHEMATICS AND DETAILS FOR ADDITIONAL REQUIREMENTS		IDF
TELECOMMUNICATIONS SYSTEM BACKBOARD. PROVIDE 96"H x 3/4"D FIRE-RETARDENT PLYWOOD BACKBOARD WITH TWO (2) COATS OF NON-C0NDUCTIVE, FIRE-RETARDANT LIGHT GRAY PAINT, #3/0 TO GROUND BAR AT MAIN SERVICE SWITCHBOARD, 30-PT GROUND BAR AND A 6'-0", #3 AWG PIGTAIL AT BACKBOARD. INSTALL BOARD AT 2' AFF. (LENGTH OF BOARD AS INDICATED ON FLOOR PLAN)		TEL
WIRELESS ACCESS POINT OUTLET WITH PROVISIONS FOR (1 DATA OUTLET FOR ANTENNA. PROVIDE A COMPLETE DATA OUTLET WITH FACEPLATE ABOVE CEILING, MOUNTED AT AN ACCESSIBLE HEIGHT NO MORE THAN 24" ABOVE CEILING. AT EACH OUTLET, PROVIDE A 20' COIL OF CABLE AHEAD OF THE OUTLET FOR ADJUSTMENT OF FINAL OUTLET LOCATION. THE CONTRACTOR SHALL COORDINATE EXACT LOCATIONS WITH THE OWNER AND ADJUST OUTLET LOCATIONS AT SUBSTANTIAL COMPLETION TO ACCOMMODATE OWNER'S WAP LOCATIONS.		WAP
TELEVISION		
TELEVISION SPLITTERS/AMPLIFIERS/DISTRIBUTION	46"	TV-HE
TELEVISION SYSTEM OUTLET WITH DUPLEX RECEPTACLE, COORDINATE LOCATION WITH WALL BRACKET WHERE APPLICABLE	7'-0"	T
OVERHEAD PAGING		
PAGING SPEAKER: CEILING	CLG	S
PAGING SPEAKER W/ VOLUME CONTROL	CLG	SV
PAGING SPEAKER: WALL	8'-0"	S
RECESSED WALL MOUNTED PAGING SPEAKER DUKANE 5A606 SPEAKER. ATLAS 417-8WD	8'-0"	S R
WALL MOUNTED PAGING HORN	9'-0"	H
CALL INITIATION STATION	46"	C
WALL VOLUME CONTROL	46"	V
LCD WALL DISPLAY		LD
PAGING MICROPHONE	1'-6"	M
PAGING SYSTEM AMPLIFIER/TUNER CABINET	46"	PA
CLOCKS		
WALL CLOCK	84"	
CLOCK SYSTEM HEAD END	84"	CLOCK

SYSTEM RESPONSIBILITY MATRIX

SYSTEM	ITEM USED ON PROJECT		DEVICES - O F O I	DEVICES - O F C I	DEVICES - C F C I		CABLING/CONDUCTORS - O F O I	CABLING/CONDUCTORS - O F C I	CABLING/CONDUCTORS - C F C I	PATHWAYS - C F C I
DATA DEVICES EXISTING	●		●				●			
DATA DEVICES NEW	●				●				●	●
FIBER OPTIC CABLE BETWEEN BUILDINGS	●				●				●	●
PAGING SYSTEM / INTERCOM	●		●				●			
SECURITY: DOOR CONTROLS	●		●				●			
SECURITY: ACCESS CONTROL	●		●				●			
SECURITY: CAMERAS	●		●				●			
CLASS TIME TONE	●		●				●			
FIRE ALARM	●				●				●	●
TELEPHONE	●		●				●			
CLASSROOM MONITORS	●		●				●			
SOUND SYSTEM - PERFORMANCE	●				●				●	●
SOUND SYSTEM - LOBBY	●				●				●	●
THEATRE LIGHTING SYSTEM / DIM CONTROL	●				●				●	●

DEVICE COLOR MATRIX

DEVICE	WHITE	IVORY	RED	BLACK	BLUE	YELLOW	STAINLESS STEEL	CUSTOM
THERMOSTATS (COORDINATE WITH HVAC TYPICALLY NO COLOR OPTIONS)								●
RECEPTACLE (NORMAL)		●	—				—	
RECEPTACLE UNFINISHED AREAS (NORMAL)		●						
FIRE ALARM DEVICES		—	●	—	—	—	—	—
WALL SWITCHES		●					—	
VOICE / DATA DEVICES		●						
CEILING OCCUPANCY SENSORS	●		—		—	—	—	
CEILING SPEAKERS			—		—	—	—	
DEVICE COVERPLATES							●	
OTHER								

DEVICE COLOR GENERAL NOTES:

A. DEVICE PLATE TO MATCH DEVICE UNLESS NOTED OTHERWISE.

B. NOT ALL DEVICES MAYBE USED THAT ARE SHOWN.

C. IF DEVICE COLOR NOT DEFINED REFER TO SPECIFICATIONS.

LEGEND

● INDICATES SELECTED COLOR
— INDICATES COLOR NOT AVAILABLE
INDICATES COLOR NOT SELECTED

ALL ROUGH-IN BOXES (SWITCHES, RECEPTACLES, DATA, SYSTEMS, AV, T-STATS, LIGHTS, ETC.) MUST BE FIELD COORDINATED WITH INSTALLATION DRAWINGS AND ELEVATIONS PRIOR TO ROUGH-IN. IN ADDITION THESE LOCATIONS MUST BE APPROVED BY OWNER, ARCHITECT, ENGINEER, AND SPECIALITY VENDOR BEFORE FINAL SURFACES ARE INSTALLED.

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Sheet List - Electrical

SHEET #	SHEET NAME
E100	ELECTRICAL SITE PLAN
E201	ELECTRICAL DEMOLITION FLOOR PLANS
E301	ELECTRICAL LIGHTING FIRST FLOOR PLAN
E302	ELECTRICAL LIGHTING SECOND FLOOR PLAN
E401	ELECTRICAL POWER FIRST FLOOR PLAN
E402	ELECTRICAL POWER SECOND FLOOR PLAN
E403	ELECTIRCAL LIGHTING, POWER AND FIRE ALARM ROOF PLAN
E501	ELECTRICAL SYSTEMS FIRST FLOOR PLAN
E502	ELECTRICAL SYSTEM SECOND FLOOR PLAN
E503	ELECTRICAL SYSTEMS - FIRST FLOOR AV PLAN
E504	ELECTRICAL SYSTEMS - SECOND FLOOR AV PLAN
E505	ELECTRICAL SYSTEMS - AV DETAILS
E506	ELECTRICAL SYSTEMS - AV DETAILS
E507	ELECTRICAL SYSTEMS - AV DETAILS
E600	ELECTRICAL ELARGED PLANS AND LUMINAIRE SCHEDULE
E601	ELECTRICAL DETAILS
E602	ELECTRICAL DETAILS
E603	ELECTRICAL DETAILS
E604	ELECTRICAL DETAILS
E700	ELECTRICAL PANEL SCHEDULES
E800	ELECTRICAL DEMOLITION SINGLE-LINE
E801	ELECTRICAL SINGE-LINE
E000	ELECTRICAL LEGEND

No.	Revisions / Submissions	Date

LWC
INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL LEGEND

JEFFREY ALLEN MILLARD

Comm. No. 18620.00	Date 2021/03/01
Drawn RAR	Drawing No. E000
Checked JAM/JRH	

EXISTING BUILDING

EXISTING ELEMENTARY SCHOOL TRANSFORMER. SHOWN FOR REFERENCE ONLY

EXISTING (2) 4" CONDUIT FOR POWER

APPROXIMATE LOCATION OF THE EXISTING MDF ROOM

EXISTING PK-6 BUILDING

EXISTING PULLBOX FOR DATA

UTILIZE EXISTING DP&L LBC CABINET INSTALLED IN PK-6 ADDITION.

EXISTING (2) 4" CONDUIT FOR POWER

EXISTING (2) 4" CONDUIT FROM ELEMENTARY SCHOOL

EXISTING PULLBOX FOR DATA

EXISTING 3'-10" SQUARE X 2'-4" DEEP PULLBOX

NEW (2) 4" CONDUIT FOR DATA. PROVIDE NEW CONDUIT FROM EXISTING PULLBOX UNDERGROUND TO MECHANICAL ROOM. (3) 24 STRANDS OF RFIBER. (1) PHONE, (1) P.A. AND (1) CAMERA

NEW PRIMARY CONDUITS 30" MIN. BELOW GRADE

EXISTING BUILDING

NEW AUDITORIUM ADDITION

NEW MDF AND EXISTING CAMERA LOCATION IT ROOM 109

EXISTING MDF TO BE RELOCATED BY OWNER

PROVIDE J-HOOK PATHWAY FOR FIBER AND DATA

NEW MECHANICAL ROOM 134

NEW UTILITY TRANSFORMER UT1.

FUTURE GYMNASIUM

EXISTING SCHOOL SIGN

1B -64

REFED EXISTING DIGITAL SIGN. FIELD VERIFY POWER AND DATA REQUIREMENTS PRIOR TO DISCONNECTING.

1B -68 VIA TIME CLOCK

OUTLINE OF NEW MAIN ELECTRICAL ROOM 112

NEW SECONDARY UNDER GROUND

CONCRETE BOLLARDS

CT CABINET AND UTILITY METER

UTILITY METER

1B -66 VIA TIME CLOCK

AREA OF NEW WORK

1 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

GENERAL NOTES (SITE):

A. DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS AND COORDINATE WITH CIVIL DRAWINGS AND SURVEYS.
B. REFER ALSO TO ALL OTHER PLANS AND THE SPECIFICATION, BUT ESPECIALLY TO: THE SITE SURVEY, THE ARCHITECTURAL SITE PLAN, THE SITE GRADING PLAN, THE PLANTING PLAN (WHERE AVAILABLE), FOUNDATION PLAN(S), APPROPRIATE MECHANICAL & ELECTRICAL FLOOR PLANS FOR SERVICE CONTINUATIONS, THE SITE UTILITY PLAN - MECHANICAL & ELECTRICAL. WHERE THERE ARE CONFLICTS AMONG THESE PLANS AND/OR RELATED SPECIFICATIONS, ADVISE THESE ENGINEERS AT LEAST TEN DAYS PRIOR TO SUBMISSION OF BIDS.
C. ALL FEES AND ANY OTHER COSTS TO UTILITY COMPANIES, MUNICIPALITIES, INSPECTORS, REVIEWING AGENCIES, ETC. ARE TO BE INCLUDED AS A PART OF THIS CONTRACT.
D. FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.
E. WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICE IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.
F. LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS. EXISTING UTILITIES LOCATIONS MAY VARY. CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS.
G. PROVIDE LONG RADIUS ELBOWS FOR UNDERGROUND CONDUIT BENDS. WHERE SERVING A UTILITY OWNED TRANSFORMER, THE UTILITY STANDARDS SHALL TAKE PRECEDENCE.
H. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE ENGINEER. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID PROPOSAL INDICATES THAT THE CONTRACTOR IS FULLY AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.
I. PROVIDE GALVANIZED RIGID CONDUIT FOR EXTERIOR UNDERGROUND TRANSITIONS TO ABOVE GRADE; EXTEND CONDUIT A MINIMUM OF 6" ABOVE GRADE.
J. CONTRACTOR SHALL PERFORM A SMOKE TEST ON ALL CONDUITS INSTALLED ON SITE AND SHALL TAKE ALL NECESSARY CORRECTIVE ACTION IF NOT FOUND IN COMPLIANCE WITH FACILITY STANDARDS.
K. CONTRACTOR SHALL CONTACT ENGINEER FOR INSPECTION OF TRENCHES PRIOR TO INSTALLATION OF CONDUITS OR RACEWAYS. PROVIDE PHOTOS UPON REQUEST.
L. CONTRACTOR SHALL CUT AND PATCH ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR WORK. CONTRACTOR SHALL REPAIR ALL LANDSCAPING THAT IS DAMAGED FOR WORK. FINISH GRADE, SEED AND STRAW ALL DISTURBED GREEN SPACES. ALL PATCH AND REPAIR WORK SHALL BE IN ACCORDANCE WITH BOTH CIVIL AND LANDSCAPE DRAWINGS AND SPECIFICATIONS.

TAGGED NOTES

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L9	EXISTING LIGHTING STANDARD INSTALLED IN THE ELEMENTARY CONSTRUCTION. SHOWN FOR REFERENCE ONLY.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SITE PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO JEFFREY ALLEN MILLARD E-57512 REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00	Date 2021/03/01
Drawn RAR	Drawing No. E100
Checked JAM/JRH	

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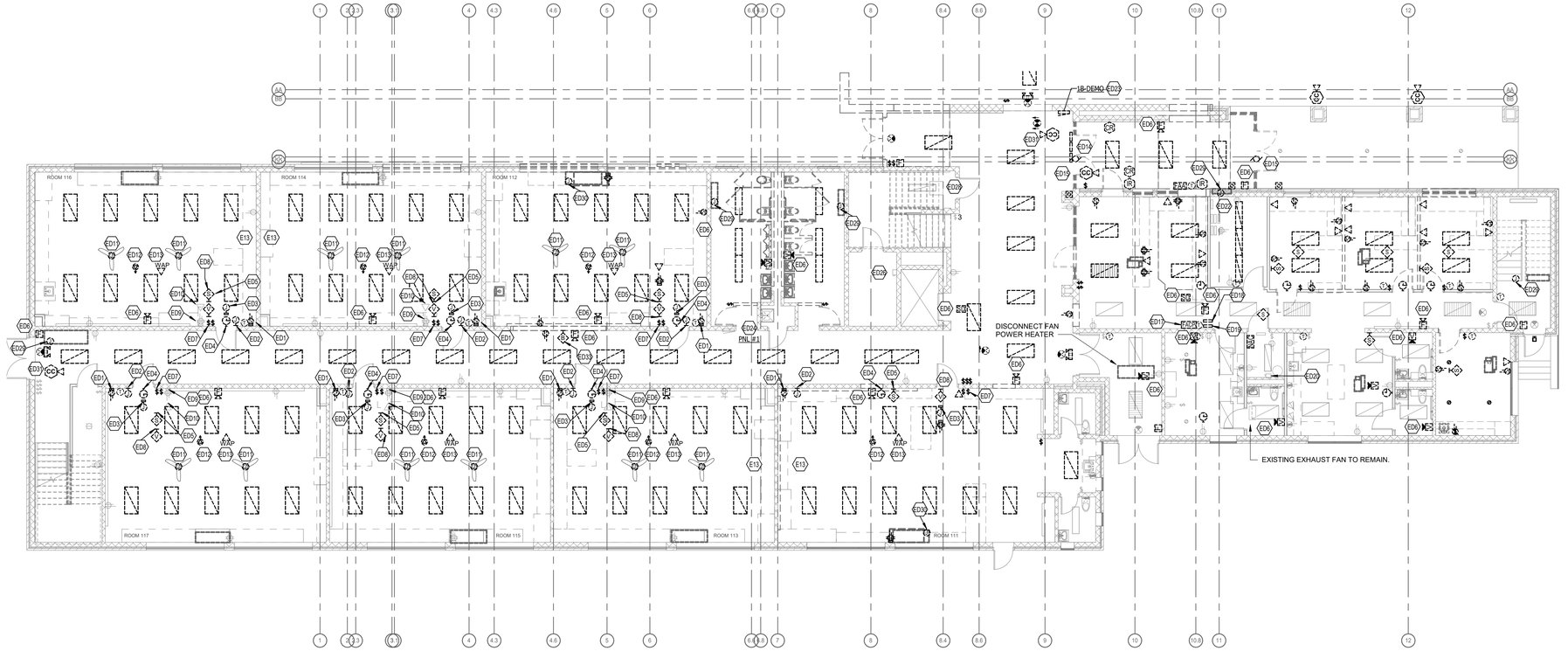
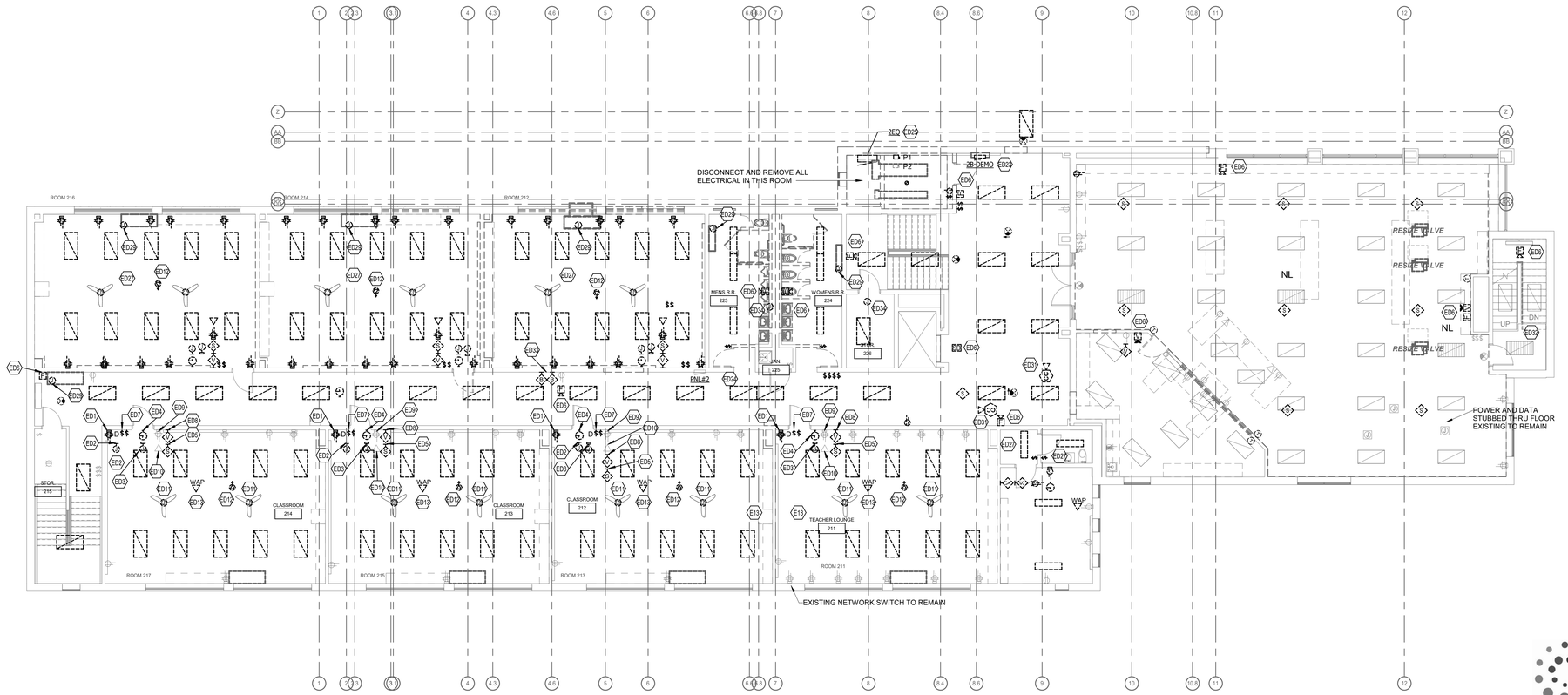


FIRST FLOOR ELECTRICAL DEMOLITION PLAN

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



SECOND FLOOR ELECTRICAL DEMOLITION PLAN

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

ELECTRICAL DEMOLITION NOTES:

A. DOTTED LINES INDICATE ITEMS FOR REMOVAL (UON) AND THIN SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
B. THE CONTRACTOR SHALL MAINTAIN THE CONTINUITY OF EXISTING CIRCUITS THAT CONTAIN DEVICES OR EQUIPMENT THAT ARE TO REMAIN. WHEN DEMOLITION OF AN ELECTRICAL DEVICE (OR CIRCUIT) IS INDICATED ON THE DRAWINGS: THE CONTRACTOR SHALL ENSURE THAT OTHER DEVICES OR EQUIPMENT "UPSTREAM" OR "DOWNSTREAM" ON THE CIRCUITS SHALL REMAIN IN "PRE- DEMOLITION" WORKING ORDER. "LEFT-OVER" CIRCUIT BREAKERS SHALL REMAIN, BE SWITCHED TO OFF POSITION, AND BE LABELED AS SPARES IN THEIR PANELS. PROVIDE NEW TYPEWRITTEN DIRECTORIES FOR ALL PANELS AFFECTED.
C. LOCATIONS OF DEVICES, CONNECTIONS, ETC., INDICATED ON THIS DRAWING WERE TAKEN FROM VARIOUS SOURCES. THEY ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO VARIATION FROM EXISTING CONDITIONS. CERTAIN EXISTING ELEMENTS MAY NOT BE INDICATED AT ALL. THE CONTRACTOR PROPOSING TO DO ANY PART OF THE WORK INDICATED HEREON SHALL VISIT THIS SITE AND DETERMINE TO HIS SATISFACTION THAT THEY MAY COMPLETE ALL WORK REQUIRED FOR THE BID WHICH HE PROPOSES.
D. REMOVE ALL ASSOCIATED BACKBOXES, CONDUIT AND CONDUCTORS FOR DEVICES / FIXTURES / ETC. BEING REMOVED (BACK TO SOURCE), WHETHER INDICATED OR NOT (UON). CONTRACTOR SHALL PATCH AND REPAIR ANY EXISTING WALLS, FLOORS OR CEILINGS WHERE DEVICES ARE SHOWN TO BE REMOVED (PATCH AND REPAIR TO RECEIVE NEW FINISHES - SEE ARCHITECTURAL PLANS).
E. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH OWNER. TURN OVER ITEMS REMOVED TO OWNER AT THEIR OPTION.
F. COORDINATE WITH OTHER TRADES FOR THE REMOVAL AND/OR RELOCATION OF ELECTRICAL DEVICES AND CONNECTIONS ASSOCIATED WITH THEIR EQUIPMENT
G. PROVIDE TEMPORARY EMERGENCY EXIT LIGHTS AT CONSTRUCTION BARRIERS AS REQUIRED.
H. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WALLS / CEILINGS AS REQUIRED WHERE DEVICES ARE BEING REMOVED OR INSTALLED.
I. UNUSED/ABANDONED CONDUCTORS DISCOVERED ABOVE ACCESSIBLE CEILINGS SHALL BE REMOVED IN ACCORDANCE WITH NEC REQUIREMENTS.
J. EXISTING ELECTRICAL SYSTEMS IN CONFLICT WITH CONSTRUCTION SHALL BE RELOCATED TO PERMIT INSTALLATION OF DEVICES AND EQUIPMENT SHOWN ON PLANS.
K. CONTRACTOR SHALL SEAL ALL EXISTING AND NEW PENETRATIONS OF BUILDING ENVELOPE (EXTERIOR WALLS, ROOF, ETC.) WATER-TIGHT AND AS APPROVED BY ARCHITECT AND ENGINEER. ROOFING SHALL BE RESTORED BY A LICENSED ROOFING CONTRACTOR BASED ON WRITTEN INSTRUCTIONS AND DETAILS FROM ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ROOF WARRANTY. REFER TO ARCHITECTURAL AND ENGINEERING PLANS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.
L. ALL EXISTING PANELS AFFECTED BY THIS CONTRACTOR'S WORK SHALL BE PROVIDED WITH NEW TYPE-WRITTEN PANEL DIRECTORIES AND INSERT SLEEVES. PANEL DIRECTORIES SHALL NOT USE ROOM NAMES OR NUMBERS FROM THESE DRAWINGS. DIRECTORIES SHALL BE DETAILED AND COORDINATED WITH OWNER'S SUITE NUMBERS, FINAL ROOM NUMBERS, IT RACK NAMES, WORKSTATION DESIGNATIONS, ETC. UNUSED BREAKERS SHALL BE IN OFF POSITION.

TAGGED NOTES (##)

E13.	ALTERNATE BID IN THIS AREA TO REMOVE WALL BETWEEN PAIRS OF CLASSROOMS TO CREATE A SINGLE ENLARGED SPACE. THE EXISTING POWER, DATA, SURFACE RACEWAY WILL NEED TO BE REMOVED AND REWORKED. REFER TO ARCHITECTURAL DRAWING SHEET AL101 ALTERNATE FOR ADDITIONAL SCOPE.
ED1	DEMOLISH SURFACE MOUNTED DUPLEX RECEPTACLE SERVING TV. RECEPTACLE IS MOUNTED 2" FROM CEILING TILE WITH 3/4" CONDUIT GOING THRU TILE. RETAIN EXISTING BRANCH CIRCUIT FOR FUTURE VIEWSONIC. LOCATION TO BE DETERMINED BY OWNER.
ED2	DEMOLISH CABLE JUNCTION BOX AND WIRE FOR TV. RECESSED BACKBOX MOUNTED HORIZONTALLY RIGHT BELOW THE CEILING TILE. REMOVE CABLE BACK TO SOURCE. PROVIDE STAINLESS COVER PLATE OVER UNUSED JUNCTION BOX.
ED3	DEMOLISH EMPTY SURFACE MOUNTED JUNCTION BOX WITH 3/4" GOING ABOVE CEILING. JUNCTION BOX IS MOUNTED ROUGHLY AT 10" BELOW CEILING TILE.
ED4	DEMOLISH DIGITAL CLOCK WALL MOUNTED 10" BELOW CEILING TILE. REMOVE CONDUIT, WIRE, CLOCK, ETC. BACK TO SOURCE.
ED5	DEMOLISH SURFACE MOUNTED PAGING SPEAKER WITH SURFACE CONDUIT TO CALL BUTTON BELOW. SPEAKER IS MOUNTED 14" BELOW CEILING TILE. REMOVE CONDUIT, WIRE, SURFACE RACEWAY, ETC. BACK TO SOURCE.
ED6	DEMOLISH SURFACE MOUNTED FIRE DEVICE BACK TO SOURCE. REMOVE ALL CONDUIT, WIRE, ETC. BACK TO SOURCE.
ED7	DEMOLISH LIGHT SWITCH AND FAN CONTROL SWITCH RECESSED IN 2-GANG BACKBOX. LOCATED ROUGHLY 48" ABOVE FINISH FLOOR. REMOVE SWITCHES AND RETAIN PATHWAY FOR NEW LIGHTING CONTROL SWITCH.
ED8	DEMOLISH PAGING SPEAKER CALL BUTTON. LOCATED ROUGHLY 48" ABOVE FINISH FLOOR. REMOVE CONDUIT, SURFACE RACEWAY, WIRE, ETC. BACK TO SOURCE.
ED9	EXISTING DOUBLE DUPLEX RECEPTACLE. RECEPTACLE IS MOUNTED ON 2-GANG SURFACE MOUNT BOX WITH 3/4" CONDUIT. LOCATED ROUGHLY 18" ABOVE FINISH FLOOR.
ED10	EXISTING 2 DATA DROP. DATA PLATE IS MOUNTED ON 1-GANG SURFACE MOUNT BOX WITH 3/4" CONDUIT. LOCATED ROUGHLY 18" ABOVE FINISH FLOOR.
ED11	DEMOLISH CEILING FAN. REMOVE CONDUIT, WIRE, CONTROL SWITCH, ETC. BACK TO SOURCE.
ED12	EXISTING CEILING MOUNTED VIDEO PROJECTOR AND WALL MOUNTED PROJECTION SCREEN TO BE REMOVED AND TURNED OVER TO OWNER. REMOVE BRANCH CIRCUIT AND DATA CABLING BACK TO SOURCE.
ED13	EXISTING CEILING MOUNTED WIRELESS ACCESS POINT (WAP) TO REMOVED AND TURNED OVER TO THE OWNER. EXISTING WIRING TO REMAIN.
ED14	EXISTING SECURITY CONTROL CABINETS. LOCATED TIGHT TO CEILING GRID.
ED15	EXISITING AUTO DOOR OPERATOR.
ED17	EXISTING FIRE ALARM ANNUNCIATOR BE REMOVED AND REPLACED WITH NEW.
ED18	DEMOLISH BOGEN PAGING SYSTEMS.
ED19	DEMOLISH 1462 PROGRAM TIME CONTROLLER.
ED20	EXISTING DISCONNECT SERVICE WATER HEATER TO REMAIN. 240,1-PHASE, 2000 WATTS.
ED22	EXISTING SECURITY CAMERA EQUIPMENT LOCATED IN THIS ROOM IS TO REMAIN.
ED23	DEMOLISH SURFACE MOUNTED 240 VOLT PANEL. RETAIN ALL EXISTING 120 VOLT BRANCH CIRCUIT WIRING. A NEW 120/208 VOLT PANEL WILL BE RECESSED IN NEW WALL AND EXISTING BRANCH CIRCUIT WILL BE REWORKED INTO THE PANEL. REFER TO NEW DRAWINGS FOR ADDITIONAL INFORMATION.
ED24	EXISTING RECESSED 120/240 VOLT PANEL TO REMAIN. REFEED FROM NEW DISTRIBUTION AS SHOWN ON SINGLE-LINE.
ED25	DISCONNECT AND REMOVE THE DISTRIBUTION PANEL COMPLETE. REFEED ALL 240 VOLT LOAD FROM NEW DISTRIBUTION PANEL.
ED26	EXISTING 240, 3 PHASE ELEVATOR EQUIPMENT TO BE REFEED.
ED27	DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN THIS ROOM, UNLESS NOTED OTHERWISE.
ED28	EXISTING DATA RACK SERVING THIS PART OF THE BUILDING TO REMAIN. REMOVE ALL CABLING ASSOCIATED WITH DEMO OF EXISTING BUILDING. EXISTING CABLING AND EQUIPMENT TO REMAIN.
ED29	DISCONNECT ELECTRICAL CABINET HEATER AND REMOVE CONDUIT AND WIRING BACK TO SOURCE, UNLESS EXISTING CONDUIT CAN BE REUSED FOR NEW UNIT HEATER.
ED30	DISCONNECT ELECTRICAL UNIT VENTILATOR AND REMOVE CONDUIT AND WIRING BACK TO SOURCE, UNLESS EXISTING CONDUIT CAN BE REUSED FOR NEW UNIT HEATER.
ED31	DISCONNECT AND REMOVE CAMERA TURN OVER TO OWNER. COORDINATE NEW CAMERA LOCATION WITH OWNERS VENDOR.
ED32	DISCONNECT AND REMOVE ALL EQUIPMENT ASSOCIATED WITH AREA OF RESCUE. THIS EQUIPMENT DOESN'T CURRENTLY WORK AND IS NO LONGER NEEDED.
ED33	DISCONNECT AND REMOVE WALL MOUNTED BELL SYSTEM.
ED34	DISCONNECT ROOF MOUNTED EXHAUST FAN AND REMOVE CONDUIT AND WIRING BACK TO SOURCE.

No.	Revisions / Submissions	Date

LWC INCORPORATED
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WAYNE LOCAL SCHOOLS

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ELECTRICAL DEMOLITION FLOOR PLANS

CMTA
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STATE OF OHIO JEFFREY ALLEN MILLARD E-49912 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E201
Checked: JAM/JRH	

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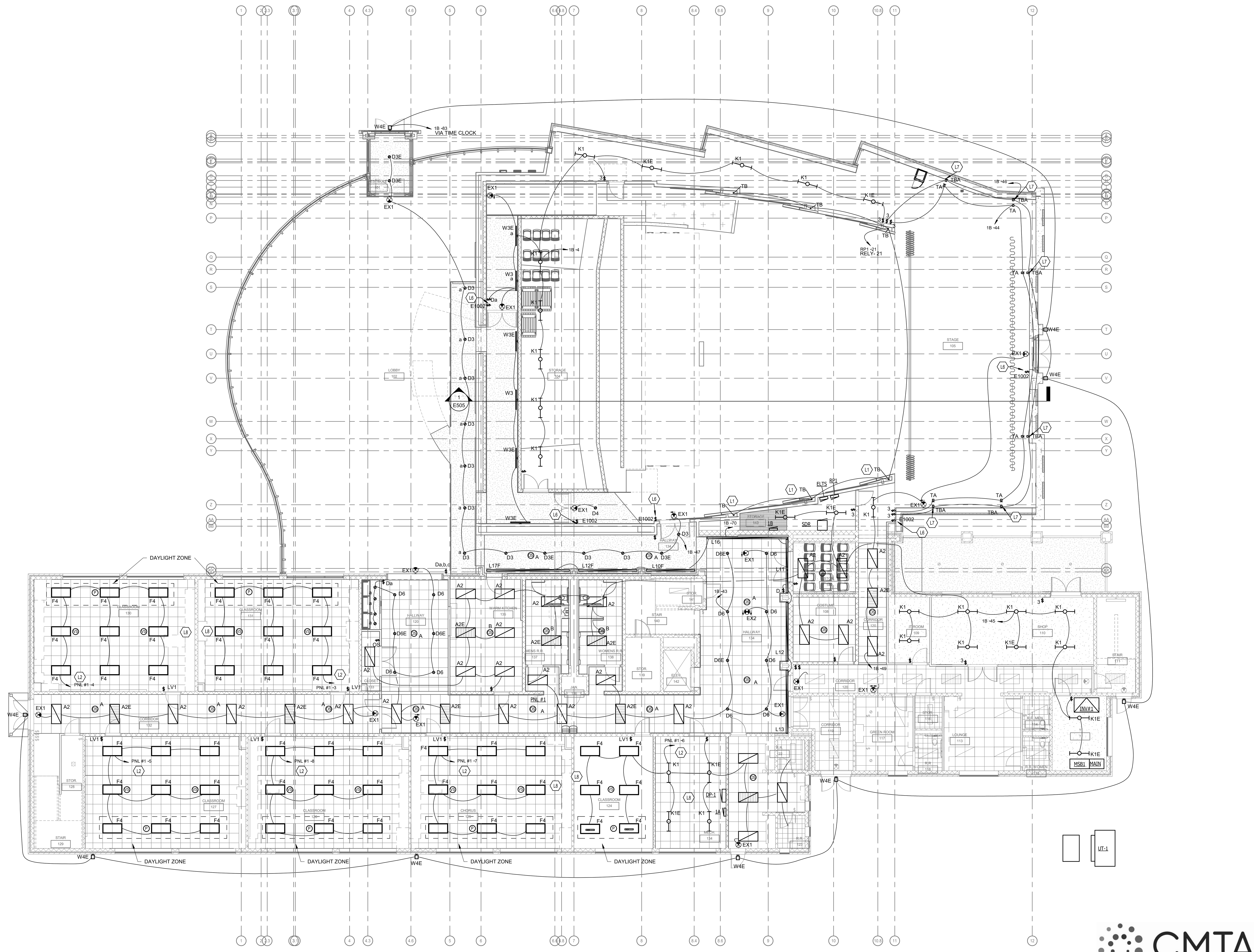

1 FIRST FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES (LIGHTING):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
E. LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
F. WHERE EXIT SIGNS OR EMERGENCY BATTERY PACKS ARE PROVIDED, THEY SHALL BE CONNECTED TO AN UNSWITCHED LINE.
G. LUMINAIRES INDICATED WITH MULTI-LEVEL SWITCHING SHALL HAVE SIMILAR LAMPS CONTROLLED TOGETHER, I.E. INBOARD AND OUTBOARD LAMPS OR RIGHT AND LEFT HAND LAMPS.
H. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
I. RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION.
J. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS, EMERGENCY INVERTER BATTERY PACKS, AND NIGHT LIGHTS AS REQUIRED.
K. OCCUPANCY SENSOR LAYOUT IS DESIGNED WITH THE INTENT TO HAVE 100% COVERAGE OF ALL SPACES CONTROLLED BY SENSORS. PROVIDE SENSORS WITHIN CONTROLLED SPACES TO MEET THE 100% COVERAGE REQUIREMENT. THIS MAY RESULT IN SUPPLEMENTAL SENSORS THAN INDICATED ON PLANS OR VARYING SENSOR TYPES TO ENSURE FULL COVERAGE. PROVIDE ALL POWER PACKS AND LOW VOLTAGE WIRING AS REQUIRED TO INTERCONNECT MULTIPLE SENSORS SERVING THE SAME SPACE.

TAGGED NOTES

L1	PROVIDE WALL MOUNTED LINEAR FIXTURE. COORDINATE FIXTURE OVERALL LENGTH, MOUNTING AND DRIVER LOCATION IN FIELD WITH DESIGN TEAM PRIOR TO INSTALLATION.
L2	CONNECT TO EXISTING LIGHTING CIRCUIT MADE AVAILABLE BY DEMOLITION.
L6	PROVIDE 1-GANG BACKBOX FOR TWO-BUTTON LIGHTING CONTROL STATION. PROVIDE CONDUIT PATHWAY AND WIRING. REFER TO THEATRICAL LIGHTING CONTROLS DIAGRAM FOR ADDITIONAL REQUIREMENTS.
L7	BLUE BULLET LIGHT (RUNNING LIGHT) SURFACE MOUNTED AT 7'-0" ABOVE FINISHED FLOOR TO BOTTOM OF FIXTURE.
L8	ALTERNATE BID IN THIS AREA TO REMOVE WALL BETWEEN PAIRS OF CLASSROOMS TO CREATE A SINGLE ENLARGED SPACE. THE LIGHTING AND CONTROLS POINTS IN THIS REMAIN THE SAME, BUT WILL BE REARRANGED DUE TO CEILING CHANGES. INCLUDE EXITS LIGHTS (TYPE EX1) OVER DOORS IF MORE THAN EXIT DOOR REMAINS IN THE ROOM. REFER TO ARCHITECTURAL DRAWING SHEET AL101 ALTERNATE FOR ADDITIONAL SCOPE.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

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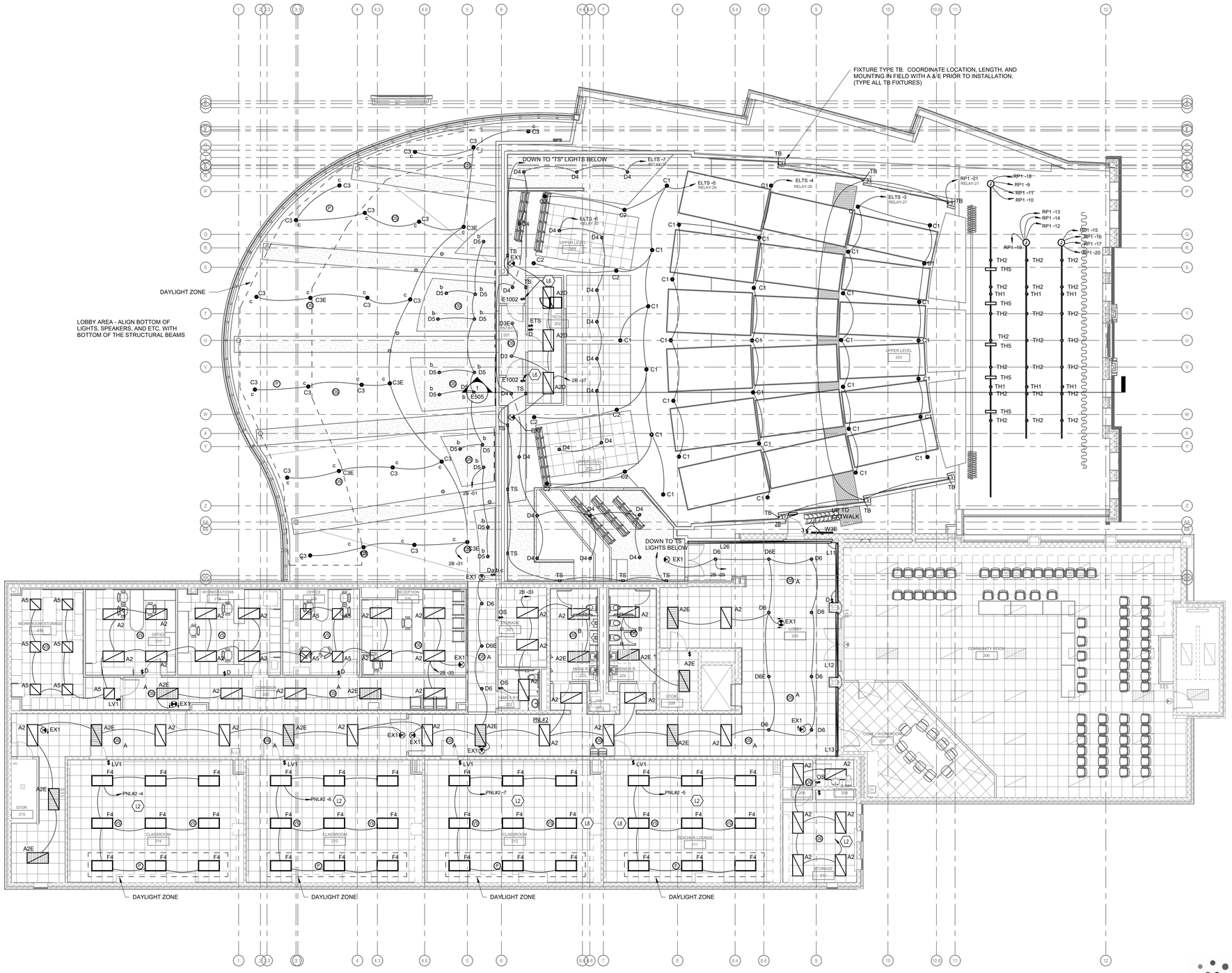
ELECTRICAL LIGHTING FIRST FLOOR PLAN

STATE OF OHIO JEFFREY ALLEN MILLARD E-67612 REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00
Date 2021/03/01
Drawn RAR
Checked JAM/JRH
Drawing No. E301



1 SECOND FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES (LIGHTING):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
E. LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
F. WHERE EXIT SIGNS OR EMERGENCY BATTERY PACKS ARE PROVIDED, THEY SHALL BE CONNECTED TO AN UNSWITCHED LINE.
G. LUMINAIRES INDICATED WITH MULTI-LEVEL SWITCHING SHALL HAVE SIMILAR LAMPS CONTROLLED TOGETHER, I.E. INBOARD AND OUTBOARD LAMPS OR RIGHT AND LEFT HAND LAMPS.
H. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
I. RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION.
J. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS, EMERGENCY INVERTER BATTERY PACKS, AND NIGHT LIGHTS AS REQUIRED.
K. OCCUPANCY SENSOR LAYOUT IS DESIGNED WITH THE INTENT TO HAVE 100% COVERAGE OF ALL SPACES CONTROLLED BY SENSORS. PROVIDE SENSORS WITHIN CONTROLLED SPACES TO MEET THE 100% COVERAGE REQUIREMENT. THIS MAY RESULT IN SUPPLEMENTAL SENSORS THAN INDICATED ON PLANS OR VARYING SENSOR TYPES TO ENSURE FULL COVERAGE. PROVIDE ALL POWER PACKS AND LOW VOLTAGE WIRING AS REQUIRED TO INTERCONNECT MULTIPLE SENSORS SERVING THE SAME SPACE.

TAGGED NOTES

(##)	
L2	CONNECT TO EXISTING LIGHTING CIRCUIT MADE AVAILABLE BY DEMOLITION.
L6	PROVIDE 1-GANG BACKBOX FOR TWO-BUTTON LIGHTING CONTROL STATION. PROVIDE CONDUIT PATHWAY AND WIRING. REFER TO THEATRICAL LIGHTING CONTROLS DIAGRAM FOR ADDITIONAL REQUIREMENTS.
L8	ALTERNATE BID IN THIS AREA TO REMOVE WALL BETWEEN PAIRS OF CLASSROOMS TO CREATE A SINGLE ENLARGED SPACE. THE LIGHTING AND CONTROLS POINTS IN THIS REMAIN THE SAME, BUT WILL BE REARRANGED DUE TO CEILING CHANGES. INCLUDE EXITS LIGHTS (TYPE EX1) OVER DOORS IF MORE THAN EXIT DOOR REMAINS IN THE ROOM. REFER TO ARCHITECTURAL DRAWING SHEET AL101 ALTERNATE FOR ADDITIONAL SCOPE.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

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ELECTRICAL LIGHTING SECOND FLOOR PLAN

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STATE OF OHIO JEFFREY ALLEN MILLARD E-67912 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E302
Checked: JAM/JRH	

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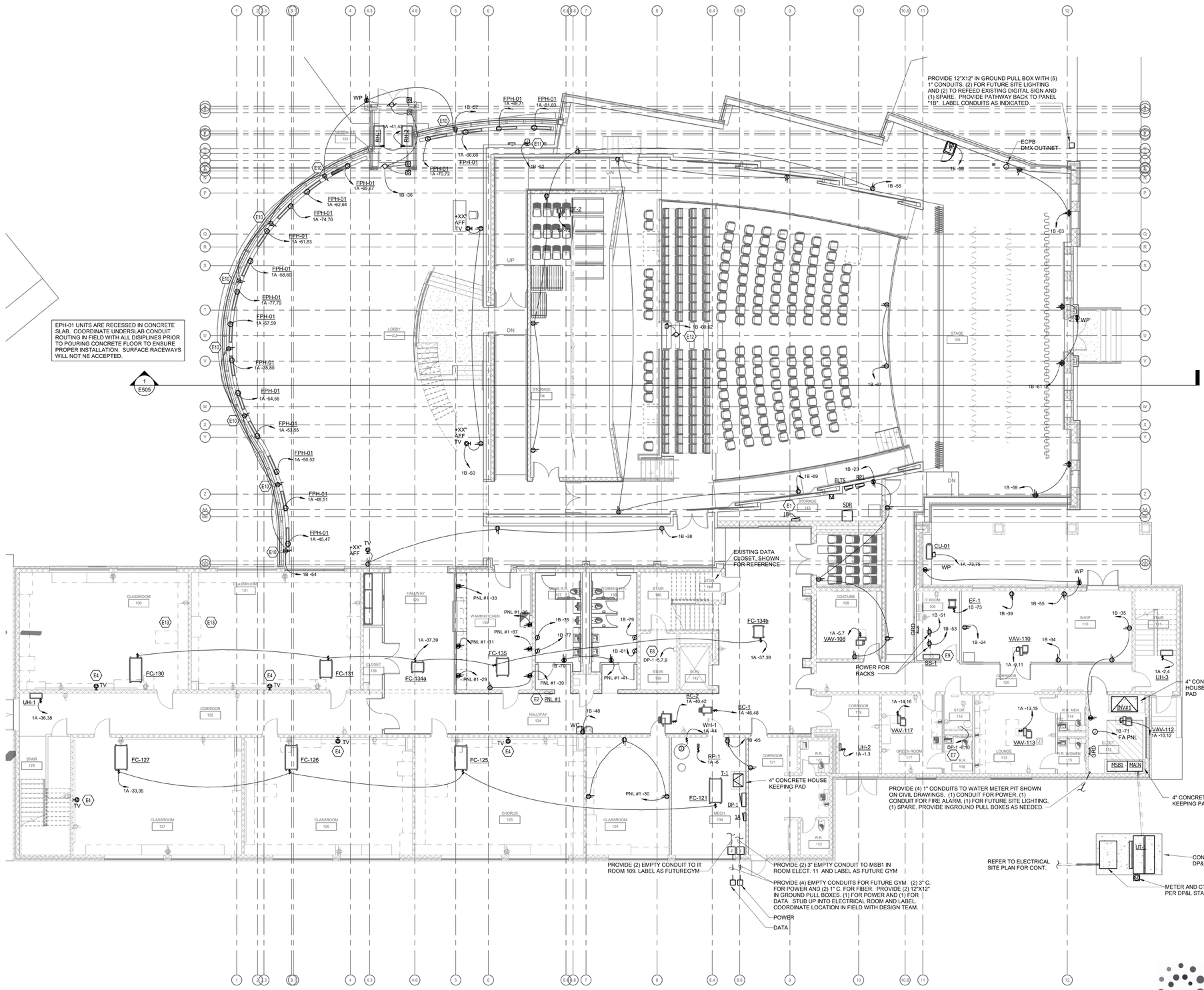


1 FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES (POWER):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. RECEPTACLES THAT ARE CONTROLLED BY AN AUTOMATIC MEANS SUCH AS OCCUPANCY SENSOR OR ENERGY MANAGEMENT SYSTEM SHALL BE MARKED IN ACCORDANCE WITH NEC 406.3(E).
E. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.
F. ALL NEW RECEPTACLES ARE TO BE TAMPER RESISTANT PER NEC 406.12.

TAGGED NOTES (##)

E1	PROVIDE A NEW SURFACE MOUNTED 120/208 VOLT PANEL. REWORK ALL EXISTING 120 VOLT BRANCH CIRCUITS FROM DEMOLISHED PANEL TO THIS NEW PANEL. SOME OF THE EXISTING BRANCH CIRCUITS WILL NEED TO BE REWORKED / EXTENDED TO THIS NEW PANEL. PROVIDE PULLBOXES, WIRE, CONDUIT, ETC. AS NEEDED TO EXTEND THE EXISTING BRANCH CIRCUITS.
E2	EXISTING PANEL REFED FROM NEW DISTRIBUTION PANEL, REFER TO SINGLE-LINE.
E4	PROVIDE POWER AND DATA FOR FUTURE INTERACTIVE TV. UTILIZE EXISTING TV POWER MADE AVAILABLE BY DEMOLITION. PROVIDE DUAL CHANNEL SURFACE RACEWAY WITH POWER AND DATA. COORDINATE EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO INSTALL.
E7	REFEED EXISTING 240 VOLT, 1-PHASE WATER HEATER FROM NEW PANEL.
E8	REFEED EXISTING 240 VOLT, 3-PHASE ELEVATOR FROM NEW PANEL.
E9	INDOOR SPLIT SYSTEM IS POWERED BY OUTDOOR UNIT. PROVIDE ALL REQUIRED CONNECTS BETWEEN UNITS SS-1 AND CU-01.
E10	MOUNT RECESSED RECEPTACLE HORIZONTALLY IN BASE OF 8" CURTAIN WALL. SPACE RECEPTACLES 10' ON CENTER.
E11	PROVIDE RECESSED JUNCTION BOX FOR BACKLIT SIGNAGE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SIGN VENDOR PRIOR TO INSTALLATION.
E12	PROVIDE COMPLETE INSTALLATION OF MOTORIZED TELESCOPING STANDS. COORDINATE MOTOR LOCATION, VOLTAGE, AND CONTROL LOCATION WITH VENDOR PRIOR TO INSTALLATION.
E13	ALTERNATE BID IN THIS AREA TO REMOVE WALL BETWEEN PAIRS OF CLASSROOMS TO CREATE A SINGLE ENLARGED SPACE. THE EXISTING POWER, DATA, SURFACE RACEWAY WILL NEED TO BE REMOVED AND REWORKED. REFER TO ARCHITECTURAL DRAWING SHEET AL101 ALTERNATE FOR ADDITIONAL SCOPE.

KEY PLAN:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL POWER FIRST FLOOR PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

JEFFREY ALLEN MILLARD 69913 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

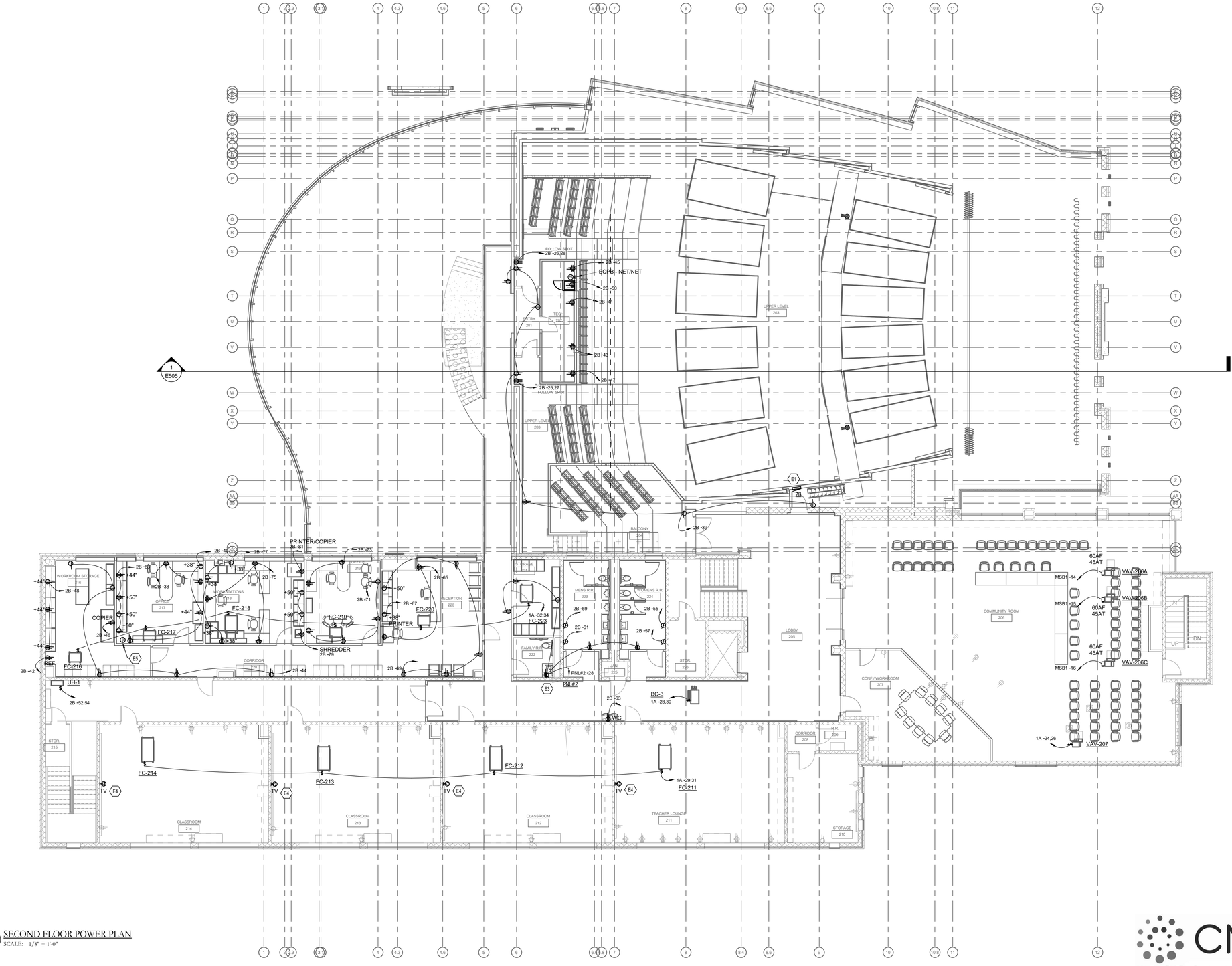
Comm. No. 18620.00	Date 2021/03/01
Drawn RAR	Drawing No. E401
Checked JAM/JRH	

GENERAL NOTES (POWER):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. RECEPTACLES THAT ARE CONTROLLED BY AN AUTOMATIC MEANS SUCH AS OCCUPANCY SENSOR OR ENERGY MANAGEMENT SYSTEM SHALL BE MARKED IN ACCORDANCE WITH NEC 406.3(E).
E. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.
F. ALL NEW RECEPTACLES ARE TO BE TAMPER RESISTANT PER NEC 406.12.

TAGGED NOTES

E1	PROVIDE A NEW SURFACE MOUNTED 120/208 VOLT PANEL. REWORK ALL EXISTING 120 VOLT BRANCH CIRCUITS FROM DEMOLISHED PANEL TO THIS NEW PANEL. SOME OF THE EXISTING BRANCH CIRCUITS WILL NEED TO BE REWORKED / EXTENDED TO THIS NEW PANEL. PROVIDE PULLBOXES, WIRE, CONDUIT, ETC. AS NEEDED TO EXTEND THE EXISTING BRANCH CIRCUITS.
E3	EXISTING PANEL APPEARS TO BE FED FROM PNL#1. ELECTRICAL CONTRACTOR TO VERIFY EARLY IN THE RENOVATION.
E4	PROVIDE POWER AND DATA FOR FUTURE INTERACTIVE TV. UTILIZE EXISTING TV POWER MADE AVAILABLE BY DEMOLITION. PROVIDE DUAL CHANNEL SURFACE RACEWAY WITH POWER AND DATA. COORDINATE EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO INSTALL.
E5	PROVIDE JUNCTION BOX AND CONDUIT PATHWAY TO ROOF FOR OWNER PROVIDED SPEAKER. REFER TO ROOF PLAN FOR PROPOSED LOCATION.



1 SECOND FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

KEY PLAN:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL POWER SECOND FLOOR PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO JEFFREY ALLEN MILLARD E-67912 REGISTERED PROFESSIONAL ENGINEER

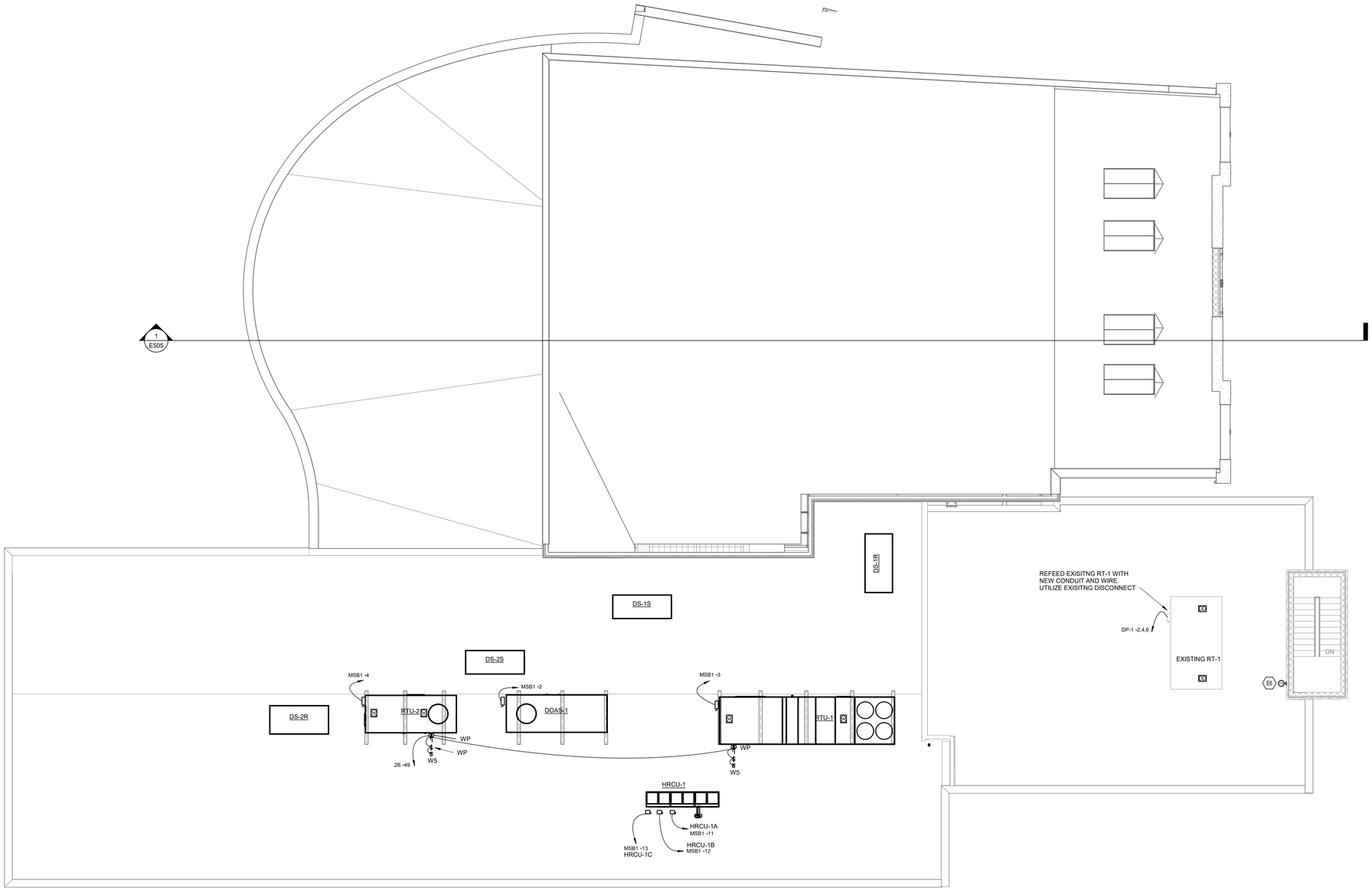
Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E402
Checked: JAM/JRH	

GENERAL NOTES (ROOF):

A. REFER TO POWER, SYSTEMS, AND LIGHTING PLANS FOR GENERAL NOTES APPLICABLE TO INTERIOR SPACES SHOWN ON THIS PLAN.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE ENGRAVED LAMACOID LABLES FOR ALL EXTERIOR DEVICES. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. PROVIDE UNI-STRUT AS REQUIRED FOR MOUNTING OF ALL DEVICES ON ROOF. COORDINATE WITH ROOFING CONTRACTOR PRIOR TO CONSTRUCTION FOR ALL PENETRATIONS. SEAL PENETRATIONS AS REQUIRED PER ROOFING CONTRACTOR AND ROOFING MANUFACTURERS RECOMMENDATIONS AS REQUIRED TO MAINTAIN ROOF WARRANTY. PROVIDE CURBS AND/OR FLASHED BOOTS AT ALL DEVICES AND PENETRATIONS.
E. CONDUITS SHALL PENETRATE ROOF FROM BELOW AS CLOSE TO FINAL ROOF EQUIPMENT TERMINATION POINT AS POSSIBLE. SUPPORT ALL ROOF MOUNTED CONDUITS AT INTERVALS NOT EXCEEDING 10 FEET WITH STRUT-BASED SUPPORT SYSTEM. SUPPORT SYSTEM TO BE CADDY PYRAMID ST SERIES OR APPROVED EQUAL.
F. ALL CONDUIT EXPOSED TO DIRECT SUNLIGHT SHALL BE AT LEAST 12" ABOVE THE ROOF-TOP. NO CONDUIT SHALL BE EXPOSED TO DIRECT SUNLIGHT BELOW THIS HEIGHT.
G. WHERE RACEWAY OR CONDUCTORS ARE INSTALLED EXPOSED ON ROOF, DERATE AMPACITY OF CONDUCTORS IN ACCORDANCE WITH NEC.
H. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.
I. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25 FT OF EACH MECHANICAL UNIT AS REQUIRED BY NEC. COORDINATE INSTALLATION LOCATIONS WITH FINAL EQUIPMENT LAYOUT PROVIDE BY MECHANICAL CONTRACTOR
J. CONDUIT FOR ROOF MOUNTED EQUIPMENT SHALL BE ROUTED IN CEILING SPACE BELOW ROOF DECK UNO.

TAGGED NOTES

##	
E6	PROVIDE JUNCTION BOX WITH WEATHER PROOF COVER FOR OWNER PROVIDED SPEAKER. REFER TO NOTE E5 FOR ADDITIONAL INFORMATION.



1 ELECTIRCAL LIGHTING, POWER AND FIRE ALARM ROOF PLAN
SCALE: 1/8" = 1'-0"

KEY PLAN:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

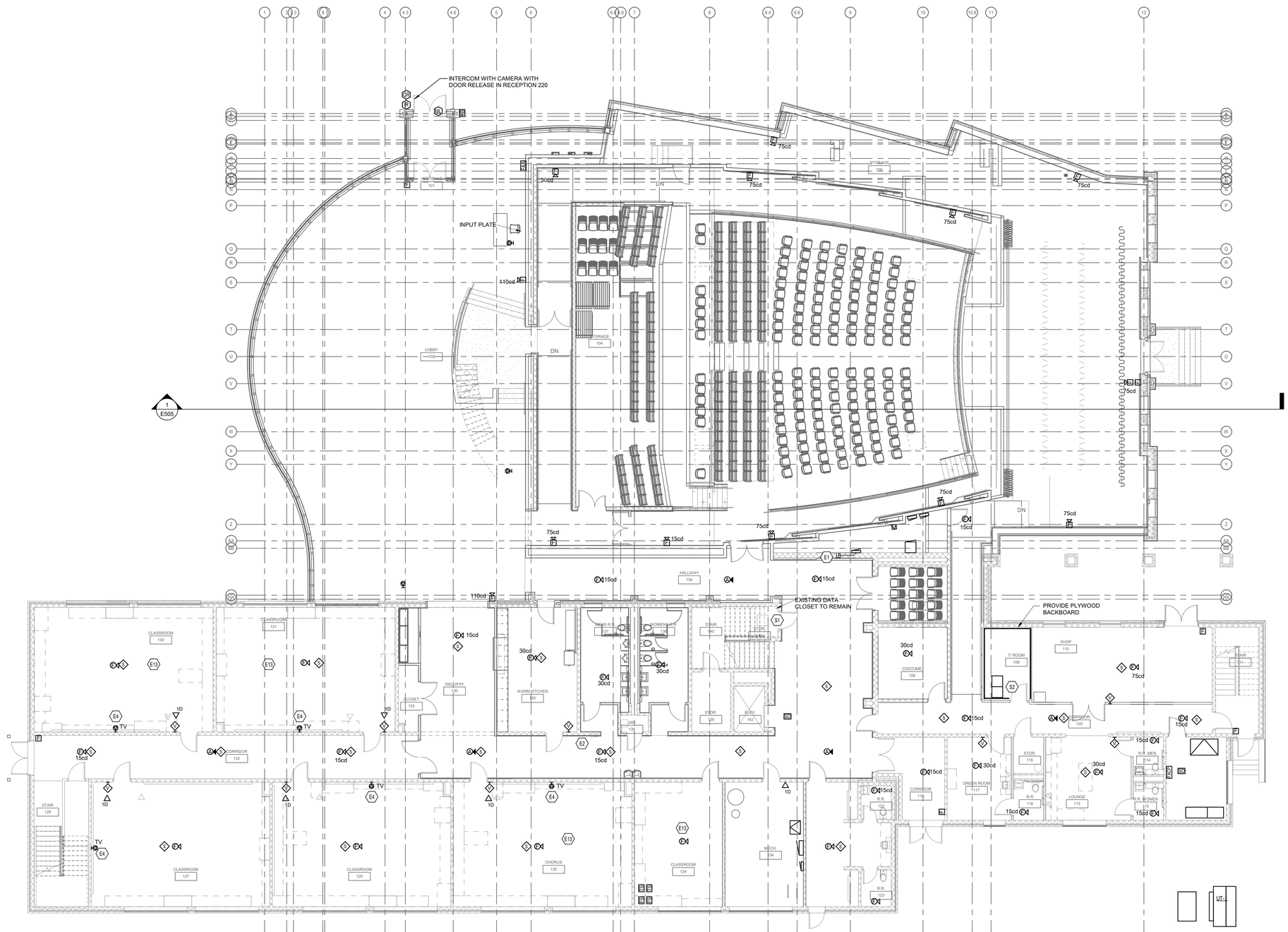
625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTIRCAL LIGHTING, POWER AND FIRE ALARM ROOF PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 ƒ 513 429 4693 www.cmta.com

STATE OF OHIO JEFFREY ALLEN MILLARD E-67913 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E403
Checked: JAM/JRH	



1 FIRST FLOOR SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES (SYSTEMS):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. REFER TO "SYSTEM INSTALLATION MATRIX" (ON SYSTEMS LEGEND SHEET) AND SPECIFICATIONS FOR CONTRACTOR REQUIREMENTS OF EACH SYSTEM.
E. THE CONTRACTOR SHALL ROUTE ALL "SYSTEM CONDUIT STUB-UPS" TO THE NEAREST CORRIDOR CABLING PATH (SEE "STUB-UP" DETAILS). REFER TO CABLING PATH INSTALLATION DETAIL FOR ADDITIONAL REQUIREMENTS.
F. CONTRACTOR SHALL PAINT ALL SYSTEMS CONDUIT STUB-UPS LIGHT BLUE FOR SYSTEMS CABLING INTO THE CORRIDOR CABLING PATH. PROVIDE PULL STRINGS IN ALL NEW CONDUIT RUNS FOR SYSTEM CABLING INSTALLATION.

TAGGED NOTES

E1	PROVIDE A NEW SURFACE MOUNTED 120/208 VOLT PANEL. REWORK ALL EXISTING 120 VOLT BRANCH CIRCUITS FROM DEMOLISHED PANEL TO THIS NEW PANEL. SOME OF THE EXISTING BRANCH CIRCUITS WILL NEED TO BE REWORKED / EXTENDED TO THIS NEW PANEL. PROVIDE PULLBOXES, WIRE, CONDUIT, ETC. AS NEEDED TO EXTEND THE EXISTING BRANCH CIRCUITS.
E2	EXISTING PANEL REFED FROM NEW DISTRIBUTION PANEL, REFER TO SINGLE-LINE.
E4	PROVIDE POWER AND DATA FOR FUTURE INTERACTIVE TV. UTILIZE EXISTING TV POWER MADE AVAILABLE BY DEMOLITION. PROVIDE DUAL CHANNEL SURFACE RACEWAY WITH POWER AND DATA. COORDINATE EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO INSTALL.
E13	ALTERNATE BID IN THIS AREA TO REMOVE WALL BETWEEN PAIRS OF CLASSROOMS TO CREATE A SINGLE ENLARGED SPACE. THE EXISTING POWER, DATA, SURFACE RACEWAY WILL NEED TO BE REMOVED AND REWORKED. REFER TO ARCHITECTURAL DRAWING SHEET AL101 ALTERNATE FOR ADDITIONAL SCOPE.
S1	EXISTING DATA RACK AND EQUIPMENT TO REMAIN. THE SCHOOL DISTRICT WILL REWORK AS REQUIRED.
S2	PROVIDE (2) NEW DATA RACKS FOR NEW MDF. OWNER WILL REWORK EXISTING CABLING FROM EXISTING PORTION OF THE BUILDING TO NEW RACKS. E.C. TO PROVIDE NEW CABLING FROM NEW ADDITION. ALL NEW CABLES ARE TO BE CAT 6 WITH RJ45 CONNECTIONS.

KEY PLAN:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SYSTEMS FIRST FLOOR PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

JEFFREY ALLEN MILLARD 5/6/21 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

Comm. No. 18620.00	Date 2021/03/01
Drawn RAR	Drawing No. E501
Checked JAM/JRH	

2/26/2021 9:37:17 AM
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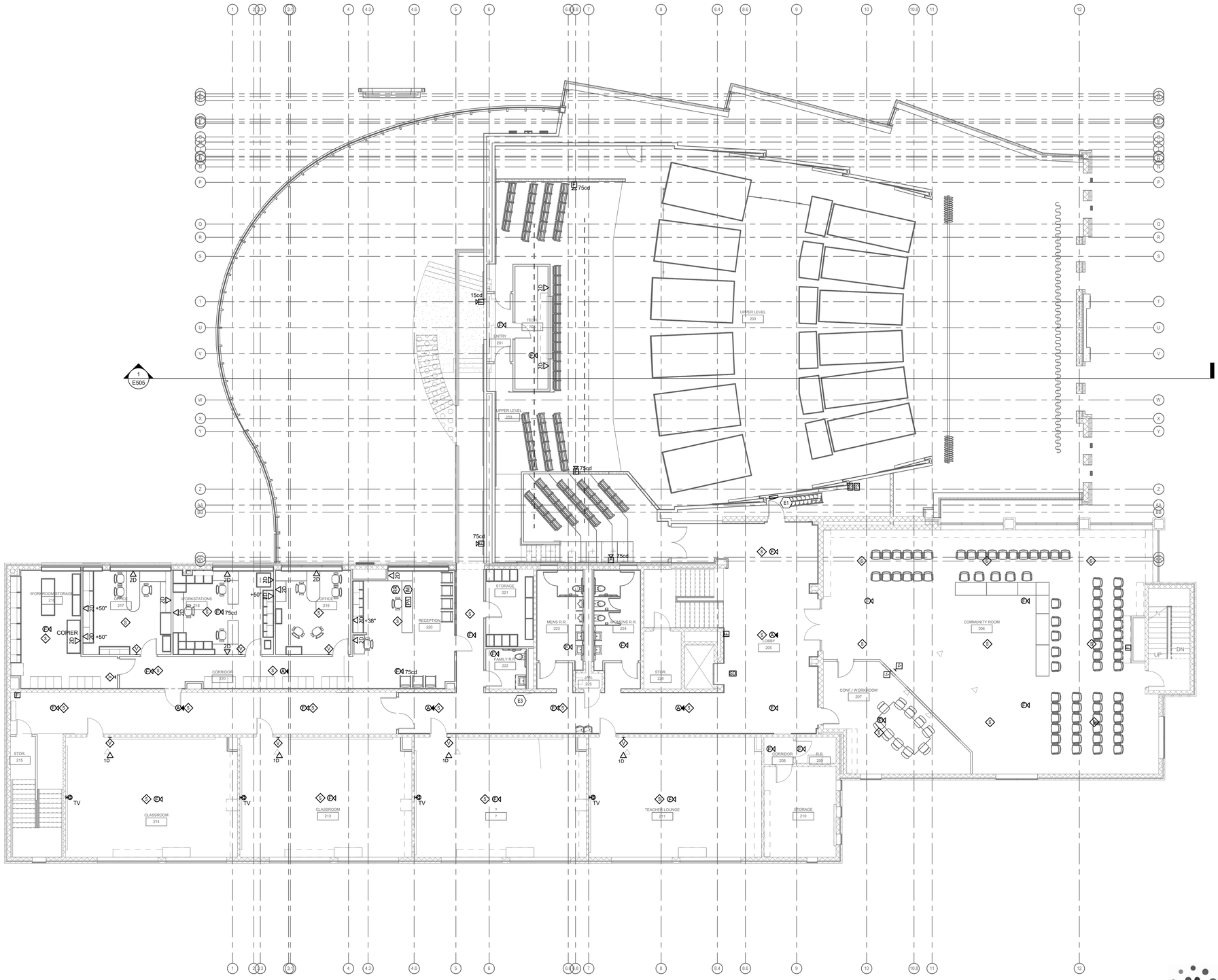


1 SECOND FLOOR SYSTEM PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES (SYSTEMS):

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. REFER TO "SYSTEM INSTALLATION MATRIX" (ON SYSTEMS LEGEND SHEET) AND SPECIFICATIONS FOR CONTRACTOR REQUIREMENTS OF EACH SYSTEM.
E. THE CONTRACTOR SHALL ROUTE ALL "SYSTEM CONDUIT STUB-UPS" TO THE NEAREST CORRIDOR CABLING PATH (SEE "STUB-UP" DETAILS). REFER TO CABLING PATH INSTALLATION DETAIL FOR ADDITIONAL REQUIREMENTS.
F. CONTRACTOR SHALL PAINT ALL SYSTEMS CONDUIT STUB-UPS LIGHT BLUE FOR SYSTEMS CABLING INTO THE CORRIDOR CABLING PATH. PROVIDE PULL STRINGS IN ALL NEW CONDUIT RUNS FOR SYSTEM CABLING INSTALLATION.

TAGGED NOTES

E1	PROVIDE A NEW SURFACE MOUNTED 120/208 VOLT PANEL. REWORK ALL EXISTING 120 VOLT BRANCH CIRCUITS FROM DEMOLISHED PANEL TO THIS NEW PANEL. SOME OF THE EXISTING BRANCH CIRCUITS WILL NEED TO BE REWORKED / EXTENDED TO THIS NEW PANEL. PROVIDE PULLBOXES, WIRE, CONDUIT, ETC. AS NEEDED TO EXTEND THE EXISTING BRANCH CIRCUITS.
E3	EXISTING PANEL APPEARS TO BE FED FROM PNL#1. ELECTRICAL CONTRACTOR TO VERIFY EARLY IN THE RENOVATION.

KEY PLAN:

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SYSTEM SECOND FLOOR PLAN

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO
JEFFREY ALLEN MILLARD
5-9-12
REGISTERED PROFESSIONAL ENGINEER

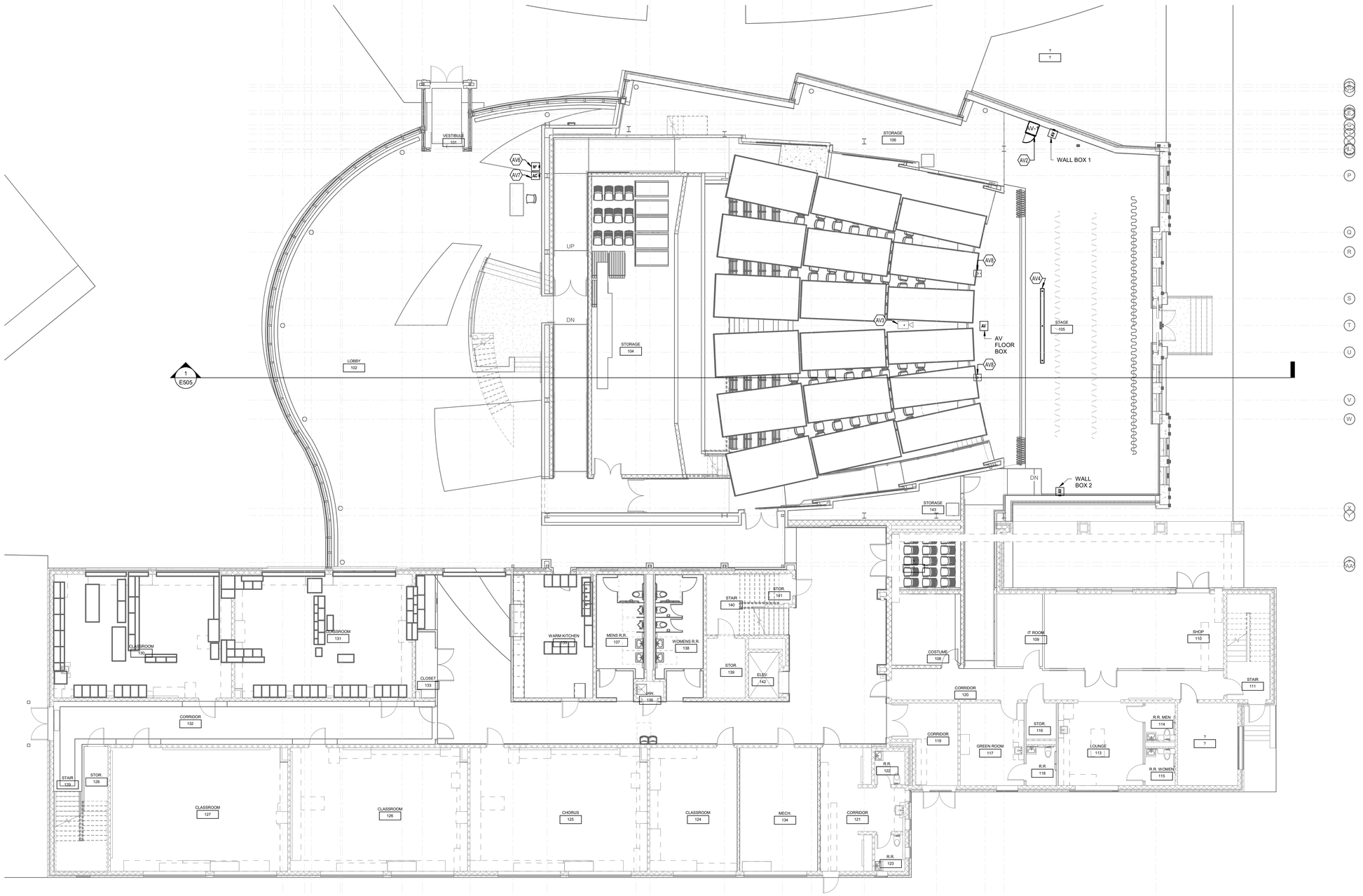
Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E502
Checked: JAM/JRH	

AV SYMBOLS LEGEND:

AV	AV FLOOR BOX LOCATION
M#	MICROPHONE WALL JACK - SUPER SCRIPT NUMBER INDICATES NUMBER OF JACKS. FEMALE JACK.
IC	INTERCOM WALL JACK MOUNTED AT 18" AFF UNLESS NOTED OTHERWISE
AC	AUDIO CONSOLE - LOCATION FOR AUDIO CONSOLE
MS	MAIN SPEAKER
HO	HOUSE AUDIO MIX OUT - MALE 3 PIN XLR CONNECTOR, HOUSE AUDIO MAIN MIX LINE LEVEL. FEED FROM CONSOLE.
AV-1	AV RACK ON COASTERS
S	CEILING MOUNTED BOOTH AUDIO MONITOR SPEAKER
DS	d SNAKE DATA PORT CAT6 SHIELDED CABLE AND JACKS
WA	WIRELESS ANTENNA

TAGGED NOTES ⟨##⟩

AV2	AV FLOOR MOUNTED RACK ON CASTERS FOR AV EQUIPMENT.
AV3	PROVIDE AND INSTALL PENDANT MOUNTED EPSON PRO L1495 LASER PROJECTOR. INSTALL PER MANUFACTURERS INSTRUCTIONS. COORDINATE EXACT LOCATION WITH ALL TRADES PRIOR TO INSTALLATION.
AV4	PROJECTOR SCREEN BY OTHERS - SCREEN SHOWN IN MODEL FOR REFERENCE ONLY. REFER TO SCREEN VENDORS DOCUMENTS FOR DETAILS AND EXACT INFORMATION.
AV6	MICROPHONE XLR INPUT JACK. MOUNTED AT 18" AFF
AV7	AUDIO SYSTEM CONTROL PANEL MOUNTED AT 48" AFF. REFER TO MANUFACTURER FOR BACKBOX REQUIREMENTS.
AV8	REINKUS-HEINZ SUB TX112S SPEAKER. PLACED ON FLOOR UNDER LIP OF STAGE.



1 E505

1 FIRST FLOOR AV PLAN
SCALE: 1/8" = 1'-0"

BICSI
LEONARD THOMAS SORRELL
BICSI ID # 157133
EXPIRES 12-31-2023
SIGNATURE

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 ƒ 513 429 4693 www.cmta.com

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SYSTEMS - FIRST FLOOR AV PLAN

STATE OF OHIO — JEFFREY ALLEN MILLARD — E-47913 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: BAK	Drawing No.: E503
Checked: WW	

2/26/2021 9:37:38 AM

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TAGGED NOTES

AV1	WIRELESS MIC REMOTE ANTENNAS
AV2	AV FLOOR MOUNTED RACK ON CASTERS FOR AV EQUIPMENT.
AV3	PROVIDE AND INSTALL PENDANT MOUNTED EPSON PRO L1495 LASER PROJECTOR. INSTALL PER MANUFACTURERS INSTRUCTIONS. COORDINATE EXACT LOCATION WITH ALL TRADES PRIOR TO INSTALLATION.
AV4	PROJECTOR SCREEN BY OTHERS - SCREEN SHOWN IN MODEL FOR REFERENCE ONLY. REFER TO SCREEN VENDORS DOCUMENTS FOR DETAILS AND EXACT INFORMATION.
AV5	AUDIO MIXER CONSOLE
AV9	PROVIDE TABLE FOR CONSOLE IF COUNTER IS NOT PROVIDED. COORDINATE WITH OWNER AND ARCHITECT.
AV10	INTERCOM JACKS MOUNTED AT 18" AFF.
AV11	CISCO AIRONET ACCESS POINT MOUNTED ABOVE WINDOW FOR USE WITH AUDIO SYSTEM NOT ON LOCAL NETWORK.
AV12	HO AT 18" AFF

COMMUNITY DP8-8" TWO-WAY PENDANT SPEAKER. TYPICAL OF 10 IN LOBBY.

LOBBY AREA - ALIGN BOTTOM OF LIGHTS, SPEAKERS, AND ETC. WITH BOTTOM OF THE STRUCTURAL BEAMS

1 E505

ENTRY 201
TECH 202
UPPER LEVEL 203
BALCONY 204
LOBBY 205
COMMUNITY ROOM 206
CONF./ WORKROOM 207
CORRIDOR 208
R.R. 209
STORAGE 210
TEACHER LOUNGE 211
CLASSROOM 212
CLASSROOM 213
CLASSROOM 214
STOR. 215
WORKROOM STORAGE 216
OFFICE 217
WORKSTATIONS 218
OFFICE 219
RECEPTION 220
STORAGE 221
FAMILY R.R. 222
MENS R.R. 223
WOMENS R.R. 224
JAN. 225
STOR. 226
CORRIDOR 228

150.00°

UP DN

1 2 2.13 (19) 4 4.3 4.6 5 6 6.6 7 8 8.4 8.6 9 10 10.8 11 12

P Q R S T U V W Y AA

1 SECOND FLOOR AV PLAN
SCALE: 1/8" = 1'-0"

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
LEONARD THOMAS SORRELL
BICSI ID # 157133
EXPIRES 12-31-2023
RCDD
SIGNATURE

No.	Revisions / Submissions	Date

LWC
INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

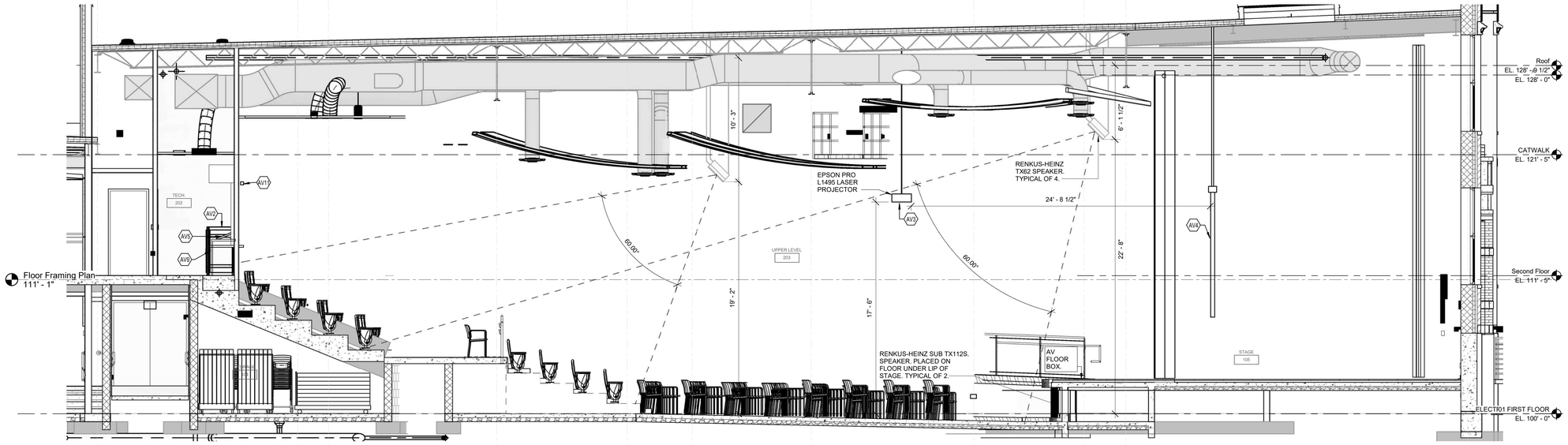
WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SYSTEMS - SECOND FLOOR AV PLAN

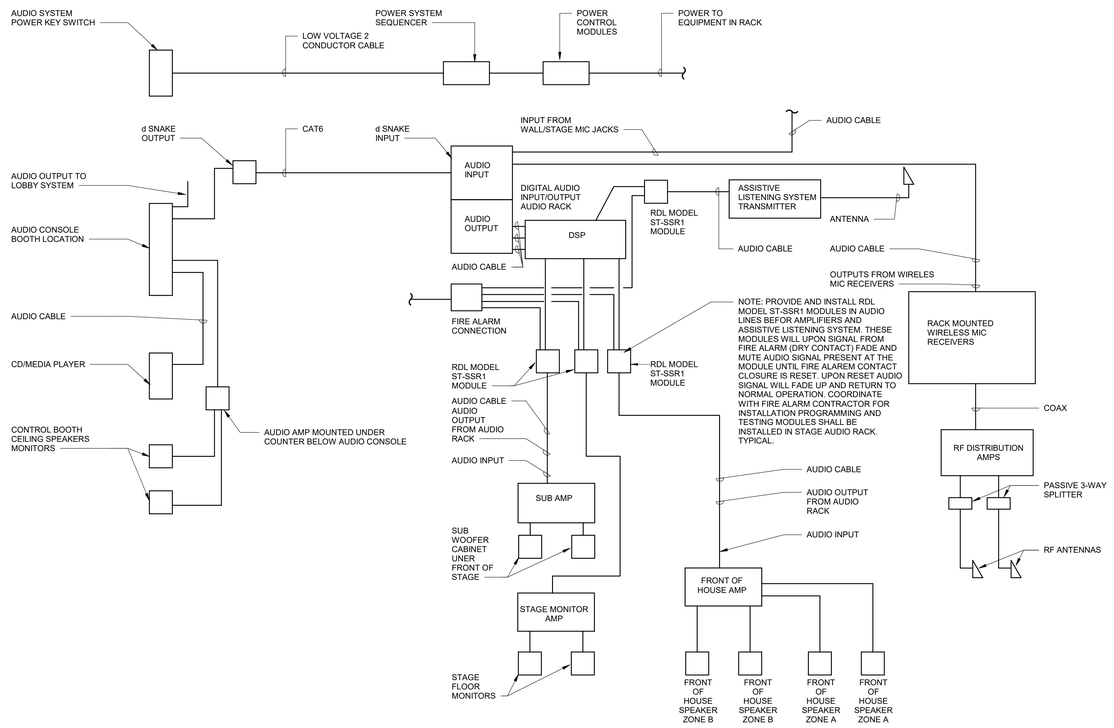
STATE OF OHIO JEFFREY ALLEN MILLARD E-67913 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: BAK	Drawing No. E504
Checked: WW	

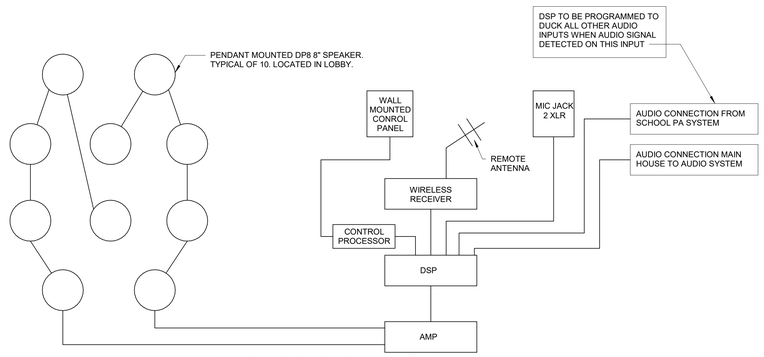


Floor Framing Plan
111' - 1"

SECTION 74 - AV THEATER SECTION
1 SECTION
SCALE: 1/4" = 1'-0"



THEATER AUDIO ONE-LINE DIAGRAM
3 DIAGRAM
SCALE: 3/4" = 1'-0"



LOBBY AUDIO SYSTEM ONE-LINE DIAGRAM
2 DIAGRAM
SCALE: 1/2" = 1'-0"

TAGGED NOTES ##

AV2	AV FLOOR MOUNTED RACK ON CASTERS FOR AV EQUIPMENT.
AV3	PROVIDE AND INSTALL PENDANT MOUNTED EPSON PRO L1495 LASER PROJECTOR. INSTALL PER MANUFACTURERS INSTRUCTIONS. COORDINATE EXACT LOCATION WITH ALL TRADES PRIOR TO INSTALLATION.
AV4	PROJECTOR SCREEN BY OTHERS - SCREEN SHOWN IN MODEL FOR REFERENCE ONLY. REFER TO SCREEN VENDORS DOCUMENTS FOR DETAILS AND EXACT INFORMATION.
AV5	AUDIO MIXER CONSOLE
AV9	PROVIDE TABLE FOR CONSOLE IF COUNTER IS NOT PROVIDED. COORDINATE WITH OWNER AND ARCHITECT.
AV11	CISCO AIRONET ACCESS POINT MOUNTED ABOVE WINDOW FOR USE WITH AUDIO SYSTEM NOT ON LOCAL NETWORK.

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
LEONARD THOMAS SORRELL
BICSI ID # 157133
EXPIRES 12-31-2023
RCDD
SIGNATURE

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ELECTRICAL SYSTEMS - AV DETAILS

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STATE OF OHIO JEFFREY ALLEN MILLARD E-49712 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
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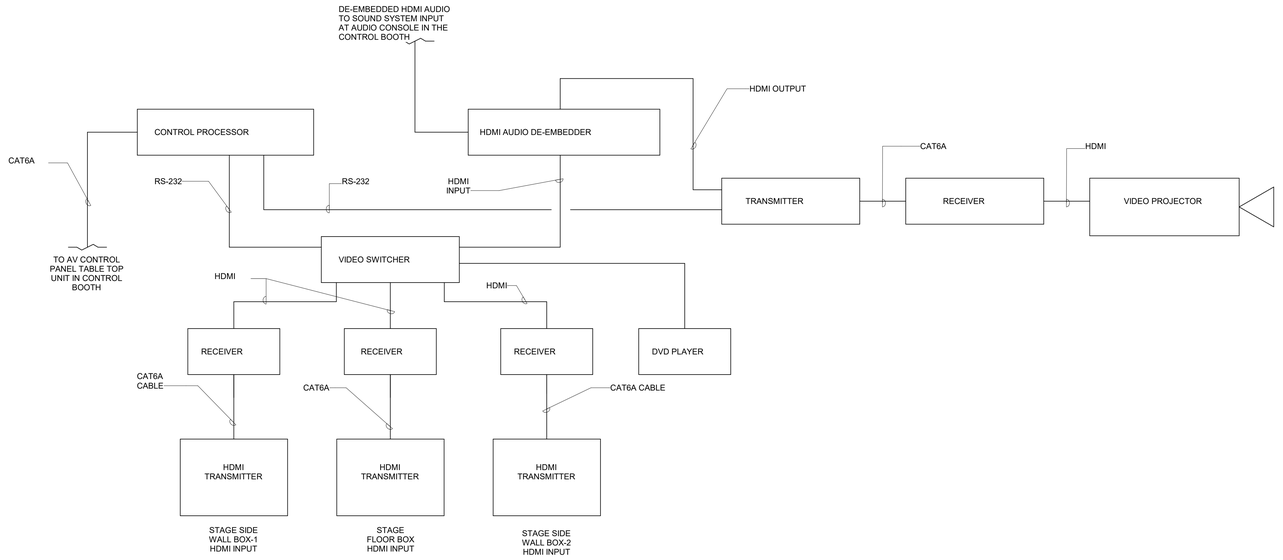
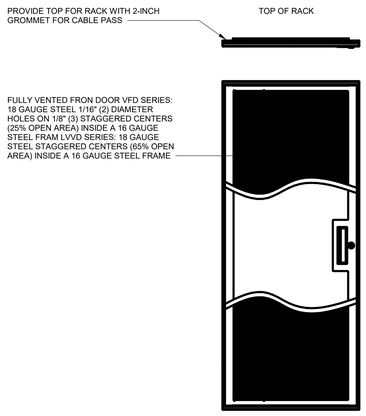
Checked: WW	

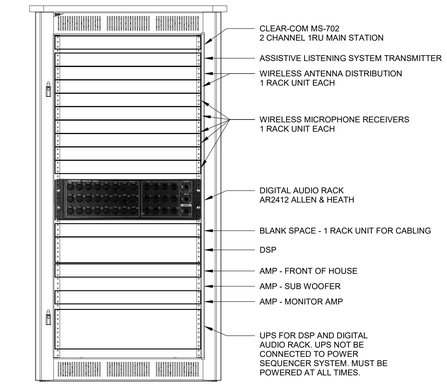
QUANITY	DESCRIPTION	MANUFACTURER	MODEL	OR EQUAL MANUFACTURER
	INTERCOM			
6	SINGLE-EAR STANDARD HEADSET	CLEAR-COM	CC-300-X4	TELEX, RLS
6	SINGLE-CHANNEL BELTPACK	CLEAR-COM	RS-701	TELEX, RLS
1	2-CHANNEL 1RU MAIN STATION	CLEAR-COM	MS-702	TELEX, RLS
6	2-CHANNEL 3-PIN SELECTABLE WALL PLATE	CLEAR-COM	WP-2	TELEX, RLS
1	LOT CABLES NEED FOR COMPLETE WORKING SYSTEM	BELDEN OR EQUAL	BELDEN #8762 (20 Gauge)	COMSCOPE, GENERAL
	HOUSE AUDIO			
1	32 CHANNEL DIGITAL MIXER CONSOLE	ALLEN&HEATH	QU-32	YAMAHA, MIDAS
1	TABLE OR FURNITURE FOR AUIDO CONSOLE	VARIOUS	VARIOUS	
1	BOOTH A/V RACK WITH 3" CASTER WHEELS INCLUDE VFD SERIES DOOR WITH LOCK AND RACK TOP	MIDDLE ATLANTIC	WRK 24-27	TRIPP LITE, APC
1	24x12 I/O EXPANDER FOR SQ MIXERS	ALLEN&HEATH	AR2412	YAMAHA, MIDAS
1	2-CHANNEL UNDER COUNTER AMPLIFIER	POWERSOFT	MEZZO 322 A	CROWN, QSC
1	8" COAXIAL CEILING SPEAKER (PAIR) - WHITE	ELECTRO-VOICE	EVIDC8.2LP	TOA, JBL
1	CD/MEDIA PLAYER WITH BLUETOOTH	DENON	DN-500CB DN-700C	TASCAM, MARANTZ
2	ACTIVE ANTENNA APLITTER	SENNHEISER	ASA 214	SHURE, AUDIX
2	19" RACK MOUNT KIT EVOLUTION WIRELESS	SENNHEISER	GA 3	SHURE, AUDIX
2	PASSIVE DIRECTIONAL ANTENNA	SENNHEISER	A 2003-UHF	SHURE, AUDIX
10	EVOLUTION WIRELESS G4 LAVALIER SET	SENNHEISER	EW 100 G4-ME2	SHURE, AUDIX
2	EVOLUTION WIRELESS G4 LAVALIER HAND HELD SET	SENNHEISER	EW 100 G4-865-S-A1	SHURE, AUDIX
4	SOLID STATE RELAY / MUTE AUDIO ON TRIGGER	RDL	ST-SSR1	SYMETRIX, BOGEN
6	DYNAMIC VOCAL MICROPHONE	SHURE	SM58	AUDIX, SENNHEISER
4	DYNAMIC INSTRUMENT MICROPHONE	SHURE	SM57	AUDIX, SENNHEISER
2	50" MINI CONDENSER BOOM MICROPHONE SYSTEM	AUDIX	MB5055	SHURE, SENNHEISER
14	PRO SERIES R MICROPHONE STAND STACKABLE BASE	ULTIMATE	PRO-R-SB	ATLAS, ONSTAGE
7	TWO-PIECE TELESCOPIC BOOM ARM	K&M KONIG MEYER	21140-300-55 - BLACK	ATLAS, ONSTAGE
25	EVOLUTION MIC CABLE 25'	PRO-CO	EVLMCN-25	MOGAMI, SEISMIC AUDIO
4	DIRECT BOX	WHIRLWIND	IM2	RADIAL, BEHRINGER
4	LEADER INSTRUMENT CABLE	WHIRLWIND	L18	MOGAMI, SEISMIC AUDIO
1	STAGE A/V RACK WITH 3" CASTER WHEELS INCLUDE VFD SERIES DOOR WITH LOCK AND RACK TOP	MIDDLE ATLANTIC	WRK 24-27	TRIPP LITE, APC
1	SMART APP LCD UPS FOR AR2412 AND DX 4008	CYBERPOWER	OR700LCDRM1U	APC, TRIPP LITE
1	FLOOR BOX	FSR	FL-540P-4-B	HUBELL, LEVITON
1	FLAT COVER IN BLACK WRINKLE POWDER COAT	FSR	FL-540P-BLK-C	HUBELL, LEVITON
2	WB-X1 MEDIUM CAPACITY WALL BOX	FSR	WB-X2NK-GNG	HUBELL, LEVITON
2	BLACK LOCKING COVER	FSR	WB-X2-CVR-BLK	HUBELL, LEVITON
1	PERFORMANCE SYSTEM (216MHZ)	LISTEN TECHNOLOGIES	LS-53-216	WILLIAMS, TELEX
1	RACK MOUNTING KIT	LISTEN TECHNOLOGIES	LA-326	WILLIAMS, TELEX
1	GROUND PLANE ANTENNA	LISTEN TECHNOLOGIES	LA-107	WILLIAMS, TELEX
SEE SPEC	DISPLAY RECEIVER	LISTEN TECHNOLOGIES	LR-400-216	WILLIAMS, TELEX
SEE SPEC	EAR SPEAKER	LISTEN TECHNOLOGIES	LA-164	WILLIAMS, TELEX
SEE SPEC	NIMH RECHARGEABLE BATTERIES	LISTEN TECHNOLOGIES	LA-362	WILLIAMS, TELEX
SEE SPEC	NECK LOOP	LISTEN TECHNOLOGIES	LA-166	WILLIAMS, TELEX
SEE SPEC	LA-325 16 UNIT DROP IN CHARGING/ CARRYING CASE	LISTEN TECHNOLOGIES	LA-311	WILLIAMS, TELEX
1	APPLE IPAD (FOR USE WITH AUDIO CONTROL)	APPLE	IPAD	
1	CISCO AIRONET 1830	CISCO	AP1832I	UBIQUITI, ARUBA
	SPEAKERS			
4	FULL RANGE PASSIVE TWO-WAY SPEAKER	RENKUS-HEINZ	TX62	RCF, EAW
2	PASSIVE BASS SUBWOOFER	RENKUS-HEINZ	TX112S	RCF, EAW
1	PROTEA NE24.3M 4 X 8 DSP	ASHLY	PROTEA NE24.24M 4×8 LOGIC	BI-AMP, BSS
1	2-CHANNEL AMPLIFIER STAGE MONITOR AMP	POWERSOFT	DUECANALI 1604	CROWN, QSC
1	4-CHANNEL AMPLIFIER FRONT OF HOUSE AMP	POWERSOFT	QUATTROCANALI 1204	CROWN, QSC
1	2-CHANNEL AMPLIFIER STAGE MONITOR AMP	POWERSOFT	DUECANALI 1604	CROWN, QSC
2	12" PASSIVE FLOOR MONITOR	YAMAHA	CM12V	RCF, EAW
2	50' 1/4-NL4FX SPEAKER CABLES	PROCO	LIFELINES 1/4-NL4FX	
1	LOT CABLING / RIGING / MOUNTING EQUIPMENT	VARIOUS	VARIOUS	
	CONTROL			
1	RACKMOUNT SEQUENCER (4-STEP)	LOWELL MANUFACTURING	SEQR-4K	FURMAN, MIDDLE ATLANTIC
3	REMOTE POWER CONTROL	LOWELL MANUFACTURING	RPC-20-CD	FURMAN, MIDDLE ATLANTIC
1	LOT CABLING REQUIRED FOR COMPLETE SYSTEM	VARIOUS	VARIOUS	
	LOBBY SYSTEM			
2	19" RACK MOUNT KIT EVOLUTION WIRELESS	SENNHEISER	GA3	SHURE, AUDIX
1	EVOLUTION WIRELESS G4 LAVALIER SET	SENNHEISER	EW 100 G4-ME2	SHURE, AUDIX
1	EVOLUTION WIRELESS G4 LAVALIER HAND HELD SET	SENNHEISER	EW 100 G4-865-S-A1	SHURE, AUDIX
2	DYNAMIC VOCAL MICROPHONE	SHURE	SM58	AUDIX, SENNHEISER
4	EVOLUTION MIC CABLE 25'	PRO-CO	EVLMCN-25	
2	PRO SERIES R MICROPHONE STAND STACKABLE BASE	ULTIMATE	PRO-R-SB	ATLAS, ONSTAGE
1	TWO-PIECE TELESCOPIC BOOM ARM	K&M KONIG MEYER	21140-300-55 - BLACK	ATLAS, ONSTAGE
10	8-INCH HIGH OUTPUT TWO-WAY PENDANT	BIAMP	DP8	TOA, JBL
1	DMP 64 PLUS C 6x4 DIGITAL MATRIX PROCESSOR	EXTRON	60-1823-01	ASHLEY, BI-AMP
1	TLP PRO 1022M BLACK WALL MOUNT PANEL 10"	EXTRON	60-1602-02	CRESTRON, KRAMER
1	IPCP PRO 250 IP LINK PRO CONTROL PROCESSOR	EXTRON	60-1429-01	CRESTRON, KRAMER
1	MANAGED L3 SWITHC - 8 POE+ ETHERENET PORTS	CISCO	SG350-10MP-K9	NETGEAR, DELL
1	XPA 4002 2 CHANNEL AMPLIFER - 400 WATTS / CHANNEL	EXTRON	60-1245-01	CRESTRON, QSC
	AV PROJECTION SYSTEM			
1	PRO L1495UNL WUXGA 3LCD LASER PROJECTOR	EPSON	V11HA16820	MAXELL, PANASONIC
1	ELPLM15 LENS	EPSON	V12H004M0F	MAXELL, PANASONIC
1	HIGH CEILING MOUNT	EPSON	ELPMB48	MAXELL, PANASONIC
1	EXTENSION POLE FOR PROJECTOR MOUNT	VARIOUS	VARIOUS	
1	MOUNTING HARDWARE FOR EXTENSION POLE	VARIOUS	VARIOUS	
1	SW4 HD 4K VIDEO SWITCHER	EXTRON	60-1484-01	CRESTRON, KRAMER
1	IPCP PRO 250 IP LINK PRO CONTROL PROCESSOR	EXTRON	60-1429-01	CRESTRON, KRAMER
1	TLP PRO 725T BLACK - TABLETOP CONTROL PANEL	EXTRON	60-1562-02	CRESTRON, KRAMER
3	DTP T HWP 4K 331 D HDMI TX DECORA-STYLE, BLACK	EXTRON	60-1421-52	CRESTRON, KRAMER
3	DTP2 R 211 4K / 60 RECIEVER WITH AUDIO DE-EMBED	EXTRON	60-1631-53	CRESTRON, KRAMER
1	DTP2 T 211 HDMI 4K/60 TX	EXTRON	60-1631-52	CRESTRON, KRAMER
1	DTP HDMI 4K 230 RX	EXTRON	60-1271-13	CRESTRON, KRAMER
1	HAE 100 4K HDMI AUDIO DE-EMBEDDER	EXTRON	60-1681-01	CRESTRON, KRAMER
1	DVD PLAYER	DENNON	DN-500BD MKII	TASCAM, MARANTZ
1	19 inches 12-Port HDMI Interface Patch Panel,Black	MONOPRICE	108061	
1	CISCO - 24 PORT MANAGED RACK MOUNT SWITCH	CISCO	SF350-24P	NETGEAR, DELL
1	SMART APP LCD UPS FOR CONTROL PROCESSORS	CYBERPOWER	OR700LCDRM1U	TRIPP LITE, APC

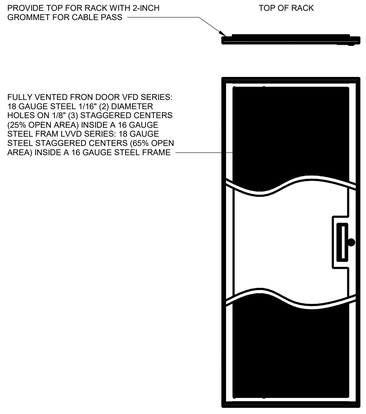


1 AV ONE-LINE DIAGRAM
SCALE: 3/4" = 1'-0"

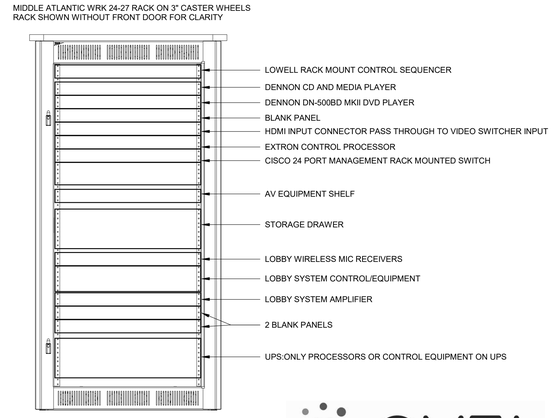


2 STAGE AV RACK DETAIL
SCALE: 1 1/2" = 1'-0"





4 CONTROL BOOTH AV RACK DETAIL
SCALE: 1 1/2" = 1'-0"



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ELECTRICAL SYSTEMS - AV DETAILS

STATE OF OHIO JEFFREY ALLEN MILLARD E-67912 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
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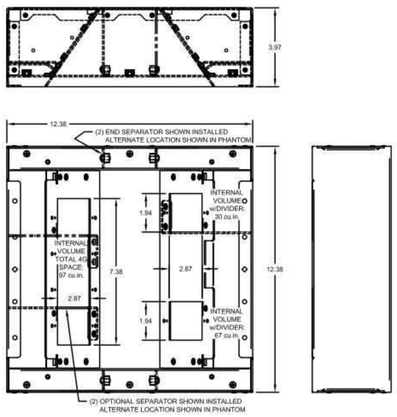
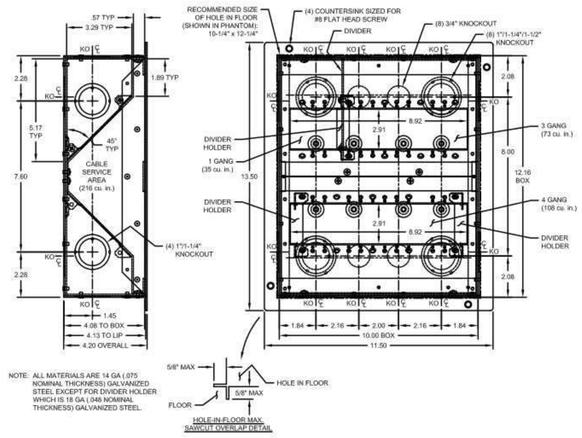
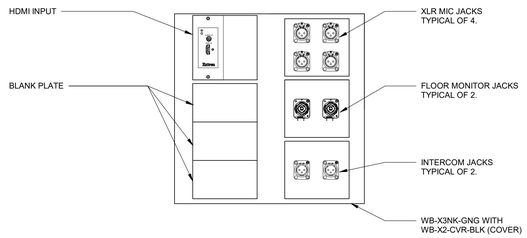


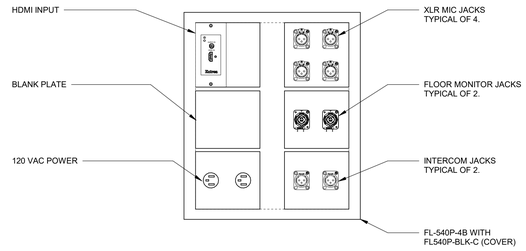
3 FSR WB-X2NK-GNG WALL BOX
SCALE: 1/4" = 1'-0"



2 FSR FL-540P-B FLOOR BOX
SCALE: 1/4" = 1'-0"



5 AV WALL BOX CONNECTIONS
SCALE: 3" = 1'-0"



4 AV FLOOR BOX CONNECTIONS
SCALE: 3" = 1'-0"

SYSTEM FUNCTION STATEMENT:

THE AUDIO SYSTEM WILL PROVIDE EVEN COVERAGE OVER THE ENTIRE SEATING AREA FROM FOUR (4) TWO-WAY SPEAKER CABINETS MOUNTED FROM THE CEILING OVER THE PORTABLE AND PERMANENT SEATING AREAS. THE SYSTEM ALSO INCLUDES TWO (2) SUB-WOOFER CABINETS INSTALLED UNDER THE FRONT OF THE STAGE OVERHANG. THE CEILING MOUNTED SPEAKER CABINETS ARE DIVIDED INTO TWO (2) ZONES. WHEN THE ROOM IS SETUP FOR FULL SEATING ALL FOUR (4) SPEAKER CABINETS ARE POWERED AND USED. WHEN THE PORTABLE SEATING IS REMOVED AND THAT SPACE IS USED FOR PRESENTATION OR MUSICAL PERFORMANCE THE SPEAKER ZONE OVER THIS AREA WILL NOT BE POWERED. IN THIS CONFIGURATION THE SYSTEM WILL FUNCTION WITH ONLY THE SPEAKERS OVER THE PERMANENT SEATING POWERED. THIS WILL ALLOW FOR THE PORTABLE SEATING AREA TO BE USED AND NOT BE IN THE ACTIVE SOUND FIELD.

THE AUDIO CONSOLE IS LOCATED IN THE CONTROL BOOTH AND IS CONNECTED TO THE STAGE RACK VIA A CAT6 CABLE. THE AUDIO CONSOLE OFFERS 32 CHANNELS AND THE STAGE RACK OFFERS 24 INPUT CHANNELS AND 12 OUTPUT CHANNELS. THIS STAGE RACK UNIT IS LOCATED IN AN EQUIPMENT RACK LOCATED OFF STAGE. MICROPHONE JACKS LOCATED IN A FRONT AND CENTER FLOOR BOX AS WELL AS TWO (2) WALL BOXES WILL BE HARD WIRED TO THE STAGE RACK UNIT. WIRELESS MICROPHONE RECEIVERS WILL ALSO BE LOCATED IN THE STAGE EQUIPMENT RACK AND CONNECTED TO THE CONSOLE VIA THE STAGE RACK UNIT. THE STAGE EQUIPMENT RACK WILL ALSO INCLUDE THE AMPLIFIERS FOR ALL SPEAKERS, THE MASTER STATION FOR THE PRODUCTION INTERCOM SYSTEM AND THE TRANSMITTER FOR THE ASSISTIVE LISTENING SYSTEM. THE EQUIPMENT PACKAGE INCLUDES TWO (2) FLOOR MONITORS, THAT CAN BE PLUGGED INTO ANY OF THREE (3) LOCATIONS ON THE STAGE. WIRELESS AND WIRED MICROPHONES, DIRECT INSTRUMENT PICKUP EQUIPMENT, AND MICROPHONE STANDS AND CABLES. THE PRODUCTION INTERCOM SYSTEM WILL ALLOW CREW MEMBERS TO TALK TO THE BOOTH FROM BACK STAGE LOCATIONS VIA WIRED BELT PACK UNITS WITH HEADSETS. THE ASSISTIVE LISTENING SYSTEM WILL PROVIDE COVERAGE OVER THE ENTIRE PERFORMANCE AREA FOR USERS WITH RECEIVERS TO HEAR VIA HEADSETS OR NECK LOOPS VIA HEARING AIDES.

THE STAGE EQUIPMENT RACK POWER WILL BE CONTROLLED FROM THE BOOTH BY A POWER SEQUENCER SYSTEM. THE CONTROL BOOTH WILL INCLUDE NOT ONLY THE MASTER AUDIO CONSOLE BUT CONTROLS AND EQUIPMENT FOR THE AV SYSTEM THAT WILL PROVIDE CONTENT TO THE VIDEO PROJECTOR LOCATED NEAR THE CATWALK FOR FRONT PROJECTION ONTO A MOTORIZED SCREEN LOCATED BEHIND THE CURTAIN ON STAGE. THIS SCREEN IS PROVIDED BY OTHERS (NOT IN THIS SCOPE OF WORK). THE BOOTH EQUIPMENT RACK WILL ALSO BE THE LOCATION FOR THE SYSTEM POWER SEQUENCER, CD MEDIA PLAYER, AND DVD PLAYER. THE BOOTH ALSO INCLUDES CEILING MOUNTED SPEAKERS THAT ALLOW FOR MONITORING OF THE HOUSE MIX INSIDE THE BOOTH. THE BOOTH EQUIPMENT RACK IS THE LOCATION FOR ALL OF THE LOBBY AUDIO SYSTEM EQUIPMENT. THE LOBBY IS EQUIPPED WITH AN AUDIO ONLY SYSTEM FOR USE WITH BOTH WIRED AND WIRELESS MICROPHONES AS WELL A DIRECT AUDIO FEED FROM THE MAIN PERFORMANCE AREA. THIS WILL ALLOW THE LOBBY AREA TO BE USED AS A PRE-FUNCTION OR OVERFLOW AREA.

BICSI
LEONARD THOMAS SORRELL
BICSI ID # 157133
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STATE OF OHIO JEFFREY ALLEN MILLARD 61417 REGISTERED PROFESSIONAL ENGINEER

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18620.00	2021/03/01
Drawn: BAK	Drawing No.: E507
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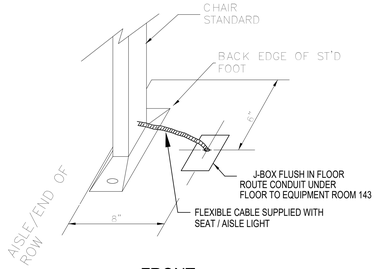
TYPE TD FIXTURES (SEAT LIGHTS MOUNTED ON END STANDARDS OF SEATS WHERE INDICATED ON DRAWINGS)



FRONT

3 AISLE LIGHT - TYPE "TD"
SCALE: 1" = 1'-0"

OCCUPANCY CONTROLS

OS$_A$ - OCCUPANCY SENSOR (A) CORRIDOR

A. BUSINESS HOURS LIGHTS ARE ON.
B. AFTER HOURS LIGHTING AUTO ON TO 100% WHEN OCCUPANCY DETECTED.
C. LIGHTING AUTO OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.
D. NORMAL POWER FAILURE EMERGENCY LIGHTING SHALL REVERT TO 100% ON.

OS$_B$ - OCCUPANCY SENSOR (B) RESTROOM

A. FOR EACH RESTROOM, LIGHTING AUTO ON TO 100% AND EXHAUST FAN (IF APPLICABLE) TO AUTO ON WHEN OCCUPANCY IS DETECTED.
B. LIGHTING AND EXHAUST FAN (IF APPLICABLE) TO AUTO OFF FOR EACH RESTROOM WITHIN 10 MINUTES OF OCCUPANTS LEAVING.
C. NORMAL POWER FAILURE EMERGENCY LIGHTING SHALL REVERT TO 100% ON.

OS$_C$ - OCCUPANCY SENSOR (C)

A. LIGHTING AUTO ON TO 100% WHEN OCCUPANCY IS DETECTED.
B. LIGHTING TO AUTO 50% OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.
C. REMAINING 50% WILL REMAIN ON CONTINUOUSLY TO PROVIDE FAILSAFE EMERGENCY OR NORAML EGRESS.

OS - OCCUPANCY SENSOR - MEDIUM STORAGE, CLOSETS

A. LIGHTING AUTO ON TO 100% WHEN OCCUPANCY DETECTED.
B. LIGHTING AUTO OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.

$OS - OCCUPANCY SENSOR SWITCH

A. LIGHTING AUTO ON TO 100% WHEN OCCUPANCY DETECTED.
B. LIGHTING AUTO OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.

VACANCY CONTROLS

VS - VACANCY SENSOR

A. LIGHTING MANUAL ON VIA LOCAL SWITCH.
B. PROVIDE MANUAL CONTROL OF DIMMING FOR LIGHTING VIA MASTER RAISE/LOWER WITH DIMMER SWITCH.
C. LIGHTING AUTO OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.
D. NORMAL POWER FAILURE EMERGENCY LIGHTING SHALL REVERT TO 100% ON.

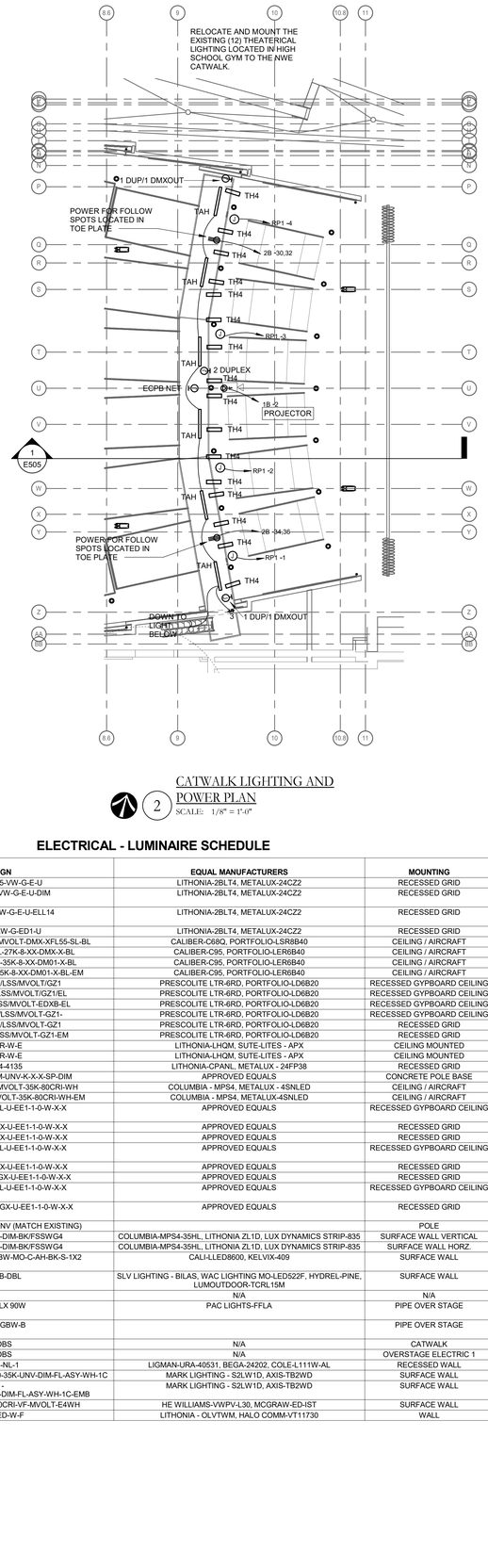
$VS - VACANCY SWITCH

A. PROVIDE MANUAL CONTROL OF DIMMING FOR LIGHTING VIA MASTER RAISE/LOWER WITH DIMMER SWITCH.
B. LIGHTING AUTO OFF WITHIN 20 MINUTES OF OCCUPANTS LEAVING.

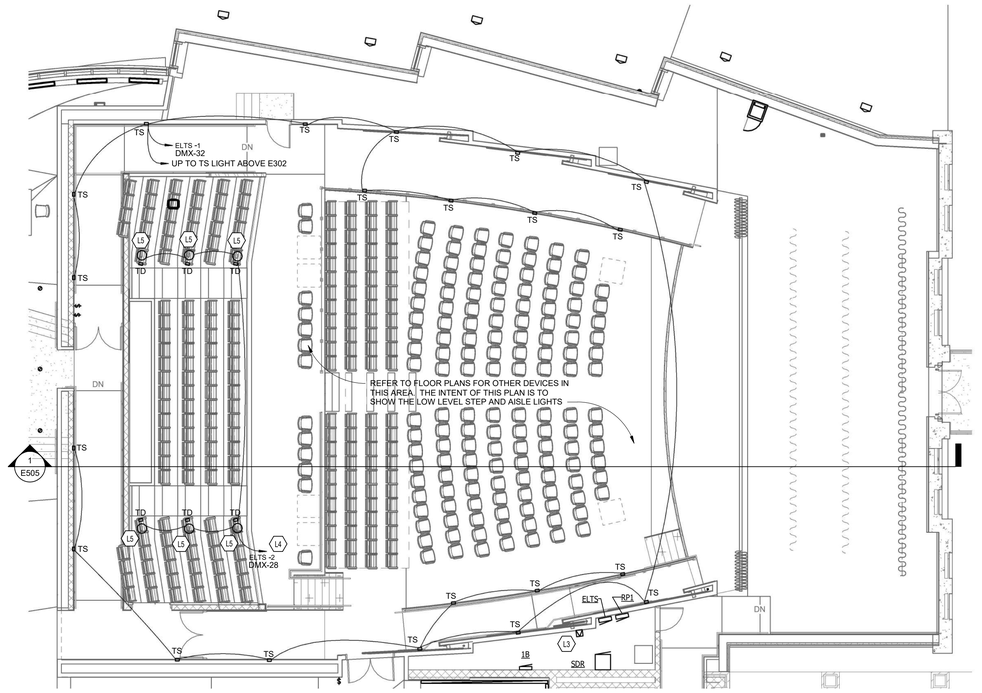
SCENE CONTROLS

$LV1 - 4 SCENE, ON/OFF, RAISE/LOWER

A. GENERAL LIGHTING IS TO BE MANUAL ON. PROGRAM SYSTEM TO MAINTAIN AN AVERAGE OF 50FC MAX IN SPACE.
B. MANUAL CONTROL OF DIMMING FOR LIGHTING ZONES VIA RAISE/LOWER FUNCTION ON CONTROL STATION.
C. CONTROL STATION TO ALSO HAVE (4) PROGRAMMABLE PRESET SCENES. INITIAL PROGRAMMING SHALL BE:
   a. 15%
   b. 40%
   c. 75%
   d. 100%
D. FOR CLASSROOMS WITH PHOTOCELLS, LIGHTING WILL CONTINUOUSLY DIM BASED ON DAYLIGHTING CONTRIBUTION TO MAINTAIN THE MAXIMUM OF THE ROOM DIMMER LEVELS. LIGHTING FIXTURES ON DAYLIGHT ZONE ARE LABELED WITH A LOWERCASE "d".
E. AUTO OFF ALL FIXTURES WITHIN 20 MINUTES OF OCCUPANTS LEAVING. AUTO OFF FOR THE HEATPUMP SERVING THIS SPACE SHALL ALSO BE INCLUDED WITHIN 20 MINUTES OF OCCUPANTS LEAVING. IF TWO OR MORE CLASSROOMS ARE SERVED BY ONE HEATPUMP, OCCUPANCY IN EITHER ROOM SHALL KEEP THE HEAT PUMP ON.
F. NORMAL POWER FAILURE EMERGENCY LIGHTING SHALL REVERT TO 100% ON.



CATWALK LIGHTING AND POWER PLAN
2 SCALE: 1/8" = 1'-0"



ELECTRICAL LIGHTING AISLE AND STEP LIGHT PLAN
1 SCALE: 1/8" = 1'-0"

ELECTRICAL - LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	EQUAL MANUFACTURERS	MOUNTING	LAMPS / CCT	MINIMUM LUMENS	MAXIMUM WATTAGE	VOLTAGE	REMARKS
A2	2'X4' LED CONTEMPORARY ARCHITECTURAL TROFFER WITH ACRYLIC CURVED CENTER LENS	HUBBELL - LCAT24-80-35-VW-G-E-U	LITHONIA-2BLT4, METALUX-24CZ2	RECESSED GRID	LED / 3500K	3124	28	120	
A2D	2'X4' LED CONTEMPORARY ARCHITECTURAL TROFFER WITH ACRYLIC CURVED CENTER LENS. PROVIDE WITH 0-10V DIMMING TO 1%	HUBBELL - LCAT24-80-35-VW-G-E-U-DIM	LITHONIA-2BLT4, METALUX-24CZ2	RECESSED GRID	LED / 3500K	3124	28	120	
A2E	2'X4' LED CONTEMPORARY ARCHITECTURAL TROFFER WITH ACRYLIC CURVED CENTER LENS. PROVIDE WITH 1400 LUMEN BATTERY PACK INSTALLED.	HUBBELL - LCAT24-80-35-VW-G-E-U-ELL14	LITHONIA-2BLT4, METALUX-24CZ2	RECESSED GRID	LED / 3500K	3124	28	120	
A5	2X2 LED CONTEMPORARY ARCHITECTURAL TROFFER WITH ACRYLIC CURVED CENTER LENS. PROVIDE WITH DIMMING.	HUBBELL - LCAT22-35-LW-G-ED1-U	LITHONIA-2BLT4, METALUX-24CZ2	RECESSED GRID	LED / 3500K	3063	23	120	
C1	10" DMX LED CYLINDER, DMX CONTROL, AND BLANK HOUSING. DIM TO LESS THAN 1%	PRESCOLITE - MC10LED-P-BL-27K-8-MVOLT-DMX-XFL55-SL-BL	CALIBER-C6BQ, PORTFOLIO-L-SR6B40	CEILING / AIRCRAFT	LED / 2700K	8000	78	120	
C2	6" ROUND LED CYLINDER, DMX CONTROL, AND BLANK HOUSING.DIM TO LESS THAN 1%	PRESCOLITE -LTC-6RDW-CM-55L-27K-8-XX-DMX-X-BL	CALIBER-C95, PORTFOLIO-LER6B40	CEILING / AIRCRAFT	LED / 2700K	5500	54	120	
C3	6" ROUND LED CYLINDER AND BLANK HOUSING. DIM TO LESS THAN 1%	PRESCOLITE -LTC-6RDW-CM-55L-35K-8-XX-DM01-X-BL	CALIBER-C95, PORTFOLIO-LER6B40	CEILING / AIRCRAFT	LED / 3500K	5500	54	120	
C3E	6" ROUND LED CYLINDER AND BLANK HOUSING. PROVIDE WITH EMERGENCY BATTERY	PRESCOLITE -LTC-6RDW-CM-55L-35K-8-XX-DM01-X-BL-EM	CALIBER-C95, PORTFOLIO-LER6B40	CEILING / AIRCRAFT	LED / 3500K	5500	54	120	
D3	6" RECESSED CAN LIGHT FIXTURE. PROVIDE BAR HANGERS	GOTHAM - EV06-40/20/AR/MD/LSS/MVOLT/GZ1	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GYPBOARD CEILING	LED / 3500K	2000	19	120	
D3E	6" RECESSED CAN LIGHT FIXTURE. PROVIDE BAR HANGERS. PROVIDE WITH EMERGENCY BATTERY PACK	GOTHAM - EV06-40/20/AR/MD/LSS/MVOLT/GZ1/EL	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GYPBOARD CEILING	LED / 3500K	2000	19	120	
D4	6" RECESSED CAN LIGHT FIXTURE. DIMMING WITH DMX LESS 1%	GOTHAM - EV06-27/20/AR/MD/LSS/MVOLT-ED XB-EL	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GYPBOARD CEILING	LED / 2700K	2000	19	120	
D5	6" RECESSED CAN LIGHT FIXTURE. DIMMING	GOTHAM - EV06-35/40/AR/ND/LSS/MVOLT-GZ1-	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GYPBOARD CEILING	LED / 3500K	4000	39	120	
D6	6" RECESSED CAN LIGHT FIXTURE.	GOTHAM - EV06-27/20/AR/MD/LSS/MVOLT-GZ1	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GRID	LED / 3500K	2000	19	120	
D6E	6" RECESSED CAN LIGHT FIXTURE.	GOTHAM - EV06-27/20/AR/MD/LSS/MVOLT-GZ1-EM	PRESCOLITE LTR-6RD, PORTFOLIO-LD6B20	RECESSED GRID	LED / 3500K	2000	19	120	
EX1	LED SINGLE SIDED EXIT SIGN. RED LETTERS	HUBBELL - EVE-U-R-W-E	LITHONIA-LHQM, SUTE-LITES - APX	CEILING MOUNTED	N/A		2	120	
EX2	LED DOUBLE SIDED EXIT SIGN. RED LETTERS	HUBBELL - EVE-U-R-W-E	LITHONIA-LHQM, SUTE-LITES - APX	CEILING MOUNTED	N/A		2	120	
F4	2'X4' LED FLAT PANEL	COLUMBIA - CFP24-4135	LITHONIA-CPANL, METALUX - 24FP38	RECESSED GRID	LED / 3500K	4069	35	120	
FL1	LED GROUND MOUNTED FLOOD LIGHT	HUBBELL - RFL3-360L-130-4K7-M-UNV-K-X-X-SP-DIM	APPROVED EQUALS	CONCRETE POLE BASE	LED/4000K			120	
K1	2'X2'X4' LED STRIPLIGHT	LITHONIA - ZL1D-48-3000LM-FST-MVOLT-35K-80CRI-WH	COLUMBIA - MPS4, METALUX - 4SNLED	CEILING / AIRCRAFT	LED / 3500K	3000	30	120	
K1E	2'X2'X4' LED STRIP LIGHT WITH EMERGENCY BATTERY	LITHONIA - ZL1D-48-3000LM-FST-MVOLT-35K-80CRI-WH-EM	COLUMBIA - MPS4, METALUX-4SNLED	CEILING / AIRCRAFT	LED / 3500K	3000	30	120	
L10F	3'X10' LED RECESSED LINEAR WITH 1/2" FLANGE FOR GYPBOARD CEILING. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-10'-FL-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GYPBOARD CEILING	LED / 3500K	500 LM/FT	48	120	
L11	3"X11' LED RECESSED LINEAR. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-11'-GX-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GRID	LED / 3500K	500 LM/FT	53	120	
L12	3"X12' LED RECESSED LINEAR. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-12'-GX-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GRID	LED / 3500K	500 LM/FT	58	120	
L12F	3"X12' LED RECESSED LINEAR WITH 1/2" FLANGE FOR GYPBOARD CEILING. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-12'-FL-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GYPBOARD CEILING	LED / 3500K	500 LM/FT	58	120	
L13	3"X13' LED RECESSED LINEAR. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-13'-GX-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GRID	LED / 3500K	500 LM/FT	62	120	
L16	3"X16'0" LED RECESSED LINEAR. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-16'6"-GX-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GRID	LED / 3500K	500 LM/FT	77	120	
L17F	3"X17 LED RECESSED LINEAR WITH 1/2" FLANGE FOR GYPBOARD CEILING. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-17'-FL-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GYPBOARD CEILING	LED / 3500K	500 LM/FT	82	120	
L26	3"X26'10" LED RECESSED LINEAR. CONTRACTOR TO DETERMINE LENGTH IN FIELD SO FIXTURE WILL RUN WALL TO WALL	PINNACLE-EV3D-WHE-35-26'10"-GX-U-EE1-1-0-W-X-X	APPROVED EQUALS	RECESSED GRID	LED / 3500K	500 LM/FT	128	120	
P1	LED AREA LIGHT ON 12'-0" POLE. MATCH EXISITNG LIGHTING INSTALLED IN ELEM. SCHOOL.	HUBBELL - RAR1-160L-100-4K7-5-UNV (MATCH EXISTING)		POLE	LED/4000K		70	120	
TA	4" LED HIGH PREFORMANCE STRIP LIGHT. MOUNTED VERTICAL. PROVIDE WIRE GUARDS AND BLACK FINISH.	PHILLIPS - FSS4-55L-840-UNV-DIM-BK/FSSWG4	COLUMBIA-MPS4-35HL, LITHONIA ZL1D, LUX DYNAMICS STRIP-835	SURFACE WALL VERTICAL	LED / 3500K	6000	45	120	
TAH	4" LED HIGH PREFORMANCE STRIP LIGHT. MOUNTED HORIZ. PROVIDE WIRE GUARDS AND BLACK FINISH.	PHILLIPS - FSS4-55L-840-UNV-DIM-BK/FSSWG4	COLUMBIA-MPS4-35HL, LITHONIA ZL1D, LUX DYNAMICS STRIP-835	SURFACE WALL HORZ.	LED / 3500K	6000	45	120	
TB	WALL MOUNTED LED LINEAR RGBW GRAZING SYSTEM WITH FROST LENS. PROVIDE ALL ENDCAPS, MOUNTING HARDWARE FOR FIXTURE AND REMOTE DRIVER.	LUMINII - KM-[ESTIMATED 24']-RGBW-MO-C-AH-BK-S-1X2	CALI-LED8600, KELVIX-409	SURFACE WALL	LED /RGBW	156 LM/FT	140	120	CONTRACTOR TO FIELD VERIFY EXACT LENGTH IN FIELD PRIOR TO ORDERING. ESTIMATED LENGTH SHOWN FOR BIDDING ONLY.
TBA	SURFACE MOUNTED BULLET WALL MOUNTED LIGHT. FIXTURES COLOR TO BE BLACK WITH FLAT DARK BLUE LENS	VISATAPRO-1007-B-DBL	SLV LIGHTING - BILAS, WAC LIGHTING MO-LED522F, HYDREL-PINE, LUMOUTDOOR-TCRL15M	SURFACE WALL		1037	50	120	
TD	LED AISLE LIGHT. LIGHT AND 12 VOLT TRANSFORMER BY SEAT MANUFACTURE.	BY OTHERS	N/A	N/A			0	120	
TH1	LED WORK / FLOOD LIGHT. IP65. PROVIDE ALL CLAMPS, CONNECTORS, AND 30" SAFETY CABLE W/SPRING HOOK. BLACK FINISH	OSRAM - KREIOS FLX 90W	PAC LIGHTS-FFLA	PIPE OVER STAGE	LED / 3500K	5000	90	120	
TH2	RGBW LED PAR WITH MOTORIZED ZOOM AND UNIVERAL PSU-BLACK. PROVIDE ALL CLAMPS AND 30" BLACK SAFETY CABLE WITH SPRING HOOK	ALTMAN - AP-150-RGBW-B		PIPE OVER STAGE	LED /RGBW	1600	135	120	
TH4	LED FOUR COLOR SPOTS	ETC - CSSPOTDBS	N/A	CATWALK	LED /RGBW	6932	166	120	
TH5	LED FOUR COLOR SPOTS	ETC - CSSPOTDBS	N/A	OVERSTAGE ELECTRIC 1	LED /RGBW	6932	166	120	
TS	5"x5" LED STEP LIGHT	TIVOLI - VET-27-B-NL-1	LIGMAN-URA-40531, BEGA-24202, COLE-L111W-AL	RECESSED WALL	LED / 2700K	169	23	120	
W3	LINEAR DIRECT / INDIRECT 2" LED WALL MOUNTED. DIMMING 0-10V. WHIITE FINISH	3G LIGHTING - 3G-2WL1-D1-L750-L750-S80-35K-UNV-DIM-FL-ASY-WH-1C	MARK LIGHTING - S2LW1D, AXIS-TB2WD	SURFACE WALL	LED / 3500K	750 LM/FT	50	120	
W3E	LINEAR DIRECT / INDIRECT 2" LED WALL MOUNTED.DIMMING 0-10V. WHIITE FINISH. PROVIDE WITH INTEGRAL BATTERY	3G LIGHTING - 3G-2WL1-D1-L750-L750-S80-35K-UNV-DIM-FL-ASY-WH-1C-EMB	MARK LIGHTING - S2LW1D, AXIS-TB2WD	SURFACE WALL	LED / 3500K	750 LM/FT	50	120	
W4E	WALL MOUNTED EGRESS LIGHT	LITHONIA - WDGE1 LED-P2-35K-80CRI-VF-MVOLT-E4WH	HE WILLIAMS-VWPV-L30, MCGRAW-ED-IST	SURFACE WALL	LED/4000K	2000	15	120	
W5	LED EXTERIOR WORK LIGHT MOUNTED ROOF TOP UNIT WITH CLEAR GLASS	CANLET-01-12W-LED-W-F	LITHONIA - OLVTWM, HALO COMM-VT11730	WALL	LED / 3500K	1548	12	120	

GENERAL NOTES (LUMINAIRE SCHEDULE):

A. ALL LUMINAIRES AND COMPONENTS SHALL BE UL LISTED.
B. WHERE LUMINAIRES ARE SHOWN SPLIT-WIRED (HALF EMERGENCY POWER/ HALF NORMAL POWER) ON FLOOR PLANS, LUMINAIRES SHALL BE PROVIDED WITH MULTIPLE ELECTRONIC BALLASTS FOR MULTIPLE POWER CIRCUITS AS INDICATED ON FLOOR PLANS.
C. PROVIDE BALLASTS FOR FIXTURE LAMP SWITCHING AS INDICATED ON LIGHTING FLOOR PLANS. WHERE A SINGLE FIXTURE IS POWERED FROM NORMAL AND EMERGENCY POWER, HALF OF THE LAMPS WITH A MINIMUM OF TWO LAMPS SHALL BE ON EMERGENCY POWER.
D. CONTRACTOR SHALL FOCUS, AIM AND ADJUST LUMINAIRES UNDER THE SUPERVISION AND DIRECTION OF THE ENGINEER AND ARCHITECT. ALLOW LABOR FOR FINAL FOCUS AND ADJUSTMENTS AFTER DARK. LIFTS AND SCAFFOLDING SHALL BE AVAILABLE.
E. ALL LAY-IN FIXTURES SHALL BE PROVIDED WITH SCREW ON HOLD DOWN CLIPS AND MAXIMUM 6'-0" LONG FLEXIBLE CONDUIT WHIPS.
F. EXIT SIGNS AND FIXTURES THAT ARE HATCHED OR WHERE THE FIXTURE TYPE CONTAINS THE SUFFIX "E" FOR EMERGENCY OPERATION SHALL HAVE AN INTEGRAL 90 MINUTE BATTERY INVERTER IF NOT POWERED FROM AN EMERGENCY GENERATOR.
G. ALL BATTERY POWERED FIXTURES SHALL HAVE TEST SWITCHES FACTORY INSTALLED INTEGRAL TO THE REFLECTOR, REMOTE TEST SWITCHES WILL NOT BE ACCEPTED.

No.	Revisions / Submissions	Date

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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

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ELECTRICAL ELARGED PLANS AND LUMINAIRE SCHEDULE

CMTA
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513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO — JEFFREY ALLEN MILLARD — E-57012 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E600
Checked: JAM/JRH	

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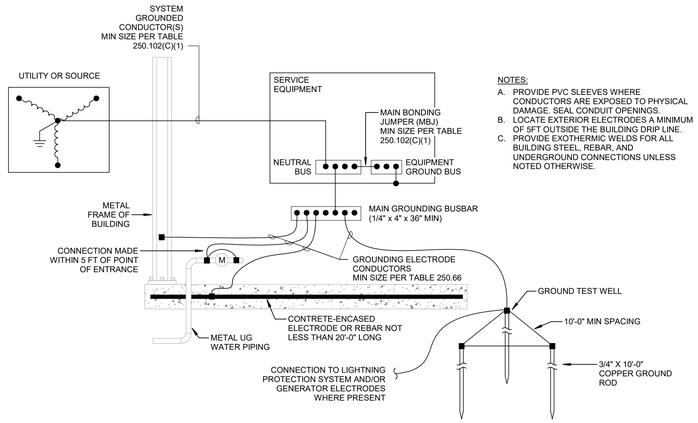
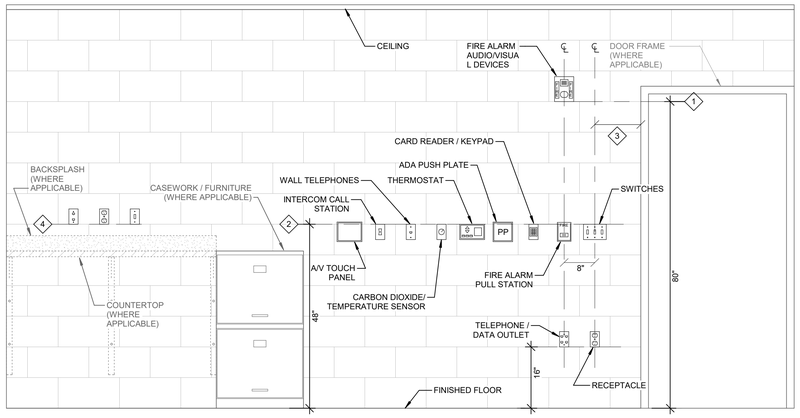


NOTES:

A. PROVIDE PVC SLEEVES WHERE CONDUCTORS ARE EXPOSED TO PHYSICAL DAMAGE. SEAL CONDUIT OPENINGS.
B. LOCATE EXTERIOR ELECTRODES A MINIMUM OF 5FT OUTSIDE THE BUILDING DRIP LINE.
C. PROVIDE EXOTHERMIC WELDS FOR ALL BUILDING STEEL, REBAR, AND UNDERGROUND CONNECTIONS UNLESS NOTED OTHERWISE.

5 GROUNDING ELECTRODE SYSTEM DETAIL

SCALE: N.T.S.



DEVICE MOUNTING DETAIL - GENERAL NOTES:

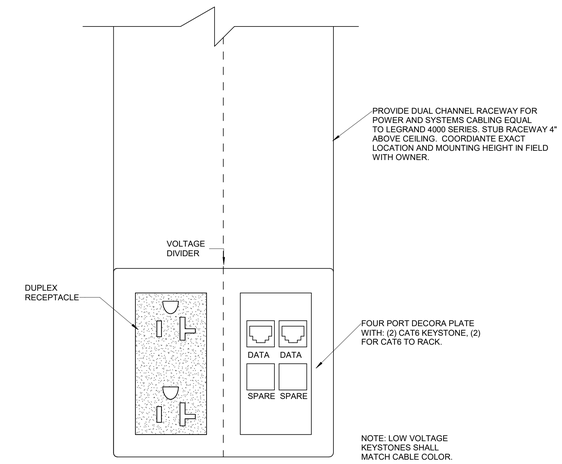
A. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN TO BE MOUNTED AT A SIMILAR HEIGHT, ALIGN HORIZONTALLY ALONG TOP OF DEVICE BACKBOX (AS SHOWN IN DETAIL AND DESCRIBED IN KEY NOTE #2).
B. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN MOUNTED AT DIFFERENT HEIGHTS, ALIGN VERTICALLY ALONG THE CENTERLINE OF THE DEVICE BACKBOX (AS SHOWN IN DETAIL).
C. FOR ANY WALL OTHER THAN PAINTED GYPSUM BOARD OR CMU, DEVICE LOCATIONS MUST BE FIELD APPROVED BY ENGINEER OR ARCHITECT PRIOR TO INSTALLATION OF FINISHES.

DEVICE MOUNTING DETAIL - KEY NOTES: (X)

1. MOUNT VISUAL NOTIFICATION APPLIANCES SO THAT ENTIRE LENS IS BETWEEN 80" AND 96" AFF. IF CEILING IS TOO LOW FOR DEVICE TO BE MOUNTED ABOVE 80", MOUNT SO THAT THE LENS IS WITHIN 6" OF FINISHED CEILING.
2. ALIGN BACKBOXES OF DEVICES AT THE MOUNTING HEIGHT INDICATED. MEASURE TO THE TOP OF THE BACKBOX FOR STANDARD OUTLET BOXES. NON-STANDARD BACKBOXES ARE TO BE INSTALLED SUCH THAT THE FINISHED DEVICES ARE ALIGNED ALONG THEIR RESPECTIVE CENTERLINES.
3. MOUNTING HEIGHTS SHOWN ILLUSTRATE DESIGN INTENT AND ARE TO BE FOLLOWED UNLESS CONTRADICTED BY APPLICABLE CODE. WHERE DEVICES ARE SHOWN ADJACENT TO DOOR FRAMES ON PLANS INSTALL 12" FROM FRAME TO AVOID SLUSHED SECTIONS OR BRACING. SPECIFIC DEVICES ARE SHOWN IN RELATIVE ORDER FROM DOOR FRAME; WHERE THESE DEVICES ARE NOT PRESENT AT A PARTICULAR LOCATION, ADJUST LOCATIONS CLOSER TO DOOR ACCORDINGLY.
4. THE CONTRACTOR IS TO COORDINATE ALL ROUGH-INS WITH ANY COUNTERTOPS/BACKSPLASHES TO AVOID CONFLICT. ALIGN DEVICE BACKBOXES IN THE BOTTOM OF THE NEXT FULL BLOCK ABOVE THE BACKSPLASH AS SHOWN. FOR NON-BLOCK WALLS ALIGN BOTTOM OF DEVICE BACKBOXES 4" ABOVE BACKSPLASH. COORDINATE WORK WITH CASEWORK AND KITCHEN SHOP DRAWINGS ACCORDINGLY. IF CONFLICT STILL ARISES CONTACT THE ENGINEER FOR DIRECTION ON HOW TO PROCEED.

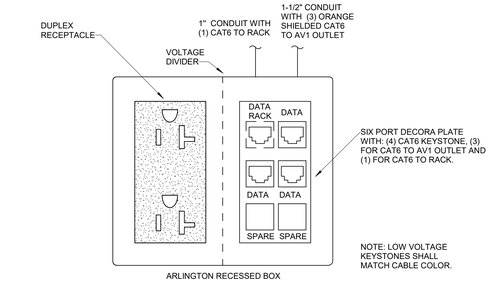
3 TYPICAL WALL DEVICE MOUNTING DETAIL

SCALE: N.T.S.



1 LOW VOLTAGE TV DETAIL SURFACE MOUNTED

SCALE: N.T.S.



2 LOW VOLTAGE T-AV DETAIL-RECESSED WALL

SCALE: N.T.S.

TYPICAL EQUIPMENT NAMEPLATE
NO SCALE

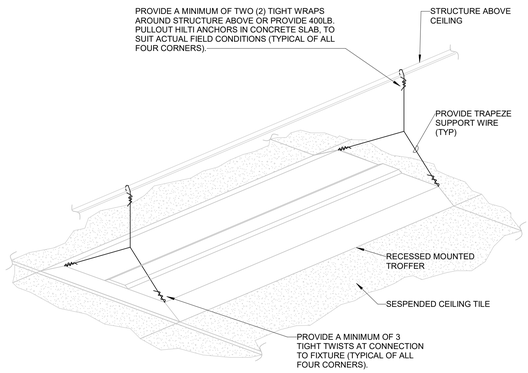
TYPICAL POWER PANEL NAMEPLATE DETAIL
NO SCALE

GENERAL NOTES:

A. NORMAL POWER LABELS SHALL BE BLACK WITH WHITE LETTERS.
B. EMERGENCY POWER LABELS SHALL BE RED WITH WHITE LETTERS. LABEL SHOULD ALSO INCLUDE THE WORD "EMERGENCY" IN 1/4" LETTERS.
C. EMERGENCY POWER LABELS IN HEALTHCARE APPLICATIONS SHOULD INCLUDE SYSTEM SEVERED "LIFE SAFETY", "CRITICAL" OR "EQUIPMENT".
D. UTILIZE SCREW-ON TYPE LAMACOID PLATES.
E. THIS DETAILS APPLIES TO ALL ELECTRICAL EQUIPMENT INCLUDING PANELS, SWITCHGEAR, DISCONNECTS, TRANSFORMERS, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES (VDF'S), SPECIAL DEVICE PLATES, INVERTER, AND SIMILAR MATERIALS SHALL BE CLEARLY MARKED AS TO THEIR FUNCTION AND USE.

8 ELECTRICAL EQUIPMENT NAMEPLATE

SCALE: N.T.S.

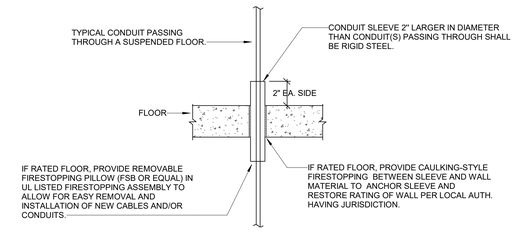


GENERAL TROFFER SUPPORT DETAIL NOTES:

A. SUPPORT WIRES SHALL BE GALVANIZED REGULAR COATING, SOFT TEMPER, 0.1055 INCHES IN DIAMETER (12 GAGE).
B. SUPPORT FIXTURE INDEPENDITLY FROM THE CEILING (GRID) SUPPORT.
C. ALTERNATELY, CONTRACTOR MAY SUPPORT FIXTURES WITH SINGLE WIRE FROM ALL FOUR CORNERS OF FIXTURE PER SPECIFICATIONS WITH NUMBER OF TWISTS AT FIXTURE AND NUMBER OF WRAPS AROUND STRUCTURE INDICATED IN THIS DETAIL.

6 LUMINAIRE SUPPORT DETAIL

SCALE: N.T.S.



GENERAL FLOOR PENETRATION NOTES:

- WHERE CONDUITS PENETRATE A FLOOR SLAB AND ARE EXPOSED, PROVIDE SQUARE 4" HIGH CONCRETEPAD AROUND CONDUIT SLEEVE AND EXTEND SLEEVE 4" ABOVE PAD.
- WHERE CONDUITS OR SLEEVES PENETRATE FLOORS IN GROUPS, THE CONCRETE PAD SHOULD BE CONTINUOUS AROUND ALL CONDUITS OR SLEEVES.

7 CONDUIT PENETRATION SLEEVE INSTALLATION

SCALE: N.T.S.

PANELBOARD SCHEDULE SYMBOLS :	
GFI	PROVIDE GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER
MLO	MAIN LUG ONLY
MCB	MAIN CIRCUIT BREAKER
VFD	VARIABLE FREQUENCY DRIVE

PANELBOARD SCHEDULE NOTES :

A. ALL NEW PANELBOARDS SHALL BE ORDERED WITH "DOOR-IN-DOOR" OPTION.
B. PROVIDE LOCK-OUT TYPE CIRCUIT BREAKERS FOR ALL HARD-WIRED EQUIPMENT. CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE HACR TYPE.
C. PROVIDE TYPEWRITTEN SCHEDULES AT ALL PANELBOARDS. INDICATE ROOM NUMBERS BEING SERVED BY CIRCUIT ON SCHEDULE.
D. PROVIDE SIX (6) SPARE 1" CONDUITS STUBBED INTO ACCESSIBLE CEILING SPACE FROM ALL NEW RECESSED PANELBOARDS.
E. PROVIDE SIX (6) SPARE 1" CONDUITS STUBBED INTO ACCESSIBLE CEILING SPACE OF FLOOR BELOW FROM ALL NEW RECESSED PANELBOARDS.

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ELECTRICAL DETAILS

JEFFREY ALLEN MILLARD 8/4/1972 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E601
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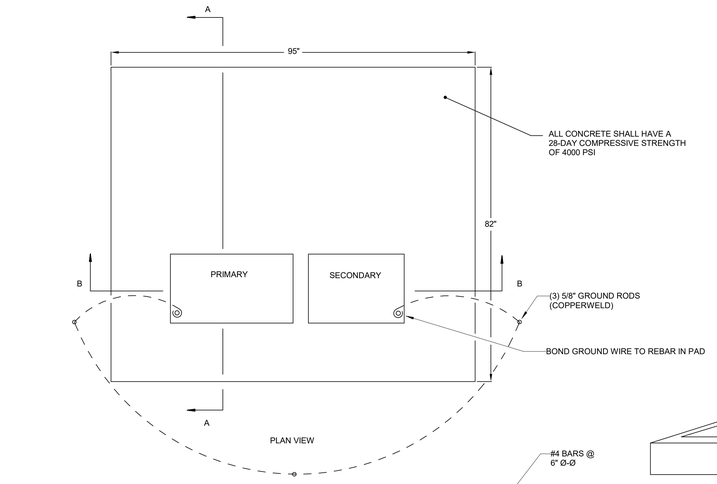
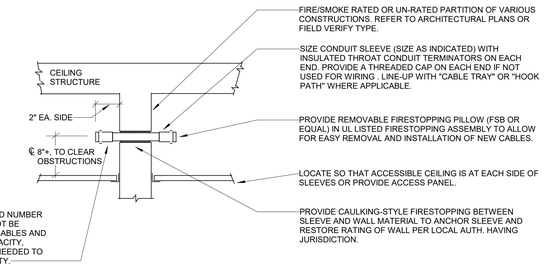


GENERAL NOTES:

A. **VERIFY ACTUAL CONCRETE PAD AND GROUNDING REQUIREMENTS FOR UTILITY TRANSFORMER WITH DAYTON POWE AND LIGHT (DP&L) PRIOR TO CONSTRUCTION.**
B. ENTIRE AREA SHALL BE BACKFILLED WITH No. 9 CRUSHED STONE (WELL COMPACTED).
C. ALL GROUND RODS SHALL BE BONDED AND TIED TOGETHER WITH No. 4 AWG SOLID BARE COPPER WIRE. WIRE SHALL BE BELOW CONCRETE PAD. BOND GROUND RODS TO RE-BAR IN PAD.
D. PAD SHALL BE INSPECTED BY BGMU ELECTRIC ENGINEERING DEPARTMENT PRIOR TO POURING CONCRETE.
E. TRANSFORMER PAD SHALL NOT BE LOCATED OVER ANY EXISTING UTILITIES.
F. 6 FT SEPARATION IS REQUIRED BETWEEN GROUND RODS.
G. TRANSFORMER PAD SHALL NOT BE LOCATED CLOSER THAN 25 FT FROM BUILDING.
H. GROUND RODS SHALL BE DRIVEN 1 FT BELOW FINISHED GRADE AND IN UNDISTURBED EARTH.
I. 6 FT OF No. 4 AWG SOLID BARE COPPER GROUND WIRE SHALL BE LEFT COILED UP IN EACH OPENING.

1 PAD MOUNTED UTILITY TRANSFORMER CONCRETE PAD AND GROUNDING DETAIL

SCALE: N.T.S.

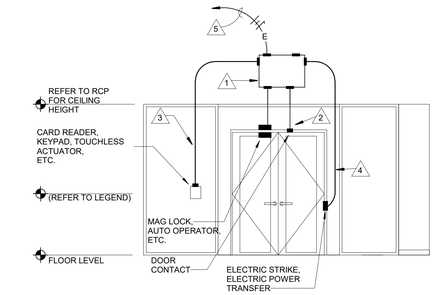


GENERAL NOTES:

A. PROVIDE ONE 2" SPARE CONDUIT SLEEVE THROUGH ALL FULL HEIGHT PARTITIONS FOR FUTURE USE. LABEL AS SPARE FOR OWNER'S USE ONLY. REFER TO ARCHITECTURAL PLANS FOR FULL HEIGHT PARTITION LOCATIONS.
B. USE AT ALL "OPEN" TYPE CABLING PENETRATIONS THROUGH WALLS, FLOORS, ETC.

7 SYSTEMS CABLING SLEEVE INSTALLATION

SCALE: N.T.S.

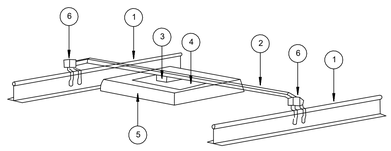


ACCESS CONTROL SYSTEM (TAGGED NOTES)

1. DOOR JUNCTION PANEL ABOVE DOOR PROVIDED AND INSTALLED BY THE ACCESS CONTROL VENDOR/CONTRACTOR. REFER TO DOOR HARDWARE SPECIFICATIONS AND FLOOR PLANS FOR ALL LOCATIONS.
2. PROVIDE CONDUIT STUB-OUT FROM DOOR FRAME TO 6" ABOVE CEILING AT DOOR LOCATION AS REQUIRED FOR DOOR POSITION CONTACT SWITCHES, AUTO OPERATORS, MAGNETIC LOCKS, ETC. PROVIDE ADDITIONAL CONDUITS AND LOCATIONS AS REQUIRED FOR ADDITIONAL DEVICES. REFER TO DOOR HARDWARE SPECIFICATIONS AND FLOOR PLANS FOR DEVICES REQUIRED.
3. PROVIDE CONDUIT STUB-OUT FROM DOOR OPERATOR DEVICE 6" ABOVE CEILING AT DOOR LOCATION AS REQUIRED FOR CARD READERS, TOUCHLESS ACTUATORS, KEYPADS, ETC. PROVIDE ADDITIONAL CONDUITS AT LOCATIONS AS REQUIRED FOR ADDITIONAL DEVICES. REFER TO DOOR HARDWARE SPECIFICATIONS AND FLOOR PLANS FOR DEVICES REQUIRED.
4. PROVIDE CONDUIT STUB-OUT FROM DOOR FRAME TO 6" ABOVE CEILING AT DOOR LOCATION AS REQUIRED FOR FOR ELECTRIC POWER TRANSFER, ELECTRIC STRIKE, ETC. PROVIDE ADDITIONAL CONDUITS AT LOCATIONS AS REQUIRED FOR ADDITIONAL DEVICES. REFER TO DOOR HARDWARE SPECIFICATIONS AND FLOOR PLANS FOR DEVICES REQUIRED.
5. ROUTE 120V EMERGENCY LIFE-SAFETY POWER TO ALL DOOR POWER SUPPLIES, AUTO DOOR OPERATORS, ETC. AS REQUIRED. REFER TO DOOR HARDWARE SPECIFICATIONS AND FLOOR PLANS FOR DEVICES REQUIRED.

ACCESS CONTROL SYSTEM (GENERAL NOTES)

- PROVIDE ALL NECESSARY BACKBOXES, CONDUITS AND ROUGH-INS REQUIRED. REFER TO DOOR HARDWARE SPECIFICATIONS FOR DOOR RISER REQUIREMENTS PER DOOR AND FOR EQUIPMENT ITEMS AND CONNECTIONS.
- REFER TO DOOR HARDWARE SPECIFICATIONS SECTION FOR ADDITIONAL REQUIREMENTS. PROVIDE ALL CONDUITS AND FINAL TERMINATIONS OF PATHWAYS AT ALL DOOR FRAMES, WALLS, BACKBOXES, ETX AS REQUIRED FOR WIRING PATHWAYS.
- PROVIDE 3/4" CONDUIT MINIMUM FOR ALL ACCESS CONTROL ROUGH-IN AND STUB-OUTS.



1	SUSPENDED CEILING T-RAIL	4	CISCO UNIVERSAL BRACKET, O.F.C.I.
2	T-BAR BOX HANGER, O.F.C.I.	5	CISCO ACCESS POINT, O.F.C.I.
3	BRACKET MOUNTING CLIP, O.F.C.I.	6	T-RAIL CLIP, O.F.C.I.

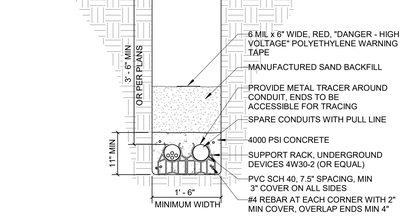
SYMBOL ON DRAWING: WAP

3 TYPICAL RECESSED WIRELESS ACCESS POINT INSTALLATION DETIAL

SCALE: N.T.S.

4 TYPICAL DOOR HARDWARE ROUGH-IN ELEVATION

SCALE: N.T.S.

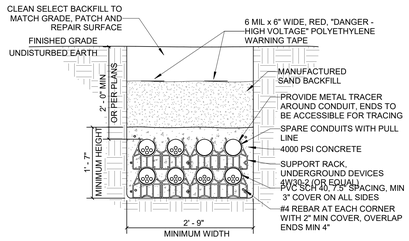


DUCT BANK NOTES:

A. USE RIGID STEEL SWEEPING ELBOWS AT ALL TURNS, WHERE RISING ON UTILITY POWER POLE, TURNING UP INTO PAD MOUNTED UTILITY TRANSFORMER AND TURNING UP INTO BUILDING.
B. REFER TO POWER RISER, FLOOR PLANS AND PLAN NOTES FOR EXACT QUANTITY AND SIZE OF CONDUITS.
C. COMMUNICATIONS/FIBER RACEWAYS SHALL BE ROUTED IN DUCT BANK ENCASED CONSTRUCTION, CONSTRUCTED SAME AS SHOWN, EXCEPT FOR NUMBER AND SIZE OF CONDUIT.
D. POUR CONCRETE AGAINST UNDISTURBED EARTH.
E. REFER TO SPECIFICATIONS FOR EXCAVATION, TRENCHING, BACKFILLING AND GRADING REQUIREMENTS. REFER TO EARTHWORK SPECIFICATIONS FOR GENERAL ROCK REMOVAL AND EARTHWORK REQUIREMENTS.

2 DUCT BANK DETAIL - 2 CONDUIT

SCALE: N.T.S.



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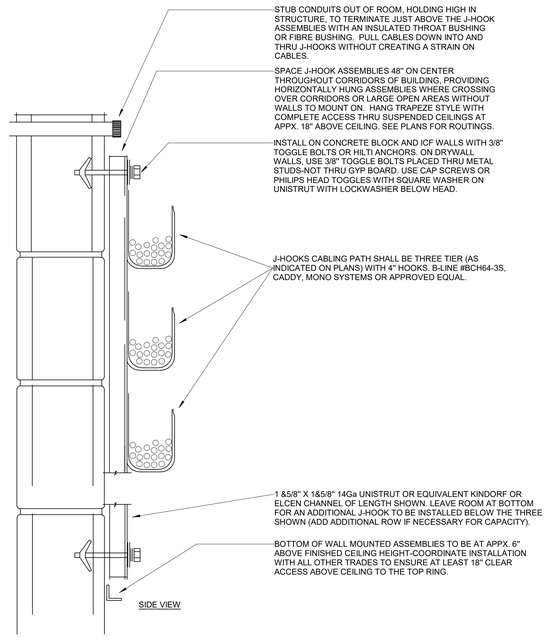
5. REFER TO SPECIFICATIONS FOR EXCAVATION, TRENCHING, BACKFILLING AND GRADING REQUIREMENTS. REFER TO EARTHWORK SPECIFICATIONS FOR GENERAL ROCK REMOVAL AND EARTHWORK REQUIREMENTS.

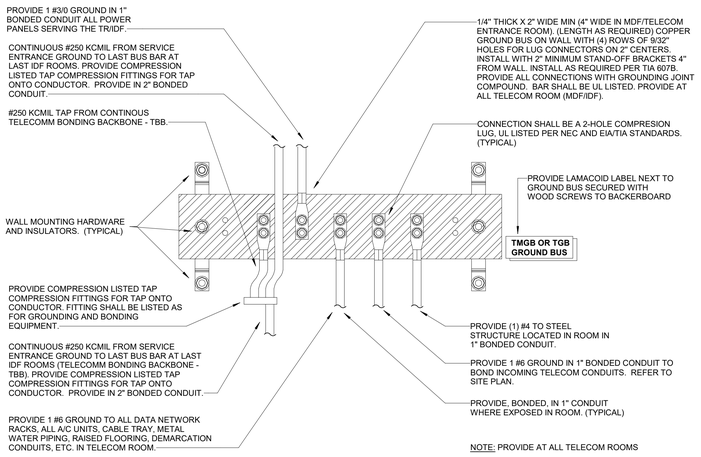
6 DUCT BANK DETAIL - 8 CONDUIT

SCALE: N.T.S.



8 LHOOK INSTALLATION DETAIL

SCALE: N.T.S.



5 TELECOM GROUNDING BUS BAR DETAIL (TGMB & TGB)

SCALE: N.T.S.

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No.	Revisions / Submissions	Date

LWC INCORPORATED
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712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

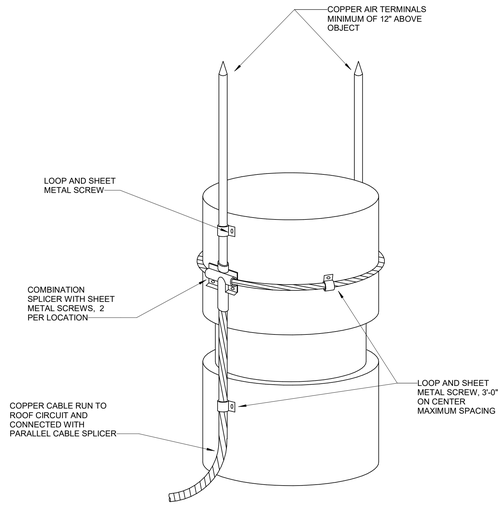
WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL DETAILS

STATE OF OHIO JEFFREY ALLEN MILLARD E-67012 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E602
Checked: JAM/JRH	

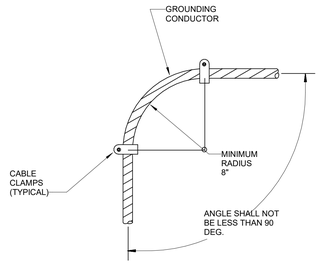


NOTE:

A. TYPICAL OF TWO (2) SIDES

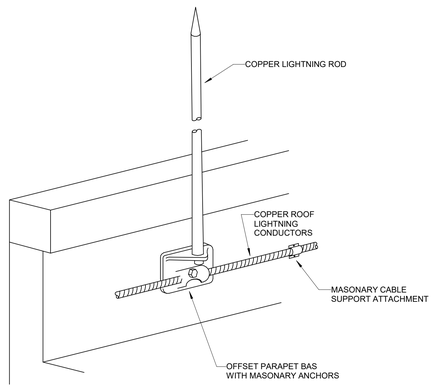
4 AIR TERMINALS FOR EXHAUST FAN

SCALE: N.T.S.



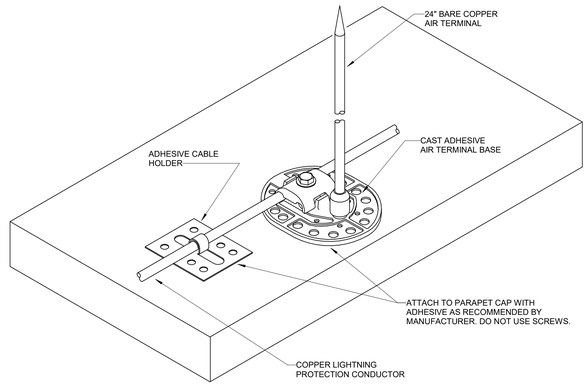
5 CONDUCTOR BEND RADIUS DETAIL

SCALE: N.T.S.



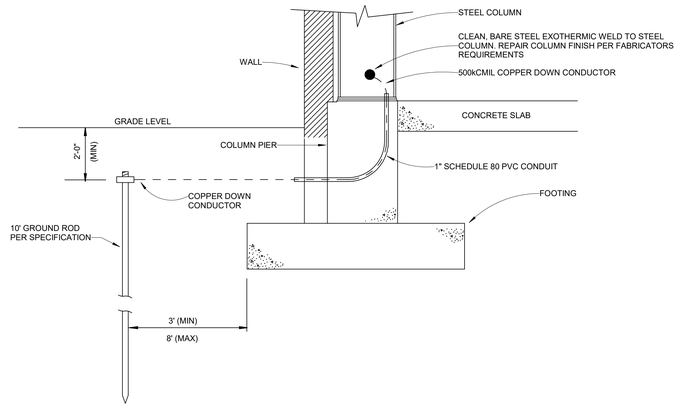
7 PARAPET WALL AIR TERMINAL

SCALE: N.T.S.



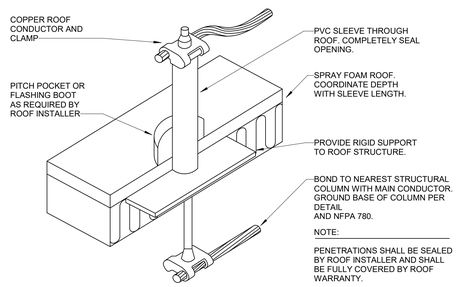
3 ADHESIVE MOUNT AIR TERMINAL DETAIL

SCALE: N.T.S.



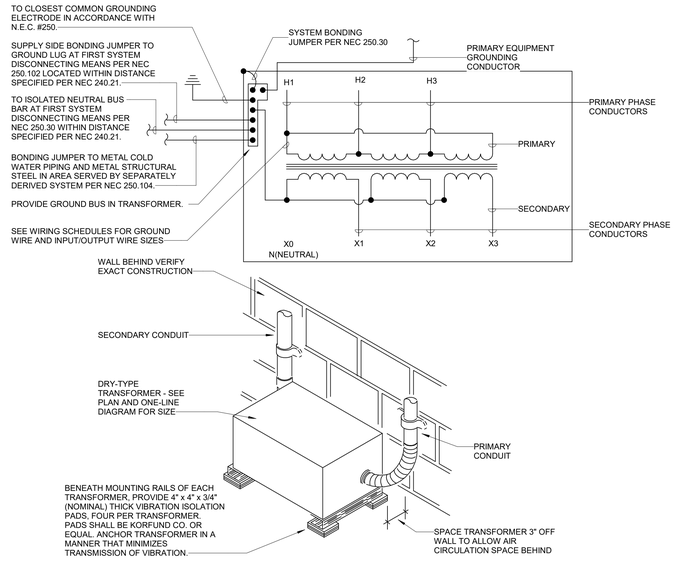
6 LIGHTNING PROTECTION COLUMN GROUNDING DETAIL

SCALE: N.T.S.



8 THRU-ROOF CABLE CONNECTOR DETAIL

SCALE: N.T.S.

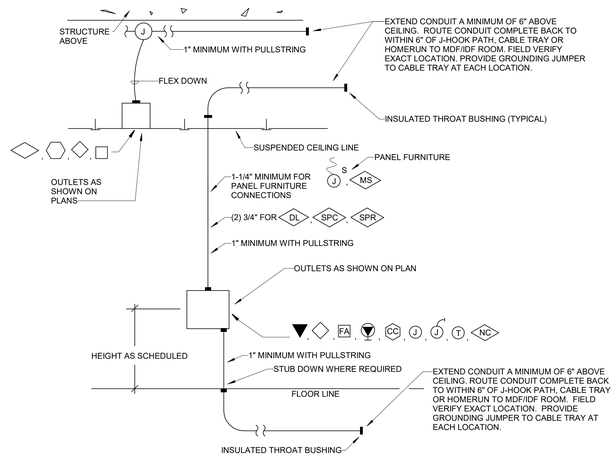


NOTE:
THE FINAL 12" TO 18" OF RACEWAY CONNECTION TO BOTH PRIMARY AND SECONDARY SIDES SHALL BE "SEALTITE" TYPE UA FLEXIBLE CONDUIT OR EQUAL, FOR VIBRATION ISOLATION.

NOTE:
ALL FLOOR - MOUNTED TRANSFORMERS 75KVA AND HIGHER TO HAVE A 4" HIGH REINFORCED CONCRETE PAD.

1 DETAIL OF TYPICAL DRY-TYPE TRANSFORMER INSTALLATION

SCALE: N.T.S.



NOTES:

A. EXTEND CONDUIT TO NEAREST WIRING PATH UNLESS CABLING TERMINATES AT ANOTHER OUTLET IN THE SAME ROOM (IN WHICH CASE, STUB CONDUIT OUT ABOVE THE ROOM'S SUSPENDED CEILING). REFER TO GENERAL NOTES LOCATED ON ALL SYSTEM'S DRAWINGS. ACCESS CONTROL CONDUITS SHALL STUB ABOVE ACCESSIBLE CEILING FOR VENDOR FURNISHED ACCESS CONTROL CABLING, ETC.
B. WHERE OPEN CABLING IS INSTALLED WITHIN ENVIRONMENT AIR PLENUMS, SUCH CABLING SHALL MEET NEC REQUIREMENTS FOR SUCH INSTALLATIONS.
C. LABEL BACK OF OUTLET BOXES AND ENDS OF CONDUIT WITH UNIQUE NUMBER TO IDENTIFY EACH STUB-UP. USE PERMANENT MARKER PEN, 3/4" HIGH LETTERS. MATCH NUMBER ON OUTLET BOX TO END OF CONDUIT
D. INSTALL TELECOMMUNICATION AND CABLE TV OUTLETS WITHIN 6" OF POWER RECEPTACLE WHERE POWER RECEPTACLE IS SHOWN ON POWER PLANS IN SAME GENERAL LOCATION.

2 ROUGHING-IN DETAIL FOR STUB-OUTS

SCALE: N.T.S.

No.	Revisions / Submissions	Date

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712 East Main Street Richmond, IN 47374 765.966.3546

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ELECTRICAL DETAILS

CMTA
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JEFFREY ALLEN MILLARD 6/4/2012 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E603
Checked: JAM/JRH	

2/26/2021 9:38:29 AM

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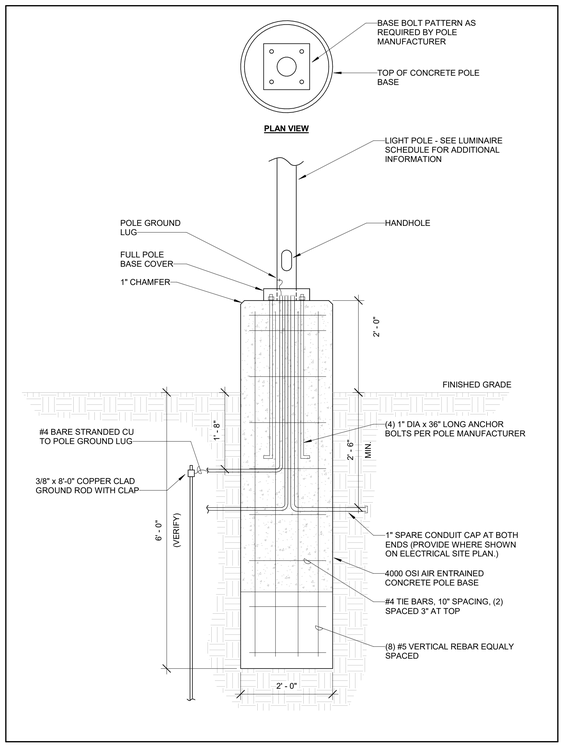
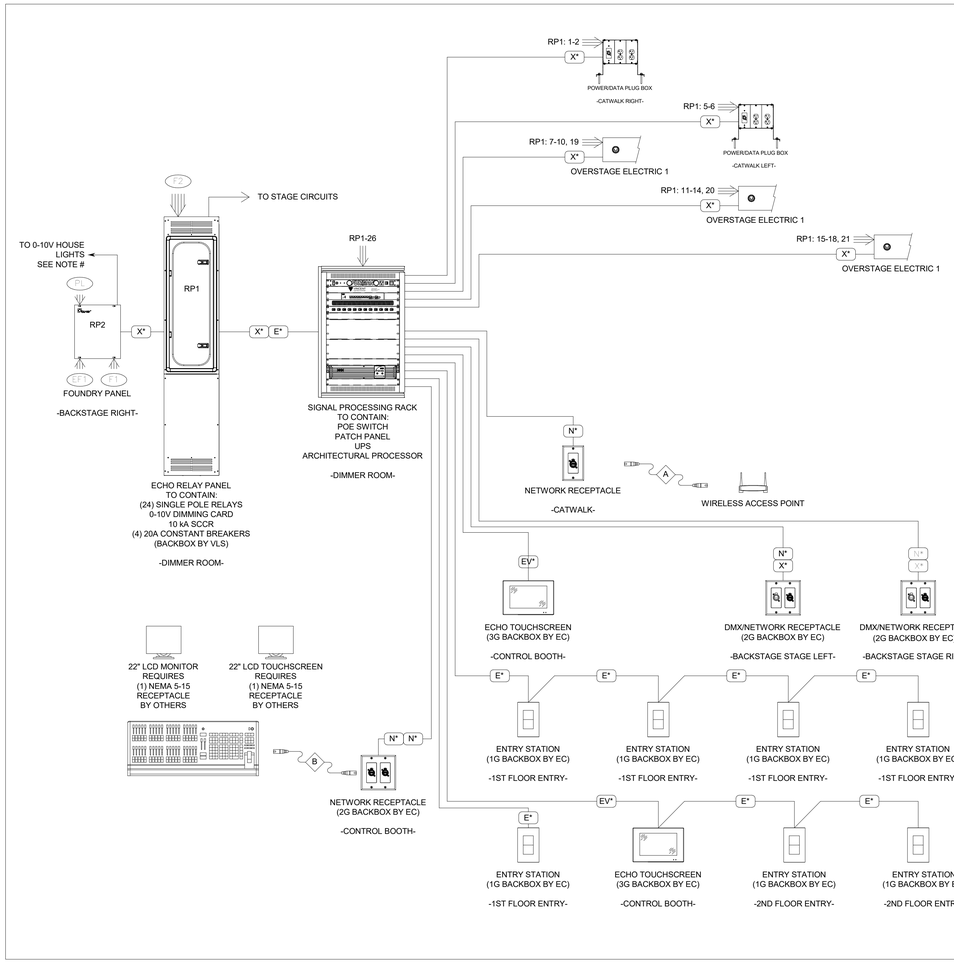


2 24" POLE BASE DETAIL
SCALE: N.T.S.



1 THEATER LIGHTING SYSTESM
SCALE: N.T.S.

PROVISIONS:

NO PART OF THIS ELECTRONIC SYSTEM SHALL BE ENERGIZED BEFORE BEING CHECKED AND INSTALLATION APPROVED BY A VINCENT LIGHTING CERTIFIED TECHNICIAN. VINCENT LIGHTING MUST BE NOTIFIED, IN WRITING, A MINIMUM OF TWO WEEKS PRIOR TO THE ACTUAL ENERGIZING OF THE SYSTEM. FAILURE TO OBSERVE THIS PROVISION SHALL AUTOMATICALLY RELIEVE VINCENT LIGHTING OF ANY RESPONSIBILITY CONCERNING THE PROPER OPERATION OF THIS SYSTEM OR ANY PART THEREOF, AND THE REPLACEMENT OF PARTS WHICH MAY HAVE BEEN DAMAGED BY THE PREMATURE ENERGIZING OF THE SYSTEM.

NOTES:

1. THIS DRAWING DOES NOT INDICATE THE NUMBER OR SIZE OF CONDUITS REQUIRED, BUT THE SEPARATION OF GROUPS OF WIRES. INTERCONNECTING WIRE AND CONDUIT NOT BY VINCENT LIGHTING.
2. WHENEVER CONTROL WIRES SHOWN MUST BE RUN CLOSE TO A.C. CONTROL AND/OR POWER CIRCUITS, THESE CONTROL WIRES MUST BE RUN IN SEPARATE METAL CONDUIT.
3. INCLUDE MINIMUM 10% SPARES IN EACH CONTROL RUN.
4. PROVIDE AN EQUIPMENT GROUND, AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, BETWEEN BUILDING SERVICE ENTRANCE AND EQUIPMENT RACKS.
5. BACK BOXES OF CONTROL STATIONS MUST BE GROUNDED.
6. DIMMING MANUFACTURER REQUIRES SEPARATE NEUTRALS FOR ALL DIMMING CIRCUITS.
7. THESE ARE NON-PLENUM WIRES. CONTACT VINCENT LIGHTING FOR PLENUM WIRE TYPES.
8. VLS RECOMMENDS THE USE OF SEPARATE JACKET COLOR OF CAT5/CAT6/CAT6A FOR DIFFERENT SIGNAL TYPES.
9. ALL NETWORK RUNS SHALL BE CONTINUOUS UNSPLICED RUNS LESS THAN 250 FEET.
10. ECHO WIRING INSTALLS TOPOLOGY FREE TO MINIMIZE TOTAL WIRE LENGTH. MAXIMUM ECHO CABLE IN SYSTEM IS NOT TO EXCEED 1,640 FEET.
11. DMX IS TO BE DAISY-CHAIN ONLY; NO STARS OR T-TAPS PERMITTED. MAXIMUM OF 32 DEVICES PER RUN. MAXIMUM RUN LENGTH NOT TO EXCEED 1,000 FEET.
12. 0-10V CONTROL FIXTURES TO BE ISOLATED CLASS 2 DRIVERS ONLY. DAMAGE THROUGH THE USE OF NON-ISOLATED CLASS 1 FIXTURE DRIVERS IS NOT COVERED. CONFIRM WIRE SIZE AND TYPE WITH MANUFACTURER. MAXIMUM OF 50mA PER RUN OF LED DRIVERS.

NEW WIRES AND CABLES BY E.C.:

CONTROL WIRE LEGEND

SYMBOL	WIRE TYPE	SIGNAL
X*	(1) BELDEN 1583A- CAT5E	DMX OUT
N*	(1) BELDEN 1583A- CAT5E	NETWORK
E*	(1) BELDEN 8471 + (1) 14AWG GND	ECHO
EV*	(1) BELDEN 8471+(1) 14AWG + (2) 16AWG	ECHO + POWER

* = WIRE IDENTIFICATION NUMBER (NOT QUANTITY)

EXTENSION CABLES:

A NETWORK EXTENSION, 5FT

B NETWORK EXTENSION, 25FT

POWER FEEDS BY E.C.:

F1 (#) 20A, 120VAC CIRCUITS

F2 3□ 4 - WIRE WITH GROUND, 120/ 208VAC 60Hz [BUSSING AND LUGS RATED FOR 200 AMPS MAX.; COPPER CONDUCTORS ONLY.]

EF1 (#) 20A, 120VAC CIRCUITS FROM EMERGENCY

PL 20A MAX, NORMAL FOR PHASE SENSE

REV	DWG. STATUS	BY	DATE	APPD.	REV DESCRIPTION
-	SUBMITAL	PC	1/26/21		

PROJECT: WAYNESVILLE PERFORMING ARTS
LOCATION: WAYNESVILLE ,OH
MANUFACTURER:
MANUFACTURER P/N:
TITLE: RISER
SCALE: NTS
SHEET: 1 OF 1
REV: 001 ####
UNLESS OTHERWISE NOTED, DIMENSIONS ARE IN INCHES

VINCENT LIGHTING SYSTEMS
CINCINNATI - CLEVELAND - DETROIT - PITTSBURGH
1420 JAMIKE AVE. - ERLANGER, KY 41018
T 859.525.2000 F 859.525.2004 WWW.VLS.COM
DRAWING:

No.	Revisions / Submissions	Date

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712 East Main Street Richmond, IN 47374 765.966.3546

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STATE OF OHIO JEFFREY ALLEN MILLARD E-67012 REGISTERED PROFESSIONAL ENGINEER

Comm. No. 18620.00
Date 2021/03/01
Drawn RAR
Drawing No. E604
Checked JAM/JRH

2/26/2021 9:38:29 AM
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PANELBOARD AND WIRING SCHEDULE

PANEL: **DP-1**
VOLTAGE: 120/240v,3P,3W
AMPERES: 200 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION: MECH. 134
SUPPLY FROM: T-1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
SPARE	--	--	--	20	1	1	0.0	9.3					2	3	150				EX. - RT-1 ROOF (REFEED)
SPARE	--	--	--	20	1	3			0.0	9.3			4						
EX. - ELEVATOR (REFEED)				60	3	5					6.7	9.3	6						
						7	6.7	3.0					8	2	40				EX. - WATER HEATER (REFEED)
						9			6.7	3.0			10						
SPARE	--	--	--	60	3	11					0.0	0.0	12	3	100	--	--	--	SPARE
						13	0.0	0.0					14						
						15			0.0	0.0			16						
SPACE	--	--	--	--	--	17					0.0	0.0	18	--	--	--	--	--	SPACE
SPACE	--	--	--	--	--	19	0.0	0.0					20	--	--	--	--	--	SPACE
SPACE	--	--	--	--	--	21			0.0	0.0			22	--	--	--	--	--	SPACE
TOTAL LOAD (kVA):							19.0 kVA		19.0 kVA		16.0 kVA								
TOTAL CURRENT (A):							140 A		140 A		115 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	54000 VA	100.00%	54000 VA	TOTAL CONNECTED LOAD:	54000 VA
				TOTAL ESTIMATED DEMAND:	54000 VA
				TOTAL CONNECTED CURRENT:	130 A
				TOTAL ESTIMATED DEMAND CURRENT:	130 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
EXTEND / PROVIDE WIRING FROM EXISTING EQUIPMENT TO NEW PANEL. REFER TO SINGLE-LINE FOR ADDITIONAL REQUIREMENTS.

PANELBOARD AND WIRING SCHEDULE

PANEL: **1A**
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 400 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION: MECH. 134
SUPPLY FROM: MSB1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
UH-2	6	10	1"	50	2	1	4.0	2.6					2	2	35	3/4"	10	8	UH-3
						3			4.0	2.6			4						
VAV-108	10	10	3/4"	25	2	5					2.2	0.5	6	1	20	3/4"	12	12	RP-1
						7	2.2	0.0					8	1	20	--	--	--	SPARE
VAV-110	8	10	3/4"	40	2	9			3.8	4.4			10	2	45	1"	10	6	VAV-112
						11					3.8	4.4	12						
VAV-113	10	10	3/4"	30	2	13	2.8	1.6					14	2	15	3/4"	12	12	VAV-117
						15			2.8	1.6			16						
SPARE	--	--	--	45	3	17					0.0	0.0	18	3	45	--	--	--	SPARE
						19	0.0	0.0					20						
						21			0.0	0.0			22						
SPARE	--	--	--	45	3	23					0.0	0.4	24	2	30	3/4"	10	10	VAV-207
						25	0.0	0.4					26						
						27			0.0	0.1			28	2	15	3/4"	12	12	BC-3
FC'S - 211,212,213,214, 210	12	12	3/4"	20	2	29					1.4	0.1	30						
						31	1.4	0.6					32	2	20	3/4"	12	12	FC'S-216,217,218,219,220,221
FC'S - 127,126,125,124,121	12	12	3/4"	20	2	33			1.4	0.6			34						
						35					1.4	3.1	36	2	40	3/4"	10	8	UH-1
FC'S - 130,131,135, 134B	12	12	3/4"	20	2	37	0.7	3.1					38						
						39			0.7	0.1			40	2	20	3/4"	12	12	BC-2
RH-1 AND RH-2	12	12	3/4"	20	2	41					0.4	0.1	42						
						43	0.4	0.6					44	1	20	3/4"	12	12	WH-1
FPH-1	12	12	3/4"	20	2	45			1.0	0.0			46	2	20	3/4"	12	12	BC-1
						47					1.0	0.0	48						
FPH-2	12	12	3/4"	20	2	49	1.0	1.0					50	2	20	3/4"	12	12	FPH-2
						51			1.0	1.0			52						
FPH-2	12	12	3/4"	20	2	53					1.0	1.0	54	2	20	3/4"	12	12	FPH-2
						55	1.0	1.0					56						
FPH-2	12	12	3/4"	20	2	57			1.0	1.0			58	2	20	3/4"	12	12	FPH-2
						59					1.0	1.0	60						
FPH-2	12	12	3/4"	20	2	61	1.0	1.0					62	2	20	3/4"	12	12	FPH-2
						63			1.0	1.0			64						
FPH-2	12	12	3/4"	20	2	65					1.0	1.0	66	2	20	3/4"	12	12	FPH-2
						67	1.0	1.0					68						
FPH-2	12	12	3/4"	20	2	69			1.0	1.0			70	2	20	3/4"	12	12	FPH-2
						71					1.0	1.0	72						
CU-01	10	10	3/4"	25	2	73	1.9	1.0					74	2	20	3/4"	12	12	FPH-2
						75			1.9	1.0			76						
FPH-2	12	12	3/4"	20	2	77					1.0	1.0	78	2	20	3/4"	12	12	FPH-2
						79	1.0	1.0					80						
FPH-2	12	12	3/4"	20	2	81			1.0	0.0			82	1	20	--	--	--	SPARE
						83					1.0	0.0	84	1	20	--	--	--	SPARE
TOTAL LOAD (kVA):							33.5 kVA		35.2 kVA		30.0 kVA								
TOTAL CURRENT (A):							284 A		298 A		250 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	98717 VA	100.00%	98717 VA	TOTAL CONNECTED LOAD:	98717 VA
				TOTAL ESTIMATED DEMAND:	98717 VA
				TOTAL CONNECTED CURRENT:	274 A
				TOTAL ESTIMATED DEMAND CURRENT:	274 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: **ELTS**
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 35 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION: STORAGE 143
SUPPLY FROM: INV#1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
AISLE LIGHTS (R 28)	12	12	3/4"	20	1	1	0.7	0.2					2	1	20	3/4"	12	12	AISLE CHAIR LIGHTS (R32)
MAIN HOUSE OVER ORCH (R 27)	12	12	3/4"	20	1	3			1.1	0.9			4	1	20	3/4"	12	12	MAIN HOUSE LIGHTS (R26)
BALCONY LIGHT (R 29)	12	12	3/4"	20	1	5					0.5	0.2	6	1	20	3/4"	12	12	SECOND FLOOR (R30)
SECOND FLOOR -(R 32)	12	12	3/4"	20	1	7	0.2	0.0					8	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	9			0.0	0.0			10	1	20	--	--	--	SPARE
TOTAL LOAD (kVA):							1.1 kVA		2.0 kVA		0.7 kVA								
TOTAL CURRENT (A):							10 A		17 A		6 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LTNG	3702 VA	100.00%	3702 VA	TOTAL CONNECTED LOAD:	3702 VA
				TOTAL ESTIMATED DEMAND:	3702 VA
				TOTAL CONNECTED CURRENT:	10 A
				TOTAL ESTIMATED DEMAND CURRENT:	10 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: **RP1**
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 200 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION: STORAGE 143
SUPPLY FROM: MSB1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
FRONT OF HOUSE RIGHT	12	12	3/4"	20	1	1	1.0	1.0					2	1	20	3/4"	12	12	FRONT OF HOUSE CENTER
FRONT OF HOUSE CENTER	12	12	3/4"	20	1	3			1.0	1.0			4	1	20	3/4"	12	12	FRONT OF HOUSE LEFT
SPARE	--	--	--	20	1	5					0.0	0.0	6	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	7	0.0	0.0					8	1	20	--	--	--	SPARE
1ST ELECTRIC	12	12	3/4"	20	1	9			1.0	1.0			10	1	20	3/4"	12	12	1ST ELECTRIC
1ST ELECTRIC	12	12	3/4"	20	1	11					1.0	1.0	12	1	20	3/4"	12	12	2ND ELECTRIC
2ND ELECTRIC	12	12	3/4"	20	1	13	1.0	1.0					14	1	20	3/4"	12	12	2ND ELECTRIC
3RD ELECTRIC	12	12	3/4"	20	1	15			1.0	1.0			16	1	20	3/4"	12	12	3RD ELECTRIC
3RD ELECTRIC	12	12	3/4"	20	1	17					1.0	1.0	18	1	20	3/4"	12	12	WRK LT 1ST ELECTRIC
WRK LT 2ND ELECTRIC	12	12	3/4"	20	1	19	1.0	1.0					20	1	20	3/4"	12	12	WRK LT 3RD ELECTRIC
SIDE RGBW LIGHTS (R21)	12	12	3/4"	20	1	21			0.8	0.0			22	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	23					0.0	0.0	24	1	20	--	--	--	SPARE
TOTAL LOAD (kVA):							6.0 kVA		6.8 kVA		4.0 kVA								
TOTAL CURRENT (A):							53 A		60 A		33 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LTNG	16840 VA	100.00%	16840 VA	TOTAL CONNECTED LOAD:	16840 VA
				TOTAL ESTIMATED DEMAND:	16840 VA
				TOTAL CONNECTED CURRENT:	47 A
				TOTAL ESTIMATED DEMAND CURRENT:	47 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: **1B**
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 400 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION: STORAGE 143
SUPPLY FROM: MSB1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
(EX.) RM. 110 COMPUTER REC	--	--	--	20	1	1	0.0	0.5					2	1	20	3/4"	12	12	VIDEO PROJECTOR-CATWALK
(EX.) RM. 108 COMPUTER REC	--	--	--	20	1	3			0.0	0.4			4	1	20	3/4"	12	12	LTNG-STORAGE 104
(EX.) RM. 106 COMPUTER REC	--	--	--	20	1	5					0.0	0.0	6	1	20	--	--	--	(EX.) RM. 107 COMPUTER REC
(EX.) COMPUTER	--	--	--	20	1	7	0.0	0.0					8	1	20	--	--	--	(EX.) RM. 109 COMPUTER REC
(EX.) COMPUTER	--	--	--	20	1	9			0.0	0.0			10	1	20	--	--	--	(EX.) RM. 105 COMPUTER REC
(EX.) COMPUTER	--	--	--	20	1	11					0.0	0.0	12	1	20	--	--	--	(EX.) COPIER
(EX.) COMPUTER	--	--	--	20	1	13	0.0	0.0					14	1	20	--	--	--	(EX.) REC NEW ADD.
(EX.) COMPUTER	--	--	--	20	1	15			0.0	0.0			16	1	20	--	--	--	(EX.) UC REF.
(EX.) COMPUTER	--	--	--	20	1	17					0.0	0.0	18	1	20	--	--	--	(EX.) REC NEW ADD.
(EX.) COMPUTER	--	--	--	20	1	19	0.0	0.0					20	1	20	--	--	--	(EX.) REC NEW ADD.
(EX.) COMPUTER	--	--	--	20	1	21			0.0	0.0			22	1	20	--	--	--	(EX.) REC NEW ADD.
REC-STORAGE / DIMMER 142	12	12	3/4"	20	1	23					0.9	0.2	24	1	20	3/4"	12	12	REC-SHOP 110
(EX.) LIGHTING NEW ADD.	--	--	--	20	1	25	0.0	0.0					26	2	20	--	--	--	(EX.) FRONT PARKING LOT LTS.
(EX.) LIGHTING NEW ADD.	--	--	--	20	1	27			0.0	0.0			28						
(EX.) LIGHTING NEW ADD.	--	--	--	20	1	29					0.0	0.0	30	1	20	--	--	--	(EX.) OPENERS
(EX.) TV & CLOCK	--	--	--	20	1	31	0.0	0.0					32	1	20	--	--	--	SPARE FROM DEMO
(EX.) DOOR / VESTIBULE LIGHTS	--	--	--	20	1	33			0.0	0.2			34	1	20	3/4"	12	12	REC-SHOP 110
REC-SHOP 110	12	12	3/4"	20	1	35					0.5	1.0	36	1	20	3/4"	12	12	AUTODOOR VEST 101
(EX.) UNIT HEATER	--	--	--	20	1	37	0.0	0.7					38	1	20	3/4"	12	12	REC-LOBBY 103
REC-SHOP 110	12	12	3/4"	20	1	39			0.2	0.0			40	1	20	--	--	--	(EX.) SIGN
(EX.) VAV POWER	--	--	--	20	1	41					0.0	0.0	42	1	20	--	--	--	(EX.) ICE MELT
LTNG	12	12	3/4"	20	1	43	0.7	0.3					44	1	20	3/4"	12	12	LTNG
LTNG-SHOP	12	12	3/4"	20	1	45			0.8	0.3			46	1	20	3/4"	12	12	LTNG
LTNG-HALLWAY 134	12	12	3/4"	20	1	47					0.2	0.4	48	1	20	3/4"	12	12	REC-HALLWAY 134
LTNG-CORRIDOR 120	12	12	3/4"	20	1	49	0.0	0.8					50	1	20	3/4"	12	12	REC-LOBBY
RACK-GREEN ROOM 109	12	12	3/4"	20	1	51			0.2	0.5			52	1	20	3/4"	12	12	REC-SIGN LOBBY
RACK-GREEN ROOM 109	12	12	3/4"	20	1	53					0.2	1.4	54	1	20	3/4"	12	12	REC-LOBBY
REC-SHOP 110	12	12	3/4"	20	1	55	0.5	1.4					56	1	20	3/4"	12	12	REC-STAGE
REC-LOBBY	12	12	3/4"	20	1	57			1.6	0.4			58	1	20	3/4"	12	12	REC-STAGE
REC-STAGE	12	12	3/4"	20	1	59					0.7	1.0	60	2	20	3/4"	12	12	MOTOR FOR TELESCOPING STANDS
REC-STAGE	12	12	3/4"	20	1	61	0.9	1.0					62						
REC-STAGE	12	12	3/4"	20	1	63			0.7	0.5			64	1	20	3/4"	12	12	EQUIP
REC-ROOM 121	12	12	3/4"	20	1	65					0.7	0.4	66	1	20	3/4"	12	12	LTNG
REC-STAGE	12	12	3/4"	20	1	67	0.4	0.4					68	1	20	3/4"	12	12	Lighting
REC-THEATER	12	12	3/4"	20	1	69			0.7	0.4			70	1	20	3/4"	12	12	LTNG-CORRIDOR
FIRE ALARM PANEL	12	12	3/4"	20	1	71					0.5	0.5	72	1	20				EQUIP
EF-1	12	12	3/4"	20	1	73	0.5	0.0					74	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	75			0.9	0.0			76	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	77					0.9	0.0	78	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	79	0.9	0.0					80	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	81			0.9	0.0			82	1	20	--	--	--	SPARE
LTNG	12	12	3/4"	20	1	83					0.1	0.0	84	1	20	--	--	--	SPARE
2B - FEED THRU LUGS (SHOWN FOR REFERENCE ONLY)				0	3	85	8.1	0.0					86	--	--	--	--	--	NO SPACE FEED THRU LUGS
						87			11.3	0.0			88	--	--	--	--	--	NO SPACE FEED THRU LUGS
						89					12.5	0.0	90	--	--	--	--	--	NO SPACE FEED THRU LUGS
TOTAL LOAD (kVA):							17.1 kVA		20.1 kVA		22.2 kVA								
TOTAL CURRENT (A):							143 A		171 A		188 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	20136 VA	100.00%	20136 VA	TOTAL CONNECTED LOAD:	59338 VA
LTNG	5982 VA	100.00%	5982 VA	TOTAL ESTIMATED DEMAND:	47908 VA
REC	32860 VA	65.22%	21430 VA	TOTAL CONNECTED CURRENT:	165 A
Lighting	400 VA	100.00%	400 VA	TOTAL ESTIMATED DEMAND CURRENT:	133 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
LOAD CLASSIFICATION "SPARE" IS RELOCATED ELECTRICAL LOAD WITH 100% DEMAND FACTOR APPLIED.

LOAD SUMMARY "1B AND 2B(SUBFEED)"

EXISTING (EX.) LOAD 1A	61.2 AMP
EXISTING (EX.) LOAD 1B	46.6 AMP
ADDED/NEW LOAD	133.0 AMP
TOTAL PANEL LOAD	**240.8 AMPS**

PANELBOARD AND WIRING SCHEDULE

PANEL: **2B**
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 400 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: SURFACE
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION:
SUPPLY FROM: 1B

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
(EX.) RM. 209 COMPUTER REC	--	--	--	20	1	1	0.0	0.0					2	1	20	--	--	--	(EX.) RM. 210 COMPUTER REC
(EX.) RM. 207 COMPUTER REC	--	--	--	20	1	3			0.0	0.0			4	1	20	--	--	--	(EX.) RM. 208 COMPUTER REC
(EX.) RM. 205 COMPUTER REC	--	--	--	20	1	5					0.0	0.0	6	1	20	--	--	--	(EX.) RM. 268 COMPUTER REC
(EX.) HALLWAY REC 2ND FLOOR	--	--	--	20	1	7	0.0	0.0					8	1	20	--	--	--	(EX.) 2ND FLOOR STAIR LIGHTING
(EX.) ELEVATOR CAB LIGHTS	--	--	--	20	1	9			0.0	0.0			10	1	20	--	--	--	(EX.) LIGHTING ADD.
(EX.) ELEVATOR PIT	--	--	--	20	1	11					0.0	0.0	12	1	20	--	--	--	(EX.) LIGHTING ADD.
(EX.) REC 2ND FLOOR	--	--	--	20	1	13	0.0	0.0					14	1	20	--	--	--	(EX.) LIGHTING ADD.
(EX.) REC 2ND FLOOR NEW ADD.	--	--	--	20	1	15			0.0	0.0			16	1	20	--	--	--	(EX.) LIGHTING ADD.
(EX.) ??	--	--	--	20	1	17					0.0	0.0	18	1	20	--	--	--	(EX.) ELEV. RM. LTG & REC
(EX.) VENDING MACHINE	--	--	--	20	1	19	0.0	0.0					20	1	20	--	--	--	(EX.) SPARE
(EX.) AC UNIT TEACHERS	--	--	--	20	1	21			0.0	0.0			22	1	20	--	--	--	(EX.) HVAC CONTROL PANEL
(EX.) RM. 205	--	--	--	20	1	23					0.0	0.0	24	1	20	--	--	--	(EX.) VAV POWER
FOLLOW SPOTS RECPT	12	12	3/4"	20	2	25	0.3	0.3					26	2	20	3/4"	12	12	FOLLOW SPOTS RECPT
						27			0.3	0.3			28						
LTNGLOBBY 205	12	12	3/4"	20	1	29					0.7	0.3	30	2	20	3/4"	12	12	FOLLOW SPOTS - CATWALK
LTNG-LOBBY	12	12	3/4"	20	1	31	0.0	0.3					32						
LTNG	12	12	3/4"	20	1	33			0.2	0.3			34	2	20	3/4"	12	12	FOLLOW SPOTS - CATWALK
LTNG-RECP 220	12	12	3/4"	20	1	35					0.7	0.3	36						
LTNG-TECH 202	12	12	3/4"	20	1	37	0.1	0.7					38	1	20	3/4"	12	12	REC
REC-BALCONY 204	12	12	3/4"	20	1	39			1.6	1.1			40	1	20	3/4"	12	12	REC
REC-TECH 202	12	12	3/4"	20	1	41					0.4	0.6	42	1	20	3/4"	12	12	REC
REC-TECH 202	12	12	3/4"	20	1	43	0.4	1.4					44	1	20	3/4"	12	12	REC
REC-TECH 202	12	12	3/4"	20	1	45			0.4	0.8			46	1	20	3/4"	12	12	REC
REC-TECH 202	12	12	3/4"	20	1	47					0.4	1.1	48	1	20	3/4"	12	12	REC
REC-ROOF	12	12	3/4"	20	1	49	0.4	0.4					50	1	20	3/4"	12	12	REC
LTNG	12	12	3/4"	20	1	51			0.5	2.1			52	2	20	3/4"	12	12	UH-1 END OF CORRIDOR
SPARE	--	--	--	20	1	53					0.0	2.1	54						
HAND DRYER	12	12	3/4"	20	1	55	0.9	0.0					56	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	57			0.9	0.0			58	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	59					0.9	0.0	60	1	20	--	--	--	SPARE
HAND DRYER	12	12	3/4"	20	1	61	0.9	0.0					62	1	20	--	--	--	SPARE
REC-WATER COOLER	12	12	3/4"	20	1	63			0.4	0.0			64	1	20	--	--	--	SPARE
REC-RECEPT 220	12	12	3/4"	20	1	65					0.7	0.0	66	1	20	--	--	--	SPARE
REC-RECEPT 220	12	12	3/4"	20	1	67	0.4	0.0					68	1	20	--	--	--	SPARE
REC-RECEPT 220	12	12	3/4"	20	1	69			1.1	0.0			70	1	20	--	--	--	SPARE
REC-OFFICE 219	12	12	3/4"	20	1	71					1.4	0.0	72	1	20	--	--	--	SPARE
REC-OFFICE 219	12	12	3/4"	20	1	73	0.7	0.0					74	1	20	--	--	--	SPARE
REC-WORKSTATION 218	12	12	3/4"	20	1	75			1.1	0.0			76	1	20	--	--	--	SPARE
REC	12	12	3/4"	20	1	77					1.4	0.0	78	1	20	--	--	--	SPARE
REC-WORKSTATION 218	12	12	3/4"	20	1	79	1.1	0.0					80	1	20	--	--	--	SPARE
REC-WORKSTATION 218	12	12	3/4"	20	1	81			0.4	0.0			82	1	20	--	--	--	SPARE
REC-OFFICE 217	12	12	3/4"	20	1	83					1.4	0.0	84	1	20	--	--	--	SPARE
TOTAL LOAD (kVA):							8.1 kVA		11.3 kVA		12.5 kVA								
TOTAL CURRENT (A):							68 A		98 A		108 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	9980 VA	100.00%	9980 VA	TOTAL CONNECTED LOAD:	31937 VA
LTNG	2377 VA	100.00%	2377 VA	TOTAL ESTIMATED DEMAND:	27147 VA
REC	19580 VA	75.54%	14790 VA	TOTAL CONNECTED CURRENT:	89 A
				TOTAL ESTIMATED DEMAND CURRENT:	75 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
LOAD CLASSIFICATION "SPARE" IS RELOCATED ELECTRICAL LOAD WITH 100% DEMAND FACTOR APPLIED.

LOAD SUMMARY "2B"

EXISTING (EX.) LOAD	46.6 AMP
ADDED/NEW LOAD	75.0 AMP
TOTAL PANEL LOAD	**121.6 AMPS**

PANELBOARD AND WIRING SCHEDULE

PANEL: **PNL #1**
VOLTAGE: 120/240V,1P,3W
AMPERES: 225 A
MAINS TYPE: PER SINGLE-LINE
SPD:
MOUNTING: FLUSH
AVAILABLE FAULT CURRENT: PER SINGLE-LINE
PANEL INTERRUPTING RATING: PER SINGLE-LINE
LOCATION:
SUPPLY FROM:

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
(EX.) ROOM #112	--	--	--	20	1	1	0.0	0.0			20	--	--	--	(EX.) RESTROOMS
REVISED LIGHTING ROOM 131	12	12	3/4"	20	1	3			0.4	0.4	20				**REVISED LIGHTING ROOM 130**
REVISED LIGHTING ROOM 127	12	12	3/4"	20	1	5	0.4	0.0			20				**REVISED LIGHTING ROOM 124**
REVISED LIGHTING ROOM 125	12	12	3/4"	20	1	7			0.4	0.4	20				**REVISED LIGHTING ROOM 126**
(EX.) CORRIDOR	--	--	--	20	1	9	0.0	0.0			20	--	--	--	(EX.) CORRIDOR
(EX.) OUTSIDE FLOODS	--	--	--	20	1	11			0.0	0.0	20	--	--	--	(EX.) LOBBY
(EX.) UNIVENTS RM. #112,#114,#116	--	--	--	20	1	13	0.0	0.0			20	--	--	--	(EX.) LOBBY
(EX.) REC RM. #111, #115	--	--	--	20	1	15			0.0	0.0	20	--	--	--	(EX.) UNIVENTS RM. #113, #115, #117
(EX.) REC RM. #113, #117	--	--	--	20	1	17	0.0	0.0			20	--	--	--	(EX.) REC RM. #112, #114, #116
(EX.) LOBBY	--	--	--	20	1	19			0.0	0.0	20	--	--	--	(EX.) EXIT SIGNS
(EX.) COMPUTER RM. #112	--	--	--	20	1	21	0.0	0.0			20	--	--	--	(EX.) COMPUTER RM. #116
(EX.) COMPUTER RM. #114	--	--	--	20	1	23			0.0	0.0	20	--	--	--	(EX.) COMPUTER RM. #111
(EX.) COMPUTER RM. #117	--	--	--	20	1	25	0.0	0.0			20	--	--	--	(EX.) COMPUTER RM. #113
(EX.) RM. #111 FANS	--	--	--	20	1	27			0.0	0.0	20	--	--	--	(EX.) COMPUTER RM. #115
REC-WARM KITH 135	12	12	3/4"	20	1	29	0.2	0.0			20	3/4"	12	12	REC
REC-WARM KITH 135	12	12	3/4"	20	1	31			0.2	0.0	--	--	--	--	(EX.) SPACE
REC-WARM KITH 135	12	12	3/4"	20	1	33	0.2	0.0			--	--	--	--	(EX.) SPACE
REC-WARM KITH 135	12	12	3/4"	20	1	35			0.2	0.0	--	--	--	--	(EX.) SPACE
REC-WARM KITH 135	12	12	3/4"	20	1	37	0.2	0.0			--	--	--	--	(EX.) SPACE
REC-WARM KITH 135	12	12	3/4"	20	1	39			0.4	0.0	--	--	--	--	(EX.) SPACE
REC-RESTROOM	12	12	3/4"	20	1	41	0.4	0.0			--	--	--	--	(EX.) SPACE
NO SPACE FEED THRU	--	--	--	--	--	43			0.0	0.0	--	--	--	--	NO SPACE FEED THRU
EXISTING PNL#2 SECOND FLOOR - FEED THRU				0	2	45	0.4	0.4			--	--	--	--	NO SPACE FEED THRU
						47			2.3	0.0	--	--	--	--	NO SPACE FEED THRU
TOTAL LOAD (kVA):							5.7 kVA		4.4 kVA						
TOTAL CURRENT (A):							47 A		37 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LTNG	350 VA	100.00%	350 VA	TOTAL CONNECTED LOAD:	10103 VA
REC	3960 VA	100.00%	3960 VA	TOTAL ESTIMATED DEMAND:	10103 VA
Spare	2400 VA	100.00%	2400 VA	TOTAL CONNECTED CURRENT:	42 A
Power	3393 VA	100.00%	3393 VA	TOTAL ESTIMATED DEMAND CURRENT:	42 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
LOAD CLASSIFICATION "SPARE" IS RELOCATED ELECTRICAL LOAD WITH 100% DEMAND FACTOR APPLIED.

LOAD SUMMARY "PNL 1 AND PNL 2 (SUBFEED)"

EXISTING (EX.) LOAD PNL 1	33.0 AMP
EXISTING (EX.) LOAD PNL 2	73.8 AMP
ADDED/NEW LOAD	42.0 AMP
TOTAL PANEL LOAD	**148.8 AMPS**

PANELBOARD AND WIRING SCHEDULE

PANEL: **PNL#2**
VOLTAGE: 120/240V,1P,3W
AMPERES: 225 A
MAINS TYPE:
SPD:
MOUNTING: FLUSH
AVAILABLE FAULT CURRENT:
PANEL INTERRUPTING RATING:
LOCATION:
SUPPLY FROM: PNL #1

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
SPARE	--	--	--	20	1	1	0.0	0.0			2	1	20	--	--	--	(EX.) BOYS/GIRLS R.R.
SPARE DEMO	--	--	--	20	1	3			0.0	0.4	4	1	20				**REVISED LIGHTING ROOM 214**
REVISED LIGHTING ROOM 211				20	1	5	0.4	0.0			6	1	20	--	--	--	(EX.) TEACHER LOUNGE LIGHTS
REVISED LIGHTING ROOM 212				20	1	7			0.4	0.4	8	1	20				**REVISED LIGHTING ROOM 213**
SPARE	--	--	--	20	1	9	0.0	0.0			10	1	20	--	--	--	(EX.) HALL LIGHTS
(EX.) HALL LIGHTS	--	--	--	20	1	11			0.0	0.0	12	1	20	--	--	--	(EX.) HALL LIGHTS
(EX.) HALL LIGHTS	--	--	--	20	1	13	0.0	0.0			14	1	20	--	--	--	(EX.) CLASSROOM HEATER
(EX.) CLASSROOM HEATERS	--	--	--	20	1	15			0.0	0.0	16	1	20	--	--	--	(EX.) REC HALLWAY & RM. #211
(EX.) REC HALLWAY, RM....	--	--	--	20	1	17	0.0	0.0			18	1	20	--	--	--	(EX.) REC RM. #213, #215, #217
(EX.) CIR. PUMP	--	--	--	20	2	19			0.0	0.0	20	2	20	--	--	--	(EX.) UNKNOWN
						21	0.0	0.0			22						
(EX.) EMERGENCY EXIT	--	--	--	20	1	23			0.0	0.0	24	1	20	--	--	--	(EX.) EMERGENCY LIGHTS
(EX.) RM. #215 COMPUTER REC	--	--	--	20	1	25	0.0	0.0			26	1	20	--	--	--	**SPARE**
(EX.) RM. #213 COMPUTER REC	--	--	--	20	1	27			0.0	1.3	28	1	20	3/4"	12	12	**REC-FAMILY RR 222**
(EX.) RM. #217 COMPUTER REC	--	--	--	20	1	29	0.0	0.0			30	2	20	--	--	--	(EX.) RM. #212 A.C.
(EX.) RM. #211 COMPUTER REC	--	--	--	20	1	31			0.0	0.0	32						
(EX.) RM. #211 COMPUTER REC	--	--	--	20	1	33	0.0	0.0			34	1	20	--	--	--	**SPARE**
(EX.) RM. #211 COMPUTER REC	--	--	--	20	1	35			0.0	0.0	36	1	20	--	--	--	**SPARE**
(EX.) RM. #211 AIR	--	--	--	20	1	37	0.0	0.0			38	1	20	--	--	--	**SPARE**
(EX.) RM. #211 AIR	--	--	--	20	1	39			0.0	0.0	40	1	20	--	--	--	**SPARE**
(EX.) SPARE	--	--	--	20	1	41	0.0	0.0			42	1	20	--	--	--	**SPARE DEMO**
TOTAL LOAD (kVA):							0.4 kVA		2.3 kVA								
TOTAL CURRENT (A):							3 A		19 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
REC	1260 VA	100.00%	1260 VA	TOTAL CONNECTED LOAD:	2664 VA
Power	1404 VA	100.00%	1404 VA	TOTAL ESTIMATED DEMAND:	2664 VA
				TOTAL CONNECTED CURRENT:	11 A
				TOTAL ESTIMATED DEMAND CURRENT:	11 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
LOAD CLASSIFICATION "SPARE" IS RELOCATED ELECTRICAL LOAD WITH 100% DEMAND FACTOR APPLIED.

LOAD SUMMARY "PNL 2"

EXISTING (EX.) LOAD PNL 2	73.8 AMP
ADDED/NEW LOAD	11.0 AMP
TOTAL PANEL LOAD	**84.8 AMPS**

No.	Revisions / Submissions	Date

LWC
INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL PANEL SCHEDULES

JEFFREY ALLEN MILLARD
E-67612

Comm. No.	18620.00	
Date	2021/03/01	
Drawn	RAR	
Checked	JAM/JRH	
Drawing No.	E700	

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
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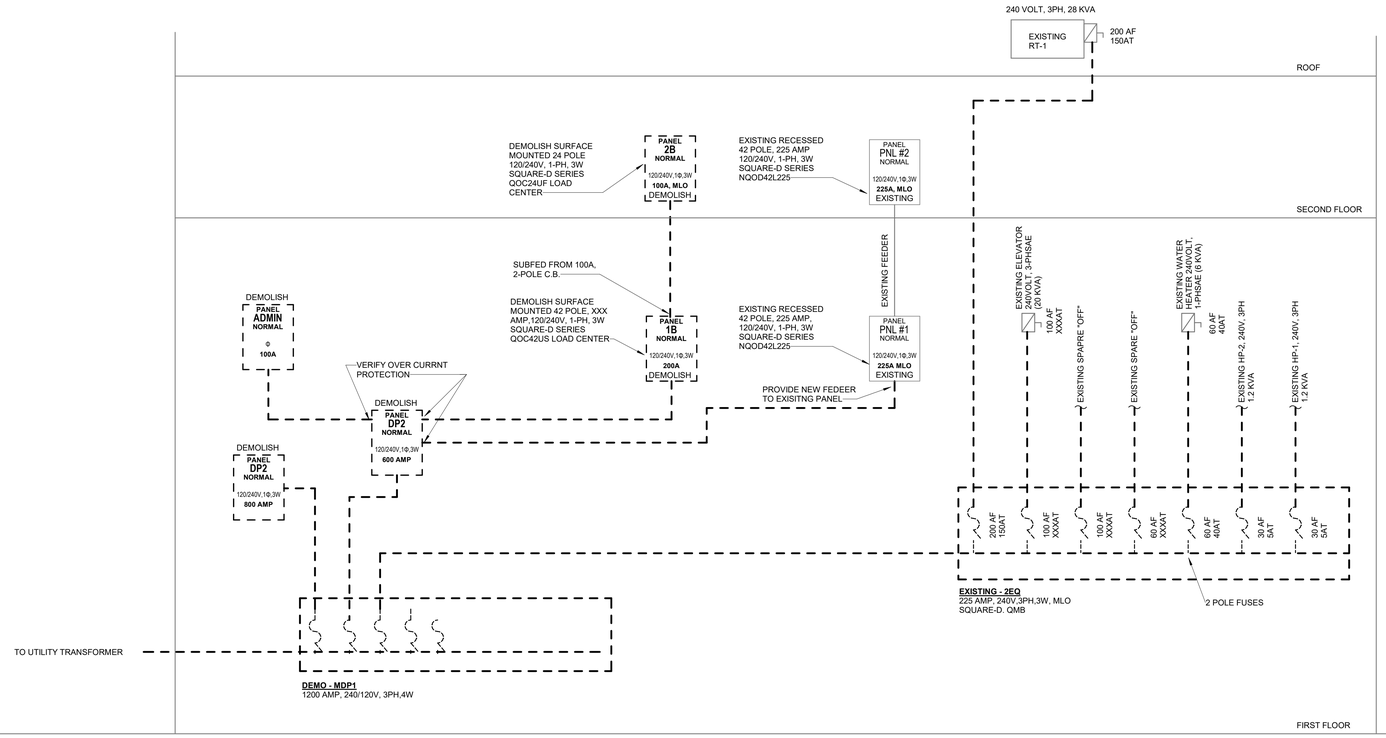


1 ELECTRICAL SINGLE-LINE DEMOLITION
SCALE: 1/8" = 1'-0"

No.	Revisions / Submissions	Date

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL DEMOLITION SINGLE-LINE

CMTA
222 E. 14th Street. Floor 4. Cincinnati, Ohio 45202
513 429 4404 f 513 429 4693 www.cmta.com

STATE OF OHIO — JEFFREY ALLEN MILLARD — E-67913 — REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No. E800
Checked: JAM/JRH	

SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: MSB1
VOLTAGE: 208Y/120V,3P,4W
AMPERES: 2000 A
MAINS TYPE: PER SINGLE-LINE
SPD: Yes
MOUNTING: FLOOR
kAIC VALUE: PER SINGLE-LINE
kAIC RATING: PER SINGLE-LINE
LOCATION:
SUPPLY FROM: UT-1

CKT	CIRCUIT DESCRIPTION	SETS	WIRE	GND	COND	POLES	FRAME	TRIP	LOAD (kVA)	REMARKS
1	PANEL 1B AND 2B	-	-	-	-	3	400 A	400 A	59.3	
2	DOAS-1	-	-	-	-	3	200 A	150 A	36.0	
3	RTU-1	-	-	-	-	3	400 A	225 A	69.6	
4	RTU-2	-	-	-	-	3	200 A	125 A	63.0	
5	PANEL A1	-	-	-	-	3	400 A	400 A	98.7	
6	INV#1	-	-	-	-	3	60 A	35 A	3.7	
7	ERP-24	-	-	-	-	3	200 A	200 A	16.8	
8	PROVISIONN FOR FUTURE (SPARE)	--	--	--	--	3	--	200 A	0.0	
9	PROVISIONN FOR FUTURE (GYM)	--	--	--	--	3	--	400 A	0.0	
10	EXISITNG PANELS PNL #1 AND PNL#2	--	--	--	--	2	--	225 A	36.7	
11	HRCU-1A	-	-	-	-	3	100 A	70 A	21.0	
12	HRCU-1B	-	-	-	-	3	60 A	50 A	15.5	
13	HRCU-1C	-	-	-	-	3	60 A	50 A	15.5	
14	VAV-206A	-	-	-	-	3	60 A	45 A	15.0	
15	VAV-206B	-	-	-	-	3	60 A	45 A	15.0	
16	VAV-206C	-	-	-	-	3	60 A	45 A	15.0	
17	SPARE	--	--	--	--	3	--	100 A	0.0	
18	T-1	-	-	-	-	3	400 A	300 A	54.0	
19	SPARE	--	--	--	--	3	--	50 A	0.0	
20	SPACE	--	--	--	--	--	--	--	0.0	--

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	438415 VA	100.00%	438415 VA	TOTAL CONN. LOAD:	535 kVA
LTNG	26685 VA	100.00%	26685 VA	TOTAL EST. DEMAND:	524 kVA
REC	32860 VA	65.22%	21430 VA	TOTAL CONN. CURRENT:	1485 A
Spare	36720 VA	100.00%	36720 VA	TOTAL EST. DEMAND CURRENT:	1453 A
Lighting	400 VA	100.00%	400 VA		

NOTES:
WIRE SIZE SHOWN ON SINGLE-LINE SHEET E801. LOAD CLASSIFICATION "SPARE" IS RELOCATED ELECTRICAL LOAD WITH 100% DEMAND FACTOR APPLIED.

LOAD SUMMARY "MSB1"

EXISTING (EX.) LOAD "1A"	61.2 AMP
EXISTING (EX.) LOAD "1B"	46.6 AMP
EXISTING (EX.) LOAD "PNL 1"	33.0 AMP
EXISTING (EX.) LOAD "PNL 2"	73.8 AMP
ADDED/NEW LOAD "MSB1	1453.0 AMP
TOTAL PANEL LOAD	**1667.6 AMPS**

3 WIRE FEEDER SCHEDULE

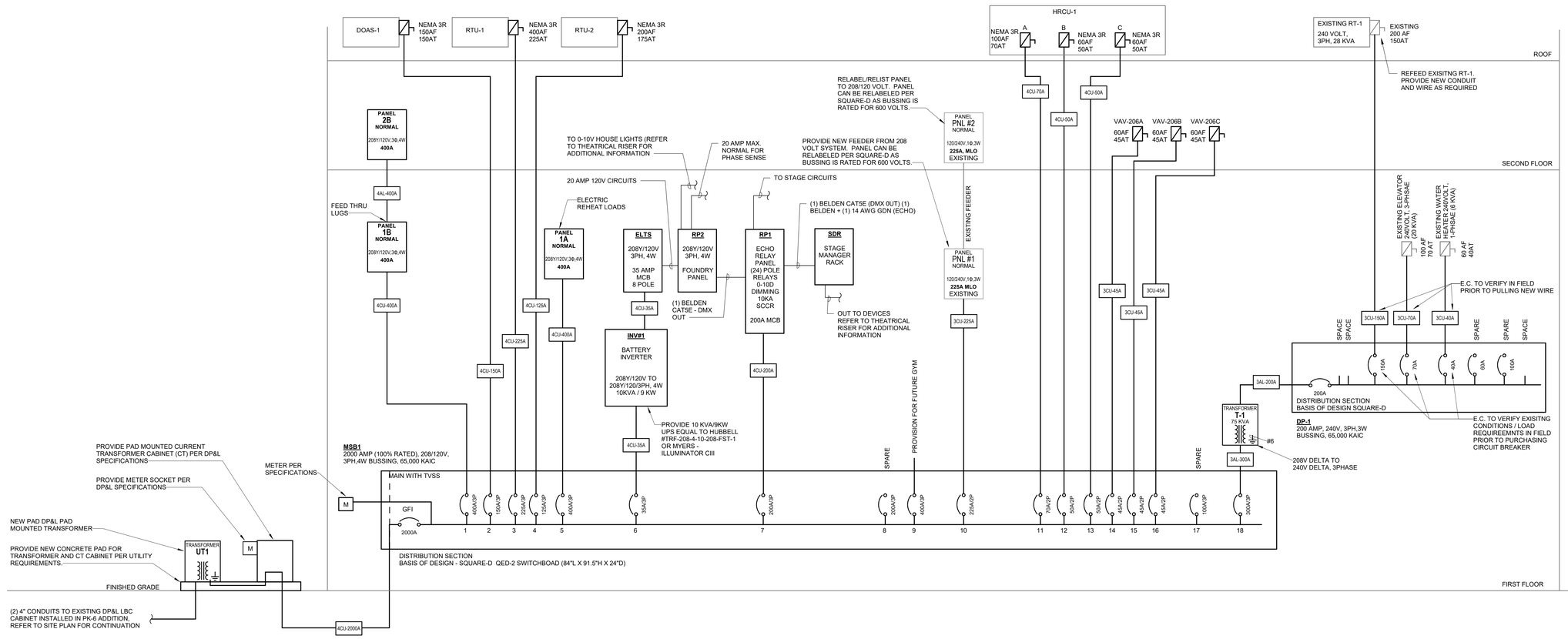
Type	WireSize
3AL-200A	(3)#250 kcmil AL & (1)#4 AL GND. IN 2" C
3AL-300A	(3)#500 kcmil AL & (1)#2 AL GND. IN 2-1/2" C
3CU-40A	(3)#8 CU & (1)#10 CU GND. IN 3/4" C
3CU-45A	(3)#6 CU & (1)#10 CU GND. IN 3/4" C
3CU-70A	(3)#4 CU & (1)#8 CU GND. IN 1" C
3CU-150A	(3)#1/0 CU & (1)#6 CU GND. IN 1-1/2" C
3CU-225A	(3)#4/0 CU & (1)#4 CU GND. IN 2" C

4 WIRE FEEDER SCHEDULE

Type	WireSize
4AL-400A	(2) SETS OF (4)#250 kcmil AL & (1)#3 CU GND. IN 3" C EACH
4CU-35A	(4)#8 CU & (1)#10 CU GND. IN 3/4" C
4CU-50A	(4)#6 CU & (1)#10 CU GND. IN 1" C
4CU-70A	(4)#4 CU & (1)#8 CU GND. IN 1-1/4" C
4CU-125A	(4)#1 CU & (1)#6 CU GND. IN 1-1/2" C
4CU-150A	(4)#1/0 CU & (1)#6 CU GND. IN 2" C
4CU-200A	(4)#3/0 CU & (1)#6 CU GND. IN 2.5" C
4CU-225A	(4)#4/0 CU & (1)#4 CU GND. IN 2-1/2" C
4CU-400A	(2) SETS OF (4)#3/0 CU & (1)#3 CU GND. IN 2.5" C EACH
4CU-2000A	5) SETS OF (4)#600 kcmil CU & (1)#250 kcmil CU GND. IN 4" C EACH

GENERAL NOTES (RISER):

A. PROVIDE ENGRAVED LAMACOID LABELS FOR ALL POWER DISTRIBUTION EQUIPMENT FURNISHED OR MODIFIED IN THIS PROJECT, LABELS PER DETAILS AND SPECIFICATIONS.
B. SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIMUM AVAILABLE FAULT-CURRENT AT THE EQUIPMENT AND THE DATE THE CALCULATION WAS PERFORMED. APPLY A TYPE-WRITTEN ADHESIVE LABEL WITH WHITE BACKGROUND, 1/2" HIGH BLACK LETTERING.
C. CONTRACTOR SHALL INSTALL SEPARATE CONDUITS, PULL BOXES, ETC. FOR EACH EMERGENCY POWER BRANCH & NORMAL POWER PER NEC FOR COMPLETE SEPARATION OF POWER SERVICES.
D. ALL CIRCUIT BREAKERS AND/OR DISCONNECTS SERVING THE PRIMARY SIDE OF A TRANSFORMER WHICH ARE NOT WITHIN SITE OF THE TRANSFORMER SHALL BE PROVIDED WITH PERMANENTLY INSTALLED MEANS TO LOCK THE BREAKER IN THE OFF POSITION. SUCH TRANSFORMERS SHALL HAVE THE ROOM NAME AND NUMBER OF THE PRIMARY DISCONNECTING MEANS ENGRAVED ON THE EQUIPMENT NAMEPLATE.
E. REFER TO SPECIFICATIONS FOR ARC FLASH AND RELATED POWER SYSTEM STUDY REQURIEMENTS.



1 ELECTRICAL SINGLE-LINE NEW
SCALE: 1/8" = 1'-0"

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WAYNE LOCAL SCHOOLS

WAYNESVILLE PERFORMING ARTS CENTER

625 DAYTON RD.
WAYNESVILLE, OH 45068

ELECTRICAL SINGE-LINE

STATE OF OHIO JEFFREY ALLEN MILLARD E-67912 REGISTERED PROFESSIONAL ENGINEER

Comm. No.	Date
18620.00	2021/03/01
Drawn: RAR	Drawing No.: E801
Checked: JAM/JRH	

2/26/2021 9:38:30 AM
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